SINCLAIR COLLEGE

Important Numbers

College Services

Academic Advising	512-3700
Accessibility Services	512-5113
Alumni Affairs	512-3330
Bursar/Cashier	512-2606
Campus Store	512-2665
College Credit Plus	512-5266
College for Lifelong Learning	512-2372
Computer Labs	
-EDU Lab	512-2787
-Library IT Lab	512-2002
Early Childhood Education Center	512-2234
Food Service/Tartan Marketplace	512-2501
Help Desk	512-4357 (HELP)
Human Resources	512-2514
International Education	512-4606
Library	512-2855
Military Family Education Center (MFEC)	512-2586
Multifaith Campus Ministry	512-2768
Ombudsman Solution Center	512-2205
Parking Information	512-2397
Physical Activity Center	512-2860
Student & Community Engagement	512-2509
Student Employment	512-2781
Student Affairs	512-2291
Student Support Services	512-3550
Tech Prep	512-5146
Testing Center	512-3000
Tutoring & Learning Center	512-2792
Workforce Development	512-9787

Regional Locations

Dayton
444 West Third Street, Dayton, Ohio 45402-1460
(937) 512-3000

Centerville
5800 Clyo Road, Centerville, Ohio 45459
(937) 512-2363

Englewood
1150 West National Road, Englewood, Ohio 45315
(937) 836-8750

Huber Heights
7301 Shull Road, Huber Heights, Ohio 45424
(937) 233-5550

Mason
5386 Courseview Drive, Mason, Ohio 45040
(513) 339-1212

Wright-Patterson Air Force Base
2130 Fifth Street • Bldg 50, Area B, WPAFB, Ohio 45433
(937) 512-2586

SinclairOnline
online@sinclair.edu • www.sinclair.edu/online
(937) 512-2990 • 1-888-226-2457 (toll-free)

Academic Departments

ASL Interpreter Education Program	512-2722
Accounting	512-2615
Allied Health Instruction	512-3285
Architectural Technology	512-2183
Art	512-5381
Associate of Technical Study/ Associate of Individualized Study	512-3198
Astronomy	512-3047
Athletics & Sports Information	512-2860
Automation & Control Technology	512-2570
Automotive Technology	512-3242
Aviation Technology	512-2570
Biology	512-2747
Business Information Systems	512-2168
Business & Public Services	512-2917
Chemistry	512-2890
Clinical Laboratory Technology	512-3285
Civil Engineering Technology	512-2183
Clarion Newspaper	512-2744
Communication	512-2271
Computer Aided Manufacturing	512-2570
Computer Information Systems	512-2892
Construction Management Technology	512-2183
Criminal Justice	512-2876
Dance	512-4580
Dental Health Sciences	512-2779
Design	512-4505
Developmental Language Arts	512-2701
Developmental Mathematics	512-4463
Dietetics & Nutrition	512-2756
Economics	512-2615
Education	512-2722
eLearning Division	512-2354
Electronics Engineering Technology	512-2570
Emergency Medical Services	512-5338
Energy Management Technology	512-2183
Engineering Technology Design	512-2183
Engineering University Transfer	512-2918
English	512-3078
Entrepreneurship	512-2615
Environmental Engineering Technology	512-2183
Exercise Science	512-3285
Financial Management	512-2615
Fire Science Technology	512-3242
Geography	512-2944
Geology	512-2890
Government	512-2844
Health Information Management	512-2973
Health Sciences	512-2919
HVACR Engineering Technology	512-2183
Honors	512-4331
Hospitality Management/Tourism	512-2014
Human Services & Behavioral Health	512-2845
Humanities	512-2844
Law	512-2616
Liberal Arts, Communication & Social Sciences	512-2881
Management	512-2615
Marketing	512-2566
Mathematics	512-2767
Mechanical Engineering Technology	512-2183
Medical Assistant Technology	512-3285
Modern Languages	512-2844

Music	512-4580
Nursing	512-2848
Occupational Therapy Assistant	512-5177
Operations Technology	512-2570
Paralegal	512-2616
Phi Theta Kappa	512-2517
Physical Therapist Assistant	512-5355
Physics	512-3047
Political Science	512-2844
Psychology	512-2889
Radiologic Technology	512-2268
Real Estate	512-2616
Respiratory Care	512-2268
Science, Mathematics & Engineering	512-2918
Service Learning	512-2040
Sociology	512-2944
Social Work	512-2944
Sport and Recreation Education	512-2722
Surgical Technology	512-2563
Theatre	512-4580
Veterinary Technology	512-2563

Other Student Resources

Accessibility Services Building 10, Fourth Floor
(937) 512-3032 (Counseling)
(937) 512-5113 (Disability Voice)
(937) 701-6784 (Disability VP)
www.sinclair.edu/accessibility

Campus Store
Building 7, First Floor
(937) 512-2506 • http://bookstore.sinclair.edu

Military Family Education Center (MFEC)
Building 10, Room 10444
(937) 512-2586 • www.sinclair.edu/mfec

Multifaith Campus Ministry
Building 10, Room 10443
(937) 512-2481 • www.sinclair.edu/campus-ministry

Ombudsman Solution Center
Building 10, Room 10424
(937) 512-2205 • www.sinclair.edu/ombudsman

Public Safety
Building 7, Room 7112
(937) 512-2700 • www.sinclair.edu/police

Student & Community Engagement
Building 8, Room 8025
(937) 512-2509 • www.sinclair.edu/engagement

Student Support Services
Building 10, Room 10421
(937) 512-3550 • www.sinclair.edu/support/sss

Tutorial Services
Building 7, Room 7L07
(937) 512-2792 • www.sinclair.edu/tutorial-services

Table of Contents

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Accreditation

Sinclair is accredited by The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604-1411, (800) 621-7440, (312) 263-0456, FAX (312) 263-7462, email: info@hlcommission.org. Sinclair is also a member of the Ohio Association of Community Colleges. Programs of study are approved by the Ohio Department of Higher Education. Sinclair is authorized to grant associate degrees in arts, sciences, applied science, individualized and technical study as well as specific bachelor's degrees.

To review a list of the associations, agencies, and/or governmental bodies that accredit, approve, or license the college's programs, check **www.sinclair.edu/accrediting-agencies**

The official documents for the associations, agencies, and/or governmental bodies that accredit, approve, or license the school and its programs are housed in the office of the Provost, Building 7, Room 7330.
In order to receive a copy for review, go to this office. For additional and specific details regarding program accreditations, approvals or licensures, see the individual program descriptions in this catalog. Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460.

State Authorization

Students who reside or are located outside Ohio and wish to enroll in online courses or students who wish to participate in internships/clinical placements/co-ops at a location or with an organization located outside Ohio, must confirm that Sinclair Community College is permitted to offer those opportunities in that particular state. Sinclair Community College must comply with each state's requirements regarding legal authorization for participation in internships/clinical placements/co-ops and the delivery of online degrees, programs and courses. Sinclair Community College is a member of the State Authorization Reciprocity Agreement (SARA) which provides authorization to offer certain activities in other SARA member states. More information about state authorization and out-of-state grievance procedures may be found at: *www.sinclair.edu/sa*

SINCLAIR COLLEGE

Academic Calendar

FALL 2022	FULL TERM AUG 22 - DEC 11	A TERM AUG 22–OCT 16	12-WEEK TERM SEPT 19–DEC 11	B TERM OCT 17–DEC 11
On-time registration begins April 11				

SPRING 2023	FULL TERM JAN 9–MAY 7	A TERM JAN 9–MAR 5	12-WEEK TERM FEB 6–MAY 7	B TERM MAR 13–MAY 7
On-time registration begins October 24				

SUMMER 2023	FULL TERM MAY 15–AUG 6	A TERM MAY 15-JULY 9	B TERM JUNE 12-AUG 6
On-time registration begins March 20			

Campus Close Dates 2022-2023

Sept 5 Labor Day holiday—all campuses closed

Nov 11 Veterans' Day holiday—all campuses closed

Nov 23 Thanksgiving holiday—all campuses close at 5 p.m.; classes beginning at 5 p.m. and later do not meet

Nov 24–25 Thanksgiving holiday—all campuses closed

Dec 19–23 Holiday Break—all campuses closed

Jan 2 New Year's Day —all campuses closed

Jan 16 Martin Luther King, Jr. holiday—all campuses closed

Mar 6–12 Student Spring Break—all campuses open regular hours
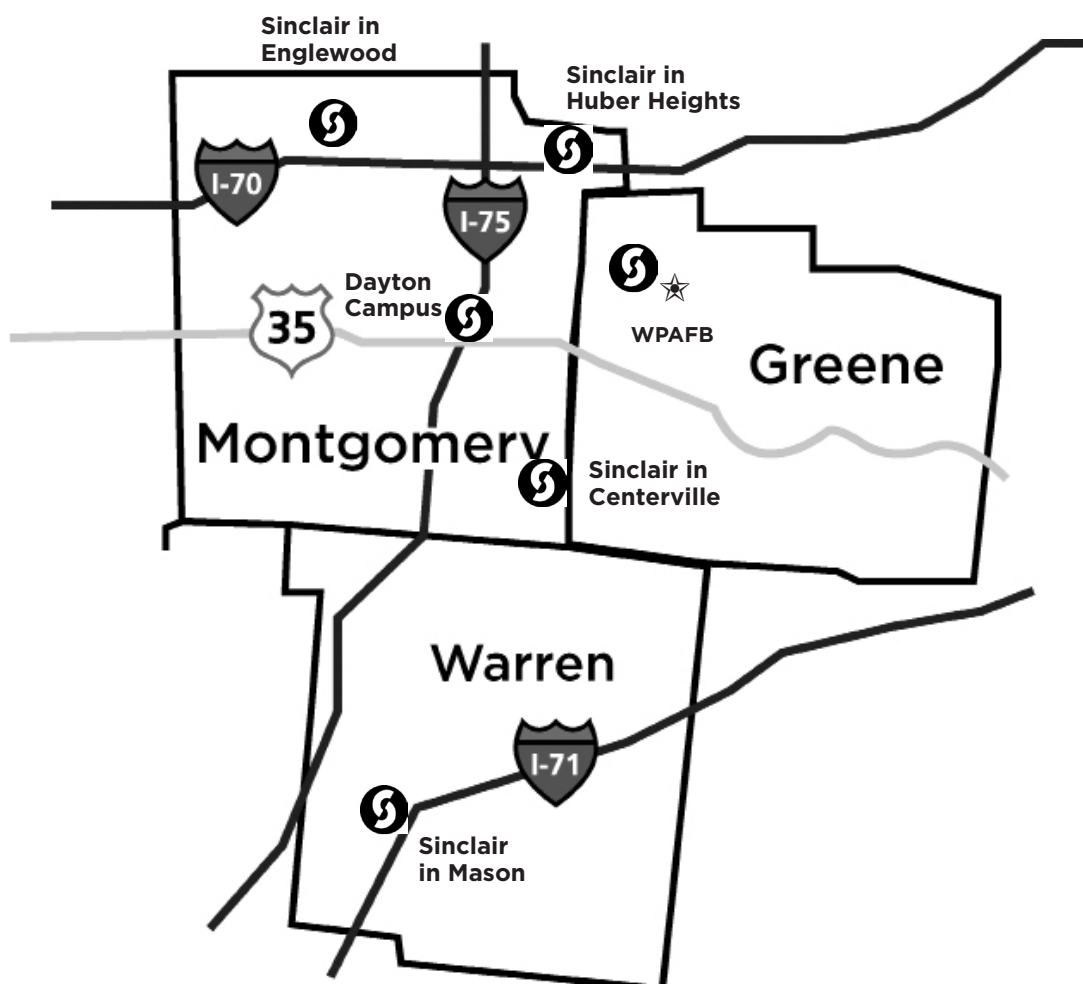
May 29 Memorial Day holiday—all campuses closed

June 19 Juneteenth holiday—all campuses closed

July 4 Independence Day holiday—all campuses closed

For a comprehensive registration calendar please visit
www.sinclair.edu/services/welcome-center/rsr/registration/reg-calendar

NOTE: *This schedule is subject to change.*

Dayton Campus
444 West Third Street
Dayton, Ohio 45402-1460
(937) 512-3000

Sinclair in Mason
5386 Courseview Drive
Mason, Ohio 45040
(513) 339-1212

Sinclair in Centerville
5800 Clyo Road
Centerville, Ohio 45459
(937) 512-3000

Sinclair in Englewood
1150 West National Road
Clayton, Ohio 45315
(937) 836-8750

Sinclair in Huber Heights
7301 Shull Road
Huber Heights, Ohio 45424
(937) 233-5550

**Sinclair at Wright-Patterson
Air Force Base**
2130 Fifth Street
Building 50, Area B
WPAFB, OH 45433
(937) 512-2586

SinclairOnline
online@sinclair.edu
www.sinclair.edu/online
(888) 226-2457 (toll-free)

Campus Security Report (Campus Security Act of 1990)

The federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act requires Sinclair Community College provide an annual security report to include statistics for the previous three years concerning reported crimes that occurred on campus; in certain off-campus buildings owned or controlled by Sinclair Community College; and on public property within, or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security , such as policies concerning alcohol and drug use, crime prevention, emergency response and evacuation procedures, the reporting of crimes, sexual assault, a statement of the enforcement authority of campus security personnel, and other matters. The public may obtain a copy of the report by contacting the Sinclair Department of Public Safety at **(937) 512-2700 or www.sinclair.edu/police**
You may also review the report (and reports for previous years) at
www.sinclair.edu/services/conduct-safety/public-safety/annual-safety-reports/

Federal Education Rights & Privacy Act (FERPA)

The Family Education Rights & Privacy Act (FERPA) grants four specific rights to current or former students with respect to their educational records at Sinclair. Those rights are a) the right to inspect and review all the information about them held by Sinclair; b) the right to seek amendment of incorrect records; c) the right to some control over disclosure of the students' education records; and d) the right to file a complaint with the U.S. Department of Education's FERPA office in Washington, D.C. For more information about students' rights under FERPA, review the Sinclair Student Records Policy, available in the Registration & Student Records office or at: **www.sinclair.edu/registration-policies**
Problems or questions concerning the Sinclair Student Records Policy may be brought to the FERPA coordinator, Registrar.

Non-Discriminatory Practices

Sinclair has an Equal Opportunity/Non-Discrimination Policy, which states as follows:

Sinclair Community College is strongly committed to a policy of equal opportunity in its employment practices, educational programs and activities, and the many services it offers to the community. The college does not discriminate against applicants, employees or students on the basis of race, color, creed, religion, age, sex, sexual orientation, gender identity, marital status, veteran status, national origin, ancestry, citizenship or disability.

Sinclair has other policies which prohibit discrimination of various types as required by law, including Title VI (discrimination on the basis of race, color, or national origin by recipients of federal financial assistance); Title VII (discrimination on the basis of race, color, or national origin in employment); Title IX (discrimination on the basis of sex in education programs or activities); Americans with Disabilities Act (ADA, as amended) and Section 504 (discrimination on the basis of disability); and ADEA (discrimination on the basis of age).

Inquiries concerning Sinclair's non-discrimination practices or complaints of discrimination should be referred to the following offices:

Equal Opportunity Officer Room 7-340
hrdept@sinclair.edu • (937) 512-2514 *(Employee matters)*

Accessibility Services Office Room 10-424
(937) 512-3400 • Email: accessibility@sinclair.edu
(937) 512-5113 • (937) 701-6784 (public videophone)
(Student matters)

Chief Diversity Officer Room 12-220
Michael Carter • (937) 512-3883 *(Student or Employee matters)*

Title IX Office Room 7-342
TitleIX@sinclair.edu • (937) 512-2961 *(Student or Employee matters)*

ADA/504 Coordinator
Students and visitors: lorrie.spivey@sinclair.edu • (937) 512-3400
Employees: stephanie.caracappa@sinclair.edu • (937) 512- 5193

Vice President for Equity and Antiracism Room 12-221
Janet Jones • (937) 512-3890 *(Student or Employee matters)*

Degree/Certificate Seeking Students

Ready to get started at Sinclair? Follow the steps below to find out how to begin your degree or certificate. All steps can be completed at any Sinclair location! For more information, visit *www.sinclair.edu/getstarted*

Apply for Admission Complete your application at **www.sinclair.edu/applynow**

Apply for Financial Aid File the Free Application for Federal Student Aid (FAFSA) at **studentaid.gov** *Use Sinclair's school code: 003119*

Visit Campus or Connect with an Admissions Counselor Learn more about the exceptional programs offered at Sinclair, discover your next steps to enrollment, and explore campus during a tour. Schedule your visit at **www.sinclair.edu/visit**

Check your Sinclair Email Visit **my.sinclair.edu** to check your email often. This is where you will receive important updates about registration and financial aid.

Determine your Course Placement Speak with an Admissions Counselor or Enrollment Specialist to make sure you get started in the right math and English courses. They will help you determine if you need to take a placement test.

Meet with an Academic Advisor Meet with your Academic Advisor to develop your academic plan (MAP). This is also a great time to discuss prior learning assessment options (e.g., CLEP, AP, portfolio-based). Visit **www.sinclair.edu/advising** to learn more.

Complete How to Succeed in eLearn Learn how to navigate Sinclair's learning management system, eLearn, which is used in many of our classes. Completing How to Succeed in eLearn is required before you can register for classes. Learn more or get started by visiting **www.sinclair.edu/hts**

Register for Classes Register for classes at **my.sinclair.edu**

Attend New Student Orientation Learn more about orientation at **www.sinclair.edu/orientation**

Pay your Tuition and Fees Make your payment at **my.sinclair.edu** or learn more about payment options at **www.sinclair.edu/bursar**

Buy your Books Online Order your books at **sinclair.ecampus.com**

Questions? Contact Admissions at admissions@sinclair.edu or (937) 512-3675

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Non-Degree Seeking Student

Ready to take classes at Sinclair? Follow the steps below to find out how to register for classes for the first time. All steps can be completed at any Sinclair location! For more information, visit **www.sinclair.edu/getstarted**

Apply for Admission

Complete your application at **www.sinclair.edu/applynow**

Check your Sinclair Email

Visit **my.sinclair.edu** to check your email often. This is where you will receive important updates about registration.

Select your Courses

Visit the Registration Portal at **regportal.sinclair.edu** to select the courses you plan to take.

If the Sinclair course(s) you plan to take does not have perquisite course requirements and course registration for your desired term is available, you can register for your classes.

> If the Sinclair course(s) you plan to take requires prerequisite course work complete the following steps:
>
> 1. Revisit your Application Portal at **www.sinclair.edu/apply**
> 2. Upload a copy of the Course Selection Form found at **www.sinclair.edu/visiting**
> 3. Upload documentation that indicates you meet the required prerequisites, be sure these documents include your name and the name of the college/university where the credit was earned. Typical documentation types include:
>   a. Unofficial Transcripts
>   b. Degree Audit Reports
>   c. Advising Reports
>
> *Other documents may be used for course placement in math and English if you have not previously earned college credit. If you graduated high school in the last three years you can upload a copy of your final high school transcript. You can also send a copy of an ACT or SAT score report if the test was taken in the last two years to help determine placement.*

Complete How to Succeed in eLearn

Learn how to navigate Sinclair's learning management system, eLearn, which is used in many of our classes. Completing How to Succeed in eLearn is required before you can register for classes. Learn more or get started by visiting **www.sinclair.edu/hts**

Register for Classes

Register for classes at **regportal.sinclair.edu**

Pay your Tuition and Fees

Make your payment at **my.sinclair.edu**

Buy your Books Online

Order your books at **sinclair.ecampus.com**

Questions? Contact Admissions at admissions@sinclair.edu or (937) 512-3675

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Sinclair FlexPace Courses & Programs

Sinclair FlexPace allows students to complete online courses on their own schedule, with degrees and certificate programs in Information Technology, Criminal Justice, Retail and Business Management, and Unmanned Aerial Systems. There are also a growing number of general education courses offered in the FlexPace format. Sinclair FlexPace offers students a faster path to graduation with online competency-based courses that offer flexible start dates and personalized pacing. For more information and a list of current Sinclair FlexPace courses and programs, visit ***www.sinclair.edu/flexpace*** or contact us at flexpace@sinclair.edu

Note: Sinclair FlexPace courses are open to all students who complete the FlexPace Orientation and meet GPA requirements.

SinclairOnline Courses & Programs

SinclairOnline offers a variety of online programs and more than 300 online courses. Course content is the same as in-person courses   and meets all program and transfer requirements. For more information about SinclairOnline courses, certificates and degrees, visit: ***www.sinclair.edu/online*** or contact us toll free at: (888) 226-2457.

SinclairOnline Registration Policies

Students must complete the free tutorial, How to Succeed in eLearn, before they may register for a SinclairOnline course. Visit: **www.sinclair.edu/hts**

Current or returning Sinclair students must have a 2.0 cumulative grade point average to enroll in a SinclairOnline course. New Sinclair students may register for a SinclairOnline course if they have met all course prerequisites.

Students may register for a SinclairOnline course up to midnight of the second day of the term.

SinclairOnline Testing Information & Academic Integrity

The Sinclair College Honor Code requires all students to uphold the values of social responsibility, citizenship and personal accountability. To support implementation of the Honor Code and to protect the integrity of students' work, some proctored (supervised) testing may be required.

As you schedule your courses, you may notice that some courses require in-person testing, or online testing with proctoring that may require you to purchase or download additional software and/or hardware. Students should read course descriptions and Syllabi thoroughly to determine any testing requirements.

More information is available at ***www.sinclair.edu/locations/online/proctored-testing/***

Wright Path Program Between Sinclair Community College and Wright State University

The Wright Path Program formalizes the partnership between Wright State University and Sinclair Community College and provides a seamless student transfer between the institutions. The objective is to facilitate student entry or reentry into a bachelor's degree program at Wright State University.

Goals of the Wright Path Program include:

- Eliminating barriers for students in attaining their educational goals
- Expanding housing options for all Sinclair Community College students.
- Providing accurate and current academic transfer pathways.
- Improving academic program articulation
- Using resources at both institutions efficiently and effectively

Wright Path students who are using federal financial aid for housing charges contracted with Wright State University must complete an authorization form before federal financial aid can cover those charges.

For more information, visit **www.sinclair.edu/wrightpath** or contact Academic Advising: **academicadvising@sinclair.edu** or (937) 512-3700.

UD Sinclair Academy Between Sinclair Community College and the University of Dayton

Maximize your future by beginning your studies at Sinclair Community College and graduating with a degree from the University of Dayton (UD). The UD Sinclair Academy provides substantial UD benefits for Academy students while at Sinclair, as well as increased levels of merit- and need-based scholarships at UD. The result is a far more integrated 2+2 model and a more accessible UD undergraduate degree.

As incoming first-year students at Sinclair, academy students will have access to:

- A University student ID card and email
- More than 240 student clubs
- Recreation facilities including complimentary RecPlex membership
- Athletic events, including basketball games
- Development of a University of Dayton co-curricular transcript and online e-portfolio
- Student Success coaching from UD during your transition
- Peer mentoring through the Office of Multicultural Affairs
- Speaking with your UD academic advisor for assigned major

For more information, visit: **www.udayton.edu/academy** or contact Academic Advising: **academicadvising@sinclair.edu** or (937) 512-3700.

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

MAP—My Academic Plan

My Academic Plan (MAP) is a prescriptive plan of courses created with an academic advisor, that assists students in meeting their academic goals. The *MAP* uses the curriculum of a student's active academic program and creates a personalized plan that takes into consideration the student's academic and non-academic life.

In order to have a *MAP* created, students should meet with their assigned academic advisor. Once the *MAP* is created and agreed upon by the advisor and the student, it will be made active. In order to stay *On Plan* with their *MAP*, students can access their *MAP* electronically in a number of ways:

- Log into *my.sinclair.edu* and click on the *My Academic Plan (MAP)* icon.
- Ask the academic advisor to email a copy of the *MAP*.

A student with an active *MAP* will have the benefit of an easier time scheduling each term. By logging into the registration portal via the *my.sinclair* portal, students will be presented with the courses for which they and their advisor agreed they should register for that term. This eliminates the need to search through the entire Sinclair catalog for their courses.

Further, if a student has inadvertently registered for the wrong course or failed to register for agreed upon courses, they will receive notification that they are *Off Plan* and should contact their advisor to modify their plan or make corrections. All of these features assist a student in meeting their academic goals in a timely and personalized fashion.

My Schedule

My Schedule provides students with their course schedule for a specific term that can be viewed in weekly or daily format. *My Booklist* provides students with a list of books required or recommended for their course section as well as the ISBNs and prices for each book. This book list provides a direct link to add books to the electronic bookstore shopping cart at *eCampus*. To use these tools, log into *my.sinclair.edu*, click on the registration portal, and select My Schedule or *My Booklist* on the left side of the page.

Students can also access their schedule by logging into *my.sinclair.edu*, selecting the Term Statement on the student finance portlet, and clicking View Statement.

> Students are encouraged to compare their *MAP* with their Program Evaluation in WebAdvisor to ensure that they are making appropriate progress toward completion of their desired degree or certificate.

Tuition and Fees (per credit hour)*

Fees current as of Fall 2022. For current tuition rates see **www.sinclair.edu/services/bursar** or call (937) 512-3000.

Per Credit Hour Fees	Montgomery County Residents	Other Ohio Residents	Out-of State and International Students
Tuition & Fees	$136.03	$136.03	$136.03
Out-of-County Surcharge	---	$47.25	---
Out-of-State Surcharge	---	---	$203.37
Per Credit Hour	$136.03	$183.28	$339.40

* Tuition and fees of $133.03 per credit hour includes an Instructional Fee of $114.78, General and Technology Fee of $14.25, and Career Services Fee of $7.00

Sinclair is one of the very few community colleges in Ohio that has the distinction of being funded by a local county levy. The Montgomery County tax levy provides tuition discounts for students who live inside Montgomery County. Per State law, only Montgomery County students are eligible for this lower rate.

Additional Fees

Fee Names	Fee Amount
Course, lab, and program fees	Varies, dependent on individual course or program to help defray costs in selected courses that are expensive to offer or have pass-through costs paid to a third-party provider.
Registration Fee for first-time registrants	$20.00
Auxiliary Services Fee (per semester)	$85.00
Online (WWW) Course Fee	$7.50 per credit hour (extra fee beyond tuition)
Transcripts (Each)	$5.00
Transcripts (Same Day Services)	$10.00
Returned Check Fee	$25.00

Cost of Attendance or Budget

The cost of attendance or budget is the average amount a student pays to attend a college or university. This amount includes direct expenses such as tuition, fees and books and indirect expenses such as supplies, transportation and personal expenses. A student attending Sinclair is only required to pay the direct expenses on his or her student accounts. The table to the right is an example based on the 2022-2023 full-time (12 credit hour per semester) tuition and fees for Montgomery County residents.

Out of county surcharge for two semesters (9 months) $1,128

Out of state surcharge for two semesters (9 months) $4,872

BUDGET A/Off-Campus with Parent(s) Fall and Spring semesters	Montgomery County/Two Semesters (9 months)
Tuition, Fees and Lab Fees	$3,264
Books and Supplies	$720
Transportation	$1,840
Room and Board	$2,520
Personal and Other*	$2,403
TOTAL	**$10,747**
BUDGET B/Off-Campus without Parent(s) Fall and Spring semesters	**Montgomery County/ Two Semesters (9 months)**
Tuition, Fees and Lab Fees	$3,264
Books and Supplies	$720
Transportation	$1,840
Room and Board	$5,994
Personal and Other*	$2,403
TOTAL	**$14,221**

* This figure increases by $50 for students that accept a Federal Direct Loan to account for the fees associated with those loans

Apply for Financial Aid

Complete the Free Application for Federal Student Aid (FAFSA) each year by visiting **studentaid.gov** or by using myStudentAid mobile app. Students submitting a FAFSA for the first time or who last applied before May 2015 must electronically sign the FAFSA. Financial aid offers are determined by the information provided on the FAFSA.

The following documents are needed to complete the 2022-2023 FAFSA:

Dependent Students:

- Student's 2020 IRS Form 1040, including all schedules;
- Student's 2020 W2(s);
- Student's 2020 Untaxed income received;
- Student's social security number, driver's license/state ID number;
- Student's FSA ID and password (if FAFSA previously completed);
- Parent(s)/Step-parent 2020 IRS Form 1040, including all schedules;
- Parent(s)/Step-parent 2020 W2(s);
- Parent(s)/Step-parent 2020 Untaxed income received (child support, workers' compensation, etc.);
- Parent(s)/Step-parent social security number(s), birth date(s), marital status and date of marriage;
- Parent(s)/Step-parent FSA ID and password (if FAFSA previously completed).

Independent Students:

- Student/Spouse (if married) 2020 IRS Form 1040, including all schedules;
- Student/Spouse (if married) 2020 W2s;
- Student/Spouse (if married) 2020 Untaxed income received (child support, workers' compensation, disability benefits, etc.).

When should I apply? Apply as early as possible each year. The FAFSA is available on October 1 for the following academic year. March 1 is the annual priority date established by Sinclair. If students submit the FAFSA after the priority date, they may be required to pay up-front for tuition and books. If students receive a financial aid offer after they have paid tuition, Sinclair can arrange for students to be reimbursed up to the amount of the award.

Some scholarships will require additional applications, available online or from the Financial Aid & Scholarships office. The office also offers scholarship applications online at **www.sinclair.edu/scholarships**. The dates for these applications are as follows:

> **Fall Term** scholarship applications are available from **June 1 to June 30**
>
> **Spring Term** scholarship applications are available from **November 1 to November 30**
>
> **Summer Term** scholarship applications are available from **March 1 to March 31**

The financial aid process can take four to six weeks to complete, depending on individual circumstances and the student's response to Sinclair's request for verification documents. Please plan accordingly.

Results of Financial Aid Application

If otherwise eligible for federal financial aid, Financial Aid Offers are sent to the Sinclair student email accounts beginning in March for courses beginning in Fall 2022. The following offers must be accepted before funds will be available:

- Federal Direct Loans
- Federal Work Study

Visit your Financial Aid Portal to review your awards. If your award package includes Federal Direct Loans, you may accept or decline them here. If you accept loans, visit studentaid.gov to complete your loan requirements.

New student loan borrowers must complete Entrance Counseling before receiving a Federal Direct Loan. New student and parent Federal Direct Loan borrowers must complete a Loan Agreement (MPN) prior to receiving a Federal Direct Loan, which is valid for 10 years.

Payment of Aid: Students' financial aid will first be credited toward payment of tuition and fees, and then for books. Look for the amount of aid on your term statement after you have registered for classes each term.

First-year (less than 30 credit hours), first-time borrowers are subject to a 30-day waiting period after the start of the semester, before their loans will be disbursed. Information regarding the frequency of disbursements, including dates, is available online at: **www.sinclair.edu/services/welcome-center/finaid**

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Federal Financial Aid

NAME OF AID	TYPE OF AID	COLLEGE EXPENSES COVERED	ANNUAL LIMITS	SPECIAL REQUIREMENTS
Federal Pell Grant	Grant	Tuition; fees; books; educational expenses	Maximum of $6,895; award amount based on need and determined by EFC	Student may not have a bachelor's or advanced degree *Subject to lifetime limits
Federal Supplemental Educational Opportunity Grant (FSEOG)	Grant	Tuition; fees; books; educational expenses	Limits based on availability of funds	Student may not have a bachelor's or advanced degree Have exceptional need Must qualify for the Federal Pell Grant
Federal Work Study	Work	Educational expenses	Award amount based on need and determined by Sinclair Financial Aid after reviewing other aid student received	Enroll in at least 6 credit hours Have unmet financial need
Federal Direct Subsidized and Unsubsidized Loans	Loan	Tuition; fees; books; educational expenses	Dependent: $5,500 - No more than $3,500 may be in subsidized loans; 2nd year dependent limit $6,500 with no more than $4,500 in subsidized 3rd and 4th year dependent limit for students in a Bachelors program $7,500 with no more than $5,500 in subsidized Independent: $9,500 - No more than $3,500 may be in subsidized loans; 2nd year independent limit $10,500 with no more than $4,500 in subsidized 3rd and 4th year independent limit for students in a Bachelors program $11,500 with no more than $5,500 in subsidized Actual award amounts based on Cost of Attendance and subsidized portions determined by EFC All students are awarded to dependent student loan limits. Students who are eligible for independent loan amounts can request additional loan amounts if Cost of Attendance allows.	Enroll in at least 6 credit hours Must complete online entrance counseling and Loan Agreement (MPN) **Subject to lifetime limits
***Federal Parent PLUS Loan (Dependent Students Only)	Loan	Tuition; fees; books; educational expenses	Parents may borrow up to the Cost of Attendance less any other aid	Enroll in at least 6 credit hours Must complete online parent loan application and Loan Agreement (MPN)

A student can receive the Pell Grant only up to 12 full time semesters or the equivalent.

** Lifetime Direct Loan Limits: Dependent - $31,000 with no more than $23,000 in subsidized; Independent - $57,500 with no more than $23,000 in subsidized.*

*** Dependent students whose parents are unable to obtain a PLUS Loan may be eligible for additional Federal Direct Unsubsidized Loans. Special loan counseling is required for qualifying PLUS loan applicants who have adverse credit history as defined by the regulations. Educational expenses include books, supplies, equipment, dependent child care expenses, transportation and computer rental/purchase.*

All students using federal aid are subject to federal aid guidelines. The most up to date policies are available at **www.sinclair.edu/services/welcome-center/finaid**

All federal loans must be repaid. Repayment begins six (6) months after a student's enrollment drops below six (6) credit hours, including students attending part-time, graduating, and withdrawing. Additional information regarding loan repayment and required exit counseling is available at: **www.sinclair.edu/services/welcome-center/finaid**

Important Note: Federal Aid received at another institution may affect the amount of aid a student is eligible for at Sinclair and it is the responsibility of the student to only accept aid for which he or she is eligible with regard to annual limits. Students should contact the Financial Aid & Scholarships office with any questions concerning aid amounts and eligibility.

Financial Aid Student Attendance Policy

Federal regulations and Sinclair policy requires the Financial Aid & Scholarships office to verify that students establish attendance through academic engagement during the first 14 days of the following terms to receive federal financial aid:

- Full-term
- A Term
- 12-Week Term
- B Term

Attendance is verified for flex sections by the final grade earned for that course. Flex sections are defined as sections that are not full-term, A, B, C or D terms or the 12-Week term. Unearned grades are a grade of "Z" which equates to a student never attending, "W", and a "U" or "F" with a last date of attendance.

Sinclair allows instructors to establish an academic attendance policy for each course they teach, which may be different from the Financial Aid Student Attendance Policy. Federal student aid is based on the Financial Aid Student Attendance Policy even if the academic attendance policy reports a different result.

Federal financial aid may be adjusted for students who have not established attendance in a course or all courses through the first 14 days of the class, or in accordance with the provision for extenuating circumstances described below. Students reported as non-attending are typically not withdrawn from the course.

Academic Engagement

The following examples of academic engagement may constitute course attendance; however, this is not an exhaustive list:

- Attending a synchronous class, lecture, recitation, or field or laboratory activity, physically or online, where there is an opportunity for interaction between the instructor and students. A synchronous course is an online or distance education course that happens in real time, often with a set class schedule and required login times;
- Submitting an academic assignment;
- Taking an assessment or an exam;
- Participating in an interactive tutorial, webinar, or other interactive computer-assisted instruction;
- Participating in a study group, group project, or an online discussion that is assigned by the institution; or
- Interacting with an instructor about academic matters.

Academic engagement does not include activities where a student may be present but not academically engaged, such as:

- Logging into an online class or tutorial without any further participation; or
- Participating in academic counseling or advisement.

Students may want to review the Academic Attendance Policy and the Attendance Policy for Online or Blended Courses.

Attendance Appeals

If a student was reported as non-attending in error, it is the student's responsibility to request their instructor to submit an electronic attendance appeal to the Financial Aid & Scholarships office. In a case where the student attended the wrong section of a class, the instructor with whom the student established attendance must submit an attendance appeal form with the date the student established attendance in his/her section. The instructor of the correct section must also submit an attendance appeal with the date the student established attendance in his/her section. The electronic appeal form is available to instructors on Forms Central, accessed through the Sinclair portal.

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Students Who Attended Within the First 14 Days of the Course

The instructor submits the appeal with the first date the student attended the course. The Financial Aid & Scholarships office reviews the student's financial aid award based on the date the instructor reported the student first attended the course.

Students Who Did Not Attend Within the First 14 Days of the Course

The instructor submits the appeal with the first date the student attended the course and enters a brief explanation of his/her knowledge of the student's circumstance. The Financial Aid & Scholarships office notifies the student of the next steps via Sinclair email (See Extenuating Circumstances section for examples of acceptable documentation).

Extenuating Circumstances

The Financial Aid & Scholarships office considers the following extenuating circumstances to allow students to establish attendance after the 14th day of the course. The documentation provided must correspond to the attendance taking period for which the student is submitting the appeal:

- Severe illness preventing him or her from attending all classes during the first 14 days of the course and he or she provided documentation from a medical doctor or hospital, and a financial aid staff member agrees that attendance in the first 14 days of the course was not possible, or;
- Death of a close family member and provides a copy of the death certificate or obituary referencing the student's name in relationship to the deceased, or;
- Campus closure (inclement weather or an act of God) causing the student to miss classes, and in addition, the student documents the extenuating circumstances preventing him or her from establishing attendance during the remainder of the 14 day period, or;
- Attended the wrong section of the course or changed sections but established attendance during the first 14 days of the course in that section as evidenced by the instructor for that course, even though the student was not registered in that course at the time attendance was verified, or;
- The instructor ceased teaching the course or is no longer available to submit the attendance appeal form (for example due to death, medical illness or disability, relocating out of state, etc.) and the student has been regularly attending the courses, or;
- Documented extenuating circumstances that a financial aid staff member determines through the use of professional judgment.

Technology Errors

If a technical error occurs during the attendance reporting submission or college error prevented accurate attendance reporting, attendance verification may be updated without an attendance appeal if the instructor provides the course roster and documentation of the error to the Financial Aid & Scholarships office. The director of Financial Aid & Scholarships determines if an attendance appeal exception can be approved.

Appeal Review Timeline

Appeal decisions can take up to 10 business days. Students are notified of the appeal decision through their Sinclair email account All appeal decisions are final. Attendance Appeals for Fall and Spring Semesters must be submitted within 30 days after the end of the term for which they are appealing. Attendance Appeals for Summer must be submitted within 15 days after the semester ends. Note: Processing deadlines may impact Federal Direct Loan eligibility for students with appeals approved after the semester ends. Contact the Financial Aid & Scholarships office for more information.

Reporting Earned Grades

Students who earned grades in a course previously reported by the instructor as non-attending may contact the Financial Aid & Scholarships office within 30 days after the semester ends to review federal aid eligibility for the completed course. Students must report grades earned for courses completed during Summer Semester to the Financial Aid & Scholarships office within 15 days after the semester ends. Note: Processing deadlines may impact Federal Direct Loan eligibility for students with appeals approved after the semester ends. Contact the Financial Aid & Scholarships office for more information.

Financial Aid Repeat Coursework Policy

Students may receive federal financial aid funding for one (1) repetition of a course successfully completed. The repeated class may be counted towards a student's enrollment status and the student may be awarded Title IV aid for the enrollment status based on the inclusion of the class.

Grades of A, B, C, D, Y, P and S are considered course credit hours successfully completed.

Grades of W, F, U, I, IP, N and Z are considered course credit hours not successfully completed.

Students should be aware that for *Satisfactory Academic Progress*, all coursework attempted counts toward GPA, PACE of completion and maximum timeframe hours used to determine eligibility for federal financial aid. To see the Satisfactory Academic Progress Policy, you may visit: **www.sinclair.edu/satisfactory-academic-progress**

Students taking repeated courses should consult with the Financial Aid & Scholarships office prior to registration to ensure repeated courses are counted appropriately for financial aid eligibility. In addition, a student may need to provide documentation from the department chairperson of their valid active program regarding the need to repeat courses.

A possible exception exists for coursework with the same department name, course number and title but whose content varies by term and is required to complete the student's current active program. All exceptions will require the student to complete and submit a Repeat Coursework Appeal, which is available online at www.sinclair.edu/finaid or any Sinclair location.

Examples of repeated coursework include the following scenarios::

A. A student is enrolled in 12 credit hours which includes a 3 credit hour course that the student passed and is repeating. The student withdraws from the course before the last day to withdraw with a full refund (withdrawals without record). The next term, the student is again registered for 12 credit hours and repeats the same 3 credit course. Twelve credits will count for financial aid eligibility.

B. A student is enrolled in 15 credit hours, which includes a 3 credit hour course that the student previously passed and is repeating. The student is enrolled in a minimum of 12 credit hours which are not repeats, therefore, student's financial aid eligibility will not be impacted by the repeated course.

C. A student is enrolled in 15 credit hours which includes 3 credits repeating a course not yet passed. Since the student has never passed the course, the student's financial aid eligibility is not impacted by the repeat.

D. A student is registered for 12 credit hours which includes a 3 credit hour course that has been previously taken two times with grades of D and F respectively. Since the student has already taken the course one time since it was passed, he cannot receive federal aid for the second repeat of the course even though an F was earned. Only 9 credits will count for financial aid eligibility.

Remedial Coursework Policy (Effective Summer 2016)

Remedial coursework prepares a student for study at the postsecondary level. According to Federal regulations, a student may receive Federal financial aid for up to 30 credit hours of remedial coursework. Remedial coursework includes most DEV (with the exception of those listed below), ACA, BIT, and EXL courses. Remedial coursework also includes prerequisite courses that are not required for a student's program of study, for example MAT 0200. A course will be excluded from the determination of a student's Federal financial aid if the total remedial credit hours, with the course included, exceeds 30 credit hours.

Remedial coursework content must be at least high school level. If a remedial course's content is below the high school level, the course cannot be included to determine federal financial aid eligibility, and will not count toward the 30 credit hour remedial coursework limit because it does not meet the definition of remedial. At Sinclair, MAT 0050 (formerly DEV 0020) is the only course that does not meet content standards.

Financial Aid Add/Drop Census Date Policy—Dropping, Adding, or Withdrawing from Courses

Typically, the initial calculation of Federal Pell Grants are prepared based on anticipated full-time enrollment each term. Sinclair recalculates Federal Pell Grant awards based on attendance and/or schedule adjustments up to the student census date. After the student census date, a student's Federal Pell Grant will not be adjusted for drops or adds even if the student has been attending class. However, if the student fails to complete all of his or her scheduled courses in the term, a Return of Title IV Funds calculation is required, and an adjustment may be made by Sinclair.

Federal Pell Grant awards will be based on the number of credit hours in which a student is enrolled as of the student census date. If a student withdraws from or drops all of his or her courses on the same date, then the student census date will be the latest census date for the course(s) they dropped with record. Students are strongly encouraged to finalize their course schedule no later than the start of the term.

DEFINITIONS	
Add	A course added by the student to his or her schedule.
Drop	A course dropped by the student from his or her schedule on or before the course census date. No grade will be issued for the dropped course. The course will not be part of the student's academic record (**a drop without record**).
Withdrawal	A course dropped by the student from his or her schedule after the course census date. A grade of "W" (withdrawal) will be issued for the course. The course will be part of the student's academic record (**a drop with record**).
Purged	The process used by the school to remove courses from a student's schedule for non-payment of tuition and fees.
Cancelled	A course removed by the school due to cancellation (e.g.—due to low course enrollment)
Course Census Date	The last date to add a course or drop a course with the possibility of a refund and without record. See the Sinclair Community College Registration Calendar for specific dates for a given academic year.
Student Census Date	The latest course census date for all of the student's registered courses for a specific term. For example, in the Fall term a student has a full-term course (census date is Aug. 31), an A term course (census date is Aug. 28), and a B term course (census date is October 23 which is the latest starting course). The student census date is October 23. All adds or drops that occur on or before October 23, will be considered when determining the student's enrollment level and the amount of federal financial aid the student will receive.

Enrollment Levels	Level	Credit Hours
	Full Time	12 or more
	Three-Quarter Time	9 – 11
	Half-Time	6 – 8
	Less Than Half-Time	1 – 5

| Credit Hours Included or Not Included in Determining Enrollment Levels for Federal Financial Aid | | | | | |
| Pell Grant | | | Federal Loans | | |
Student Enrollment Activity	Before Course Census Date	After Course Census Date but Before Student Census	After Student Census Date	Before Loan Disbursed to Student Account	After Loan Disbursed to Student Account
Add	Included	Included	Not included	Disbursement allowed if at least 6 Title IV credit hours	NA – if the activity occurred after the federal loan was disbursed, no adjustment is made.
Drop without record (Drop)	Not included	NA – cannot drop without record after the course census date	NA – cannot drop without record after the course census date	Disbursement not allowed if at least 6 Title IV credit hours after excluding the dropped hours.	NA – if the activity occurred after the federal loan was disbursed, no adjustment is made.
Drop with record (Withdrawal)	NA -cannot drop with record before the course census date	Not included	Included	Disbursement not allowed if at least 6 Title IV credit hours after excluding the dropped hours.	NA – if the activity occurred after the federal loan was disbursed, no adjustment is made.
Purged	Not included	Not included	Included	Disbursement not allowed if at least 6 Title IV credit hours after excluding the dropped hours.	NA – if the activity occurred after the federal loan was disbursed, no adjustment is made.

Communication with Financial Aid & Scholarships Office

The Financial Aid & Scholarships office at Sinclair helps students meet their educational expenses. Sinclair will make every effort to help students meet the difference between college costs and the amount the family is able to pay. All aid offers are made on a non-discriminatory basis.

1. The Financial Aid & Scholarships office communicates with students about their FAFSA application status through their sinclair.edu student email account. When the student's financial aid offer has been determined, an aid offer notification will be sent via email. Students should check their **sinclair.edu email** and **Financial Aid Portal** information regularly.

2. **Questions**—For information, call, write, or personally visit the office:

- Call Sinclair's Welcome Center: (937) 512-3000 or (800) 315-3000

- Email welcomecenter@sinclair.edu. All email messages sent to welcomecenter@sinclair.edu must be sent from a student's sinclair.edu email account.

- Send a letter to: Financial Aid & Scholarships, Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460.

- Visit the Dayton Campus Welcome Center, Building 10, First Floor, to speak with a Welcome Center representative

- Students can also visit a Sinclair regional location for assistance

   Note: No information regarding student's financial aid records will be provided to anyone but the student without the student's written permission. See a financial aid representative at any campus location to complete the Authorization for the Release of Student Information (FERPA Release).

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2022 - 2023

Satisfactory Academic Progress (SAP) Policy

Process Overview and Responsibilities

Federal regulations require students receiving federal student financial aid to maintain satisfactory academic progress (SAP) toward the completion of a federal aid eligible program. The following sources of federal student aid may be awarded, if a student qualifies:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant
- Federal Work Study
- Federal Direct Loan (subsidized and unsubsidized)
- Federal Direct PLUS Loan (parents of dependent students only)

The Financial Aid SAP Policy evaluates qualitative and quantitative components to determine federal financial aid eligibility at the end of each semester. Failure to meet both requirements results in financial aid warning status for the following semester of enrollment, if the SAP status was satisfactory in the prior semester of enrollment. If the student does not meet the SAP requirements after the warning semester, federal aid is suspended for subsequent semesters. The student may appeal for reconsideration if an extenuating circumstance prevented successful completion of the semesters in which the requirements were not met.

Qualitative Measure

Students must maintain a fixed, cumulative GPA of at least 2.0 when the SAP evaluation is completed after each semester of enrollment. The financial aid GPA is computed by dividing the total number of grade points by the total credit hours in which grades were earned at Sinclair.

The GPA calculation is based on grades reported by faculty to the Registration & Student Records office. Financial Aid staff initiate the SAP evaluation each semester, which systematically determines if the GPA requirement is met.

Quantitative Measure

Maximum Timeframe (MTF) and Pace of Completion (Pace) are the quantitative measures used to evaluate students' progress through their program of study. The MTF component requires students to complete their active program of study within 150% of the published program credit hours. The Pace component requires students to receive a passing grade in 66.67% of the total credit hours attempted to ensure students will complete within the maximum timeframe established for their program.

Maximum Time Frame (MTF)

Students must not attempt 150% of the published credit hours required for their program of study. Maximum Timeframe is calculated by multiplying the published program credit hours by 150%. Students with unsatisfactory SAP status due to maximum timeframe are ineligible for financial aid warning, although financial aid probation status may be assigned if the student successfully appeals.

Pace

Students must receive a passing grade in 66.67% of the total credit hours attempted to ensure program completion within 150% of the published program credit hours (MTF). The Pace component is evaluated at the end of each semester by dividing the completed credit hours by the total number of attempted credit hours. The Pace component evaluates the percentage, not the number, of successfully completed classes, which allows students flexibility in their enrollment statuses.

Categories of Students

The Financial Aid SAP Policy applies consistently to all categories of students who have a FAFSA on file, regardless of enrollment status, program of study, or any other category of student.

Evaluation Periods

The Financial Aid SAP Standards are evaluated at the end of each payment period (Fall, Spring, Summer Semesters) for students who were enrolled for the semester and for whom Sinclair has received a FAFSA.

Note: An intersession course is combined with the following payment period. Credit hours attempted during intersessions are included in following payment period's SAP evaluation.

Students may be reviewed outside of the evaluation period on a case-by-case basis as determined by a Financial Aid Officer or Director. For instance, students on financial aid probation and identified as not meeting academic plan requirements before the end of semester evaluation are notified of their option to appeal. Any such evaluation does not replace the official end of term evaluation completed for all applicable students.

Financial Aid SAP vs. Academic Progress Policy

Sinclair's Financial Aid SAP Policy and Academic Progress Policy each require students maintain a cumulative 2.0 Grade Point Average (GPA). The Academic Progress Policy applies to all students, including non-federal financial aid recipients, to ensure students meet the required 2.0 graduation requirement upon program completion.

The Financial Aid SAP Policy evaluates quantitative measures (pace of completion and maximum timeframe) to ensure students can graduate within the maximum number of credit hours required for their program of study. The Academic Progress Policy does not evaluate quantitative measures to determine satisfactory academic progress. Additionally, the Financial Aid SAP Policy imposes stricter consequences for failing to meet the requirements (see below). Therefore, the Financial Aid SAP Policy is stricter than the Academic Progress Policy.

Evaluation Period	GPA Requirement	Financial Aid SAP Policy	Federal Aid Eligible	Academic Progress Policy	Academic Eligible to Enroll
Semester 1	2.0	Warning	Yes	Academic Intervention	Yes
Semester 2	2.0	Suspended	No	Academic Probation	Yes
Semester 3	2.0			Academic Dismissal	No

SAP Status Notification

Students are emailed when their financial aid eligibility has changed due to the end of term SAP review. The notification is sent to their Sinclair.edu email account by the Friday after the last date of the semester.

Financial Aid Warning

Financial Aid Warning status is assigned for one semester of enrollment following an unsuccessful GPA and/or Pace evaluation. This status may be assigned if a student's prior SAP status was Financial Aid Satisfactory (or its equivalent).

The student must meet the minimum cumulative GPA and/or Pace requirements at the end of semester evaluation for the warning semester to continue federal financial aid eligibility. If the requirements are not met, the student's federal financial aid is denied until regaining eligibility by meeting the requirements through completed coursework, or by successfully appealing for reconsideration of federal financial aid eligibility.

There is no limit to the number of times a student may be placed on a Financial Aid Warning status. However, no Financial Aid Warning status may be assigned to consecutive terms of enrollment, i.e., the student must be in a Financial Aid Satisfactory status (or its equivalent) the term prior to being assigned to a Financial Aid Warning status.

There is no Financial Aid Warning status for MTF status. Students receive an alert when 24 credit hours of eligibility remain and again when 12 credit hours remain for maximum credit hours attempted.

SAP Appeal Process

Students may appeal federal financial aid suspension if extenuating circumstances prevented academic progress during the semester(s) of unsatisfactory SAP status. Students who are not meeting SAP after the end of term evaluation are notified of their financial aid suspension and the appeal process via Sinclair email.

The SAP appeal must be submitted to the Financial Aid & Scholarships office for review by the SAP Appeal Review Committee. The appeal must include the items listed below for initial consideration. Incomplete appeals will be rejected. The SAP Appeal Review Committee may request additional documentation or clarification if the documentation provided does not support the timeline or circumstances of the appeal.

SAP Appeal Requirements

- SAP Appeal Form

  o Submit SAP Appeal form through FA Online forms

- Personal statement addressing the extenuating circumstances that contributed to unsatisfactory academic progress during the corresponding semester(s) in which GPA/Pace requirements were not met.

- Statement addressing how circumstances have changed to achieve satisfactory academic progress in the future.

- Third party statements must be unbiased documentation of the extenuating circumstances by a party associated with the extenuating circumstance. Letters from individuals must be signed, and professional statements must be signed on company letterhead.

  o Extenuating circumstances include, but are not limited to, illness, accident, grievous personal loss, employment change or relocation, or other circumstances beyond the student's control. The following are examples of third-party documentation:

    - Obituaries or death certificates

    - Physician statements verifying extenuating circumstance described in the student's statement

    - Written statement from college staff supporting the student's statement

  o Extenuating circumstances do not include, for example, a dislike of an instructor or mode of instruction or a circumstance for which a previous appeal was approved.

- Academic Plan Calculation Form

  o Contact your Academic Advisor to initiate this form. Both the student and Academic Advisor must electronically sign the form to confirm and acknowledge how many credit hours away from certificate/ degree completion the student is. This must be uploaded with the appeal and is used to create the academic plan used for probationary period, if appeal is approved.

SAP Appeal Decision Notification

Appeal decisions are sent via Sinclair.edu email typically within 7-10 days after the appeal is submitted, if the Review Committee was able to make a determination.

Financial Aid Probation Status

Financial Aid Probation status is assigned when a student successfully appeals a Financial Aid Unsatisfactory or Financial Aid Maximum Time Frame status. The student is assigned an academic plan that defines the requirements to maintain federal aid eligibility for each semester of enrollment. If the academic plan requirements are not met, the student's federal aid is denied until either regaining eligibility by meeting the requirements through completed coursework (GPA and Pace only), or by successfully appealing for reconsideration of federal financial aid eligibility.

Academic Plans

The Academic Advisor and student develop the academic plan to define the probationary period for each student. Successful completion of the academic plan results in program completion or Financial Aid Satisfactory status and continued aid eligibility.

Failure to meet the academic plan results in federal financial aid suspension for future semesters (Financial Aid Unsatisfactory or Financial Aid Maximum Time Frame status). A student may file a SAP appeal to regain federal aid eligibility. The SAP appeal may be approved if the student documents extenuating circumstances during the probationary semester. These must be different than the extenuating circumstance from previous semesters.

Academic Plan Calculation

Students with an approved appeal are placed on a Financial Aid Academic Plan as a condition of Financial Aid Probation. This plan is calculated based on remaining credit hours for the active program completion, which the academic advisor certifies on the Financial Aid Academic Plan Calculation Form and the student submits with the SAP appeal. Financial aid staff evaluates the program and cumulative GPA to determine if institutional graduation requirements can be achieved within the remaining program credit hours.

The academic plan includes the required GPA and Pace for each semester of enrollment to maintain federal financial aid eligibility. The academic plan states the first semester of federal aid eligibility authorized by the approved appeal, and each subsequent semester. The active program of study for which the appeal was approved is the only program authorized by the academic plan. If a student on financial aid probation changes programs, federal financial aid is suspended at the end of semester evaluation. The student may re-appeal based on the new program of study.

Revised Academic Plans

A revised Financial Aid Academic Plan Calculation Form may be submitted due to change in required courses or other necessary changes, such as admission to a limited enrollment Health Sciences Associate's Degree program. This must be completed and signed by the academic advisor and student. Revised calculation forms are reviewed by Financial Aid Officers, and are reviewed on a case-by-case basis. It's possible some revisions could result in suspension at the end of semester evaluation.

Academic Plan Notification

The financial aid academic plan is sent via **Sinclair.edu email** and U.S. Mail.

Regaining Eligibility

Students who are ineligible to receive federal financial aid due to unsatisfactory SAP status and did not file a successful appeal will be evaluated at the end of the next semester of enrollment if Sinclair has received a FAFSA for the corresponding award year. If the cumulative SAP requirements are met, federal financial aid eligibility will be reinstated. Federal financial aid cannot be paid retroactively for a semester during which a student was ineligible to receive federal financial aid.

There is no limit to the number of appeals a student may submit; however, if choosing to re-appeal a previously rejected appeal, documentation not included in prior appeals is necessary for reconsideration, and approval is not guaranteed. For example, documentation of successful completion of college level courses since the previous rejection could be submitted to demonstrate academic progress.

If a student has had three or more approved SAP appeals, a director may review future appeals and may require a meeting between the student and their academic advisor to discuss terms of FA probation.

Treatment of Nonpunitive Grades, Repeated Courses, Audited Courses, Pass/Fail Courses, Withdrawals, and Incompletes

Grade Definitions and Treatment in SAP Calculation

Institutional credit hours include college level, developmental (DEV, ACA, and EXL subject codes), and English as a Second Language (ESL subject code).

Grades	GPA	Attempted	Completed	Testing/Other Grades	GPA	Attempted	Completed
A - Excellent	Y	Y	Y	Y - Proficiency Credit	N	Y	Y
B - Good	Y	Y	Y	AA - Articulation Agreement	N	Y	Y
C - Average	Y	Y	Y	AP - Advanced Placement	N	Y	Y
D - Passing	Y	Y	Y	CL (CLEP)	N	Y	Y
F - Failure	Y	Y	N	CT - Career Tech Credit Transfer	N	Y	Y
S - Satisfactory	Y	Y	Y	DS - (DSST)	N	Y	Y
P - Pass	Y	Y	Y	WC - WEBCAPE	N	Y	Y
U - Unsatisfactory	Y	Y	N	- A, B, C, D, P and S followed by ":" are fresh start courses and calculated in the quantitative/qualitative SAP components the same as the grade preceding the ":". - A, B, C, D, and P followed by a "#" are grades earned through proficiency testing and calculated in the quantitative/qualitative SAP components the same as the grade preceding the "#". - SAP is calculated using a 2.0 GPA for grades of S and P. - SAP is calculated using a 0.0 GPA for grades of U and N.		
Z - Nonattendance	Y	Y	N			
I - Incomplete	N	Y	N			
W - Withdrawal	N	Y	N			
N - Progress	N	Y	N			
X - Audit	N	N	N			
IP - In Progress	N	Y	N			
-- No grade assigned	Y	Y	N			

Transfer Credit

Transfer credit hours accepted from other institutions are included in the attempted credit hours calculation for Pace and MTF, but not in cumulative GPA.

Repeat Coursework

All course attempts are calculated in the pace of completion and maximum timeframe. The financial aid SAP policy abides by the College's academic policy regarding the treatment of repeated courses and the replacement of grades in the calculation of the cumulative GPA.

Dropped Courses

Attempted credits include all courses in which a student remains enrolled beyond the last day of the add/drop period of the course, whether or not the student began attending. Courses in which the student drops after the add/drop period are given a grade of "W".

*COVID-19 "W" Grade Exception: Credit hours for courses dropped with a grade of "W" and with the COVID-19 drop reason selected are excluded from all SAP components. Refer to the COVID-19 Catalog policy to view all policies related to the COVID-19 pandemic.

Fresh Start

The College's academic amnesty policy is superseded by the Financial Aid Satisfactory Academic Progress policy when calculating a SAP status to determine financial aid eligibility.

Treatment of Remedial and English as a Second Language Courses

Remedial (Developmental) and English as a Second Language (ESL) courses are included in attempted and completed hours in the Pace and MTF end of semester SAP evaluations. If a grade of pass or fail is received in a remedial or ESL course, a passing grade is calculated as a 2.0 in the financial aid GPA and a failing grade is calculated as zero.

Treatment of Consortium, Change of Major, Second Degree, and Second Major Courses

Consortium Agreement Grades

Grades received through a consortium or contractual agreements are not included in the end of term GPA calculation. Consortium grades are included in the Pace and MTF end of term SAP calculations as attempted and completed credit hours, if a passing grade was earned.

Single Program of Study Requirements

Students may not be enrolled in multiple academic programs concurrently to register for classes. If the student was granted an exception to this policy and has more than one active program of study, the active, highest-credential program with the most recent start date will be evaluated for satisfactory academic progress. The SAP standards will include all Sinclair credits and grades and transfer credits.

A student must be enrolled in a federal financial aid eligible program before the GPA, Pace or MTF SAP calculation occurs. The student is assigned a SAP status of ineligible program (or IEP) until an eligible program is declared. Federal aid ineligible programs include, but are not limited to, Ohio Transfer 36, SCC Graduate, and non-degree programs with program code ending in ND. Additionally, many certificates are ineligible until approved by the U.S. Department of Education, and some programs are permanently ineligible for federal financial aid. Students should contact an Academic Advisor for information on program federal aid eligibility.

Second Degree or Certificate

Second or subsequent degrees or certificates after graduating from a Sinclair program are permitted under the Financial Aid SAP Policy, but are subject to the SAP evaluation requirements. There is no limit to the number of programs a student may complete, and receive federal financial aid, if eligible. If federal aid is suspended due to the SAP evaluation, the student has the option to appeal as described in the Financial Aid SAP Policy.

Change of Major

Changes of major are permitted as long as the student meets the SAP evaluation requirements. Students who have changed their major and federal aid subsequently suspended may appeal in accordance with the SAP Appeal Policy. If the student is on financial aid probation and later changes their major, this may result in federal financial aid suspension at the end of term evaluation.

The Financial Aid SAP Policy reviewed by the Financial Aid & Scholarships leadership staff and approved by the director of Financial Aid & Scholarships at least annually. The online catalog and website policies are updated if policy changes occur after the annual review. In addition to the Sinclair Online Course Catalog, students may also access the SAP Policy on Sinclair's Financial Aid & Scholarships website, or obtain a copy in person at the Financial Aid & Scholarships office located in Dayton Campus Welcome Center, Building 10, First Floor.

Scholarships

Sinclair Community College offers a variety of scholarship opportunities for students.

Sinclair's institutional scholarships include need-based and merit-based awards to new and currently enrolled students ranging from $100—$5,000 per year. Typically, students must have at least a 2.0 cumulative GPA; for the first semester, the GPA requirement is waived for new students. Students may be eligible for more than one institutional scholarship per academic year.

Competitive scholarships are also available to students on a departmental basis. Students should contact their department to determine if scholarships are offered for their department.

High School Merit Scholarships—These scholarships are offered each year to high school seniors planning to enroll at Sinclair in the Fall semester after graduation. They range in amount from $2,000-$3,000 per year and include the following awards for Montgomery County residents: Presidential Scholarship (3.5 minimum high school GPA required) and the Virginia McNeal Scholarship (3.0 minimum high school GPA required). A Regional Scholarship is offered to non-Montgomery County residents (3.0 minimum high school GPA required). Further information regarding those scholarships can be found at **www.sinclair.edu/scholarships**

Foundation Scholarships—The Sinclair Foundation annually funds scholarships through endowment earnings and cash gifts to the college. Scholarships are available to currently enrolled Sinclair students, graduating high school seniors, and adults entering college for the first time. Students with enough Pell and other grants to cover tuition, books and fees are typically not considered for these scholarships. Other criteria such as program of study, academics and community service may also be considered. Online applications can be submitted at **www.sinclair.edu/scholarships**

External Scholarships—Several scholarships are awarded by agencies, clubs and organizations outside of Sinclair. Students are encouraged to periodically check the External Scholarship Resources and other scholarship resources link on the web at **www.sinclair.edu/scholarships**

Visit **www.sinclair.edu/scholarships** for additional scholarship information including application and selection details.

Student Private Loans

Sinclair provides information about private lenders who qualify to provide private loans to community college students who do not qualify for federal loan programs or who need additional financial assistance to meet educational expenses.

The yearly (or term) amount cannot exceed the cost of attendance minus other financial aid and resources. How to apply: Visit Sinclair's FASTChoice link on the Financial Aid and Scholarships page for a list of private education loan lenders most used by Sinclair students.

These are student loans offered by private companies. They are not guaranteed by the Federal Government. Private loans are meant to help students cover education costs not met by other forms of financial aid. It is recommended that students take full advantage of all government loans available to them before considering a supplemental private loan.

Verification Process for Applicants Filing the FAFSA

Institutions are required to verify the accuracy of a student's FAFSA to assure federal aid is awarded to those who are eligible. Approximately 30% of FAFSA applications are selected for verification each year. Sinclair may also select FAFSAs for verification if there is conflicting information that requires resolution. Federal financial aid is not awarded until verification is completed.

Students are notified they are selected for verification via their **Sinclair.edu email** account. The email specifies the actions required by the applicant and the documents required to complete the verification process. The student also receives a FAFSA processing email notification from U.S. Department of Education (ED) stating their FAFSA was processed and a Student Aid Report (SAR) was generated, which indicates their eligibility status and if they are selected for verification.

For the 2022-2023 award year the FAFSA information selected by ED that an institution, applicant and, if appropriate, the applicant's parent(s) or spouse may be required to verify are:

- Adjusted Gross Income
- U.S. Income Tax Paid
- Untaxed Portions of Individual Retirement Account (IRA) Distributions
- Untaxed Portions of Pensions
- IRA Deductions and Payments
- Tax Exempt Interest Income
- Education Credits
- Income Earned from Work
- Number of Household Members
- Number of Household Members in College
- High School Completion Status
- Identity/Statement of Educational Purpose

Sinclair may select FAFSA items for verification beyond what is required by ED. If the ED or Sinclair selects an applicant for verification under this policy, the applicant must complete the required actions specified or provide the requested documents or information. Applicants are advised to complete the required actions or submit copies of the requested documents within 14 days of the request made by the Financial Aid & Scholarships office. However, the Federal deadline for verification completion is the earlier of 120 days from the applicant's last date of attendance or the federal deadline of September 16, 2022. This includes making any necessary corrections, submitting those corrections to the Central Processing System, and submitting the new corrected Student Aid Report (SAR) to Sinclair.

The following consequences occur for applicants who fail to complete verification in a timely manner:

- Applicants who do not complete verification within the required deadlines will not qualify for federal financial aid.
- No federal grant or loan funds will be disbursed.
- No federal financial aid loan will be originated.
- If a loan was originated prior to the notice of verification, any undisbursed monies will be returned to the ED.
- Student employment in a Federal Work Study job will be terminated.
- If federal grant funds were disbursed prior to being selected for verification and there was an overpayment, the monies must be returned to the appropriate federal grant programs.
- Federal financial aid will not be disbursed, and refunds, if any, will not be available until verification is completed and corrections (if necessary) have been processed and received by Sinclair from the ED.

Federal financial aid awards are based on the information provided on the applicant's FAFSA. Federal need-based programs, such as the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (FSEOG), and the Federal Subsidized Direct Loan Programs have strict eligibility requirements. If the data reported on verification documents differs from the information reported on the applicant's FAFSA, the applicant's eligibility for funding from these programs may be affected.

If any credible information indicates that the applicant engaged in fraud or other criminal misconduct in connection with their federal student aid application, Sinclair will report applicants to the Office of the Inspector General of the U.S. Department of Education after review.

Withdrawal & Return of Title IV Funds

Students earn federal financial aid by attending class (i.e., completing all scheduled days). Any unearned portion must be returned to the appropriate Title IV program. Federal law specifies how Sinclair must determine the amount of Title IV program assistance that you earn if you withdraw from school. The Title IV programs offered by Sinclair that are covered by this law are: Federal Pell Grants, Federal Supplemental Educational Opportunity Grants (FSEOG), Federal Iraq and Afghanistan Service Grants, Federal Direct Loans, and Federal PLUS Loans.

Calculating a Return of Title IV Funds When a Student Withdraws

When you withdraw during your payment period, the amount of Title IV program assistance that you have earned up to that point is determined by a specific formula. If you received (or if Sinclair or your parent received on your behalf) less assistance than the amount that you earned, you may be able to receive those additional funds. If you received more assistance than you earned, the excess funds must be returned by Sinclair and/or you to the U. S. Department of Education (ED). You will be responsible for repayment of the funds to Sinclair that it paid to ED on your behalf.

The amount of assistance that you have earned is determined on a prorated basis. The percentage of the period completed is determined by dividing the number of calendar days completed in the payment period, as of the day the student withdrew, by the total number of calendar days in the payment period. The number of calendar days includes all days within the payment period, except for institutionally scheduled breaks of five or more consecutive days. The day the student withdrew is counted as a completed day. For example, if you completed 30% of your payment period, you earned 30% of the assistance you were originally scheduled to receive. Once you have completed more than 60% of the payment period, you earn 100% of the assistance that you were scheduled to receive for that period. That is, there are no unearned funds.

Withdrawing from a Course or all Classes May Affect a Student's Financial Aid

Students receiving financial aid who withdraw or stop attending, in most cases, will be required to return a portion of financial aid received. A student should submit an official withdrawal from classes to the Registration & Student Records office (RSR). Before withdrawing or stopping attendance in classes, the student should be aware of the proper procedure for withdrawing from classes and the consequences of withdrawing or stopping attendance. Official withdraw is the responsibility of the student. The Sinclair Official Withdrawal Policy is available online at: *www.sinclair.edu/policies* Questions on Return of Title IV Funds may be addressed to the Financial Aid & Scholarships office. Questions on withdrawal should be addressed with an Academic Advisor.

The Withdrawal Date

The withdrawal date used in the Return of Title IV calculation is the actual date the official drop is received by the Registration and Student Records office. If a student stops attending classes without notifying Sinclair, the withdrawal date will be the last date of recorded attendance at an academically related activity in a course for which attendance was established during the attendance verification period.

Post Withdrawal Disbursements

If you did not receive all of the funds that you earned, you may be due a post-withdrawal disbursement.

Sinclair will notify the student within 30 days of the date of determination of withdrawal concerning the post withdrawal disbursement. If the post-withdrawal disbursement results in a credit balance, the credit balance will be returned to the student no later than 14 days from the date of disbursement.

If your post-withdrawal disbursement includes loan funds, Sinclair must get your permission (or your parent's permission for a Direct PLUS Loan) before it can disburse the funds. You (or your parent for a Direct PLUS Loan) may choose to decline some or all of the loan funds so that you do not incur

additional debt. The student (or parent if a PLUS loan) must respond within 14 days of the date the post-withdrawal disbursement notification was sent. Entrance counseling must be completed before funds are disbursed.

Sinclair may automatically use all or a portion of your post-withdrawal disbursement of grant funds for tuition and fees and will apply those funds to your student account within 45 days of the date of determination of your withdrawal from Sinclair. Sinclair needs your permission to use the post-withdrawal grant disbursement for all other school charges. If you do not give your permission (Sinclair may ask for this when you enroll or register), you will be offered the funds. However, it may be in your best interest to allow Sinclair to keep the funds to reduce your debt at the school.

There may be some Title IV funds that you were scheduled to receive that cannot be disbursed to you once you withdraw because of other eligibility requirements. For example, if you are a first-time, first-year undergraduate student and you did not complete the first 30 days of your program before you withdrew, you will not receive any Direct Loan funds that you would have received had you remained enrolled past the 30th day.

Returning Unearned Federal Funds

If you receive (or if Sinclair or your parents receive on your behalf) excess Title IV program funds that must be returned, Sinclair must return a portion of the excess equal to the lesser of:

1. Your institutional charges multiplied by the unearned percentage of your funds, or

2. The entire amount of excess funds.

Sinclair will return Title IV funds in the following order:

1. Unsubsidized Direct Loan

2. Subsidized Direct Loan

3. Direct PLUS Loan

4. Federal Pell Grant

5. Iraq and Afghanistan Service Grant

6. Federal Supplemental Educational Opportunity Act (FSEOG)

The required return of Title IV funds will be made to the Title IV programs within 45 calendar days of the date of determination of withdrawal.

In addition to returning unearned loan and grant funds due from the school to the Title IV program, Sinclair will return those excess unearned grant funds due from you to the Title IV program. You will be required to repay Sinclair for the student portion of the funds returned to the Title IV programs.

Any loan funds that you (or your parent for a Direct PLUS Loan) are eligible to keep must be repaid in accordance with the terms of the promissory note. That is, you make scheduled payments to the holder of the loan over a period of time agreed upon by you (or your parent for a Direct PLUS loan).

Any amount of unearned grant funds that you must return is called an overpayment. The maximum amount of a grant overpayment that you must repay is half of the grant funds you received or were scheduled to receive. You do not have to repay a grant overpayment if the original amount of the overpayment is $50 or less. ***You must make arrangements with Sinclair to repay Sinclair the amount of the unearned grant funds paid on your behalf by the college.***

The requirements for refunds and repayments of Title IV program funds when you withdraw are separate and different from any Sinclair refund policy. The institutional refund policy determines the amount of tuition and other charges owed the College and has no impact on the Return of Title IV funds calculation. Therefore, you may still owe funds to Sinclair to cover unpaid institutional charges. Sinclair may also charge you for any Title IV program funds that the school was required to return. Students are encouraged to review Sinclair's refund of fees policy which can be found online at: ***www.sinclair.edu/bursar-refund-policy*** or you may ask Sinclair for a copy of its refund policy.

If a credit balance exists on the student's account after applying institutional refund policy and the R2T4 calculation, the institution will disburse the credit balance to the student no later than 14 days from the date the school performs the R2T4 calculation.

Sinclair can provide you with a copy of the requirements and procedures for an official academic withdrawal from courses or an administrative withdrawal or you can review it online at: ***http://catalog. sinclair.edu/#/policies/Academic/Official Withdrawal from College Policy***

If you have questions about your Title IV program funds, you can call the Federal Student Aid Information Center at (800) 4-FEDAID (800-433-3243). TTY users may call 1-800-730-8913. Information is also available on Student Aid on the Web at: ***www.studentaid.gov***

All information contained in the Withdrawal and Return of Title IV Funds Policy is subject to change based on changes to federal law, regulation, or Sinclair's policy and procedure. If changes are made, students must abide by the new policy.

Note: In many instances, the student will owe a balance to Sinclair based on the returns made by Sinclair to the U.S. Department of Education. Please see a Sinclair Financial Aid Officer for additional information.

Military-affiliated Educational Benefits

Sinclair is proud to assist our military affiliated students. Educational benefits for military affiliated students come in several forms: Military Tuition Assistance (TA) programs, Veterans Affairs (VA) Education Benefits (also known as the GI Bill ®), Scholarships and Ohio Funding. In general, Military TA programs provide funding to currently serving members of the United States Armed Forces, VA Education Benefits are determined by service information found on the the service member's DD214, and other benefits are determined by military-affiliation.

The best way to get information about using these benefits is to contact the Military Family Education Center (MFEC). You can contact the MFEC by phone at (937) 512-2586, or by email at ***mfec@sinclair.edu.*** Students can find updated information and forms to process education benefits at ***www.sinclair.edu/mfec.***

VA Education Benefits

VA education benefits are administered by the U.S. Department of Veterans Affairs. Students who meet VA eligibility criteria will apply to use their benefits by first obtaining a Certificate of Eligibility (COE) from the VA. Information regarding the criteria for receiving benefits and current payment rates may be found at: ***www.gibill.va.gov***.

Once a student has received their COE from the VA, they can use their educational benefits by registering with Sinclair's MFEC. Each semester students wishing to use their VA educational benefits at Sinclair will submit eligibility and enrollment information to the MFEC. It is recommended that students submit their information as soon as course registration is completed in order to allow ample time for their benefits to be processed at the VA. Students are also responsible to provide an updated schedule to the MFEC when any schedule changes are made.

Repayment of VA Educational Benefits

Under certain circumstances, students may be required to repay all, or part of the benefits received in each semester to the VA. Please see the following list of possible repayment situations.

1. Dropping from courses
2. Non-attendance of courses
3. Punitive grades for courses (Z, F, U grades)

To best avoid these situations, students are advised to report any schedule changes immediately to the MFEC. If a student has questions about making changes to their schedule or withdrawing from classes, it is recommended that they speak with a staff member from the MFEC to discuss the impact of their situation on their education benefits.

End of Term Reports

The MFEC is required to track information and progression for each student using the GI Bill ® to maintain compliance standards. These reports are submitted within 30 days of the end of the full-term. The following reports are submitted by the MFEC:

- Academic Dismissal Report: The MFEC reports students that have previously been on Academic Probation and have been escalated to Academic Dismissal status within the term. This required reporting could cause a debt with the VA and/or drop of future registered classes.

- F/Z/U Grade Report: F/Z/U grades that are considered unearned by the VA. Unearned grades are defined as failing grades with a last date of attendance (LDA) before the end of the term. This required reporting could cause a debt with the VA and/or the college.
- Graduation Report the MFEC reports students that earn a degree within the term.

Transition Act of 2018

Sinclair's Statement of Compliance for the Veteran Benefit Transition Act of 2018 In accordance with the Veteran Benefits and Transition Act of 2018, Sinclair College has enacted a policy that protects military-affiliated students using Chapter 33 Post 9/11 and Chapter 31 Vocational Rehabilitation from being penalized for any delay in payment from the Department of Veteran Affairs (VA) for tuition or fees. Military-affiliated students that provide an updated Certificate of Eligibility (COE) or VA Form 28-1905 (Tungsten Form), showing eligibility for the current term in question, will not accrue any late penalties, purging of current term classes, restriction of access to any institutional facilities (i.e.; Library, Tutoring & Learning Center), or be required to borrow additional funds to meet the financial obligation while waiting for funding from the VA.

To learn more about the Veteran Benefit Transition Act of 2018, please visit: ***https://www.congress.gov/bill/115th-congress/senate-bill/2248/text***

Courses and Programs of Study

To help students reach their educational goals, those that have earned college credits outside of Sinclair or served in the U.S. Armed Forces, must have official transcripts sent to Sinclair. Transcripts will be evaluated by the office of Registration & Student Records. Once the credits have been evaluated, the school will send the student a letter informing them of the number of credits accepted. This information is essential for students and advisors to create an academic plan that accurately reflects the best path to success.

For assistance with creating an academic plan, students need to meet with an Academic Advisor. A degree plan is required before the MFEC can certify any VA educational benefits.

Sinclair's developmental (remedial) courses are approved for VA educational benefits if these courses are recommended through placement testing and are taken in-person.

The following is a listing of programs and courses that are not approved for VA educational benefits:

1. All one-year and short-term technical certificate programs
2. Courses that cannot be credited toward graduation in an approved associate and/or bachelor's degree program
3. Developmental courses taken in an online format (no face-to-face class meetings required)
4. Real Estate courses for students not enrolled in the Real Estate associate degree program
5. Professional Pilot courses for students not enrolled in the approved Professional Pilot associate/bachelor's degree program(s)

Remember: Assistance may be received in course selection, but final course selection is the student's responsibility. Students should follow the course outline as contained in the college catalog and communicate regularly with their academic advisor.

Aviation Students Using the GI Bill®

Best Practices Process: Advising Students in the Aviation Technology/Professional Pilot program that are using the GI Bill ®

Students that are in the Aviation Technology/Professional Pilot program and are utilizing GI Bill® benefits should be made aware that the Department of Veteran Affairs (VA) does not pay for certificates within the program, they will only pay for a degree. This means you are advised to take general education classes mixed with flight classes showing intent to complete the program.

GI Bill ® Trademark

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about benefits offered by VA is available at the official U.S. Government Web Site at ***https://benfits.va.gov/gbill***

Military Tuition Assistance (TA)

Each branch of the United States Armed Forces offers Tuition Assistance (TA) programs for their active duty members, national guard members and its reservists. Programs are administered by the individual service branches, and typically require coordination through the service member's command structure. Students with questions about using their Military TA at Sinclair can contact the Military Family Education Center (MFEC). The MFEC (formerly Veteran Services), is located in Building 10, Room 10444, Dayton Campus. You can also contact the MFEC by phone at (937) 512-2586, or by email at mfec@sinclair.edu.

To use your TA at Sinclair, students need to provide their Branch's TA program with an Academic Plan. Requirements for academic plans vary by service branch, but in general the plan must be created and signed by a Sinclair Academic Advisor, list all of the courses required for the degree or certificate being sought by the student, show all transfer courses that have been accepted by Sinclair and are applicable to course requirements of the student's program. Students must submit a request to use TA each semester through their Branch's online education portal.

Ohio National Guard Scholarship Program (ONGSP)

The ONGSP is provided to all Air and Army National Guard members serving in the Ohio National Guard. This is a state benefit that covers tuition for approved national guard members. To apply, please visit ***ONGSP.Ohio.gov*** for each term that you would like to use these benefits.

Once these benefits are approved each term, please send the official document to the MFEC at mfec@sinclair.edu. For questions regarding this process, please contact the MFEC at (937) 512-2586.

Current Military Access Scholarship (CMAS)

Military TA and ONGSP programs do not cover college fees. To minimize out-of-pocket costs, Sinclair has established the Current Military Access Scholarship (CMAS) program that pays up to $250 in non-tuition fees per semester for students using Military TA. Funds are awarded directly to student accounts after TA has been applied. Students do not need to apply for this scholarship.

My Career Advancement Account (MYCAA)

The My Career Advancement Account (MyCAA) Scholarship Program is a workforce development program that provides up to $4,000 ($2,000 per year) of financial assistance to eligible military spouses who are pursuing a license, certification or Associate's degree in a portable career field and occupation. For more information about MyCAA and to apply go to ***https://mycaa.militaryonesource.mil/mycaa***. For questions regarding MyCAA, please contact the MFEC at (937) 512-2586.

Ohio War Orphans Scholarship (OWOS)

The Ohio WOS Program awards tuition assistance to the children of deceased or severely disabled Ohio veterans who served in the armed forces during a period of declared war or conflict. For more information about OWOS and to apply go to ***https://www.ohiohighered.org/ohio-war-orphans***. For questions regarding OWOS, please contact the MFEC at (937) 512-2586.

Articulation and Transfer Policies for Degree-Seeking Students

Begin a four-year degree by taking advantage of Sinclair's small class size, caring faculty, supportive staff and low tuition.

Students can:

- Complete many freshman and sophomore level courses before transferring to a four-year institution.
- Earn a Sinclair associate degree and apply many of those credits toward a bachelor's degree.
- Complete most of the general education requirements by taking courses from the Ohio Transfer 36 before transferring to a four-year institution.

Transfer to and from Sinclair by following a few easy steps. Be sure to check with a Sinclair academic advisor and the transfer institution.

Transfer of Credit to Sinclair

To make sure that credits from another institution transfer efficiently to Sinclair, follow these steps:

1. **Request Official Transcripts**

   Contact all previously attended colleges/universities and request that official transcripts be sent to: Sinclair Community College, Registration & Student Records, 444 West Third Street, Dayton, Ohio 45402-1460

Upon receipt of a student's transcript, Sinclair will notify the student with a post card via U.S. mail. Within 15 business days the Student Records department will equate the transferred courses to Sinclair courses and a full report of these equivalencies will be sent to the student in the mail. Sinclair accepts credits from colleges and universities accredited by regional accrediting associations.

2. **Meet with an Academic Advisor**

   Advisors will work with students to determine which courses to take for their degree programs. If all transcripts have not been received by Sinclair prior to meeting with advisors, students are encouraged to bring an unofficial transcript from their previously attended college(s) to the advising session.

3. **Register for Classes**

Transfer of Credits from Sinclair

To make sure that Sinclair credits transfer efficiently to another institution (referred to here as "transfer institution"), follow these steps:

1. Meet with the appropriate Sinclair academic/faculty advisor and speak with a representative at the transfer institution early and often during an academic career. This will help ensure that the student is selecting the appropriate courses.
2. Follow the transfer admissions procedures for that institution.
3. Have official Sinclair transcripts sent to the transfer institution and follow up to ensure that they have received and evaluated the transfer credits.

- For additional information, go to: **www.sinclair.edu/transcripts**

Remember:

- Speak with an academic/faculty advisor early in your academic career. It is the student's responsibility to keep the advisor aware of the intended academic program and/or transfer institution.
- Contact the transfer institution as soon as possible. Ask for specific recommendations from the transfer institution to help with structuring a degree program at Sinclair as closely as possible around their requirements. Also, speaking to advisors from both institutions helps ensure that students receive timely, accurate transfer information.

- Always confirm course choices with the transfer institution. Because Sinclair is accredited by the Higher Learning Commission and is a member of the association as well as the Ohio Department of Higher Education, most credits will transfer to other colleges and universities. University Parallel courses usually transfer more easily than technical courses. Due to the highly specialized nature of courses in career programs, many are not designed for transfer to a four-year institution. The exception to this is any course in an approved articulation agreement with a four-year college or university. An academic advisor can provide information about which programs offer this option.

Institutional Transfer

The Ohio Department of Higher Education in 1990, following a directive of the 118th Ohio General Assembly, developed the Ohio Articulation and Transfer Policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. A subsequent policy review and recommendations produced by the Articulation and Transfer Advisory Council in 2004, together with mandates from the 125th Ohio General Assembly in the form of Amended Substitute House Bill 95, have prompted improvements of the original policy. Additional legislation from the 125th Ohio General Assembly also initiated the development of a statewide system for articulation agreements among state institutions of higher education for transfer students pursuing teacher education programs.

Action by the 126th Ohio General Assembly led to the establishment of criteria, policies, and procedures for the transfer of technical courses completed through a career-technical education institution; and standards for the awarding of college credit based on Advanced Placement (AP) test scores.

Legislation from the 130th Ohio General Assembly required public institutions of higher education to: use baseline standards and procedures in the granting of college credit for military training, experience, and coursework; establish an appeals process for resolving disputes over the awarding of credit for military experience; provide specific assistance and support to veterans and service members; adopt a common definition of a service member and veteran; and establish a credit articulation system in which adult graduates of public career-technical institutions who complete a 900 clock-hour program of study and obtain an industry-recognized credential approved by the Chancellor shall receive 30 college technical credit hours toward a technical degree upon enrollment.

While all public colleges and universities are required to follow the Ohio Articulation and Transfer Policy, independent colleges and universities in Ohio may or may not participate in the Transfer Policy. Therefore, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements. In support of improved articulation and transfer processes, the Ohio Department of Higher Education has established an articulation and transfer clearinghouse to receive, annotate, and convey transcripts among public colleges and universities. This system is designed to provide standardized information and help colleges and universities reduce undesirable variability in the transfer credit evaluation process.

Acceptance of Transfer and Articulated Credit

To recognize courses appropriately and provide equity in the treatment of incoming transfer students and students native to the receiving institution, transfer credit will be accepted for all successfully completed college-level courses completed in or after Fall 2005 from Ohio public institutions of higher education. Students who successfully completed Associate of Arts (AA) or Associate of Science (AS) degrees prior to Fall 2005 with a 2.0 or better overall grade-point average would also receive credit for all college-level courses they have passed. While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting.

Pass/Fail courses, credit-by-examination credits, experiential learning courses, and other non-traditional credit courses that meet these conditions will also be accepted and posted to the student record.

Application of Transfer and Articulated Credit

Application of credit is the decision process performed by the receiving institution to determine how the credits it has accepted and recorded on the student's official academic transcript will or will not apply toward program and degree requirements. While the receiving institution makes this decision, it will do so within the parameters of this Policy.

The following guidelines and requirements shall govern the application of transfer and articulated credit:

Ohio Transfer 36 (formerly the Ohio Transfer Module (OTM))

The Ohio Department of Higher Education's Articulation and Transfer Policy established the Ohio Transfer 36, which may be a subset or the entire set of a public higher education institution's general education curriculum in Associate of Arts (AA), Associate of Science (AS) and baccalaureate degree programs. Students in applied associate degree programs may complete some individual Ohio Transfer 36 courses within their degree program or continue beyond the degree program to complete the entire Ohio Transfer 36. The Ohio Transfer 36 contains 36-40 semester of course credit in English composition (minimum of 3 semester); mathematics, statistics and logic (minimum of 3 semester); arts and humanities (minimum of 6 semester); social and behavioral sciences (minimum of 6 semester); and natural sciences (minimum of 6 semester). Oral communication, Diversity, Equity, and Inclusion (DEI), and interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Ohio Transfer 36. Courses for the Ohio Transfer 36 should be 100- and 200-level general education courses commonly completed in the first two years of a student's course of study. Each public university and technical and community college is required to establish and maintain an approved Ohio Transfer 36.

Ohio Transfer 36 course(s) or the full module completed at one college or university will automatically meet the requirements of individual Ohio Transfer 36 course(s) or the full Ohio Transfer 36 at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Ohio Transfer 36 at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Ohio Transfer 36 portion of Institution R's general education program. Institution R, however, may have general education courses that go beyond its Ohio Transfer 36. State policy initially required that all courses in the Ohio Transfer 36 be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Ohio Transfer 36 courses on a course-by-course basis.

A complete list of approved OT36 courses for Sinclair can be viewed at:
https://reports-cems.transfercredit.ohio.gov

Transfer Assurance Guides

Transfer Assurance Guides (TAGs) courses are pre-major/beginning major courses that have been identified as common requirements across public bachelor's degree programs. They are guaranteed to transfer and apply to specific TAG-related degree/program requirements as equivalent courses.

TAGs identify common major course work that is guaranteed to transfer. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged. A complete list of approved TAG courses for Sinclair can be viewed at: **https://reports-cems.transfercredit.ohio.gov**

Career-Technical Assurance Guides

Collaboration among the Ohio Department of Higher Education, the Ohio Department of Education, and other key stakeholders led to the development of policies and procedures to create statewide career-technical discipline specific articulation agreements and further ensure that students completing coursework at an adult or secondary career-technical institution can articulate and transfer agreed-upon technical courses/programs to any Ohio public institution of higher education and among Ohio public institutions of higher education "without unnecessary duplication or institutional barriers."

Career-Technical Assurance Guides (CTAGs) are statewide articulation agreements that guarantee the recognition of learning which occurs at public adult and secondary career-technical institutions and have the opportunity for the award of college credit toward technical courses/programs at any public higher education institution. CTAGs serve as advising tools, identifying the statewide content guarantee and describing other conditions or obligations (e.g., program accreditation or industry credential) associated with the guarantee.

A complete list of approved CTAG courses for Sinclair can be viewed at:
https://reports-cems.transfercredit.ohio.gov

Military Transfer Assurance Guides

In response to the legislative requirement (Ohio Revised Code 3333.164) to create a military articulation and transfer assurance guide for college-level learning that took place through military training, experience, and coursework, college credit will be granted to students with military training, experience, and/or coursework that is recognized by the American Council on Education (ACE) or a regionally accredited military institution, such as Community College of the Air Force

In order to streamline the awarding, transferability, and applicability of college credit, service members and veterans are guaranteed to earn certain types of credit(s) or course(s) as specified in the Military Transfer Assurance Guides (MTAGs), which are based on the endorsed baseline standards and procedures by the Chancellor. Equivalent course(s), credits for courses, or block of credit is to be awarded and applied towards general education and/or major course requirements at the receiving institution in accordance with the MTAG guarantee. There is some training, experience, and coursework that the receiving institution may be able to award college credit only toward general or free electives.

In addition, public institutions of higher education shall ensure that appropriate equivalent credit is awarded for military training, experience, and coursework that meet the baseline standards and procedures according to the Ohio Revised Code 3333.164. This requirement goes beyond credit/course awarded based on the MTAG alignment process.

A complete list of approved MTAG courses can be viewed at: **https://transfercredit.ohio.gov**

Ohio Guaranteed Transfer Pathways

The Ohio Guaranteed Transfer Pathways (OGTPs) are designed to provide a clear path for students pursuing an associate degree at Ohio community colleges who plan to transfer to an Ohio public university to complete a bachelor's degree in an equivalent field. The OGTPs constitute an agreement between public community colleges and universities confirming that community college courses meet major preparation requirements and will be counted and applied toward the bachelor's degree. Students still must meet all university program admission requirements.

A student who completes all of the coursework within a major-specific Ohio Guaranteed Transfer Pathway (OGTP) will be eligible to earn an associate degree from an Ohio public community college. Successful completion of the OGTP will be recorded on the student's transcript, and upon transfer to an Ohio public university, the student should receive junior standing and all coursework taken as part of the pathway will transfer to the university toward the completion of a bachelor's degree in an equivalent field. OGTP builds upon the existing statewide credit transfer guarantees including the Ohio Transfer 36, Transfer Assurance Guides, Military Transfer Assurance Guides, and Career-Technical Assurance Guides. OGTPs can be found on the Ohio Department of Higher Education's website at **https://www.ohiohighered.org/OGTP.**

Apprenticeship Pathway Programs

The Apprenticeship Pathways initiative advocates for individuals completing apprenticeships by incorporating their learning into academic credit, thereby saving them time and money and encouraging them to advance their academic credentials to contribute to a strong, educated workforce.

Ohio apprenticeship programs partner with public two-year institutions to provide technology-specific statewide articulation agreements that recognize non-traditional prior learning. College credit is awarded toward a technical associate degree. Each agreement simplifies student advising by outlining how apprenticeship training in a certain pathway applies to an applied associate degree and lists remaining courses required to complete the degree. The application of the credit toward a technical associate degree in these agreements is guaranteed at the participating receiving institutions.

Advanced Placement (AP) Exams

The State of Ohio, working with public institutions of higher education, has initiated policies to facilitate the ease of transition from high school to college, as well as between and among Ohio's public colleges and universities.

Beginning in the Fall term 2009:

Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.

General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill(s) a requirement.

If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.

Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics – STEM) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

A complete list of approved AP courses for Sinclair can be viewed at:
https://reports-cems.transfercredit.ohio.gov

One-Year Option Credit Award

The One-Year Option builds upon Ohio's articulation and transfer system to help more adults accelerate their preparation for work by earning a technical associate degree. Consistent with the philosophy of the Career-Technical Assurance Guides (CTAGs), the One-Year Option guarantees that college credit will be awarded for college-level learning that occurs through adult programs at public career-technical institutions.

Adults who complete a career-technical education program of study consisting of a minimum of 900 clock-hours and achieve an industry-recognized credential approved by the Chancellor shall receive thirty (30) semester hours of technical course credit toward a standardized Associate of Technical Study Degree (ATS) upon matriculation at a public institution of higher education that confers such a degree. The 30 semester hours will be awarded as a block of credit rather than credit for specific courses. Proportional credit is to be awarded toward the ATS degree for adults who complete a program of study between 600 and 899 clock hours and achieved an industry-recognized credential approved by the Chancellor.

The credit earned through the One-Year Option will be applied to ATS degrees bearing the following standardized degree titles:

1. Associate of Technical Study in Building and Industrial Technology
2. Associate of Technical Study in Business Technology
3. Associate of Technical Study in Health and Allied Health Technology
4. Associate of Technical Study in Information Technology
5. Associate of Technical Study in Services Technology

College-Level Examination Program (CLEP)

The State of Ohio, working with public institutions of higher education and statewide faculty panels, has developed policies to recognize students' prior learning and to facilitate the articulation and guaranteed transfer of such learning between Ohio's public colleges and universities.

College credit is guaranteed for students who achieve an established College-Level Examination Program (CLEP) test score for exams that have been endorsed statewide as college level. Statewide faculty panels aligned CLEP exams to equivalent Ohio Transfer 36 and Transfer Assurance Guide (TAG) courses, as appropriate. If an equivalent course is not available for the CLEP exam area, by default, endorsed elective or area credit will still be awarded and applied towards graduation.

Specific endorsed alignments and scores for individual CLEP exams that are outlined in the College-Level Examination Program (CLEP) Endorsed Alignment Policies document are available on the Ohio Department of Higher Education website at **https://www.ohiohighered.org/transfer/clep.**

Conditions for Transfer Admission

1. Graduates who are considered transfer students under the Integrated Postsecondary Education Data System (IPEDS) definition with associate degrees from Ohio's public institutions of higher education and a completed, approved Ohio Transfer 36 shall be admitted to a public institution of higher education in Ohio, provided their cumulative grade-point average is at least 2.0 for all previous college-level courses and and other institutional admission criteria, such as space availability, adherence to deadlines, payment of fees, and grade-point average that are fairly and equally applied to all undergraduate students, have also been satisfied. Further, these students shall have admission priority over graduates with an out-of-state associate degree and other transfer students with transferable and/or articulated college credit.

2. Associate degree holders who are considered transfer students under the IPEDS definition and have not completed the Ohio Transfer 36 from an Ohio public institution of higher education will be eligible for preferential consideration for admission as transfer students as long as the institution's admission criteria, such as the minimum academic standards, space availability, adherence to deadlines, and payment of fees, are fairly and equally applied to all undergraduate students.

3. In order to encourage completion of the baccalaureate degree, students who are not enrolled in or who have not earned an degree but have earned 60 semester/90 quarter hours or more of credit toward a baccalaureate degree with a cumulative grade-point average of at least a 2.0 for all previous college-level courses will be eligible for preferential consideration for admission as transfer students as long as the institution's admission criteria, such as the minimum academic standards, space availability, adherence to deadlines, and payment of fees, are fairly and equally applied to all undergraduate students.

4. Students who have not earned an associate degree or who have not earned 60 semester/90 quarter hours of credit with a grade-point average of at least a 2.0 for all previous college-level courses will be eligible for admission as transfer students on a competitive basis.

5. Incoming transfer students admitted to a college or university shall compete for admission to selective programs, majors, and units on an equal basis with students native to the receiving institution.

The admission of transfer students by an institution, however, does not guarantee admission to any majors, minors, or fields of concentration at the institution. Some programs have additional academic and non-academic requirements beyond those for general admission to the institution (e.g., background check, a grade-point average higher than a 2.0, or a grade-point average higher than the average required for admission to the institution). Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as native students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be completed at the receiving institution.

Responsibilities of Students

To maximize transfer credit application, prospective transfer students must take responsibility for planning their course of study to meet both the academic and non-academic requirements of the institution to which they desire to articulate or transfer credit as early as possible. The student is responsible to investigate and use the information, advising, and other available resources to develop such a plan. Students should actively seek program, degree, and transfer information; meet with an advisor from both the current and receiving institutions to assist them in preparing a course of study that meets the academic requirements for the program/degree to which they plan to transfer; use the various electronic course/program transfer and applicability database systems, including Ohio Transfer to Degree Guarantee web resources; and select courses/programs at their current institution that satisfy requirements at the receiving institution to maximize the application of transfer credit. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are foreign language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will better articulate with the receiving institution's major.

Appeals Process

Following the evaluation of a student transcript from another institution, the receiving college institution will provide the student with a Statement of Transfer and Articulated Credit Applicability (Degree Audit Report). A student disagreeing with the application of transfer and/or articulated credit by the receiving institution must file his/her appeal in writing within ninety (90) days of receipt of the Statement of Transfer and Articulated Credit Applicability. The institution shall respond to the appeal within thirty (30) days of the receipt of the appeal at each appeal level.

Student Complaints Following Transfer Appeals at the Receiving Institution

After a student exhausts the appeals process at the receiving institution and chooses to pursue further action, the Ohio Department of Higher Education (ODHE) responds to formal written complaints related to Ohio Articulation and Transfer Policy against public, independent non-profit, and proprietary institutions of higher education in Ohio. While the ODHE has limited authority over colleges and universities and cannot offer legal advice or initiate civil court cases, staff will review written complaints submitted through its established process and work with student complainants and institutions.

Articulation Agreements

Articulation agreements are formal agreements between organizations detailing the recognition of college credit between those organizations. Sinclair uses articulation agreements as a means to avoid duplication of resources and to encourage and enhance students' interest in post-secondary education and transfer from one institution to another. The college has developed articulation agreements with secondary schools, hospitals, professional organizations, and colleges and universities.

Articulation agreements can be categorized in two ways:

- Incoming agreements with secondary schools, hospitals and professional organizations indicate how credits will be recognized at Sinclair Community College. Known as articulated credit, information regarding this option can be requested from an Academic Advisor by calling (937) 512-3700 or emailing **plaprograms@sinclair.edu**.

- Outgoing agreements with other colleges and universities indicate how Sinclair Community College programs and courses will transfer to those institutions. Information regarding current agreements can be viewed at: **www.sinclair.edu/agreements**

Transferology™

Students who have completed courses in higher education and want to know which colleges and universities will accept those courses and apply them to a degree should visit: **www.transferology.com**

Transferology will provide quick answers from hundreds of institutions in a streamlined and dynamic interface.

General Education

Sinclair Community College believes every educated person should possess a set of basic, common knowledge, skills and attitudes. Through Sinclair's courses and programs of study, a student acquires breadth of knowledge and gains competence to achieve independent intellectual inquiry. Upon completion of the associate degree at Sinclair, the student will be able to demonstrate the following six general education outcomes:

1. **Oral Communication:** the creation of common understanding through the use of verbal and nonverbal messages in a variety of contexts.
2. **Written Communication:** the creation of understanding through composition and synthesis of the written word.
3. **Information Literacy:** the ability to effectively locate, evaluate, and use information.
4. **Critical Thinking:** the application of higher order analytical and creative cognitive processes.
5. **Cultural Diversity and Global Citizenship:** the ability to apply knowledge of cultural diversity to real world context by acknowledging, understanding, and engaging constructively within the contemporary world.
6. **Mathematical Reasoning and Problem Solving:** the application of quantitative problem-solving skills to the mathematical modelling, analysis and interpretation of real-world problems.

Accessibility Services

Building 10, Room 10424 • (937) 512-5113 • www.sinclair.edu/accessibility-services

Accessibility Services provides assistance to all qualified students with disabilities, whether they are physical, psychiatric or educational. Students are required to register with the office and identify their needs in order to be eligible for academic adjustments. All services are based on individual needs. We are here to help students reach their academic goals. Students may begin the process by completing an application on our website www.sinclair.edu/services/support/accessibility-services

Appalachian Outreach

Building 10, Room 10424 • (937) 512-4429 • www.sinclair.edu/appalachian

Appalachian Outreach collaborates with college and community partners to provide programs and services that help eliminate educational and social barriers, champion the benefits of post-secondary education and life-skills training and promote Appalachian cultural awareness at Sinclair and in the community.

Appalachian Outreach provides community update breakfast meetings which is open to all (students, faculty/staff, community members). We share news important to the culture and learn from a guest speaker about topics of interest

Cultural events offered include traditional music concerts, and presentations from other artists representing Appalachia such as poets, toy makers, and other musicians. Each spring break, a 3-day trip to Appalachia is planned. A limited number of students may attend.

Sinclair tuition & book scholarships are available to qualifying students of Appalachian heritage.

College for Lifelong Learning

Building 10, First Floor, Welcome Desk • (937) 512-2372 • www.sinclair.edu/lifelong

Adults of any age may enroll in 6000 level, non-credit semester courses. Classes offered can include Art, History and more. Classes carry a modest fee to cover instructional costs. For more information, visit the College for Lifelong Learning web page.

Counseling Services

Building 10, Room 10424 • (937) 512-3032 • https://www.sinclair.edu/services/support/counseling-services/

Counseling Services offers free and confidential counseling to students to address personal and academic concerns. Counselors help students identify actions steps they can take to reduce and eliminate challenges in their lives.

Fast Forward Re-engagement Center

Job Center, Suite 250, Edwin C. Moses Blvd. • Dayton, Ohio • (937) 512-FAST (3278) • www.sinclair.edu/fastforward

The Sinclair Fast Forward Re-engagement Center (FFRC), established in 2001, has re-engaged over 4,000 disconnected youth throughout Montgomery County. Nationally recognized as a one-of-a-kind resource center for out-of-school youth, the FFRC connects with students and families by listening, coaching, and offering support to help them get back on track for graduation. The FFRC assists youth ages 15 – 24, who are out of school, not attending regularly or credit deficient to identify a best fit academic option to complete their high school credential and career pathway. FFRC is a county-wide collaborative partnership with traditional and non-traditional schools, as well as community organizations and youth workforce development agencies throughout Montgomery County.

International Education

Building 10, Room 10303 • (937) 512-3060 • www.sinclair.edu/international

The International Education Office supports international students and promotes programs and initiatives such as study abroad and Collaborative Online International Learning (COIL). These programs are designed to make Sinclair more globally oriented and internationally connected. Staff members strive to provide high quality services and support to international students and to the Sinclair community.

LGBTQ+ Outreach

Building 10, Room 10441 • (937) 512-2481 • www.sinclair.edu/lgbtq-support/

LGBTQ+ Outreach works to welcome students who identify as LGBTQ+ and to advocate for issues related to the LGBTQ+ community, in order to ensure that all students on campus feel welcome, respected, and safe as valued members of the campus community.

Multifaith Campus Ministry

Building 10, Room 10441 • (937) 512-2481 • www.sinclair.edu/services/support/campus-ministry/

Multifaith Campus Ministry encourages spiritual growth for all members of the Sinclair campus community. We provide pastoral care, educational opportunities, and programs related to spirituality. We welcome persons from any religious tradition or spiritual practice, as well as those who identify as "none of the above."

Additional Learning Opportunities

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Office of the Ombudsman

Building 10, Room 10424 • (937) 512-2205 • www.sinclair.edu/ombudsman

The mission of the Office of the Ombudsman at Sinclair is to provide support, mediation, and advocacy for fair processes throughout the institution. The office works to analyze information gathered from student experiences in order to implement procedural changes into Sinclair's culture. The Ombudsman can provide collaborative, mediation, intervention, and connecting services, as well as advocate for fair processes and procedures.

School Partnerships

Building 6, Room 6122 • (937) 512-5226 • www.sinclair.edu/about/offices/sp

College Credit Plus, Tech Prep, and Transition Advising, provide opportunities for students in grades 7-12 to:

- Be exposed to college coursework and career pathways
- Earn college credit PRIOR to high school graduation
- Receive added support with their high school teacher and Sinclair faculty
- Reduce time and cost to a college credential
- Earn scholarship opportunities – Tech Prep and CCP Completion for students continuing at Sinclair after high school
- Develop a post-high school enrollment plan

Sinclair Campus Store

Building 7, First Floor • (937) 512-2665 • campuswebstore.sinclair.edu

Visit the Sinclair Campus Store for all the college essential and required supplies you need right on campus or online!

Sinclair Online Bookstore

Books by eCampus • sinclair.ecampus.com
Use the Online Bookstore to order new, used, rental, eBook and marketplace textbooks.

Student and Community Engagement

Building 8, Room 8025 (937) 512-2509   www.sinclair.edu/engagment

Student and Community Engagement provides students with access to a wide variety of activities like clubs and campus events, leadership development programs, Student Senate, and assistance with preparing for and connecting with employers near graduation. Student and Community Engagement also oversees the Sinclair Food pantry, which provides currently enrolled students with access to food, personal hygiene, and childcare items.

Student Enrichment Programs

Building 19, Room 19103 • (937) 512-5231 • www.sinclair.edu/about/offices/sep

The Student Enrichment Programs at Sinclair collaborate with schools and other community stakeholders to provide programming and support that increase access to college and build a foundation for career readiness and completion of a college certificate or degree. This is achieved through the design and delivery of high quality, student-centered programs that create synergy between in-class and out-of-class learning. This division believes that through education ALL students will achieve their dreams.

Tutoring & Learning Center

Library, Room 7L07 • (937) 512-2792 • www.sinclair.edu/tlc

The Tutoring and Learning Center at Sinclair provides quality tutoring for a wide variety of subjects. Tutoring at Sinclair is a FREE service to Sinclair students who are currently enrolled in courses for academic credit!

Workforce Development

Building 11, Room 11346 • Dayton Campus • (937) 252-9787
workforcedevelopment@sinclair.edu •workforce.sinclair.edu

Sinclair Workforce Development partners with the region's industry leaders to provide consulting, professional development training, certifications, custom business solutions and resources that are relevant to the demands of today's competitive job market. Offering a wide array of innovative programs and services in organizational and professional development, leadership, information technology, advanced manufacturing, industry credentials, certification testing at our WFD testing center, online learning and more, Sinclair Workforce Development is a first-stop solution for employers and individuals looking to take their skills to the next level.

Student Services & Support

www.sinclair.edu/services

Sinclair provides access to academic support services, programs and resources that proactively and collaboratively guide, assist, and help students achieve their personal learning goals.

Visit *www.sinclair.edu/services* and *www.sinclair.edu/student-life/wellness/resources* for more information.

Academic Advising Center
Academic Departments
Academic Division
Academic Testing
Accessibility Services
Admissions
African American Male Initiative (AAMI)
Alerts: Campus Closing Information
Alumni Resources
Appalachian Outreach
Biology Self Instruction Service B.I.O.S.I.S
Books by eCampus
Bursar College Cashier
Business Information Systems (BIS) Lab
Campus Life
Campus Store
Campus Visits (Tour Campus)
Career & Transfer Fairs
Career Advising & Exploration
Career Communities
Career Development & Employment Assistance
CCAMPIS (Child Care Access Means Parents in School)
Chemistry Resource Center
College Credit Plus (CCP)
College for Lifelong Learning
Computer Access (Computer Labs)
Counseling Services
Course Catalog
Dental Hygiene Clinic
Discount RTA Bus Passes
Displaced Worker Services
DMV Disability Plates/Placards
eLearning Division
Email (Office365)
Employee Directory
FAFSA Workshops (Financial Aid)
English as a Second Language (ESL)
Fast Forward Re-engagement Center
Fee & Tuition Schedule
Financial Aid & Scholarships
Financial Aid Portal
Financial Aid TV
FlexPace Online Courses

Focus 2
Geology Resource Center (GRC)
Greene CATS Public Transit
Greene County Board of Developmental Disabilities (GCBDD)
Help Desk (Information Technology Support)
Honors Program
How to Succeed Online Tutorial
International Education
Internships &Apprenticeships (Office of Work-based Learning)
IT Documentation (Students)
JobLink
Kappa Beta Delta Honor Society
LGTBQ+ Support
Library
Louis Stokes Alliance for Minority Participation (LSAMP) Program
Mathematics Lab
Military Family Education Center/ Veterans Services
Mobile App
Modern Languages Lab
Multi-faith Campus Ministry
My Academic Plan (MAP)
My.Sinclair (Student Portal)
Net Price Calculator
New Student Orientation (NSO)
Ohio Career Information Systems (OCIS)
Ohio Transfer 36 (OT36) for Transferable Courses
Ombudsman Solution Center
Parking
Payment Deadlines
Phi Theta Kappa (PTK)
Physical Activities Center (PAC)
Physical Education Classes
Physics Resource Lab
Placement Testing
Prior Learning Assessment (PLA)
Project Lead the Way (PLTW)
Public Safety (Sinclair Police)
Registration & Student Records
Registration Calendar (Registration & Student Records)

Registration Portal
SCC 1101 First Year Experience Class
Scholarship Workshops
Scholarships (Financial Aid & Scholarships)
Service Learning
Sinclair Calendar (Events)
Sinclair News
Sinclair Policies
Sinclair Talks (Student & Community Engagement)
SinclairOnline
Sponsored Student Payment Information
Student & Community Engagement
Student Affairs
Student Clubs & Organizations
Student Employment (Financial Aid & Scholarships)
Student Enrichment Programs
Student Judicial Affairs
Student Lactation Rooms
Student Support Services
Study Abroad (International Education)
Tartan Card (Student ID)
Tartan Marketplace
Taylor Scholars
Tech Prep (MVTPC)
Testing Center
The Clarion (Student Newspaper)
Think College
Title IX Office
Transfer Agreements
Transfer Student Services
Tuition Payment Plan
Tutoring & Learning Center (TLC)
UD Sinclair Academy
University Partnerships
Upward Bound
Web Accessibility Help
Welcome Week
Work Study (financial Aid)
Wright Path Program
Writing Lab
YMCA Childcare (Englewood)
YMCA Childcare (Huber Heights)
Young Scholars Program

There are three types of two-year degree programs and one type of four-year degree program offered at Sinclair:

University parallel programs are associate of arts or associate of science degree programs designed specifically for transfer to a four-year institution.

Career programs are associate of applied science degree programs designed to prepare for a particular job or vocational area or transfer to a four-year school.

Individualized degrees are associate of individualized study or associate of technical study degree programs designed for specialized interest, often combining multiple degree programs.

Associate of Arts (AA) and Associate of Science (AS)

Associate of Arts and Associate of Science degrees are designed for students wishing to complete the first two years of a bachelor's degree, as well as those desiring two years of a liberal arts education.

Associate of Applied Science (AAS)

Associate of Applied Science degrees are awarded in recognition of successful completion of career technical education programs and prepare students for immediate employment upon graduation. The curricula for applied associate degree programs are described in terms of technical and non-technical studies. Non-technical studies include general education and courses that serve as a base for the technical field. Some degrees require program prerequisites as noted. Program prerequisites are courses or requirements that must be successfully completed prior to entering the program.

Associate of Technical Study (ATS)

Associate of Technical Study degrees are awarded for successful completion of a planned program of study designed to respond to the need for specialized technical education. The program must have an area of concentration which is equivalent to at least 30 semester credit hours in technical studies and a clearly identifiable career objective. The area of concentration can either be formed by: a) a coherent combination of technical courses selectively drawn from two or more technical programs currently offered by the college to serve a career objective that would not be adequately addressed by one of the existing programs alone; or b) courses completed or training received by a student at other institutions of higher education, career centers, or other educational enterprises judged by the institution to be of college level and for which the institution awards degree credit.

Associate of Individualized Study (AIS)

Associate of Individualized Study degrees are awarded for the satisfactory completion of an individually planned program designed to serve an educational objective that could not be served through another degree program of the institution. The program, planned by the student and advisor must contain an area of concentration consisting of a minimum of 20 semester credit hours which is formed according to one of the following models: a) an interdisciplinary, but coherent combination of courses drawn from a minimum of two and a maximum of four instructional areas; b) up to forty semester credit hours awarded by the institution for documentable educational experiences or courses completed at other institutions of higher education or educational enterprises judged by the institution to be of college level; or c) an unusual but academically coherent combination of technical and general studies courses.

Bachelor of Applied Science (BAS)

Bachelor of Applied Science degrees offer educational opportunities to students who have completed an AAS degree and are now seeking to complete a four-year degree.

Some degree programs contain embedded certificates. These are certificate programs that contain all of the same courses required for a degree program. When a student completes these requirements while they are pursuing their selected degree program, the certificate(s) will be automatically awarded. If a student does not want to automatically receive embedded certificates, they must come to the Registration & Student Records office on the Dayton Campus, or the front desk at any Regional Center to fill out the required form to prevent the embedded certificate(s) from being awarded. The form must be completed and submitted during the first term the degree program is declared.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Ohio Transfer 36

Ohio Transfer 36 is a subset or a complete set of general education requirements at Ohio public colleges and universities. Courses are guaranteed to transfer to any of Ohio's public institutions of higher education. Ohio Transfer 36 represents a common body of knowledge and academic skills and is comprised of 36 semester hours of courses in the following areas:

- English Composition/Oral Communication
  (Minimum of 3 credit hours)

- Mathematics, Statistics & Logic
  (Minimum of 3 credit hours)

- Natural Sciences
  (Minimum of 6 credit hours - one lab course required)

- Social & Behavioral Sciences
  (Minimum of 6 credit hours from two disciplines)

- Arts & Humanities
  (Minimum of 6 credit hours from two disciplines)

The additional 12 credit hours should be chosen based on a student's academic interests.

English/Oral Communication

COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3

Mathematics, Statistics & Logic

MAT	1445	Quantitative Reasoning	3
MAT	1450	Introductory Statistics	4
MAT	1460	Mathematics for Business Analysis	3
MAT	1470	College Algebra	3
MAT	1520	Geometry & Statistics for Teachers	5
MAT	1570	Analytic Geometry & Trigonometry	3
MAT	1580	PreCalculus	5
MAT	2160	Calculus for Business & Economics	5
MAT	2170	Business Statistics I	4
MAT	2180	Business Statistics II	3
MAT	2215	Mathematics for Machine Learning & Artificial Intelligence	5
MAT	2240	Calculus for the Life Sciences	4
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
MAT	2290	Calculus & Analytic Geometry III	5
MAT	2310	Elementary Differential Equations	4
MAT	2320	Linear Algebra	3
MAT	2330	Differential Equations & Linear Algebra	5
MAT	2415	Mathematics for Elementary Education I	5
MAT	2435	Mathematics for Elementary Education II	4
MAT	2570	Discrete Mathematics	4
PHI	2208	Symbolic Logic	3

Natural Sciences

AST	1111	The Solar System	3
AST	1112	Stars, Galaxies & the Universe	3
AST	1117	Lab for The Solar System	1
AST	1118	Lab for Stars, Galaxies and the Universe	1
BIO	1111	General Biology I	4
BIO	1121	Human Anatomy & Physiology I	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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BIO	1141	Principles of Anatomy & Physiology I	4
BIO	1171	Principles of Biology I	5
BIO	1211	General Biology II	4
BIO	1222	Human Anatomy & Physiology II	3
BIO	1242	Principles of Anatomy & Physiology II	4
BIO	1272	Principles of Biology II	5
BIO	2205	Microbiology	4
BIO	2222	Evolution	3
BIO	2225	Ecology	4
BIO	2235	Genetics	4
CHE	1211	General Chemistry I	5
CHE	1221	General Chemistry II	5
CHE	1311	College Chemistry I	4
CHE	1321	College Chemistry II	4
CHE	2111	Organic Chemistry I	5
CHE	2121	Organic Chemistry II	5
GEO	1300	Introduction to Weather & Climate	4
GLG	1101	Physical Geology	4
GLG	1201	Historical Geology	4
GLG	1301	Geologic Field Trips	4
GLG	1401	Environmental Geology	4
PHY	1100	Introduction to Physics	4
PHY	1141	College Physics I	4
PHY	1142	College Physics II	4
PHY	2201	General Physics I	5
PHY	2202	General Physics II	5

Social & Behavioral Sciences

AFR	1100	African-American Studies	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
GEO	1101	Global Forces, Local Diversity	3
GEO	1102	Earth's Physical Environment	4
GEO	1201	World Regional Geography: People, Places & Globalization	3
HIS	2219	Survey of the Middle East	3
PLS	1120	American Federal Government	3
PLS	1232	State & Local Government	3
PLS	2200	Political Life, Systems & Issues	3
PLS	2220	International Relations	3
PSY	1100	General Psychology	3
PSY	1160	Black Psychology	3
PSY	2200	Lifespan Human Development	3
PSY	2205	Child Development	3
PSY	2206	Adolescent & Adult Development	3
PSY	2217	Abnormal Psychology	3
PSY	2220	Personality Psychology	3
PSY	2225	Social Psychology	3
PSY	2228	Industrial Organizational Psychology	3
PSY	2242	Educational Psychology	3
SOC	1101	Introduction to Sociology	3
SOC	1115	Sociology of Marriage & Family	3
SOC	1117	Popular Culture	3
SOC	1145	Introduction to Cultural Anthropology	3
SOC	1160	Sociology of Aging	3
SOC	2205	Social Problems	3
SOC	2215	Race & Ethnicity	3
SOC	2226	Criminology	3

Arts & Humanities

ART	1110	Art Appreciation: Introduction to Art & Art Media	3
ART	2230	Art History: Ancient through Medieval Periods	3
ART	2231	Art History: Renaissance through Contemporary Periods	3
ART	2235	History of Photography	3
ART	2236	History of Women Artists	3
ART	2237	History of American Art	3
ART	2238	History of African Art	3
HIS	1101	United States History I	3
HIS	1102	United States History II	3
HIS	1105	African American History	3
HIS	1111	Western Civilization I	3
HIS	1112	Western Civilization II	3
HIS	2215	Survey of African History	3
HIS	2216	Survey of Latin American History	3
HIS	2217	Survey of East Asian History	3
HIS	2218	History of Ohio	3
HUM	1125	Introduction to the Humanities	3
HUM	1130	Humanity & the Challenge of Technology	3
HUM	1131	The Search for Utopia	3
HUM	1135	Environmental Ethics	3
HUM	1140	Appalachian Folkways	3
HUM	1141	Appalachian History & Culture	3
LIT	2201	British Literature I	3
LIT	2202	British Literature II	3
LIT	2211	American Literature I	3
LIT	2212	American Literature II	3
LIT	2217	Images of Women in Literature	3
LIT	2220	Introduction to Literature	3
LIT	2230	Great Books of the Western World	3
LIT	2234	Literature of Africa, Asia & Latin America	3
LIT	2236	African-American Literature	3
LIT	2400	Children's & Adolescent Literature	3
MUS	1121	Music Appreciation	3
MUS	1123	World Music	3
MUS	2117	Surveys of Musical Styles I	3
MUS	2118	Surveys of Musical Styles II	3
PHI	2204	Great Books: Philosophy	3
PHI	2205	Introduction to Philosophy	3
PHI	2206	Introduction to Ethics	3
REL	1111	Eastern Religions	3
REL	1112	Western Religions	3
REL	1135	American Religious Movements	3
REL	2204	Great Books: The Bible & Western Culture	3
REL	2255	People & Religion	3
THE	1101	Theatre Appreciation	3
THE	1105	Introduction to Theatre	3
THE	2201	History of Theatre I	3
THE	2202	History of Theatre II	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Transfer Assurance Guides (TAGs)

TAGs are courses that move beyond general education (OT36) into pre-major and major courses. TAGs are developed, approved, and monitored by Ohio's public institutions for higher education. Courses in a TAG are guaranteed to transfer and apply directly to the major. The approved TAG courses for Sinclair Community College are as follows:

ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting	3
ALH	2220	Pathophysiology	3
ART	1101	2-D Foundations	3
ART	1102	3-D Foundations	3
ART	1111	Drawing I	3
ART	1121	Beginning Painting I	3
ART	1131	Introduction to Sculpture	3
ART	1141	Introduction to Ceramics	3
ART	1161	Black & White Darkroom Photography I	3
ART	2216	Life Drawing & Anatomy I	3
ART	2230	Art History: Ancient through Medieval Periods	3
ART	2231	Art History: Renaissance through Contemporary Periods	3
ART	2269	Printmaking I	3
ASL	1111	Beginning American Sign Language I	3
BIO	1171	Principles of Biology I	5
BIO	1272	Principles of Biology II	5
BIS	1221	Specialized Computer Applications for Health Information Management	3
CAT	1201	Construction Methods & Materials	3
CAT	1211	Construction Materials Testing	2
CAT	1431	OSHA Construction Standards 10 Hour	3
CAT	1501	Fundamental of Surveying & Mapping	3
CAT	2421	Soil Mechanics	3
CHE	1211	General Chemistry I	5
CHE	1221	General Chemistry II	5
CHE	2111	Organic Chemistry I	5
CHE	2121	Organic Chemistry II	5
CHN	1101	Elementary Chinese I	4
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1165	Corrections	3
COM	2201	Introduction to Mass Communication	3
COM	2206	Interpersonal Communication	3
COM	2211	Effective Public Speaking	3
COM	2220	Introduction to Communication Theory	3
COM	2225	Small Group Communication	3
DAN	1155	Dance History	3
DIT	1525	Human Nutrition	3
DIT	2510	Institutional Foodservice Systems	3
DIT	2515	Foodservice Practicum I	1
DIT	2735	Foodservice Organization & Management	3
ECE	2200	Families, Communities & Schools	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
EDU	1100	Introduction to Education	3
EDU	1105	Individuals with Exceptionalities	3
EET	1131	Digital Electronics	5
EET	1150	DC Circuits	4
EET	1155	AC Circuits	3
EET	2201	Electronic Devices & Circuits	5
EET	2261	Microprocessors	4
EET	2281	Programmable Logic Controllers	3
EGV	1101	Alternate & Renewable Energy Sources	3
EGV	2101	Solar Photovoltaic Design & Installation	3
EGV	2151	Solar Thermal Systems	3
ENG	1131	Business Writing	3
FST	1111	Fire Behavior & Combustion	3
FST	1112	Principles of Emergency Services	3
FST	1113	Fire Prevention	3
FST	2202	Building Construction for Fire Protection	3
GEO	1101	Global Forces, Local Diversity	3
GEO	1102	Earth's Physical Environment	4
GEO	1107	Introduction to Geographic Information Systems (GIS)	4
GEO	1201	World Regional Geography: People, Places & Globalization	3
GEO	1209	Map Design & Visualization	4
GLG	1101	Physical Geology	4
GLG	1201	Historical Geology	4
HIM	1101	Medical Terminology	2
HIM	1204	Medicolegal & Ethics in Healthcare Records	2
HIS	1101	United States History I	3
HIS	1102	United States History II	3
HIS	1111	Western Civilization I	3
HIS	1112	Western Civilization II	3
HMT	1112	Food Principles & Basic Preparation	4
LAW	1101	Business Law	3
LIT	2201	British Literature I	3
LIT	2202	British Literature II	3
LIT	2211	American Literature I	3
LIT	2212	American Literature II	3
LIT	2220	Introduction to Literature	3
LIT	2236	African-American Literature	3
MAT	2170	Business Statistics I	4
MAT	2290	Calculus & Analytic Geometry III	5
MAT	2310	Elementary Differential Equations	4
MAT	2320	Linear Algebra	3
MET	1231	Introduction to Engineering Design Using 3D CAD	4
MET	1371	CAD Concepts using AutoCAD	3
MET	2151	Material Science	3
MET	2201	Statics	3
MET	2251	Strength of Materials	3
MET	2301	Fluid Mechanics	3
MRK	2101	Principles of Marketing Management	3
MRK	2102	Principles of Advertising	3
MUS	1111	Music Theory I	3
MUS	1112	Aural Skills I	1
MUS	1113	Music Theory II	3
MUS	1114	Aural Skills II	1
MUS	1115	Piano for Music Majors I	1
MUS	1116	Piano for Music Majors II	1
MUS	1131	Chorale	1
MUS	1141	Wind Symphony	1
MUS	1143	Concert Band	1
MUS	1145	Classical Guitar Ensemble	1
MUS	2111	Music Theory III	3
MUS	2112	Aural Skills III	1
MUS	2113	Music Theory IV	3
MUS	2114	Aural Skills IV	1
MUS	2500	Applied Piano for Majors I	2
MUS	2501	Applied Piano for Majors II	2
MUS	2502	Applied Voice for Majors I	2
MUS	2503	Applied Voice for Majors II	2
MUS	2504	Applied Classical Guitar for Majors I	2
MUS	2505	Applied Classical Guitar for Majors II	2
MUS	2506	Applied Flute for Majors I	2
MUS	2507	Applied Flute for Majors II	2

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MUS	2508	Applied Clarinet for Majors I	2
MUS	2509	Applied Clarinet for Majors II	2
MUS	2510	Applied Saxophone for Majors I	2
MUS	2511	Applied Saxophone for Majors II	2
MUS	2512	Applied Oboe for Majors I	2
MUS	2513	Applied Oboe for Majors II	2
MUS	2514	Applied Bassoon for Majors I	2
MUS	2515	Applied Bassoon for Majors II	2
MUS	2516	Applied Trumpet for Majors I	2
MUS	2517	Applied Trumpet for Majors II	2
MUS	2518	Applied French Horn for Majors I	2
MUS	2519	Applied French Horn for Majors II	2
MUS	2520	Applied Baritone Horn for Majors I	2
MUS	2521	Applied Baritone Horn for Majors II	2
MUS	2522	Applied Trombone for Majors I	2
MUS	2523	Applied Trombone for Majors II	2
MUS	2524	Applied Tuba for Majors I	2
MUS	2525	Applied Tuba for Majors II	2
MUS	2526	Applied Violin for Majors I	2
MUS	2527	Applied Violin for Majors II	2
MUS	2528	Applied Viola for Majors I	2
MUS	2529	Applied Viola for Majors II	2
MUS	2530	Applied Cello for Majors I	2
MUS	2531	Applied Cello for Majors II	2
MUS	2532	Applied String Bass for Majors I	2
MUS	2533	Applied String Bass for Majors II	2
MUS	2534	Applied Percussion for Majors I	2
MUS	2535	Applied Percussion for Majors II	2
MUS	2536	Applied Organ for Majors I	2
MUS	2537	Applied Organ for Majors II	2
MUS	2538	Applied Harpsichord for Majors I	2
MUS	2539	Applied Harpsichord for Majors II	2
OPT	2205	Manufacturing Processes	3
PHI	2205	Introduction to Philosophy	3
PHI	2206	Introduction to Ethics	3
PHY	1141	College Physics I	4
PHY	1142	College Physics II	4
PHY	2201	General Physics I	5
PHY	2202	General Physics II	5
PLS	1120	American Federal Government	3
PLS	1232	State & Local Government	3
PLS	2200	Political Life, Systems & Issues	3
PLS	2220	International Relations	3
PSY	1100	General Psychology	3
PSY	2200	Lifespan Human Development	3
PSY	2205	Child Development	3
PSY	2206	Adolescent & Adult Development	3
PSY	2217	Abnormal Psychology	3
PSY	2220	Personality Psychology	3
PSY	2225	Social Psychology	3
SOC	1101	Introduction to Sociology	3
SOC	1115	Sociology of Marriage & Family	3
SOC	1145	Introduction to Cultural Anthropology	3
SOC	2205	Social Problems	3
SOC	2215	Race & Ethnicity	3
SOC	2226	Criminology	3
SWK	1206	Introduction to Social Work	3
SWK	1213	Introduction to Social Welfare	3
THE	1106	Stagecraft	2
THE	1107	Lab for Stagecraft	1
THE	1111	Acting I	3
THE	1194	Applied Theatre Technology I	1
THE	2206	Script Analysis	3

Career-Technical Assurance Guides (CTAGs)

Students who successfully complete specified technical programs at Ohio secondary and adult career-technical institutions are eligible to have technical credit transfer to public colleges and universities. This transfer of credit is described in Career-Technical Assurance Guides (CTAG). CTAGs are advising tools that assist students moving from Ohio secondary and adult career-technical institutions to Ohio public institutions of higher education. The approved CTAG courses for Sinclair Community College are as follows:

ALH	1113	Clinical Phlebotomy (CTP001)	2
ALH	1114	Clinical Phlebotomy Practice (CTP001)	2
AUT	1102	Introduction to Automotive Service (CTAUT005)	2
AVT	1105	Orientation to Aviation (CTAIR004)	2
AVT	1119	Aviation Meteorology (CTAIR003)	2
AVT	2146	Introduction to Airline Operations (CTAIR001)	3
BIS	2180	Medical Office Simulation (CTMMS01)	3
BTN	1110	Biotechnology & Bioethics (CTBTC001)	3
CAT	1141	Architectural Blueprint Reading (CTCON001)	2
CAT	1201	Construction Methods & Materials (CTCON003)	3
CAT	1431	OSHA Construction Standards 10 Hour (CTS001)	1
CAT	2431	OSHA Construction Standards (CTCON002)	2
CIS	1107	Introduction to Operating Systems (CTIT005)	3
CIS	1111	Introduction to Problem Solving & Computer Programming (CTPROG001)	3
CIS	1130	Network Fundamentals (CTIT002)	3
CIS	1202	C++ Software Development (CTPROG003)	3
CIS	1510	Windows Client Operating System (CTIT011)	3
CIS	2212	Java Software Development I (CTPROG002)	3
CIS	2510	Microsoft Windows Server Operating System (CTIT013)	3
CIS	2550	Linux Operating System (CTIT016)	3
CIS	2640	Network Security (CTIT015)	3
CIS	2711	Enterprise Desktop Support Technician (CTIT006)	3
CIS	2731	A+ Hardware & Software (CTIT014)	4
CJS	1101	Introduction to Criminal Justice Science (CTCJ001)	3
CLT	1200	Introduction to Clinical Laboratory (CTMLT001)	2
ECE	1100	Introduction to Early Childhood Education (CTECE001)	3
ECE	1202	Healthy & Safe Environments (CTECE002)	3
ECE	2302	Intentional Practices in the Classroom (CTECE003)	3
EDU	1100	Introduction to Education (CTEDU007)	3
EET	1131	Digital Electronics (CTEET002)	5
EET	1150	DC Circuits (CTEET001)	4
EET	2281	Programmable Logic Controllers (CTEET003)	3
EGV	1101	Alternate & Renewable Energy Sources (CTAE001)	3
EGV	2101	Solar Photovoltaic Design & Installation (CTSP001)	3
EMS	1100	Emergency Medical Responder Lecture & Laboratory (CTEMS001)	2
EMS	1150	Emergency Medical Technician: Lecture (CTEMS002)	5
EMS	1155	Laboratory for Emergency Medical Technician (CTEMS002)	2
EMS	2100	Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider (CTEMS004)	3
EMS	2105	Paramedic 1: Lecture (CTEMS004)	2
EMS	2110	Paramedic 1: Laboratory (CTEMS004)	2
EMS	2125	Paramedic 2: Lecture (CTEMS004)	5
EMS	2130	Paramedic 2: Laboratory (CTEMS004)	2
EMS	2135	Paramedic 2: Clinical (CTEMS004)	2
EMS	2150	Paramedic 3: Lecture (CTEMS004)	5
EMS	2155	Paramedic 3: Laboratory (CTEMS004)	2
EMS	2160	Paramedic 3: Clinical (CTEMS004)	1

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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EMS	2175	Paramedic 4: Lecture (CTEMS004)	2
EMS	2180	Paramedic 4: Field Experience (CTEMS004)	1
EMS	2200	Paramedic 5: Integration/Refresher Lecture (CTEMS004)	2
EMS	2205	Paramedic 5: Integration/Refresher Laboratory (CTEMS004)	1
ENS	1116	Introduction to Exercise Science & Health Promotion (CTES001)	3
ENS	1118	Lifetime Physical Fitness & Wellness (CTES002)	3
FIN	2450	Personal Finance (CTPF001)	3
HIM	1101	Medical Terminology (CTMT001)	2
HIM	1110	Health Information Processing (CTHIM001)	3
HIM	1204	Medicolegal & Ethics in Healthcare Records (CTHIM002)	2
HMT	1105	Introduction to the Hospitality & Tourism Industry (CTCF002)	2
HMT	1107	Sanitation & Safety (CTCF001)	2
HMT	1137	Hospitality Industry Computer Systems (CTCF007)	2
HMT	2226	Hospitality Purchasing & Negotiations (CTCF009)	2
MAN	2159	Supply Chain Management Concepts & Applications (CTSCM001)	3
MAS	1102	Clinical Medical Assisting I (CTMAT008)	3
MAS	1103	Clinical Medical Assisting II (CTMAT008)	4
MAS	1110	Administrative Medical Assisting (CTMAT004)	4
MAS	2201	Clinical Medical Assisting III (CTMAT009)	4
MAS	2210	Medical Billing Specialist (CTMAT005)	3
MET	1371	CAD Concepts using AutoCAD (CTMET005)	3
MHT	1101	Introduction to Mental Health Services (CTBH001)	3
MHT	1130	Fundamentals of Addiction Counseling CDCA Preliminary (CTBH002)	3
MRK	2102	Principles of Advertising (CTVDI002)	3
OPT	2205	Manufacturing Processes (CTMET004)	3
VET	1120	Introduction to Large Animal Sciences: Handling & Husbandry (CTASM001)	3
VIS	1208	Typography (CTVDI001)	4

Military Transfer Assurance Guides (MTAGs)

In order to streamline the awarding, transferability, and applicability of college credit, service members and veterans are guaranteed to earn certain types of credit(s) or course(s) as specified in the Military Transfer Assurance Guides (MTAGs). The approved MTAG courses for Sinclair Community College are as follows:

AVT	1119	Aviation Meteorology	2
CAT	1201	Construction Methods & Materials	3
CAT	1501	Fundamental of Surveying & Mapping	3
CAT	2421	Soil Mechanics	3
CIS	1130	Network Fundamentals	3
CIS	1411	Introduction to Networks	3
CIS	1510	Windows Client Operating System	3
CIS	2416	Routing & Switching Essentials	4
CIS	2510	Microsoft Windows Server Operating System	3
CIS	2640	Network Security	3
CIS	2731	A+ Hardware & Software	4
CIS	2711	Enterprise Desktop Support Technician	3
CJS	1165	Corrections	3
DIT	2510	Institutional Foodservice Systems	3
DIT	2515	Foodservice Practicum I	1
DIT	2735	Foodservice Organization & Management	3
EET	1131	Digital Electronics	5
EET	1150	DC Circuits	4
EET	1155	AC Circuits	3
EET	2201	Electronic Devices & Circuits	5

EET	2261	Microprocessors	4
EET	2281	Programmable Logic Controllers	3
EMS	1150	Emergency Medical Technician: Lecture	5
EMS	1155	Laboratory for Emergency Medical Technician	2
GEO	1209	Map Design & Visualization	4
MUS	1131	Chorale	1
MUS	1141	Wind Symphony	1
MUS	1143	Concert Band	1
MUS	1145	Classical Guitar Ensemble	1
MUS	2500	Applied Piano for Majors I	2
MUS	2501	Applied Piano for Majors II	2
MUS	2502	Applied Voice for Majors I	2
MUS	2503	Applied Voice for Majors II	2
MUS	2504	Applied Classical Guitar for Majors I	2
MUS	2505	Applied Classical Guitar for Majors II	2
MUS	2506	Applied Flute for Majors I	2
MUS	2507	Applied Flute for Majors II	2
MUS	2508	Applied Clarinet for Majors I	2
MUS	2509	Applied Clarinet for Majors II	2
MUS	2510	Applied Saxophone for Majors I	2
MUS	2511	Applied Saxophone for Majors II	2
MUS	2512	Applied Oboe for Majors I	2
MUS	2513	Applied Oboe for Majors II	2
MUS	2514	Applied Bassoon for Majors I	2
MUS	2515	Applied Bassoon for Majors II	2
MUS	2516	Applied Trumpet for Majors I	2
MUS	2517	Applied Trumpet for Majors II	2
MUS	2518	Applied French Horn for Majors I	2
MUS	2519	Applied French Horn for Majors II	2
MUS	2520	Applied Baritone Horn for Majors I	2
MUS	2521	Applied Baritone Horn for Majors II	2
MUS	2522	Applied Trombone for Majors I	2
MUS	2523	Applied Trombone for Majors II	2
MUS	2524	Applied Tuba for Majors I	2
MUS	2525	Applied Tuba for Majors II	2
MUS	2526	Applied Violin for Majors I	2
MUS	2527	Applied Violin for Majors II	2
MUS	2528	Applied Viola for Majors I	2
MUS	2529	Applied Viola for Majors II	2
MUS	2530	Applied Cello for Majors I	2
MUS	2531	Applied Cello for Majors II	2
MUS	2532	Applied String Bass for Majors I	2
MUS	2533	Applied String Bass for Majors II	2
MUS	2534	Applied Percussion for Majors I	2
MUS	2535	Applied Percussion for Majors II	2
MUS	2536	Applied Organ for Majors I	2
MUS	2537	Applied Organ for Majors II	2
MUS	2538	Applied Harpsichord for Majors I	2
MUS	2539	Applied Harpsichord for Majors II	2
PHY	1141	College Physics I	4
PHY	1142	College Physics II	4

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Industry Recognized Credential Transfer Assurance Guides (ITAGs)

ITAGs are a statewide transfer initiative that guarantees the awarding of college-level credit to students who earn agreed-upon, industry-recognized credentials. The award of credit is based upon the knowledge, skills, and competencies gained through credential attainment, regardless of where the learning to prepare for the credential took place. The approved ITAG courses for Sinclair Community College are as follows:

AUT	1102	Introduction to Automotive Service	2
CIS	2640	Network Security	3
HMT	1107	Sanitation & Safety	2

Multicultural Electives

AFR	1100	African-American Studies	3
ART	2236	History of Women Artists	3
GEO	1101	Global Forces, Local Diversity	3
GEO	1201	World Regional Geography: People, Places & Globalization	3
HIS	1105	African-American History	3
HIS	1111	Western Civilization I	3
HIS	1112	Western Civilization II	3
HIS	2215	Survey of African History	3
HIS	2216	Survey of Latin American History	3
HIS	2217	Survey of East Asian History	3
HIS	2219	Survey of the Middle East	3
HUM	1125	Introduction to the Humanities	3
HUM	1130	Humanity & the Challenge of Technology	3
HUM	1141	Appalachian History & Culture	3
LIT	2217	Images of Women in Literature	3
LIT	2234	Literature of Africa, Asia, & Latin America	3
LIT	2236	African American Literature	3
PLS	2200	Political Life, Systems & Issues	3
PLS	2220	International Relations	3
PSY	1160	Black Psychology	3
PSY	2225	Social Psychology	3
REL	1111	Eastern Religions	3
REL	1112	Western Religions	3
SOC	1145	Introduction to Cultural Anthropology	3
SOC	2215	Race & Ethnicity	3
THE	2201	History of Theatre I	3
THE	2202	History of Theatre II	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Published Program Length for Instructional Time

The chart below represents the amount of classroom time that each program will take to complete. For example, a 24 credit hour short-term certificate will take a student going full-time, two semesters to complete. Following Sinclair's academic year, two semesters is equivalent to 1 academic year, 9 months or 32 weeks.

CREDIT HOURS IN PROGRAM	YEARS	MONTHS	WEEKS
12 or less	.5	5	16
13 to 24	1.0	9	32
25 to 36	1.5	14	48
37	2.0	18	64
60	2.5	23	80
61 to 73	3.0	27	96

Years were calculated based on (credit hours ÷ 12) ÷ 2 because there are 2 terms per year in the academic calendar.

Months were calculated based on years x 9 months because budgets for an academic year are based on 9 months.

Weeks were calculated based on the number of terms in a year x 16 weeks.

SINCLAIR COLLEGE

Art

Program Code: ART.S.AA • Credit Hours: 65

Description

The Art university parallel program is oriented toward students who intend to transfer to a four-year college or university. The Art curriculum challenges students' creative thinking abilities with its studio and art history courses. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Accreditation

Sinclair Community College has been accredited by the National Association of Schools of Art and Design (NASAD) since 2002.

Career Opportunities

For students who want a career in art, the faculty of working professional artists will advise and assist in developing techniques and a body of work that will transfer well to other colleges and universities. If the goal is to set up a working studio after graduation, students will be given the necessary information by the faculty. Although the most obvious career for college graduates with art degrees is that of fine artists, there are other opportunities which require the skill, knowledge and talents gained through the study of art. These include art teachers, art historians, art curators and art therapists.

ART		Art History Elective	3
ART		ART Concentration Elective	6
ART		ART Elective	9
ART		ART 2D or 3D Elective	3
ART	1101	2-D Foundations	3
ART	1102	3-D Foundations	3
ART	1111	Drawing I	3
ART	2230	Art History: Ancient through Medieval Periods	3
ART	2231	Art History: Renaissance through Contemporary Periods	3
ART	2270	Fine Art Internship	1
ART	2295	Graduation Portfolio Development & Exhibition	1
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Social & Behavioral Sciences Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Arts & Humanities Elective (May not be ART course)	3

Drawing Concentration (2D)
ART	1112	Drawing II
ART	2111	Intermediate Drawing I

Life and Anatomy Concentration (2D)
ART	2216	Life Drawing & Anatomy I
ART	2217	Life Drawing & Anatomy II

Painting Concentration (2D)
ART	1121	Beginning Painting I
ART	1122	Beginning Painting II

Photography Concentration (2D)
ART	1161	Black & White Darkroom Photography I AND
ART	1162	Black & White Darkroom Photography II OR
ART	2265	Digital Color Photography I OR
ART	1170	Non-Silver Photography OR
ART	1171	Studio Photography

Printmaking Concentration (2D)
ART	2269	Printmaking I
ART	2279	Printmaking II

Ceramics Concentration (3D)
ART	1141	Introduction to Ceramics
ART	1142	Intermediate Ceramics

Sculpture Concentration (3D)
ART	1131	Introduction to Sculpture
ART	1132	Intermediate Sculpture

2D Electives
ART	1112	Drawing II
ART	1121	Beginning Painting I
ART	1122	Beginning Painting II
ART	1161	Black & White Darkroom Photography I
ART	1162	Black & White Darkroom Photography II
ART	1170	Non-Silver Photography
ART	1171	Studio Photography
ART	1175	Computer Photography
ART	2111	Intermediate Drawing I
ART	2112	Intermediate Drawing II
ART	2216	Life Drawing & Anatomy I
ART	2217	Life Drawing & Anatomy II
ART	2221	Intermediate Painting-Observation & Concept
ART	2222	Intermediate Painting-The Figure
ART	2265	Digital Color Photography I
ART	2266	Digital Color Photography II
ART	2269	Printmaking I
ART	2279	Printmaking II
ART	2280	Intermediate Printmaking I
ART	2281	Intermediate Printmaking II
ART	2285	Printmaking - Monotype

3D Electives
ART	1131	Introduction to Sculpture
ART	1132	Intermediate Sculpture
ART	1133	Figurative Sculpture
ART	1141	Introduction to Ceramics
ART	1142	Intermediate Ceramics
ART	2141	Advanced Ceramics

Art History Electives
ART	2235	History of Photography
ART	2236	History of Women Artists
ART	2237	History of American Art
ART	2238	History of African Art

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Associate of Arts
Program Code: LA.S.AA • Credit Hours: 60

Description
The Associate of Arts-Liberal Arts is designed for students who are planning to transfer to a four-year college or university in a variety of majors, including education. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. Transferring students can select specific electives based on the requirements of their intended major at the receiving institution. Students should communicate with the receiving institution early into their educational program and are required to work with an academic advisor to select appropriate courses. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities
Students will graduate with a general understanding of the complex nature of human society. Introductory knowledge of communication, critical thinking and inter-cultural awareness will transfer to baccalaureate programs or as soft skills in a variety of industries.

COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Arts & Humanities Elective	9
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	9
OT36		Mathematics Elective	3
SCC	1101	First Year Experience	1
XXX		Any Course in Catalog Elective	20
XXX		Multicultural Elective	3

Communication Studies
Program Code: COM.S.AA • Credit Hours: 62

Description
Communication is the study of interactions between people in interpersonal, small group, public speaking, organizational and mass-media settings. This degree can lead to successful transfer to a four-year college or university baccalaureate program. Through careful course selection, a program of study can be planned to satisfy a student's particular educational and career interests. Enhancing communication skills provides invaluable benefits for all students, regardless of major. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities
A communication degree can provide opportunities in journalism, speech education, business, industry, government, broadcast media, law, ministry, social services, public relations, or provide valuable communication skills to enrich any career. Through careful course selection, a program of study can be planned to satisfy your particular educational and career interests. Enhancing communication skills provides invaluable benefits for all students, regardless of major or career path.

BIS	1120	Introduction to Software Applications	3
COM	2201	Introduction to Mass Communication	3
COM	2206	Interpersonal Communication	3
COM	2211	Effective Public Speaking	3
COM	2220	Introduction to Communication Theory	3
COM	2225	Small Group Communication	3
COM	2278	Communication Capstone	1
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Social & Behavioral Sciences Elective	6
OT36		Natural & Physical Sciences Elective	6
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	6
OT36		Any Group	6
SCC	1101	First Year Experience	1
XXX		Any Course in Catalog Elective	3
XXX		Communication/Journalism Elective	6

Communication/Journalism Electives

COM	2230	Nonverbal Communication
COM	2235	Principles of Interviewing
COM	2245	Intercultural Communication
COM	2285	Organizational Communication
COM	2286	Public Relations Principles
COM	2287	Effective Listening
JOU	2101	Introduction to Journalism
JOU	2203	Reporting & Writing for Media

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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SINCLAIR COLLEGE

Creative Writing
Program Code: CRWE.S.AA • Credit Hours: 60

Description
The Creative Writing Program is designed specifically for students interested in studying how to write original creative work, including poetry, fiction, and narrative. Students hone their writing skills and learn about the world of publishing in this program, as well. Graduates of this program are well-prepared to transfer to a four-year college or university to continue their studies. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
ENG	2262	Writing to Publish	3
ENG	2255	Poetry Writing OR	
ENG	2256	Fiction Writing OR	
ENG	2257	Freelance Writing OR	
ENG	2259	Novel Writing	9
LIT	2220	Introduction to Literature	3
LIT	2217	Images of Women in Literature OR	
LIT	2234	Literature of Africa, Asia & Latin America OR	
LIT	2236	African-American Literature	3
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	9
XXX		Language Elective	4
XXX		Any Course in Catalog Elective	2

Elementary Education
Program Code: ELEE.S.AA • Credit Hours: 62

Description
This Associate of Arts degree program in Elementary Education is designed to serve as a transfer degree for those students interested in teacher education in grades kindergarten through 12th grade. All courses in this degree are Ohio Transfer 36 (OT36) courses or Transfer Assurance Guide (TAG) courses and are designed to transfer seamlessly to any state (and some private) Ohio colleges and universities and to apply toward a baccalaureate degree in Elementary Education. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

COM	2211	Effective Public Speaking	3
ECE	1101	Introductory Child Development	3
ECE	2200	Families, Communities & Schools	3
EDU	1100	Introduction to Education	3
EDU	1105	Individuals with Exceptionalities	3
EDU	1109	Effective Classroom Management & Learning Environments	3
EDU	1111	Classroom Observation K-12 Field Experience	1
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
HIS	1102	United States History II OR	
HIS	1112	Western Civilization II	3
MAT	2415	Mathematics for Elementary Education I	5
MAT	2435	Mathematics for Elementary Education II	4
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	7
OT36		Social & Behavioral Sciences Elective	3
PSY	1100	General Psychology	3
PSY	2242	Educational Psychology	3
XXX		Any Course in Catalog Elective	3

English

Program Code: ENGE.S.AA • Credit Hours: 62

Description

The Associate of Arts in English is comprised of an array of literature courses that introduces students to the world of literature. Students planning to transfer to a four-year program in English or a related field will have a strong foundation based on the broad English curriculum, which also fulfills the first and second year general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
LIT	2201	British Literature I OR	
LIT	2202	British Literature II OR	
LIT	2211	American Literature I OR	
LIT	2212	American Literature II	6
LIT	2217	Images of Women in Literature	3
LIT	2220	Introduction to Literature	3
LIT	2230	Great Books of the Western World	3
LIT	2234	Literature of Africa, Asia, & Latin America	3
LIT	2236	African-American Literature	3
OT36		Arts & Humanities Elective (May not be LIT course)	3
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	9
SCC	1101	First Year Experience	1
XXX		Associate of Arts Elective	3
XXX		Language Elective	4

Geography

Program Code: GEOE.S.AA • Credit Hours: 63-64

Description

Geography is the study of Earth's landscapes, peoples, places and environments. It provides a knowledge of the Earth's physical and human systems and of the interdependency of living things and physical environments. The Associates of Arts Degree in Geography is designed for students who are planning to transfer to a four-year college or university and pursue baccalaureate degree programs in geography or related fields. The curriculum fulfills the freshman and sophomore general education requirements for most four-year colleges and universities. In addition, the program offers a one-year certificate in Geographic Information Systems. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Ample opportunities exist for students with a degree in geography. The US Department of Labor projects "much faster than average growth in excess of 20% or more, in jobs for geographers, and other geographic professionals." A list of possible careers include: Environmental Scientist/Analyst, Natural Resource Management, Urban and Regional Planning, Education, GIS Analyst, Tourism, International Development, Marketing Analyst, Demographer, Park Ranger and Environmental Conservation. Note: Some career opportunities may require more than two years of college study.

BIO	2225	Ecology	4
CIS	2165	Database Management	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
GEO	1101	Global Forces, Local Diversity	3
GEO	1102	Earth's Physical Environment	4
GEO	1107	Introduction to Geographic Information Systems (GIS)	4
GEO	1201	World Regional Geography: People, Places & Globalization	3
GEO	1209	Map Design & Visualization	4
GEO	2210	Advanced Spatial Analysis	4
GLG	1101	Physical Geology AND	
GLG	1111	Lab for Physical Geology OR	
GEO	1300	Introduction to Weather & Climate	4
HUM	1135	Environmental Ethics	3
MAT	1450	Introductory Statistics OR	
MAT	1470	College Algebra	3-4
OT36		Arts & Humanities Elective (May not be HUM course)	3
OT36		Social & Behavioral Sciences Elective	3
SCC	1101	First Year Experience	1
XXX		Language Elective	8

***Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.**

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History

Program Code: HISE.S.AA • Credit Hours: 61

Description

An Associate of Arts in History introduces students to broad periods of the human experience. History, though, is more than just the study of the past. Students will also develop cultural literacy, critical thinking, and other skills that inform global citizenry. These skills can prepare students planning to transfer to a four-year college or university and pursue a baccalaureate degree in history or a related field, providing a foundation for careers in teaching, journalism, archival work, government, politics, and law. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
HIS	1101	United States History I	3
HIS	1102	United States History II	3
HIS	1111	Western Civilization I	3
HIS	1112	Western Civilization II	3
HIS	1105	African-American History OR	
HIS	2218	History of Ohio	3
HIS	2215	Survey of African History OR	
HIS	2216	Survey of Latin American History OR	
HIS	2217	Survey of East Asian History OR	
HIS	2219	Survey of the Middle East	6
MAT	1445	Quantitative Reasoning OR	
MAT	1470	College Algebra	3
OT36		Arts & Humanities Elective (May not be HIS course)	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6
SCC	1101	First Year Experience	1
XXX		Multicultural Elective	3
XXX		Associate of Arts Elective	6

Modern Languages

Program Code: FORE.S.AA • Credit Hours: 60-62

Description

The Associate of Arts in Modern Languages is designed for students who are planning to transfer to a four-year university as a French, German or Spanish major, or into a major for which modern language is a strong base. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
		First Year Modern Language Sequence	8
		First Year Modern Language Sequence (different language) OR	
		Second Year Modern Language Sequence (original language)	6-8
MAT	1445	Quantitative Reasoning OR	
MAT	1470	College Algebra	3
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6
OT36		Any Group	9
SCC	1101	First Year Experience	1
XXX		Multicultural Elective	3

First-Year Modern Language Course Sequences

CHN	1101	Elementary Chinese I
CHN	1102	Elementary Chinese II
FRE	1101	Elementary French I
FRE	1102	Elementary French II
GER	1101	Elementary German I
GER	1102	Elementary German II
JPN	1101	Elementary Japanese I
JPN	1102	Elementary Japanese II
SPA	1101	Elementary Spanish I
SPA	1102	Elementary Spanish II

Second-Year Modern Language Course Sequences

CHN	2201	Intermediate Chinese I
CHN	2202	Intermediate Chinese II
FRE	2201	Intermediate French I
FRE	2202	Intermediate French II
GER	2201	Intermediate German I
GER	2202	Intermediate German II
JPN	2201	Intermediate Japanese I
JPN	2202	Intermediate Japanese II
SPA	2201	Intermediate Spanish I
SPA	2202	Intermediate Spanish II

Multimedia Journalism
Program Code: COMMJ.S.AA • Credit Hours: 61

Description
Communication is the study of interactions between people in interpersonal, small group, public speaking, organizational and mass-media settings. The Multimedia Journalism degree is a collaboration of the Communication, Journalism and Visual Communication programs. Multimedia journalism is presently the fastest growing area of journalism. It will also prove valuable for students who plan to transfer to a four-year college or university baccalaureate program to continue their studies in journalism or mass communication. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities
Multimedia journalism is the fastest growing area of journalism, and this degree prepares students to work as producers for news and corporation websites. Students may also elect to transfer to a four-year college or university baccalaureate program to continue their studies in journalism or communication.

BIS	1120	Introduction to Software Applications	3
CIS	1350	Web Site Development with HTML & CSS	3
COM	2201	Introduction to Mass Communication	3
COM	2206	Interpersonal Communication	3
COM	2211	Effective Public Speaking	3
COM	2225	Small Group Communication	3
COM	2278	Communication Capstone	1
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
JOU	2101	Introduction to Journalism	3
JOU	2203	Reporting & Writing for Media	3
JOU	2270	Journalism Internship	2
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6
OT36		Any Group	6
SCC	1101	First Year Experience	1

Music
Program Code: MUS.S.AA • Credit Hours: 65

Description
The Associate of Arts in Music is designed for students who will be transferring to a four-year institution for further studies upon graduation in music education, music performance, or any baccalaureate program in music. The A.A. curriculum fulfills the requirements of the first two years of a bachelor of music, with special emphasis on public performance. An audition is required upon entering the program and a solo recital is required before graduation. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Accreditation
Sinclair Community College is an accredited institutional member of the National Association of Schools of Music.

COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MUS	1110	Music Technology for Music Majors	1
MUS	1111	Music Theory I	3
MUS	1112	Aural Skills I	1
MUS	1113	Music Theory II	3
MUS	1114	Aural Skills II	1
MUS	2111	Music Theory III	3
MUS	2112	Aural Skills III	1
MUS	2113	Music Theory IV	3
MUS	2114	Aural Skills IV	1
MUS	2117	Survey of Musical Styles I	3
MUS	2118	Survey of Musical Styles II	3
MUS		Applied Instrument Elective	8
MUS	2231	Chorale for Majors OR	
MUS	2241	Music Practicum for Majors OR	
MUS	2243	Concert Band for Majors OR	
MUS	2245	Classical Guitar Ensemble for Majors	0
MUS	1115	Piano for Music Majors I AND	
MUS	1116	Piano for Music Majors II AND	
MUS	2115	Piano for Music Majors III AND	
MUS	2116	Piano for Music Majors IV OR	
MUS	1119	Secondary Voice AND	
MUS	1119	Secondary Voice AND	
MUS	1119	Secondary Voice AND	
MUS	1119	Secondary Voice	4
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Political Science

Program Code: PLSE.S.AA • Credit Hours: 61

Description

An Associate in Arts in Political Science degree exposes students to the political thought, processes, and behavior of governments, institutions, and organizations. The study of political science provides one with the concepts, theories and methods necessary to analyze problems scientifically. These tools serve as an underpinning for a level of civic engagement constructed around critical thinking and cultural literacy, and can be applied in a wide range of careers including government, law, business, international organizations, nonprofits, journalism, and teaching. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6
PLS	1120	American Federal Government	3
PLS	1232	State & Local Government	3
PLS	2200	Political Life, Systems & Issues	3
PLS	2220	International Relations	3
SCC	1101	First Year Experience	1
XXX		Multicultural Elective	3
XXX		Associate of Arts Elective	12

Psychology

Program Code: PSYE.S.AA • Credit Hours: 60

Description

The Associate of Arts in Psychology prepares students for entry-level positions in fields such as education, mental health, and community service. The curriculum includes courses in social psychology, abnormal psychology, human development, and personality psychology, as well as current psychological theory and practice. This degree prepares students to directly enter the workforce and it transfers well to most 4-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Graduates are employed as psychiatric and mental health technicians, case workers or managers, victim advocates, residential/group home specialists, and in a variety of other positions in which knowledge of human behavior and mental processes is beneficial, including sales and marketing, human resources, community service agencies, administrative positions, and others.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective (May not be PSY course)	3
PSY	1100	General Psychology	3
PSY	2200	Lifespan Human Development	3
PSY	2217	Abnormal Psychology	3
PSY	2220	Personality Psychology	3
PSY	2225	Social Psychology	3
PSY		Psychology Elective	3
PSY	1160	Black Psychology OR	
PSY	2180	Psychology of Gender	3
SCC	1101	First Year Experience	1
XXX		Associate of Arts Elective	8

Psychology Electives

PSY	2205	Child Development
PSY	2206	Adolescent & Adult Development
PSY	2126	Stress Management
PSY	2180	Psychology of Gender
PSY	2214	Drugs & Behavior
PSY	2218	Principles of Counseling
PSY	2228	Industrial Organizational Psychology
PSY	2235	Behavioral Science Research Methods
PSY	2236	Behavioral Science Statistics
PSY	2242	Educational Psychology
PSY	2250	Behavior Modification
PSY	2297	Special Topics

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Social Work

Program Code: SWKE.S.AA • Credit Hours: 60-62

Description

Social Work is a profession for people who want to help those in need to overcome difficulties and improve their lives. The Associate of Arts in Social Work is dedicated to students wishing to transfer to a four year university in Social Work or a related field. With an associate's, students can begin working in the field as paraprofessionals in social service settings. Social Work will provide students with skills and knowledge necessary to help people with a wide range of issues including psychological/mental health, behavioral, financial, health, relationships, and substance abuse problems. At the Associate's level, students complete practicum and service learning opportunities and explore skills related to advocacy and case management as well as skills related to working with multicultural client populations. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Social Work is a helping profession which aims to assist individuals, families, and larger groups; as well as targeting the social problems which effect society today. The Department of Labor Statistics shows the job outlook for Social Work is projecting growth in the field of 19% between 2012 and 2022 which is faster than the average growth for other occupations. There is an increased demand for social work in fields such as aging and healthcare. Social Work allows opportunities for licensure and higher education which lead to more open doors for employment in the field. Social Workers are found in almost every facet of society including in the medical field such as hospitals and nursing homes, child welfare, schools, jails, and private practice.

BIO	1111	General Biology I	4
BIO	1211	General Biology II	4
COM	2206	Interpersonal Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Social & Behavioral Sciences Elective	3
PLS	1120	American Federal Government OR	
PLS	2200	Political Life, Systems & Issues	3
PSY	1100	General Psychology	3
SCC	1101	First Year Experience	1
SOC	1101	Introduction to Sociology	3
SOC	1115	Sociology of Marriage & Family	3
SWK	1206	Introduction to Social Work	3
SWK	1213	Introduction to Social Welfare	3
SWK	2207	Anti-Oppressive Social Work	3
XXX		Modern Language Elective	6-8

Sociology

Program Code: SOCE.S.AA • Credit Hours: 60

Description

Sociology is the study of social life, social change, and the social causes and consequences of human behavior. The Associates of Arts in Sociology can lead to successful transfer to a four-year college or university baccalaureate program. Sociology provides 21st century skills for all students regardless of the major: The ability to critically analyze social problems/issues necessary for responsible decision making; a systematic approach to information gathering and interpretations of data; a fundamental comprehension of multi-cultural differences and global diversity. With an associate's, students can begin working in the field as paraprofessionals in social service & business settings. The curriculum fulfills the freshman and sophomore general education requirements for most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	8
OT36		Social & Behavioral Sciences Elective	3
PSY	1100	General Psychology	3
SCC	1101	First Year Experience	1
SOC	1101	Introduction to Sociology	3
SOC	1115	Sociology of Marriage & Family	3
SOC	1145	Introduction to Cultural Anthropology	3
SOC	1160	Sociology of Aging	3
SOC	2205	Social Problems	3
SOC	2215	Race & Ethnicity	3
XXX		Associate of Arts Elective	6

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Sport and Recreation Education
Program Code: PED.S.AA • Credit Hours: 65

Description

This program is designed for sport and recreation careers and will fulfill the freshman and sophomore educational requirements at most four-year colleges or universities. Sport and Recreation provides two years of a solid foundation in sport related business. It also contains a Coaching short-term certificate. Course work includes management, marketing, coaching, and leadership along with many other respective components of the industry. Students are prepared to enter the profession or transfer for completion of a baccalaureate degree. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Sport and Recreation Education gives the student a variety of options. The student could work in sports information, promotions, ticket sales, media relations, event management, tournament planning and marketing and facility management. Some careers will require a baccalaureate degree.

ALH	1132	Heartsaver First Aid, CPR & AED	1
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
ENS	1118	Lifetime Physical Fitness & Wellness	3
ENS	2419	Health Promotion, Fitness & Sport Programming	3
ENT	2140	Small Business Finance	3
GLG	1101	Physical Geology	4
GLG	1201	Historical Geology	4
HIS	1111	Western Civilization I	3
HIS	1112	Western Civilization II	3
MAN	1107	Foundations of Business	3
MAN	1114	Introduction to Sport Management	3
MAN	2414	Foundations of Coaching	3
MAN	2415	Foundations of Leadership	3
MAN	2270	Management Internship	2
MRK	2220	Small Business Marketing	3
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Social & Behavioral Sciences Elective (may not be PSY course)	3
PSY	1100	General Psychology	3

Theatre Performance
Program Code: THEP.S.AA • Credit Hours: 61

Description

The theatre performance degree is designed as a university-parallel program for students to transfer to four-year institutions. The faculty and staff are theatre professionals with extensive experience in acting, directing, playwriting and choreography. Curriculum is based on skills required to enhance students' performance including: voice, movement, character and script analysis, dance, auditioning and presentation. Successful students achieve real-world experience participating in our theatre productions in several performance venues. Students must pass all THE courses with a grade of C or better. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Accreditation

Sinclair's Theatre Performance Program is accredited by the National Association of Schools of Theatre (NAST).

Career Opportunities

Employment opportunities are available in areas such as performer, director, educator, dramaturge, playwright, arts administrator, company business or artistic manager. These positions can commonly be found in theatre, film, television commercials, voice over work, theme parks, cruise ships, education, and modeling. A theatre performance degree also provides skills to enrich any career that requires artistic research, presentations, customer service, confidence or communication.

Program Prerequisite(s):

Approval of Department

COM	2211	Effective Public Speaking	3
DAN	1172	Ballet OR	
DAN	1173	Modern Dance OR	
DAN	1174	Jazz Dance I OR	
DAN	1175	Tap Dance	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MAT	1445	Quantitative Reasoning OR	
MAT	1470	College Algebra	3
OT36		Arts & Humanities Elective (May not be THE course)	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6
THE	1105	Introduction to Theatre	3
THE	1106	Stagecraft	2
THE	1107	Lab for Stagecraft	1
THE	1111	Acting I	3
THE	1212	Voice for the Actor	3
THE	1194	Applied Theatre Technology I	1
THE	1194	Applied Theatre Technology I	1
THE	1196	Applied Theatre Technology II	1
THE	1199	Applied Theatre Performance	1
THE	2115	Movement for the Actor	3
THE	2201	History of Theatre I	3
THE	2202	History of Theatre II	3
THE	2206	Script Analysis	3
THE	2216	Acting II	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Theatre Technology
Program Code: THET.S.AA • Credit Hours: 62

Description

The theatre technology degree is a university-parallel program designed for transfer to four-year institutions. Faculty and staff are theatre professionals with extensive experience in design and technology: scenic, lighting, costumes, props, sound, directing and stage management. Curriculum is based on skills to enhance students' technical skills in stage craft, lighting and costume fundamentals, and stage management. Successful students achieve real-world experience with theatre productions in several performance venues. Students must pass all THE courses with a grade of C or better. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Employment opportunities are available in areas such as designer, technician, director, educator, stage manager, arts administrator and company business or artistic manager. These positions can commonly be found in theatre, film, theme parks, cruise ships, rock shows, museums, churches, or fashion. A theatre technology degree also provides the skills to enrich any career that requires artistic research, safety troubleshooting, management, and creative problem solving.

Accreditation

Sinclair's Theatre Technology Program is accredited by the National Association of Schools of Theatre (NAST).

Program Prerequisite(s):

Approval of Department

COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MAT	1445	Quantitative Reasoning OR	
MAT	1470	College Algebra	3
OT36		Arts & Humanities Elective (May not be THE course)	3
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective	6
THE	1105	Introduction to Theatre	3
THE	1106	Stagecraft	2
THE	1107	Lab for Stagecraft	1
THE	1103	Principles of Acting OR	
THE	1111	Acting I	3
THE	1116	Stage Lighting Fundamentals	2
THE	1117	Lab for Stage Lighting Fundamentals	1
THE	1118	Costume Fundamentals	2
THE	1119	Lab for Costume Fundamentals	1
THE	1194	Applied Theatre Technology I	1
THE	1194	Applied Theatre Technology I	1
THE	1196	Applied Theatre Technology II	2
THE	2220	Theatre Portfolio	2
THE	2296	Applied Theatre Technology IV	2
THE	2201	History of Theatre I	3
THE	2202	History of Theatre II	3
THE	2206	Script Analysis	3
THE	2240	Stage Management	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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SINCLAIR
C O L L E G E

Associate of Science
Program Code: LA.S.AS • Credit Hours: 60-61

Description

The Associate of Science is designed for students who are planning to transfer to a four-year college or university and pursue baccalaureate degree programs such as Biology, Chemistry, Geology, Mathematics, Physics and Pre-professional programs, i.e. Medicine, Pharmacy, etc. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
MAT	2215	Mathematics for Machine Learning & Artificial Intelligence OR	
MAT	2240	Calculus for the Life Sciences OR	
MAT	2270	Calculus & Analytic Geometry I	4-5
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	12
OT36		Social & Behavioral Sciences Elective	6
OT36		Mathematics Elective OR	
OT36		Natural & Physical Sciences Elective	3
SCC	1101	First Year Experience	1
XXX		Any Course in Catalog Elective	18
XXX		Multicultural Elective	3

Biology
Program Code: BIOE.S.AS • Credit Hours: 60

Description

The Associate of Science in Biology is designed for students who are planning to transfer to a four-year college or university and pursue a baccalaureate degree in biology. The curriculum fulfills the freshman and sophomore requirements of most colleges and universities. The biology courses offer a solid foundation in key areas of biology such as cell biology, genetics, evolution, and ecology with a broad survey of life on Earth including microbiology. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 to graduate.

Career Opportunities

Studying biology opens the door to a wide variety of teaching, research, and service careers including health sciences, forensic science, environment, agriculture, and science writing. Students of the biological sciences find jobs in colleges and universities, primary and secondary schools, museums, zoos, nature centers, hospitals, clinics, and laboratories. Governments need the expertise of biologists to formulate sound policies and legislation. Many non-profit organizations, businesses, and industries also depend on biologists to fulfill their missions.

BIO	1171	Principles of Biology I	5
BIO	1272	Principles of Biology II	5
BIO	2222	Evolution	3
BIO	2225	Ecology	4
BIO	2235	Genetics	4
BIO	2236	Lab for Genetics	0
CHE	1211	General Chemistry I	5
CHE	1221	General Chemistry II	5
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Arts & Humanities Elective	6
OT36		Mathematics Elective	3
OT36		Social & Behavioral Sciences Elective	6
SCC	1101	First Year Experience	1
XXX		Multicultural Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
64   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Business Administration
Program Code: BUS.S.AS • Credit Hours: 63

Description

The University Parallel program is designed for the student who wants to pursue a baccalaureate degree at a four-year institution in a business discipline. The purpose of the degree program is to provide the basic core of business and general education requirements for the first two years of a four-year program. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2211	Effective Public Speaking	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
ENG	1201	English Composition II OR	
MAT	2180	Business Statistics II	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MAN	2150	Management & Organizational Behavior	3
MAT	2160	Calculus for Business & Economics	5
MAT	2170	Business Statistics I	4
MRK	2101	Principles of Marketing Management	3
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective (May not be ECO course)	3

Chemistry
Program Code: CHEE.S.AS • Credit Hours: 61

Description

The Associate of Science degree in Chemistry fulfills the freshman and sophomore general education and degree-specific requirements for students transferring to programs which require General and Organic Chemistry at most four-year colleges and universities. Recipients of this degree may be able to apply for laboratory technician or research assistant positions. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Studying chemistry opens the door to a wide variety of teaching, research, industrial, clinical and service careers including health sciences, forensics, environment, manufacturing and science writing. Chemistry graduates find jobs in colleges and universities, primary and secondary schools, clinics and laboratories. Governments rely on the expertise of chemists to formulate sound policies and legislation and many non-profit organizations, businesses, and industries hire chemists who use their skills to meet the goals of the organization.

CHE	1211	General Chemistry I	5
CHE	1221	General Chemistry II	5
CHE	2111	Organic Chemistry I	5
CHE	2121	Organic Chemistry II	5
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
MAT	2290	Calculus & Analytic Geometry III	5
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Arts & Humanities Elective	6
OT36		Social & Behavioral Sciences Elective	6
SCC	1101	First Year Experience	1
XXX		Multicultural Elective	3

![SINCLAIR COLLEGE]

Computer Science
Program Code: CS.S.AS • Credit Hours: 61

Description
Course work will focus on giving students a foundational knowledge of computer science concepts such as mathematics and programming skills. Furthermore, this Associate of Science degree will provide students a much needed transfer pathway to Computer Science Bachelor Degrees at four-year universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Accreditation
This program is fully accredited by the Council on Higher Education Accreditation (CHEA).

Career Opportunities
According to Ohio Bureau of Labor Information data, statewide increases of 18.1% for Software Developers; Applications, and 7.8% for Software Developers; Systems Software, are projected between 2014 and 2024.

CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	2212	Java Software Development I	3
CIS	2217	Java Software Development II	4
CIS	2207	Data Structures & Algorithms OR	
CIS	2266	Python for Data Analytics	3
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
OT36		Mathematics Elective	18
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	9
OT36		Social & Behavioral Sciences Elective	6
XXX		Multicultural Elective	3

Engineering and Engineering Technology University Transfer
Program Code: ESUP.S.AS • Credit Hours: 60-61

Description
The Engineering and Engineering Technology University Transfer Associate degree programs are for students who plan to attend a four-year college or university for a degree in Engineering Science or Engineering Technology. This program is designed to bring an entering student up to the level of a third year university student in Engineering or Engineering Technology. Course sequence is designed to transfer the basic requirements of most universities. The student is strongly advised to consult the particular school he or she will be entering as well as a Sinclair academic advisor, before signing up for any courses. Please see an academic advisor for the listing of available electives and assistance in selecting electives toward your major that will be accepted by the receiving transfer institution. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
OT36		Arts & Humanities Elective (two different disciplines)	6
OT36		Social & Behavioral Sciences Elective (two different disciplines)	6
PHY	2201	General Physics I AND	5
PHY	2207	Lab for General Physics I AND	
PHY	2202	General Physics II AND	5
PHY	2208	Lab for General Physics II AND	
MAT	2310	Elementary Differential Equations OR	4-5
MAT	2330	Differential Equations & Linear Algebra AND	
		Engineering Transfer Pathway Elective	18-20
		OR	
CHE	1211	General Chemistry I AND	5
CHE	1251	Lab for General Chemistry I AND	
PHY	1141	College Physics I AND	4
PHY	1142	College Physics II AND	4
		Engineering Technology Pathway Elective	20-23

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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66   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Engineering Pathways

(See Advisors to align with receiving institution)

Electrical Engineering Transfer Pathway Electives

CHE 1211/1251 General Chemistry I with Lab

EGR 1101 Introductory Mathematics for Engineering Applications

EGR 2131 Engineering Digital Design

EGR 2201 Circuit Analysis

EGR 2261 Engineering Problem Solving using C & C++

MAT 2290 Calculus & Analytic Geometry III

MEE 2101 Statics for Engineers

MEE 2201 Thermodynamics for Engineers

PHY 2210 MATLAB for Scientists & Engineers

Mechanical Engineering Pathway Electives

CHE 1211/1251 General Chemistry I with Lab

EGR 1101 Introductory Mathematics for Engineering Applications

EGR 2201 Circuit Analysis

MAT 2290 Calculus & Analytic Geometry III

MEE 2101 Statics for Engineers

MEE 2201 Thermodynamics for Engineers

MEE 2301 Strength of Materials for Engineers

MEE 2401 Dynamics for Engineers

MET 1301 SolidWorks Basics

PHY 2210 MATLAB for Scientists & Engineers

Computer Science & Computer Engineering Transfer Pathway Electives

CHE 1211/1251 General Chemistry I with Lab

CIS 1107 Introduction to Operating Systems

CIS 1130 Network Fundamentals

CIS 1350 Web site Development with HTML & CSS

CIS 2207 Data Structures & Algorithms

CIS 2212 Java Software Development I

CIS 2217 Java Software Development II

CIS 2268 Structured Query Language (SQL) Programming

CIS 2550 Linux Operating Systems

EGR 2131 Engineering Digital Design

EGR 2201 Circuit Analysis

EGR 2261 Engineering Problem Solving using "C" and "C++"

MAT 2290 Calculus & Analytic Geometry III

MAT 2570 Discrete Mathematics

MEE 2101 Statics for Engineers

MEE 2201 Thermodynamics for Engineers

PHY 2210 MATLAB for Scientists & Engineers

Science/Math/English/Other Engineering Transfer Pathway Electives

BIO 1171 Principles of Biology I

BIO 1272 Principles of Biology II

CAT 1301 Introduction to Civil Construction CAD

CAT 1501 Fundamentals of Surveying & Mapping

CHE 1211/1251 General Chemistry I with Lab

CHE 1221/1261 General Chemistry II with Lab

CHE 2111/2151 Organic Chemistry I with Lab

CHE 2121/2161 Organic Chemistry II with Lab

EGR 2201 Circuit Analysis

ENG 1201 English Composition II

GLG 1101/1111 Physical Geology with Lab

GLG 1201/1211 Historical Geology with Lab

MAT 2170 Business Statistics I

MAT 2290 Calculus & Analytic Geometry III

MAT 2320 Linear Algebra

MAT 2570 Discrete Mathematics

MAT 2600 Applied Statistics

MEE 2101 Statics for Engineers

MEE 2201 Thermodynamics for Engineers

MEE 2301 Strength of Materials for Engineers

MEE 2401 Dynamics for Engineers

Chemical Engineering

CHE 1211/1251 General Chemistry I with Lab

CHE 1221/1261 General Chemistry II with Lab

CHE 2111/2151 Organic Chemistry I with Lab

CHE 2121/2161 Organic Chemistry II with Lab

EGR 2201 Circuit Analysis

ENG 1201 English Composition II

MAT 2290 Calculus & Analytic Geometry III

MEE 2101 Statics for Engineers

MEE 2201 Thermodynamics for Engineers

Civil Engineering

BIO 1171 Principles of Biology I

BIO 1272 Principles of Biology II

CAT 1301 Introduction to Civil Construction CAD

CHE 1211/1251 General Chemistry I with Lab

CHE 1221/1261 General Chemistry II with Lab

ENG 1201 English Composition II

EGR 2201 Circuit Analysis

GLG 1101/1111 Physical Geology with Lab

GLG 1201/1211 Historical Geology with Lab

MAT 2290 Calculus & Analytic Geometry III

MEE 2101 Statics for Engineers

MEE 2201 Thermodynamics for Engineers

MEE 2301 Strength of Materials for Engineers

MEE 2401 Dynamics for Engineers

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Engineering Technology Pathways
(See Advisors to align with receiving institution)

Electronic and Computer Engineering Technology Electives

CIS	1202	C++ Software Development
EET	1116	Electronics Schematics & Fabrication
EET	1131	Digital Electronics
EET	1150	DC Circuits
EET	1155	AC Circuits
EET	2201	Electronic Devices & Circuits
EET	2259	Programming for Electronics Technology
EET	2261	Microprocessors
EGR	1101	Introductory Mathematics for Engineering Applications
EGR	2261	Engineering Problem Solving using "C" & "C++"
ENG	1131	Business Writing
ENG	1201	English Composition II
MAT	1450	Introductory Statistics
MAT	2240	Calculus for the Life Sciences
MAT	2270	Calculus & Analytic Geometry I
MAT	2280	Calculus & Analytic Geometry II
MET	1301	SolidWorks Basics
MET	1371	CAD Concepts using AutoCAD
MET	2201	Statics

Industrial Engineering Technology Electives

CAM	1109	Fundamentals of Tooling & Machining
CAM	1213	Fundamentals of Computer Numerical Control
EET	1150	DC Circuits
EET	1155	AC Circuits
EGR	1101	Introductory Mathematics for Engineering Applications
EGR	2261	Engineering Problem Solving using "C" & "C++"
ENG	1201	English Composition II
MAT	1450	Introductory Statistics
MAT	2240	Calculus for the Life Sciences
MAT	2270	Calculus & Analytic Geometry I
MAT	2280	Calculus & Analytic Geometry II
MET	1301	SolidWorks Basics
MET	2201	Statics
OPT	1100	Tooling & Machining Metrology
OPT	1101	Introduction to Industrial Engineering Technology
OPT	1110	Operations Work Measurement & Ergonomics
OPT	2201	Statistical Process Control
OPT	2207	Operations Systems Analysis
OPT	2208	Engineering Technology Economics & Cost Analysis
OPT	2216	Work Flow Layout & Efficiency
OPT	2240	Six Sigma: Green Belt

Mechanical Engineering Technology Electives

CAM	1109	Fundamentals of Tooling & Machining
CIS	1202	C++ Software Development
EET	1150	DC Circuits
EET	1155	AC Circuits
EGR	1101	Introductory Mathematics for Engineering Applications
EGR	2261	Engineering Problem Solving using "C" & "C++"
ENG	1131	Business Writing
ENG	1201	English Composition II
MAT	1450	Introductory Statistics
MAT	2240	Calculus for the Life Sciences
MAT	2270	Calculus & Analytic Geometry I
MAT	2280	Calculus & Analytic Geometry II
MET	1231	Introduction to Engineering Design Using 3D CAD
MET	1301	SolidWorks Basics
MET	1371	CAD Concepts using AutoCAD
MET	2101	Thermodynamics
MET	2201	Statics
MET	2251	Strength of Materials
MET	2301	Fluid Mechanics
MET	2351	Dynamics
OPT	1100	Tooling & Machining Metrology

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
68   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Geology

Program Code: GLGE.S.AS • Credit Hours: 60

Description

The Associate of Science degree in Geology is designed for students planning to transfer to a four-year college or university and pursue a Baccalaureate Degree Program in the Earth Sciences. The curriculum approximates the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Careers in the Earth Sciences are highly diverse and in global demand. They can be found at local, state and federal levels, in private industry, and in education. Natural resource sustainability, global climate change, natural hazard management, water supply issues, and contamination remediation are continuing to be pressing, global issues that require involvement from Earth Scientists. Earth scientists also play an important role in the development of environmental policies and regulations.

CHE	1211	General Chemistry I	5
CHE	1221	General Chemistry II	5
CHE	1251	Lab for General Chemistry I	0
CHE	1261	Lab for General Chemistry II	0
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
GLG	1101	Physical Geology	4
GLG	1111	Lab for Physical Geology	0
GLG	1201	Historical Geology	4
GLG	1211	Lab for Historical Geology	0
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Arts & Humanities Elective	6
OT36		Social & Behavioral Sciences Elective	6
PHY	2201	General Physics I	5
PHY	2202	General Physics II	5
PHY	2207	Lab for General Physics I	0
PHY	2208	Lab for General Physics II	0
XXX		Multicultural Elective	3

Health Science Pre-Professional Studies

Program Code: PPS.S.AS • Credit Hours: 62-64

Description

The Sinclair Health Sciences Pre-Professional Studies degree provides a flexible pathway for students interested in the following professions who wish to pursue transfer to a university program through an academic pathway* to the following Health Science Professions: Doctor of Dental Sciences, Medical Doctor, Doctor of Osteopathy, Physician's Assistant, Doctor of Pharmacy, Doctor of Physical Therapy, Doctor of Veterinary Medicine. This degree does include some patient-interaction through work-based learning or clinical practicums. *Students will be advised that different professional schools have different pre-requisites and they must consult their intended school of study to determine their best curricular pathway to complete their prerequisites. Further courses may be needed in order to meet the pre-requisites required by different programs. Communication with an Academic Adviser is strongly recommended. This list is not inclusive. Further professional program prerequisites may be identified as students indicate interest.

Career Opportunities

This highly transferable degree has been designed for the student interested in a medical degree in one of the following fields: Doctor of Osteopathy (DO), Medical Doctor (MD), Doctor of Dental Surgery (DDS), Doctor of Veterinary Medicine (DVM), Doctor of Pharmacy (DP), Doctor of Physical Therapy (DPT), or Physician's Assistant (PA). Completion of this degree will position the student with over 60 credits toward entry to a University program as well as clinical experience in the field of interest (a requirement of many professional schools.) Working closely with an Academic Adviser, the student will be able to design their program to best fit the requirements of their intended profession and intended school of transfer.

ALH	1102	Basic Healthcare Practices & Medical Scribe	3
ALH	1120	Nurse Aide Training OR	
ALH	1250	Health Science Practicum	3 - 4
BIO	1171	Principles of Biology I	5
BIO	1272	Principles of Biology II	5
CHE	1211	General Chemistry I	5
CHE	1251	Lab for General Chemistry I	0
CHE	1221	General Chemistry II	5
CHE	1261	Lab for General Chemistry II	0
CHE	2111	Organic Chemistry I	5
CHE	2151	Lab for Organic Chemistry I	0
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
HUM	1135	Environmental Ethics OR	
OT36		Arts & Humanities Elective	3
OT36		Arts & Humanities Elective	3
MAT	2240	Calculus for the Life Sciences OR	
MAT	2270	Calculus & Analytic Geometry I	4 - 5
OT36		Natural & Physical Sciences Elective	9
OT36		Social & Behavioral Sciences Elective	3
PSY	1100	General Psychology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Mathematics

Program Code: MATE.S.AS • Credit Hours: 60-62

Description

The curriculum of the Associate of Science in Mathematics degree is designed to correspond to both the math and general education courses that a student would take in the first two years of pursuing a Bachelor's degree in math at a four-year institution. Coursework can be customized to fit interests in Statistics/Actuarial Science, Secondary Math Education, or Pure/Applied Mathematics. Students will get a solid grounding in the mathematics that is applied in the physical science and engineering disciplines, and an introduction to more theoretical mathematics. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Actuary, Statistical Consultant, Investment Analyst, Cryptographer, Operations Researcher, High School or College-Level Teacher. Visit www.maa.org/careers/career-profiles for more examples. For more information on these and other careers, including employment outlook and working conditions, go to www.ohcis.intocareers.org and login with username "sinclaircoll" and password "ohiocis03".

COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
MAT	2290	Calculus & Analytic Geometry III	5
MAT	2310	Elementary Differential Equations OR	
MAT	2600	Applied Statistics AND	
		Any Course in Catalog OR	
CIS	1111	Introduction to Problem Solving & Computer Programming AND	
CIS	2212	Java Software Development I AND	
		Any Course in Catalog	10-11
MAT	2320	Linear Algebra OR	
CIS	2217	Java Software Development II	3 -4
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	10
OT36		Social & Behavioral Sciences Elective	6
SCC	1101	First Year Experience	1
XXX		Multicultural Elective	3

Physics

Program Code: PHYE.S.AS • Credit Hours: 62-64

Description

The Associate of Science in Physics is designed for students who are planning to transfer to a four-year college or university and pursue a baccalaureate degree program in Physics. The curriculum fulfills the freshman and sophomore general education requirements along with the required first year physics courses offered at most four-year colleges and universities. Physics majors will develop a solid understanding of the fundamental laws of physics in addition to acquiring strong analytical and laboratory skills. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Physics can be the pathway to a variety of careers such as research scientists, astrophysicists, material scientists, radar project managers, gravity researchers, and many types of engineers.

CHE	1211	General Chemistry I	5
CHE	1221	General Chemistry II	5
CHE	1251	Lab for General Chemistry I	0
CHE	1261	Lab for General Chemistry II	0
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication OR	
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
MAT	2290	Calculus & Analytic Geometry III	5
MAT	2320	Linear Algebra OR	
MAT	2330	Differential Equations & Linear Algebra OR	
PHY	2210	MATLAB for Scientists & Engineers	3-5
OT36		Arts & Humanities Elective	6
OT36		Social & Behavioral Sciences Elective	6
PHY	2201	General Physics I	5
PHY	2202	General Physics II	5
PHY	2203	Introduction to Modern Physics	3
PHY	2207	Lab for General Physics I	0
PHY	2208	Lab for General Physics II	0
PHY	2780	Scientific Thought Method	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
70   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Accounting
Program Code: ACC.S.AAS • Credit Hours: 64

Description

Accountants prepare, analyze and verify financial reports and monitor information systems that furnish this information to management. Business executives, bankers, government leaders and investors all rely on financial statements and other reports prepared by accountants that summarize and interpret financial transactions that occur in every business. An accountant must have the ability to develop reliable analyses of business operations which can be used in making business decisions. Students who complete the accounting program can qualify to sit for the CPA exam in Ohio after completing a few additional courses and a qualifying exam as determined by the Ohio Board of Accountancy.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Employment opportunities in addition to accounting firms, exist in private business and industry as well as not-for-profit and governmental organizations. Positions available to graduates include staff accountant, cost accountant, payroll accountant, auditor, tax accountant and financial analyst.

ACC		Accounting Elective	3
ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting	3
ACC	1510	Computerized Accounting Systems	3
ACC	2101	Intermediate Accounting I	3
ACC	2102	Intermediate Accounting II	3
ACC	2211	Cost Accounting	3
ACC	2212	Managerial Accounting & Finance	3
ACC	2321	Federal Taxation	3
ACC	2435	Auditing	3
BIS	1120	Introduction to Software Applications	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MAT	1460	Mathematics for Business Analysis OR	
MAT	1470	College Algebra	3
MAT	2170	Business Statistics I	4
MRK	2101	Principles of Marketing Management	3
OT36		Arts & Humanities Elective	3

Accounting Electives

ACC	2270	Accounting Internship
ACC	2322	Advanced Taxation
ACC	2510	Advanced Accounting
CIS	1111	Intro to Problem Solving & Computer Programming
LAW	1102	Consumer Law
MAN	1106	Introduction to Radio Frequency Identification
MAN	1110	International Business
MAN	2110	Introduction to Project Management
MRK	2145	Principles of Retailing

Addiction Services
Program Code: MHTCD.S.AAS • Credit Hours: 63

Description

In the Mental Health and Addiction Services department, the Addiction Services degree program prepares entry-level professionals for employment working on an inter-disciplinary team with clinical supervision in chemical dependency treatment settings. Graduates of this program work directly with a diverse group of clients. The program can be taken full-time or part-time. If enrolled full-time, it is designed to be completed in five (5) semesters. It consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. Second-year practicum hours can be submitted toward partial employment requirements of the Ohio Chemical Dependency Professionals Board (OCDP). To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the web page. A cumulative GPA of 2.0 is required, as well as an initial faculty advising appointment during MHT 1101. A grade of C or higher is required in all program courses. The practicum portion of the curriculum provides 420 hours of supervised experience. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Mental Health and Addiction Services graduates can be hired into entry level positions as Chemical Dependency Counselor Assistants (CDCA). They can work in various positions at social services agencies, community mental health agencies, hospitals, addictions treatment centers, and numerous other field-related positions in the community. Graduates have completed the 180 hours of specific education required to sit for the LCDC II exam. The OCDP Board has other requirements for licensure.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1111	General Biology I	4
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
MHT	1101	Mental Health Services	3
MHT	1130	Fundamentals of Addiction Counseling CDCA Preliminary	3
MHT	1201	Interviewing Skills	3
MHT	1202	Motivational Interviewing	3
MHT	1236	Assessment & Diagnosis of Substance Use Disorders	3
MHT	2105	Psychosocial Methods	3
MHT	2111	Group Dynamics I	3
MHT	2121	Practicum I	5
MHT	2137	Treatment Techniques in Substance Use Disorders	3
MHT	2138	Ethical Issues in the Helping Professions	2
MHT	2211	Group Dynamics II	3
MHT	2222	Practicum II	5
MHT	2235	Family Dynamics of Addiction	3
PSY	1100	General Psychology	3
PSY	2217	Abnormal Psychology	3
SWK	2207	Anti-Oppressive Social Work	3

Agricultural Sciences

Program Code: AGR.S.AAS • Credit Hours: 62

Description

The Agricultural Sciences Program offers competency in specialized skill areas such as Unmanned Aerial System Precision Agriculture, Alternate and Renewable Energy Sources, and Hazardous Waste Operations and Emergency Response. Graduates of an Agricultural Sciences Program will contribute to filling the current and growing need within the state of Ohio for educated Agricultural personnel. External certificates that will be offered to students within the curriculum include; OSHA Basic Safety in the Workplace, OSHA, Agricultural Safety, HAZWOPER, Pork Quality Assurance, Beef Quality Assurance, ServSafe, +/- Bovine Artificial Insemination.

Career Opportunities

The associate degree program in Agricultural Sciences prepares competent entry-level Agricultural personnel with additional potential expertise in the following added areas: Agribusiness, Large Animal Sciences, Horticulture, Diesel Mechanics, and Precision Agriculture in UAS. The agricultural sciences are an important part of our past as well as our future, and educated personnel are more in-demand as safer, more specialized workers.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
AGR	1160	Introduction to Agriculture Science	1
AGR	1300	Agronomy OR	
AGR	1110	Introduction to Large Animal Sciences: Handling & Husbandry	3
AGR	1400	Agriculture Internship	2
AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1112	UAS Precision Agriculture	2
BIS	1120	Introduction to Software Applications	3
BIS	1400	Customer Service	3
BTN	1110	Biotechnology & Bioethics	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
EGV	1101	Alternate & Renewable Energy Sources	3
ENG	1101	English Composition I	3
FST	1555	Hazardous Waste Operations & Emergency Response (HAZWOPER)	3
LAW	1101	Business Law AND	
AGR	1200	Agricultural Economics OR	
AGR	1111	Principles of Large Animal Reproduction OR	
AGR	1112	Principles of Large Animal Nutrition	6
MAN	1107	Foundations of Business	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
MRK	2100	Foundations of Marketing	3
MRK	2135	Digital Marketing	3
OT36		Social & Behavioral Sciences Elective	3
OT36		Arts & Humanities Elective OR	
OT36		Natural & Physical Sciences Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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![Sinclair College Logo] **SINCLAIR** COLLEGE

Applied Psychology

Program Code: PSY.S.AAS • Credit Hours: 60

Description

The Applied Psychology program will prepare students for entry-level positions in a number of fields including research, behavioral analysis, education, mental health, and community service. The coursework will emphasize development of skills and knowledge to enable students to work in high-demand areas related to applied research and behavioral analysis. The curriculum includes courses in research design and statistics, behavior analysis and modification, industrial/organizational psychology, and human factors psychology, as well as current psychological theory and practice. The curriculum includes many Ohio Transfer 36 (OT36) courses and fulfills many general education requirements. This degree prepares students to directly enter the workforce and it transfers well to most 4-year colleges and universities.

Career Opportunities

Graduates may be employed as research assistants, project/research coordinators, information analysts, behavioral skills technicians, and teaching/special education aides. Graduates also work as psychiatric and mental health technicians, case workers or managers, victim advocates, residential/group home specialists, and in a variety of positions where knowledge of human behavior and mental processes is beneficial (i.e. salesperson, human resources specialist, employee at not-for-profit agencies, administrative assistant, etc.).

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	6
OT36		Natural & Physical Sciences Elective	6
OT36		Social & Behavioral Sciences Elective (May not be PSY course)	3
PSY		Applied Psychology Elective	3
PSY	1100	General Psychology	3
PSY	2200	Life Span Human Development	3
PSY	2217	Abnormal Psychology	3
PSY	2225	Social Psychology	3
PSY	2228	Industrial Organizational Psychology	3
PSY	2235	Behavioral Science Research Methods	3
PSY	2236	Behavioral Statistics	3
PSY	2250	Behavior Modification	3
XXX		Any Course in Catalog Elective	3

Applied Psychology Electives

PSY	1160	Black Psychology
PSY	2126	Stress Management
PSY	2180	Psychology of Gender
PSY	2205	Child Development
PSY	2206	Adolescent & Adult Development
PSY	2214	Drugs & Behavior
PSY	2218	Principles of Counseling
PSY	2220	Personality Psychology
PSY	2242	Educational Psychology
PSY	2270	Psychology Service Learning
PSY	2297	Special Topics

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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SINCLAIR COLLEGE

Architectural Technology
Program Code: ARC.S.AAS • Credit Hours: 61-63

Description

The Architectural Technology program helps students develop skills applicable in a variety of Built Environment professions, including architectural, engineering and design practices, contracting firms, and material suppliers. Building Information modeling (BIM) and Integrated Project Design (IPD) are core principles taught throughout the curriculum, with Autodesk Revit being the primary BIM tool. Environmental responsibility is emphasized, with students taking a USGBC LEED exam prep course. Curriculum tracks are available for both building technology and building design.

Accreditation

Accredited by Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

Career Opportunities

Graduates are employed as drafters for architectural firms, inspectors and project managers in the construction industry. Many opportunities exist in the building materials and assemblies sales and supply area.

CAT	1101	Architectural Graphics I	3
CAT	1121	Architectural Graphics II	3
CAT	1161	Introduction to Built Environment	3
CAT	1201	Construction Methods & Materials	4
CAT	1241	Building Systems	4
CAT	1341	Architecture Design I	3
CAT	2101	Architectural Design II	3
CAT	2201	Architectural Visualization	2
CAT	2401	Engineering Technology Project Management	3
CAT	2411	Architectural Practice, Codes & Laws	3
CAT	2700	Civil Architectural Technology Internship	2
CAT	2780	Architectural Technology Capstone	3
COM	2211	Effective Public Speaking	3
EGV	1301	Architectural Energy Analysis	2
EGV	2351	LEED Green Associate Exam Preparation	2
ENG	1101	English Composition I	3
MAT	1470	College Algebra AND	
MAT	1570	Trigonometry OR	
MAT	1580	PreCalculus OR	
MAT	1200	Technical Mathematics	5-6
OT36		Social & Behavioral Sciences Elective	3
PHY	1106	Physics for Technology AND	
PHY	1107	Lab for Physics for Technology OR	
PHY	1141	College Physics I	3-4
XXX		Architectural Technology Elective	3

Architectural Technology Electives

ART	1111	Drawing I
ART	1112	Drawing II
CAT	1131	Introduction to Revit MEP
CAT	1141	Architectural Blueprint Reading
CAT	1161	Introduction to Civil & Architectural Technology
CAT	1401	Construction Estimating
CAT	2610	Stakeholders & Participants for Design & Construction Projects
CAT	2620	Construction Documents, Legal Requirements, & Project Delivery
CAT	2630	Architectural Practice Project Deliverables & Contractual Obligations
CAT	2640	Construction Project Change Management
CAT	2741	Current Topics in Architecture
EGV	1251	Introduction to Energy Management Principles
IND	1180	History of Interior Design
IND	1234	Materials & Textiles
IND	1240	Color Theory
IND	2140	Sustainable Design

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
74   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

SINCLAIR COLLEGE

Automation & Control Technology with Robotics
Program Code: AMCT.S.AAS • Credit Hours: 62-67

Description

The Automation and Control Technology with Robotics program builds knowledge in the application of electrical and mechanical skills for developing, installing, programming and troubleshooting the complex machinery found in the modern manufacturing and Supply Chain environments.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

This program prepares graduates for control system technician and designer, electrical and electronic systems engineering technician, industrial equipment sales, purchasing, installation, and service. Graduates will also be prepared to assume roles as industrial maintenance technician, plant maintenance technician, robotics technician, system integrators, and supply chain technician.

COM	2211	Effective Public Speaking	3
EET	1120	Introduction to DC & AC Circuits	2
EET	1139	Electrical Machinery	3
EET	1166	Industrial Machine Wiring	3
EET	1198	Digital Technology OR	
EET	1131	Digital Electronics	2-5
EET	2157	Radio Frequency Identification (RFID) Technology OR	
EGR	2250	Electromechnical Repair	3-4
EET	2281	Programmable Logic Controllers	3
EET	2282	Advanced Programmable Logic Controllers	3
EGR	1106	Basic Mechanical & Electrical Skills	2
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
EGR	1144	Sensors & Vision Systems	3
EGR	1217	Fluid Power & Control	2
EGR	2231	Troubleshooting of Automated Systems	3
EGR	2252	Teach Pendant Robot Programming	3
EGR	2278	Automation & Control Capstone	3
EGR		Engineering Elective OR	
EGR	2275	Automation & Control Internship I	3
ENG	1101	English Composition I	3
MAT	1580	Precalculus	5
MET	1101	Introduction to Engineering Drafting OR	
MET	1371	CAD Concepts using AutoCAD	2-3
MET	2711	Ethics for Engineering Technology Professionals	1
OT36		Social & Behavioral Sciences Elective	3
PHY	1141	College Physics I	4

Automotive Technology
Program Code: AUT.S.AAS • Credit Hours: 65

Description

The Associate of Applied Science in Automotive Technology provides training for students aspiring to become automotive technicians. Training in automotive management and business operations is a component of the program. To earn the associate degree students must participate in a capstone course offered only during the day or complete four paid internship courses with an automotive service facility.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

Career Opportunities

Graduates are finding excellent employment opportunities existing in dealerships, independent service facilities, machine shops and other automotive businesses. Graduates may also find employment as automotive instructors or sales, service and parts managers.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

SINCLAIR COLLEGE

AUT		Automotive Elective	2
AUT	1102	Introduction to Automotive Service	2
AUT	1108	Automotive Engine Systems	4
AUT	1114	Automotive Electrical/Electronic Systems I	3
AUT	1115	Automotive Engine Performance I	4
AUT	1116	Automotive Steering & Suspension Systems	3
AUT	1142	Automotive Manual Transmission & Driveline	3
AUT	1146	Automotive Heating Ventilation & Air Conditioning Systems	3
AUT	1165	Automotive Brake Systems	3
AUT	2214	Automotive Electrical/Electronic Systems II	4
AUT	2215	Automotive Engine Performance II	4
AUT	2241	Automatic Transmission Systems	4
AUT	1170	Automotive Internship I AND	
AUT	1171	Automotive Internship II AND	
AUT	1172	Automotive Internship III AND	
AUT	1173	Automotive Internship IV OR	
AUT	2250	Automotive Service Operations	8
CAM	1109	Fundamentals of Tooling & Machining OR	
CAM	1180	Welding & Metal Joining I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
OT36		Arts & Humanities Elective	3
OT36		Social & Behavioral Sciences Elective	3

Automotive Electives

AUT	1100	Consumer Automotive
AUT	1111	Automotive Service Consulting & Advising
AUT	1170	Automotive Internship I
AUT	2221	High Performance Engine Blocks & Heads
AUT	2222	High Performance Engine Assembly & Dyno Testing
AUT	2224	High Performance Fuel Induction Systems
AUT	2226	High Performance Fabrication
AUT	2230	Hybrid Electric Vehicle Systems
AUT	2240	Automotive Diesel Systems
AUT	2297	Special Topics

Automotive Technology (GM ASEP)
Program Code: ASEP.S.AAS • Credit Hours: 65

Description

The Associate of Applied Science in General Motors Automotive Service Educational Program (ASEP) provides training for students aspiring to become automotive technicians for General Motors dealerships or AC Delco independent shops. Specific General Motors training is presented to apprentice student technicians as they apply learned content to a co-op work experience. Students attend classes for half a semester and then apprentice at a GM/AC Delco sponsoring dealership the other half. Students are paid for work rendered during the co-op experience. Upon graduation, students will receive hundreds of hours of official General Motors training credits that are recorded in the corporation's training database. Graduates should be 85 to 90% trained towards meeting the certification requirements for a GM Master Technician. Graduates will also receive an Associate of Applied Science from Sinclair along with a job opportunity from the sponsoring dealer.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

Career Opportunities

Career opportunities are available in positions for automotive service technicians in General Motors dealerships, independent shops and automotive machine shops. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors. Graduates with practical experience, education, willingness to work and a high degree of professionalism may expect to find jobs in middle management or research occupations within major automotive corporations.

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
76   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

SINCLAIR COLLEGE

AUT		Automotive Elective	2
AUT	1102	Introduction to Automotive Service	2
AUT	1114	Automotive Electrical/Electronic Systems I	3
AUT	1115	Automotive Engine Performance I	4
AUT	1116	Automotive Steering & Suspension Systems	3
AUT	1142	Automotive Manual Transmission & Driveline	3
AUT	1146	Automotive Heating Ventilation & Air Conditioning Systems	3
AUT	1165	Automotive Brake Systems	3
AUT	1170	Automotive Internship I	2
AUT	1171	Automotive Internship II	2
AUT	1172	Automotive Internship III	2
AUT	1173	Automotive Internship IV	2
AUT	2214	Automotive Electrical/Electronic Systems II	4
AUT	2215	Automotive Engine Performance II	4
AUT	2241	Automatic Transmission Systems	4
AUT	1108	Automotive Engine Systems	4
CAM	1109	Fundamentals of Tooling & Machining OR	
CAM	1180	Welding & Metal Joining I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
OT36		Arts & Humanities Elective	3
SOC	1101	Introduction to Sociology	3

Automotive Electives

AUT	1100	Consumer Automotive
AUT	1111	Automotive Service Consulting & Advising
AUT	1170	Automotive Internship I
AUT	2221	High Performance Engine Blocks & Heads
AUT	2222	High Performance Engine Assembly & Dyno Testing
AUT	2224	High Performance Fuel Induction Systems
AUT	2226	High Performance Fabrication
AUT	2230	Hybrid Electric Vehicle Systems
AUT	2240	Automotive Diesel Systems
AUT	2297	Special Topics

Automotive Technology (Honda PACT)
Program Code: AUTHA.S.AAS • Credit Hours: 65

Description

This Associate of Applied Science program provides training for students aspiring to become Honda/Acura dealership technicians and requires students to co-op at a Honda or Acura dealership. Students receive specific Honda technical training resulting in training, credits/certifications from the corporation. These credits/certifications help a student secure employment with a Honda/Acura dealership.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

AUT		Automotive Elective	2
AUT	1102	Introduction to Automotive Service	2
AUT	1108	Automotive Engine Systems	4
AUT	1114	Automotive Electrical/Electronic Systems I	3
AUT	1115	Automotive Engine Performance I	4
AUT	1170	Automotive Internship I	2
AUT	1171	Automotive Internship II	2
AUT	1172	Automotive Internship III	2
AUT	1173	Automotive Internship IV	2
AUT	1116	Automotive Steering & Suspension Systems	3
AUT	1142	Automotive Manual Transmission & Driveline	3
AUT	1146	Automotive Heating Ventilation & Air Conditioning Systems	3
AUT	1165	Automotive Brake Systems	3
AUT	2214	Automotive Electrical/Electronic Systems II	4
AUT	2215	Automotive Engine Performance II	4
AUT	2241	Automatic Transmission Systems	4
CAM	1109	Fundamentals of Tooling & Machining OR	
CAM	1180	Welding & Metal Joining I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
OT36		Arts & Humanities Elective	3
OT36		Social & Behavioral Sciences Elective	3

Automotive Electives

AUT	1100	Consumer Automotive
AUT	1111	Automotive Service Consulting & Advising
AUT	1170	Automotive Internship I
AUT	2221	High Performance Engine Blocks & Heads
AUT	2222	High Performance Engine Assembly & Dyno Testing
AUT	2224	High Performance Fuel Induction Systems
AUT	2226	High Performance Fabrication
AUT	2230	Hybrid Electric Vehicle Systems
AUT	2240	Automotive Diesel Systems
AUT	2297	Special Topics

Automotive Technology (Mopar CAP)
Program Code: CAP.S.AAS • Credit Hours: 65

Description

The Associate of Applied Science in the Mopar Career Automotive Program (CAP) provides training for students aspiring to become automotive technicians for Chrysler, Dodge, Jeep, and Ram dealerships. Specific Chrysler training is presented to apprentice student technicians as they apply learned content to a co-op work experience. Students attend classes for half a semester and then apprentice at a Fiat Chrysler Automobile sponsoring dealership the other half. Students are paid for work rendered during the co-op experience. Upon graduation, students will receive hundreds of hours of official Chrysler training credits that are recorded in the corporation's training database. Graduates should be 85% to 90% trained towards meeting the certification requirements for a Chrysler Master Technician. Graduates will also receive an Associate of Applied Science from Sinclair along with a job opportunity from the sponsoring dealer.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

Career Opportunities

Career opportunities are available in positions for automotive service technicians in Chrysler, Dodge and Jeep dealerships, independent shops and automotive machine shops. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors. Graduates with practical experience, education, willingness to work and a high degree of professionalism may expect to find jobs in middle management or research occupations within major automotive corporations.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
78   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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AUT		Automotive Elective	2
AUT	1102	Introduction to Automotive Service	2
AUT	1108	Automotive Engine Systems	4
AUT	1114	Automotive Electrical/Electronic Systems I	3
AUT	1115	Automotive Engine Performance I	4
AUT	1116	Automotive Steering & Suspension Systems	3
AUT	1142	Automotive Manual Transmission & Driveline	3
AUT	1146	Automotive Heating Ventilation & Air Conditioning Systems	3
AUT	1165	Automotive Brake Systems	3
AUT	1170	Automotive Internship I	2
AUT	1171	Automotive Internship II	2
AUT	1172	Automotive Internship III	2
AUT	1173	Automotive Internship IV	2
AUT	2214	Automotive Electrical/Electronic Systems II	4
AUT	2215	Automotive Engine Performance II	4
AUT	2241	Automatic Transmission Systems	4
CAM	1109	Fundamentals of Tooling & Machining OR	
CAM	1180	Welding & Metal Joining I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
OT36		Arts & Humanities Elective	3
SOC	1101	Introduction to Sociology	3

Automotive Electives

AUT	1100	Consumer Automotive
AUT	1111	Automotive Service Consulting & Advising
AUT	1170	Automotive Internship I
AUT	2221	High Performance Engine Blocks & Heads
AUT	2222	High Performance Engine Assembly & Dyno Testing
AUT	2224	High Performance Fuel Induction Systems
AUT	2226	High Performance Fabrication
AUT	2230	Hybrid Electric Vehicle Systems
AUT	2240	Automotive Diesel Systems
AUT	2297	Special Topics

Aviation Airframe and Powerplant Maintenance Technology
Program Code: AVIAO.S.AAS • Credit Hours: 98

Description
This program leads to an Associate of Applied Science in Airframe and Powerplant Maintenance and provides the knowledge and skills required to successfully pass the Federal Aviation Administration (FAA) written, oral, and practical examinations required by the FAA for certification as an airframe and powerplant (A&P) maintenance technician. The training and knowledge the student receives from the General Aviation Maintenance, Airframe, and Powerplant Aviation Maintenance certificate programs funnels directly into this degree program. The FAA certifications and this degree will allow the student to continue towards a Bachelor's degree in Aviation Science (or related field), or to begin a career as an A&P maintenance technician.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation
The programs General and Airframe certificates are approved by the FAA under air agency certificate XSCT086K.

Career Opportunities
The Bureau of Labor Statistics projects "favorable future job opportunities" over the long term as older mechanics and technicians retire. Maintenance Repair Organizations (M.R.O.s) are contracting for the work that airlines used to do in house. Many of the M.R.O.s are in need of maintenance technicians. Boeing Commercial Aircraft Company recently predicted 1,000,000 more jobs in aviation in the next 15 years. Airbus of Europe has predicted about 800,000 more jobs in the next 15-20 years. Both predictions are based on anticipated growth in aircraft production and flying passengers. Many mechanics will reach retirement age in the next three years as a result of an interruption of current certificates issued by the FAA. More jet aircraft means more need for mechanics. The general aviation sector already has a shortage of certificated mechanics.

AVT	1106	Airframe Safety Systems	2
AVT	1107	Fuel Systems	3
AVT	1113	Drawings for Aviation	3
AVT	1116	Regulations for Maintenance	3
AVT	1118	Weight & Balance	3
AVT	1128	Powerplant Safety Systems	3
AVT	2122	Ignition & Starting	4
AVT	2126	Reciprocating Engines	7
AVT	2129	Propellers	4
AVT	2138	Engine Fuel & Fuel Metering	3
AVT	2139	Induston/Exhaust/Cooling	2
AVT	2219	Turbine Engines	4
AVT	1131	Basic Aviation Electricity	3
AVT	1133	Instruments/Communications	3
AVT	1135	Materials & Processes	4
AVT	1136	Sheet Metal	4
AVT	1213	Corrosion	3
AVT	1214	Cabin Atmospheric Control	2
AVT	1218	Utility Systems	6
AVT	2121	Assembly & Rigging	3
AVT	2132	Airframe Electrical Systems	4
AVT	2143	Review & Recommendation	2
AVT	2236	Non-Metallic Structures	4
AVT	2237	Aircraft Inspections	3
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Arts & Humanities Elective	3
PHY	1106	Physics for Technology	3
PHY	1107	Lab for Physics for Technology	0

Aviation Technology

Program Code: AVIAT.S.AAS • Credit Hours: 64

Description

This program leads to an Associate of Applied Science in Aviation Technology. The student, having completed this course work, would have the background and skills to enter the aviation industry or continue towards a bachelor's degree in aviation science (or related field).

Career Opportunities

Career opportunities are available in airline, corporate and general aviation. Growth in major, regional and low-cost airlines will increase demand for all types of aviation professionals in these companies. In addition, aviation professionals with higher levels of experience and education will have more robust job opportunities. A large number of the positions created in the coming years will be the result of older workers retiring from the industry, prompting the need for new hires.

AVT		Any Aviation Course	21
AVT	1105	Orientation to Aviation	2
AVT	1119	Aviation Meteorology	2
AVT	1140	Introduction to Business Aviation	2
AVT	1141	Principles of Aviation Leadership	2
AVT	1245	Aviation Law	2
AVT	2125	Developments in Aviation	2
AVT	2146	Introduction to Airline Operations	3
AVT	2240	Human Factors in Aviation	3
AVT	2242	Aircraft Accident Investigation	3
AVT	2700	Aviation Internship	2
COM	2206	Interpersonal Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAT	1470	College Algebra	3
MAT	1570	Trigonometry	3
MET	1131	Personal Computer Applications for Engineering Technology	1
PHY	1141	College Physics I	4

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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80   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Aviation Technology/ Professional Pilot

Program Code: APPAO.S.AAS • Credit Hours: 66-67

Description

This program leads to an Associate of Applied Science in Aviation Technology/Professional Pilot. It is designed for students who want to pursue a career as a professional pilot. The student, having completed this course work, would have the background and skills to enter the aviation industry as a professional pilot or continue towards a bachelor's degree in aviation science (or related field). Students may choose fixed wing (airplane single engine and multi-engine) or helicopter pilot certifications. The student must obtain a Federal Aviation Administration (FAA) 3rd class medical certificate prior to enrolling in any of the flight labs.

In addition to standard tuition fees there are additional course and lab fees for each of the flight labs in the program. The flight lab fees are structured to cover the costs associated with the minimum flying hours required for each FAA certificate. Any additional flying time costs beyond the FAA minimums covered by the flight lab fee must be borne by the student. See the Department for the latest course and flight lab fee costs.

Career Opportunities

Career opportunities are available in airline, corporate and general aviation. The current U.S. Bureau of Labor Occupational Outlook Handbook for Airline and Commercial Pilots states, "Overall employment of Airline and Commercial pilots is projected to grow 5 percent from 2014 to 2024. Employment of commercial pilots is projected to grow 10 percent from 2014 to 2027, faster than the average for all occupation. Commercial pilots are projected to add jobs in various industries, including ambulance services and support activities for air transportation."

AVT	1105	Orientation to Aviation	2
AVT	1119	Aviation Meteorology	2
AVT	1140	Introduction to Business Aviation	2
AVT	1141	Principles of Aviation Leadership	2
AVT	1241	Blind Flying Hazards	1
AVT	1254	Flight Simulator Instruction	1
AVT	1245	Aviation Law	2
AVT	2146	Introduction to Airline Operations	3
AVT	2240	Human Factors in Aviation	3
AVT	2242	Aircraft Accident Investigation	3
AVT	2247	Aerodynamics & Flight Mechanics	3
AVT	2258	Flight Instructor Ground	4
AVT	2700	Aviation Internship	2
AVT	1110	Private Pilot Ground School AND	
AVT	1124	Private Pilot Flight Lab - Airplane Single Engine AND	
AVT	1170	Instrument Pilot Ground School AND	
AVT	1224	Instrument Pilot Flight Lab - Airplane Single Engine AND	
AVT	2250	Commercial Pilot Ground AND	
AVT	2263	Commercial Pilot Flight Lab - Airplane Single Engine AND	
AVT	2269	Flight Instructor Flight Lab - Airplane Single Engine OR	
AVT	1111	Helicopter Private Pilot Ground AND	
AVT	1126	Private Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	1171	Helicopter Instrument Pilot Ground AND	
AVT	1226	Instrument Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	2251	Helicopter Commercial Pilot Ground AND	
AVT	2265	Commercial Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	2271	Flight Instructor Flight Lab - Rotorcraft Helicopter	18
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1470	College Algebra	3
MAT	1570	Trigonometry	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Arts & Humanities Elective	3
PHY	1141	College Physics I	4

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Biotechnology

Program Code: BTN.S.AAS • Credit Hours: 60-63

Description

The Associate of Applied Science in Biotechnology provides a full range of courses to prepare students for entry-level positions in the biotechnology field. The academic curriculum provides a background in historical development of biotechnology, bioethics, safety, reagent preparation, cell culture techniques, protein purification and analysis techniques, microbiology and fermentation methods, molecular biology (DNA) techniques and bioinformatics. With advances in molecular and cellular biology, the biotechnology industry has expanded in scope to include human diagnoses and therapeutics, agricultural and veterinary applications, food production and environmental cleanup.

Career Opportunities

This degree program prepares graduates to enter the biotechnology workforce as entry-level technicians and conduct a variety of basic and advanced laboratory techniques used in biomedical research.

BIO	1107	Human Biology	3
BIO	1111	General Biology I AND	
BIO	1211	General Biology II OR	
BIO	1171	Principles of Biology I AND	
BIO	1272	Principles of Biology II	8-10
BIS	1120	Introduction to Software Applications	3
BTN	1110	Biotechnology & Bioethics	3
BTN	1120	Laboratory Safety & Regulatory Compliance	2
BTN	1130	Biological Reagents Preparation	3
BTN	1140	Cell Culture	2
BTN	2210	Protein Purification & Analysis	4
BTN	2220	Microbiology & Fermentation Methods	3
BTN	2230	Molecular Biology Techniques	4
BTN	1201	Biotechnology Careers OR	
BTN	2700	Biotechnology Internship	2
CHE	1111	Introduction to Chemistry I OR	
CHE	1211	General Chemistry I	4-5
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
MAT	1470	College Algebra	3
OT36		Arts & Humanities Elective	6
OT36		Social & Behavioral Sciences Elective	3
SCC	1101	First Year Experience	1

Business Information Systems

Program Code: BIS.S.AAS • Credit Hours: 60 - 61

Description

Students in this program will learn advanced features in various software applications and will practice integrating multiple applications to be more productive. The degree includes a strong technology emphasis and sound business foundation with courses in accounting, economics, management and business math. The program will prepare software and information technology staff in all industries to work in teams, support internal and external customers, and use new technologies to maximize business productivity. Students will select one of four concentrations: software applications, computer support, business analytics, or medical office to gain expertise in their area of interest.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Association (CHEA).

Career Opportunities

Employment opportunities are available in many types of businesses, including banks, insurance offices, advertising agencies, manufacturing companies, small to large businesses and educational facilities, to name a few.

ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
BIS	1220	Word Processing Software	3
BIS	1230	Spreadsheet Software	3
BIS	1260	Database Software	3
BIS	2170	BIS Capstone	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business OR	
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
		Software Applications OR	
		Business Data OR	
		Medical Office OR	
		Computer Support	18 - 19

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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82   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Software Applications Concentration

BIS	1201	Keyboarding & Document Formatting
BIS	1240	Presentation Software
BIS	1250	Specialized Business Software
BIS	1400	Customer Service
BIS	2270	Business Information Systems Internship
XXX		BIS or MAN/MRK Elective
OT36		Natural & Physical Sciences Elective

Business Data Concentration

BIS	1600	Data Management & Visualization
CIS	1140	Information Systems Analysis & Design
CIS	2165	Database Management
CIS	2265	Data Visualization with Tableau
MRK	2135	Digital Marketing
OT36		Natural & Physical Sciences Elective

Medical Office Concentration

BIO	1121	Anatomy & Physiology I
BIS	1400	Customer Service
BIS	2180	Medical Office Simulation
BIS	2270	Business Information Systems Internship
HIM	1101	Medical Terminology
HIM	1201	Introductory Medical Office Coding

Computer Support Concentration

BIS	1201	Keyboarding & Document Formatting
BIS	1400	Customer Service
BIS	2270	Business Information Systems Internship
CIS	1107	Introduction to Operating Systems
CIS	1130	Network Fundamentals
CIS	2371	A+ Hardware & Software

Business Management
Program Code: GBM.S.AAS • Credit Hours: 60

Description

This program emphasizes preparation for a wide variety of management-related positions. It is designed to provide a balance in technical business education along with general education courses while providing a considerable choice of electives and alternatives. Opportunities for managers include supervision, office managers, management trainees, assistant managers and owners within a variety of settings, including small and medium-size businesses, corporations, industries, non-profit organizations and governmental agencies.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
LAW	1101	Business Law	3
MAN	2270	Management Internship OR	
MAN	2275	Retail Management Capstone OR	
MAN	2279	Business Management Capstone	3
MAN	1107	Foundations of Business	3
MAN	1110	International Business OR	
MAN	2110	Introduction to Project Management	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management	3
OT36		Arts & Humanities Elective OR	
OT36		Natural & Physical Science Elective	3
XXX		Any Course in Catalog	18

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Business Management/Digital Marketing

Program Code: MRK.S.AAS • Credit Hours: 64-65

Description

Digital Media has disrupted many of the traditional areas of business management. This program provides a broad-based study of digital marketing strategies including customer engagement and consumer behavior, social media, online reputation management, inbound marketing, advertising and branding, graphic design, and website development. Students will have the opportunity to learn new media theories, online consumer psychology and marketing approaches while developing hands on experience with digital marketing tools and techniques. All students will produce a portfolio of their digital marketing projects and benefit from an internship in the digital marketing field.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

According to a recent jobs survey from Adecco's Creative and Marketing Recruiting Division, "Inbound Marketing is on the rise" and many consumers are making their initial approach to a business using mobile media/smartphones, social media, social networks and search engines. Many marketing departments are not fully prepared to address this shift in consumer behavior. 82% of survey respondents indicated they don't have formal training in digital marketing and frequently learn on the job. Further, 60% of respondents think their company's digital marketing is ineffective. There is a significant need for a formalized education program in the digital marketing space. Employers are actively searching for candidates that have formalized education and experience in digital marketing. Within the digital marketing space, there are multiple career paths that a student can pursue. If a student has a passion for social media, there are positions available as a social media manager, social media project leader, social media designer, interactive content specialist and customer engagement manager. If a student is interested in broader aspects of digital marketing including website development, search engine optimization and measurement, there are many career options. Potential career paths could include coordinator, specialist, manager and even director roles in e-commerce, new media, website marketing, search engine optimization, web analytics, digital media, online marketing, paid search, and digital optimization. Digital Marketing is an exciting career path with a wide assortment of career options from which to choose.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
CIS	1350	Web Site Development with HTML & CSS	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication OR	
COM	2286	Public Relations Principles	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
GEO	1107	Introduction to Geographic Information Systems (GIS) OR	
MRK	2250	Digital Marketing Analytics OR	
BIS	1600	Data Management & Visualization	3-4
LAW	1101	Business Law	3
MAN	2270	Management Internship	3
MAN	1107	Foundations of Business	3
MAN	2150	Management & Organizational Behavior	3
MAN	2155	Management Information Systems	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
MRK	2102	Principles of Advertising	3
MRK	2135	Digital Marketing	3
MRK	2230	Social Media & Consumer Engagement	3
MRK	2236	Consumer Behavior	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management	3
OT36		Arts & Humanities Elective	3
VIS	1140	Design Processes	4

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Business Management/ Entrepreneurship

Program Code: ENTR.S.AAS • Credit Hours: 60

Description

This area of concentration within the Management degree program prepares existing or potential entrepreneurs in a wide variety of small business functions. In addition to general education courses and traditional management courses, the following key areas are emphasized: opportunities for entrepreneurs, financial plan development, marketing plan development and complete business plan development.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Students completing this degree can expect to be prepared to begin their own businesses or to work in larger companies in an entrepreneurial role.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
BIS	1400	Customer Service	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication OR	
COM	2286	Public Relations Principles	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
ENT	2140	Small Business Finance	3
ENT	2160	Business Plan Development	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MAN	2101	Introduction to Supervision	3
MAN	2144	Negotiation Techniques	3
MAN	2150	Management & Organizational Behavior	3
MAN	2159	Supply Chain Management Concepts & Applications	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
MRK	2220	Small Business Marketing	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management OR	
MRK	2135	Digital Marketing	3
OT36		Arts & Humanities Elective	3
XXX		Entrepreneurship Elective	3

Entrepreneurship Electives

MAN	1106	Introduction to Radio Frequency Identification
MAN	1157	Management Applications of Radio Frequency Identification Technology
MAN	2110	Introduction to Project Management
MAN	2140	Human Resource Management
MRK	2102	Principles of Advertising
MRK	2135	Digital Marketing
MRK	2145	Principles of Retailing
MRK	2225	Sales Fundamentals

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Business Management/Supply Chain Management
Program Code: SCM.S.AAS • Credit Hours: 60

Description

The Business Management Supply Chain Management (SCM) concentration provides a broad-based study of organizational strategic plans, resources, roles, responsibilities and functions, while also focusing on management of supply chain activities. This study involves consideration and application of processes to develop coordinated supplier-to-customer systems, including: identifying needs for raw materials, supplies and components; developing specifications; computing quantity requirements; selecting sources and negotiating agreements; acquiring, transporting and storing inventory; managing and maintaining operations; and logistics management.

Accreditation

This program is fully accredited by the Accreditation Council for Collegiate Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

SCM specialists have opportunities for management positions at all levels in virtually every type of business, throughout small and medium-sized businesses, corporations, industries, nonprofit organizations and government agencies. SCM involves coordinating supplier-to-customer systems, including: identifying the need for materials, computing quantity requirements, selecting sources and negotiating agreements, and logistics and transportation management.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
BIS	1230	Spreadsheet Software	3
COM	2225	Small Group Communication	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
HUM	1130	Humanity & the Challenge of Technology	3
LAW	1101	Business Law OR	
LAW	1102	Consumer Law OR	
LAW	1104	Employment Law	3
MAN	1106	Introduction to Radio Frequency Identification	1
MAN	1157	Management Applications of Radio Frequency Identification Technology	2
MAN	2101	Introduction to Supervision OR	
MAN	2140	Human Resource Management	3
MAN	2110	Introduction to Project Management OR	
MAN	2155	Management Information Systems	3
MAN	2144	Negotiation Technique	3
MAN	2150	Management & Organizational Behavior	3
MAN	2159	Supply Chain Management Concepts & Applications	3
MAN	2270	Management Internship OR	
MAN	2279	Business Management Capstone	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1130	Lean Operations & Continuous Improvement	3
OPT	2240	Six Sigma: Green Belt	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
86   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Civil Engineering Technology
Program Code: CEGT.S.AAS • Credit Hours: 60-64

Description
In Civil Engineering Technology, students are prepared to work as technicians in the planning, design, construction and operation of the built environment in our civilized world. A strong background in basics of architectural and civil construction and in-depth study of advanced topics such as surveying, construction management and structural analysis prepares students to produce and use construction documents and perform basic design and analysis.

Accreditation
Accredited by Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

CAT	1161	Introduction to the Built Environment	3
CAT	1211	Construction Materials Testing	2
CAT	1300	Introduction to CAD for Applications in Civil Engineering Technology	2
CAT	1301	Civil Construction CAD	3
CAT	1401	Construction Estimating	3
CAT	1501	Fundamentals of Surveying & Mapping	3
CAT	2301	Land Development Design in Civil 3D	3
CAT	2401	Engineering Technology Project Management	3
CAT	2421	Soil Mechanics	3
CAT	2501	GPS & GIS for Engineering Technology Professionals	2
CAT	2531	Advanced Surveying & Mapping	3
CAT	2561	Route Surveying with Construction Applications	2
CAT	2701	Civil Engineering Technology Internship	2
CAT	2781	Civil Engineering Technology Capstone	4
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1470	College Algebra AND	
MAT	1570	Trigonometry OR	
MAT	1580	Precalculus OR	
MAT	1200	Technical Mathematics	5-6
MET	1111	Preparatory Math for Engineering Technology	3
MET	1131	Personal Computer Applications for Engineering Technology	1
MET	1161	Software Tools for Engineering Technology	1
MET	2201	Statics	3
MET	2251	Strength of Materials	3
MET	2711	Ethics for Engineering Technology Professionals	1
OT36		Social & Behavioral Sciences Elective	3
PHY	1141	College Physics I	4
XXX		Construction Elective	3

Construction Electives

CAT	2610	Stakeholders & Participants for Design & Construction Projects	
CAT	2620	Construction Documents, Legal Requirements, & Project Delivery	
CAT	2630	Architectural Practice Project Deliverables & Contractual Obligations	
CAT	2640	Construction Project Change Management	

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Clinical Laboratory Technology
Program Code: CLT.S.AAS • Credit Hours: 60-62

Description
The associate degree program in Clinical Laboratory Technology prepares students to enter the workforce as Clinical Laboratory Technicians. In this profession, graduates are responsible for performing routine clinical laboratory tests as the primary analysis, making specimen oriented decisions on predetermined criteria, including a working knowledge of critical values. As part of the program, the students will complete a non-paid, supervised health-related practicum in a hospital lab setting.

This degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage.

Students will have a maximum of three opportunities to successfully complete BIO 1121, ALH 1101, and all general education courses required by the program. All course withdrawals (W) or failures (D) or (F) will countas an attempt. After a third unsuccessful attempt, the student is no longer eligible to enter or continue in the program.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation
Sinclair Community College's Clinical Laboratory Technology associate degree program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 66018; P:773.714.8880; naaclsinfor@naacls.org

Career Opportunities
Laboratory Technicians perform highly technical diagnostic tests in medical or scientific laboratories. Lab technicians might collect samples, study and perform tests on body fluids, chemical compounds and biological specimens. Lab techs use various types of lab equipment and complex computer programs to perform their tests.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1121 Human Anatomy & Physiology I AND

Approval of Department AND

2.7 cumulative grade point average or greater is required for admission to the program and to begin technical studies AND

Completion of Test of Essential Academic Skills (TEAS) required AND

Students have a maximum of three opportunities to successfully complete BIO and MAT courses. Students may withdraw or fail, but must successfully complete the course on or before the third attempt. Students are ineligible for admission to the Clinical Laboratory Technology Program after a third unsuccessful course attempt.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	2220	Pathophysiology	3
BIO	1171	Principles of Biology I	5
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
CHE	1111	Introduction to Chemistry I AND	
CHE	1151	Lab for Introduction to Chemistry I OR	
CHE	1211	General Chemistry I AND	
CHE	1251	Lab for General Chemistry I OR	
CHE	1311	College Chemistry I AND	
CHE	1351	Lab for College Chemistry I	4-5
CHE	1121	Introduction to Chemistry II AND	
CHE	1161	Lab for Introduction to Chemistry II OR	
CHE	1221	General Chemistry II AND	
CHE	1261	Lab for General Chemistry II	
CHE	1321	College Chemistry II AND	
CHE	1361	Lab for College Chemistry II	4-5
CLT	1200	Introduction to Clinical Laboratory	2
CLT	1203	Lab for Introduction to Clinical Laboratory	0
CLT	2110	Urine & Body Fluid Analysis Immunology/Serology	2
CLT	2113	Lab for Urine & Body Fluid Analysis Immunology/ Serology	0
CLT	2210	Hematology	4
CLT	2213	Lab for Hematology	0
CLT	2310	Clinical Chemistry	3
CLT	2313	Lab for Clinical Chemistry	0
CLT	2410	Clinical Microbiology/Parasitology	4
CLT	2413	Lab for Clinical Microbiology/ Immunohematology	0
CLT	2510	Immunohematology	2
CLT	2513	Lab for Immunohematology	0
CLT	2810	CLT Practicum	6
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1450	Introductory Statistics	4
PSY	1100	General Psychology	3

Computer Aided Manufacturing/CNC Technology
Program Code: CAMCT.S.AAS • Credit Hours: 60

Description

Course work includes CNC applications and programing, tool and manufacturing processes, computers in engineering technology, and quality control. Facilities and equipment rank among the best in the nation, with more than four million dollars in CNC and conventional machining equipment for laboratory use by students.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Careers are available for CNC operators, Programmers and Process Improvement Specialists.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1110	Advanced Machine Operations	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
CAM	1142	Advanced Shop Floor Math	3
CAM	1214	Computer Numerical Control Mill Programming	3
CAM	2114	Jig & Fixture Design	3
CAM	2145	Shop Floor Programming	3
CAM	2204	Computer Numerical Control Lathe Programming	3
CAM	2212	Computer Assisted Programming	3
CAM	2225	Tool Design	3
CAM	2780	Computer Aided Manufacturing Capstone	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2
OPT	1101	Introduction to Industrial Engineering Technology OR	
OPT	2240	Six Sigma: Green Belt OR	
CAM	1180	Welding & Metal Joining I	3
OPT	1113	Coordinate Measurement	3
OT36		Arts & Humanities Elective	3
OT36		Social & Behavioral Sciences Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
88   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Computer Aided Manufacturing/Precision Machining
Program Code: CAMPM.S.AAS • Credit Hours: 60

Description

Graduates of the CAM precision machining certificate programs are candidates for completion of this two-year associate degree option. More in-depth focus is given to enhancing communication and mathematical skills. A greater development of knowledge in industrial courses is also emphasized, including such areas as tool design, computer numerical control, jig and fixture design, process engineering and basic statistics.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Careers are available for entry-level in the precision machining and tool-and-die industries.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1110	Advanced Machine Operations	3
CAM	1111	Advanced Machine Operations II	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
CAM	1142	Advanced Shop Floor Math	3
CAM	1214	Computer Numerical Control Mill Programming	3
CAM	2114	Jig & Fixture Design	3
CAM	2145	Shop Floor Programming	3
CAM	2225	Tool Design	3
CAM	2781	Precision Machining Capstone	3
CAM	2700	Computer Aided Manufacturing Internship	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1113	Coordinate Measurement OR	
OPT	2240	Six Sigma: Green Belt OR	
CAM	2204	Computer Numerical Control Lathe Programming OR	
CAM	1180	Welding & Metal Joining I	3
OT36		Arts & Humanities Elective	3
OT36		Social & Behavioral Sciences Elective	3

Computer Information Systems/Network Engineering
Program Code: NEEN.S.AAS • Credit Hours: 60

Description

Students learn Cisco routing protocols, troubleshooting the routing protocols, components, methods and technologies required for network and Internet communications, operation of IP addressing services, network security threats and functions of common security appliances and applications, wireless network standards and components, basic switching concepts, operation of Cisco switches, Virtual Local Area Networks (VLANs) to create logically separate networks. Sinclair is a Regional Cisco Academy.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Employment opportunities in IT include entry-level positions such as network administrators, network security analysts and network engineers.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1105	IT Fundamentals	3
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1140	Information Systems Analysis & Design	3
CIS	1411	Introduction to Networks	3
CIS	1510	Windows Client Operating System OR	
CIS	2510	Microsoft Windows Server Operating System OR	
CIS	2731	A+ Hardware & Software	3
CIS	2165	Database Management	3
CIS	2416	Routing & Switching Essentials	4
CIS	2421	Scaling Networks	4
CIS	2427	IoT Fundamentals	4
CIS	2640	Network Security	3
CIS	2170	Computer Information Systems Internship OR	
CIS	2178	Computer Information Systems Capstone	3
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Computer Information Systems/ Secure System Administration
Program Code: NEMA.S.AAS • Credit Hours: 61

Description

Students are prepared in problem solving, designing and documenting programs, system and network administration, and computer operating systems. Students learn to manage and configure computers, using various operating systems, to provide critical network services to diverse clients in a secure manner. Security concepts that are vendor neutral and applicable to all system types are discussed; those concepts are then applied to specific systems using various operating systems. The overall objective, to securely and efficiently administer networked systems of client and server machines, is emphasized throughout.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Students learn to manage and configure computers, using various operating systems, to provide critical network services to diverse clients in a secure manner. Security concepts that are vendor neutral and applicable to all system types are discussed; those concepts are then applied to specific systems using various operating systems. The overall objective to configure high standards of system and network security is emphasized throughout. Increased recognition of the need for secure systems and networks has provided significantly increased opportunities for those prepared to work in this field.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1105	IT Fundamentals OR	
BIS	1120	Introduction to Software Applications	3
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	2165	Database Management	3
CIS	2510	Microsoft Windows Server Operating System	3
CIS	2515	Windows Network Infrastructure	3
CIS	2520	Windows Directory Services Administration	3
CIS	2550	Linux Operating System	3
CIS	2630	Securing a Windows Network Environment	3
CIS	2640	Network Security	3
CIS	2170	Computer Information Systems Internship OR	
CIS	2178	Computer Information Systems Capstone	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
SCC	1101	First Year Experience	1

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
90   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Computer Information Systems/ Software Development
Program Code: SODE.S.AAS • Credit Hours: 62

Description

Students learn software programming and system design for entry-level software development positions. Students are prepared in logical problem solving, designing and documenting programs, network administration, microcomputer and network operating systems and business applications using current computer languages.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Employment opportunities in IT include entry-level positions such as software developers, web developers, help desk analysts, network administrators, user support specialists, network security analysts and network engineers.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1105	IT Fundamentals OR	
BIS	1120	Introduction to Software Applications	3
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	1202	C++ Software Development I	3
CIS	1350	Web Site Development with HTML & CSS	3
CIS	2165	Database Management	3
CIS	2170	Computer Information Systems Internship	3
CIS	2207	Algorithms & Data Structures OR	
CIS	2268	Structured Query Language (SQL) Programming	3
CIS	2212	Java Software Development I	3
CIS	2217	Java Software Development II	4
CIS	2222	ASP.NET with C#	3
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Art & Humanities Elective	3
SCC	1101	First Year Experience	1

Computer Information Systems/ User Support
Program Code: USSU.S.AAS • Credit Hours: 62

Description

Students learn hardware and software troubleshooting, personal computer and system maintenance, documentation and are prepared in logical problem solving, designing and documenting programs, computer and network operating systems and business applications using current computer languages.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Computer support specialists provide help and advice to people and organizations using computer software or equipment. Some, called computer network support specialists, support information technology (IT) employees within their organization. Others, called computer user support specialists, assist non-IT users who are having computer problems.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1105	IT Fundamentals	3
CIS		Computer Information Systems Elective	6
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	1510	Windows Client Operating System	3
CIS	2165	Database Management	3
CIS	2640	Network Security	3
CIS	2427	IoT Fundamentals	3
CIS	2731	A+ Hardware & Software	4
CIS	2170	Computer Information Systems Internship OR	
CIS	2178	Computer Information Systems Capstone	3
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
SCC	1101	First Year Experience	1

Computer Information Systems Electives

CIS	1202	C++ Software Development
CIS	1350	Web Site Development with HTML & CSS
CIS	2212	Java Software Development I
CIS	2240	Introduction to Mobile Applications
CIS	2268	Structured Query Language (SQL) Programming
CIS	2510	Microsoft Windows Server Operating System
CIS	2515	Windows Network Infrastructure
CIS	2520	Windows Server Advanced Services
CIS	2550	Linux Operating System

Computer Information Systems/ Web Development
Program Code: WEDE.S.AAS • Credit Hours: 63

Description

Students design and develop websites and web applications and are prepared in logical problem solving, designing and documenting programs, microcomputer and network operating systems and business applications using current computer languages.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Today the world wide web dominates much of our daily lives and there is considerable need for those with the skills needed to create, deploy and maintain web content. Nearly every retailer of any size uses dynamic web content to display and sell their products. Other businesses and industries have similar need to host dynamic content regarding their organizations on the web. Those with the skills to manage these sites will have significant opportunities ahead.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1105	IT Fundamentals OR	
BIS	1120	Introduction to Software Applications	3
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	1350	Web Site Development with HTML & CSS	3
CIS	1375	Javascript	3
CIS	2165	Database Management	3
CIS	2170	Computer Information Systems Internship	3
CIS	2212	Java Software Development I	3
CIS	2217	Java Software Development II	4
CIS	2222	ASP.NET with C#	3
CIS	2250	Web Site Development with php	3
CIS	2268	Structured Query Language (SQL) Programming OR	
CIS	2207	Data Structures & Algorithms	3
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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92   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Construction Management Technology

Program Code: CMO.S.AAS • Credit Hours: 60-62

Description

The Construction Management Technology program helps students develop skills related to managing the construction process including project planning and organization, safety, cost estimating, plan reading, surveying, current construction methods, modern building materials and Building Information Modeling (BIM).

Accreditation

Accredited by Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

Career Opportunities

Graduates are employed as project managers, estimators, inspectors and craftsmen with residential, commercial and governmental agencies.

CAT	1101	Architectural Graphics I	3
CAT	1121	Architectural Graphics II	3
CAT	1201	Construction Methods & Materials	3
CAT	1211	Construction Materials Testing	2
CAT	1241	Building Systems	4
CAT	1401	Construction Estimating	3
CAT	1501	Fundamentals of Surveying & Mapping	3
CAT	2401	Engineering Technology Project Management	3
CAT	2411	Architectural Practice, Codes & Laws	3
CAT	2700	Civil Architectural Technology Internship	2
CAT	2782	Construction Management Technology Capstone	4
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
EGV	2351	LEED Green Associate Exam Preparation	2
MAT	1470	College Algebra AND	
MAT	1570	Trigonometry OR	
MAT	1580	PreCalculus OR	
MAT	1200	Technical Mathematics	5-6
MET	1131	Personal Computer Applications for Engineering Technology	1
MET	2711	Ethics for Engineering Technology Professionals	1
OT36		Social & Behavioral Sciences Elective	3
PHY	1106	Physics for Technology AND	
PHY	1107	Lab for Physics for Technology OR	
PHY	1141	College Physics I	3-4
XXX		Construction Technology Elective	6

Construction Technology Electives

CAT	1141	Architectural Blueprint Reading
CAT	1161	Introduction to Civil & Architectural Technology
CAT	1301	Introduction to Civil Construction CAD
CAT	1701	Construction Craft Skills/Concrete
CAT	1721	Structural Framing Systems
CAT	1741	Residential Electrical Systems
CAT	1761	Interior & Exterior Finishes
CAT	1781	Construction Project
CAT	1810	Construction Techniques I
CAT	1820	Construction Techniques II
CAT	1830	Construction Techniques III
CAT	1840	Construction Techniques IV
CAT	2201	Architectural Visualization
CAT	2431	OSHA Construction Standards
CAT	2531	Advanced Surveying & Mapping
CAT	2561	Route Surveying with Construction Applications
CAT	2581	Legal Principles for Surveyors
MAT	2270	Calculus & Analytic Geometry I

Criminal Justice Science/ Corrections

Program Code: CJCO.S.AAS • Credit Hours: 60

Description

This program is designed to combine the criminal justice concepts, theories and laws with practical application techniques and modern technology skills to prepare the Criminal Justice Science student for productive employment in corrections. The corrections track maintains cutting-edge curriculum that enhances critical thinking, written and oral communications, teamwork, leadership and assessment. The curriculum includes general education requirements, theory and practice courses and educational requirements in ethics, law and the current best practices in the field of criminal justice.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at student records@sinclair.edu.

Career Opportunities

Employment is available in the corrections field as correctional officers, security guards, county probation and parole officers, positions in commercial, school, and private security organizations, and correctional treatment specialists.

BIO	1107	Human Biology OR	
OT36		Natural & Physical Sciences Elective	3
BIS	1120	Introduction to Software Applications	3
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	1105	Criminal Law	3
CJS	1110	Interrogation, Documentation & Testimony	3
CJS	1165	Corrections OR	
CJS	1197	Corrections Full Service Jails/Basic Correction Officer Academy	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
CJS	2145	Correctional Case Management	3
CJS	2200	Human Relations, Mediation, & Conflict Resolution	3
CJS	2270	Criminal Justice Science Internship OR	
CJS	2295	Criminal Justice Science Seminar	3
COM	2245	Intercultural Communication	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
PSY	1100	General Psychology	3
SOC	1101	Introduction to Sociology	3
SOC	2226	Criminology	3

Criminal Justice Science/Law Enforcement

Program Code: CJLE.S.AAS • Credit Hours: 63

Description

The Associate of Applied Science Degree in Criminal Justice prepares entry-level professionals from diverse backgrounds in theoretical foundations, knowledge, skills, and practices of criminal justice operations. This study enables students to develop rational decisions and informed responses to challenges facing law enforcement and criminal justice professionals today.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

A broad range of career opportunities are available in the area of criminal justice/law enforcement including those in court systems, court administration, patrol, victim services, investigation, and probation/parole.

BIO	1107	Human Biology OR	
OT36		Natural & Physical Sciences Elective	3
BIS	1120	Introduction to Software Applications	3
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	1105	Criminal Law	3
CJS	1110	Interrogation, Documentation & Testimony	3
CJS	1125	Policing	3
CJS	1155	Homeland Security Issues & Administration	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
CJS	2200	Human Relations, Mediation, & Conflict Resolution	3
CJS	2205	Introduction to Criminal Investigation & Forensic Science	3
CJS	2209	Computer Crime	3
CJS	2270	Criminal Justice Science Internship OR	
CJS	2295	Criminal Justice Science Seminar	3
COM	2245	Intercultural Communication	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
PSY	1100	General Psychology	3
SOC	1101	Introduction to Sociology	3
SOC	2226	Criminology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Cyber Investigation Technology
Program Code: CYIT.S.AAS • Credit Hours: 61

Description

The Cyber Investigation Technology degree will prepare students for careers in the areas of computer network protection, managing networks and operating systems, and IT criminal investigation, which includes evidence procedures and computer forensics. The degree incorporates preparation for industry-recognized certifications, articulated credit for Law Enforcement and Corrections entities, and transfer students for four-year degree transfer opportunities.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Job titles include but are not limited to: Intelligence Analyst, IT Specialist (Government Breakout Codes 2210), Systems Administrator, Network Engineer, Information System Security Manager, Cyber Security Incident Response Specialist and Private Investigator.

CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	2165	Database Management	3
CIS	2510	Microsoft Windows Server Operating System	3
CIS	2550	Linux Operating System	3
CIS	2630	Securing a Windows Network Environment	3
CIS	2640	Network Security	3
CIS	2731	A+ Hardware & Software	4
CIS	2808	Introduction to Computer Forensics	3
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
CJS	2209	Computer Crime	3
CJS	2295	Criminal Justice Science Seminar	3
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
MAN	2150	Management & Organizational Behavior	3

Data Analytics
Program Code: DATA.S.AAS • Credit Hours: 63

Description

Students will be prepared for entry-level data analytics positions requiring knowledge, setup and usage of business intelligence and data analysis solutions. Students will have the ability to extract, curate, wrangle, and visualize data in a way that is meaningful to a variety of organizations. Course work will include database concepts, data modeling, Structured Query Language (SQL), data analysis and visualization, data mining tools, mathematical and statistical techniques, project management and systems analysis. Emphasis is placed on strong communication skills necessary to interact with key stakeholders to achieve their desired objectives.

Career Opportunities

Opportunities include positions such as Data Engineer, Data Analyst, Business Intelligence Analyst, Data Manager, Visualization Analyst, and Business Systems Analyst.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1105	IT Fundamentals OR	
BIS	1120	Introduction to Software Applications	3
BIS	1230	Spreadsheet Software	3
BIS	1600	Data Management & Visualization	3
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	2165	Database Management	3
CIS	2170	CIS Internship	2
CIS	2265	Data Visualization with Tableau	3
CIS	2266	Python for Data Analytics	3
CIS	2268	Structured Query Language (SQL) Programming	3
CIS	2269	Data Analytics Theory & Solutions	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
MAT	1460	Mathematics for Business Analysis	3
MAT	2170	Business Statistics I	4
MAT	2180	Business Statistics II	3
OT36		Arts & Humanities Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Dental Hygiene
Program Code: DEH.S.AAS • Credit Hours: 69

Description

Working as part of a dental team, dental hygienists treat patients needing non-surgical periodontal therapy and radiographs, apply preventive agents, provide intra- and extra-oral exams and oral hygiene instructions. Registered dental hygienists work in private dental offices, public health settings, and in higher education.

The Dental Hygiene program is designed to be completed in five (5) semesters on a full-time basis when the student begins the technical portion of the program. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage.

In order to be invited into the Dental Hygiene Program all students must have a GPA of 2.7 with an overall TEAS score of 60 and a score on the sciences portion of the test of 50. You have three opportunities to successfully take the TEAS. For any students applying under the Accelerated Admission for Academic Achievement (AAAA) you must have a GPA of 3.0 with an overall TEAS score of 65 and a science score of 55. A student may take the TEAS test two times for consideration. In addition, you much earn an "A" or "B" in all required biology and chemistry courses. Complete CHE 1111/1151 (Intro to Chemistry I) or provide proof of High School chemistry with "C" or better within past 5 years to the Dental Health Sciences Department.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The program in Dental Hygiene at Sinclair Community College is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of Approval (without reporting requirements). The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (800) 621-8099 or (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678.

Career Opportunities

Career options may vary according to state practice act restrictions. Dental hygienists have a variety of career opportunities in a wide range of employment settings, including private practice, hospitals, HMO's, community health programs, long-term care facilities, school systems, dental product research, marketing and sales, military bases, universities and research centers.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1141 Principles of Anatomy & Physiology I AND

DEH 1102 Introduction to Dental Hygiene AND

ENG 1101 English Composition I AND

MAT 1130 Mathematics in Health Sciences OR

OT36 Mathematics Elective

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1141	Principles of Anatomy & Physiology I	4
BIO	1147	Lab for Principles of Anatomy & Physiology I	0
BIO	1242	Principles of Anatomy & Physiology II	4
BIO	1248	Lab for Principles of Anatomy & Physiology II	0
BIO	2205	Microbiology	4
DEH	1102	Introduction to Dental Hygiene	1
DEH	1202	Head, Neck & Dental Anatomy	3
DEH	1203	Lab for Head, Neck & Dental Anatomy	0
DEH	1204	Preclinical Dental Hygiene I	4
DEH	1205	Lab for Dental Hygiene Instrumentation I	0
DEH	1206	Nutrition & Oral Health	2
DEH	1302	Preclinical Dental Hygiene II	4
DEH	1303	Lab for Dental Hygiene Instrumentation II	0
DEH	1304	Oral Histology & Embryology	1
DEH	1306	General & Oral Pathology	4
DEH	1308	Dental Radiology	3
DEH	1309	Lab for Dental Radiology	0
DEH	2402	Clinical Dental Hygiene I	1
DEH	2403	Dental Hygiene Clinic I	1
DEH	2502	Pharmacology in the Dental Practice	2
DEH	2503	Pain Control in the Dental Practice	1
DEH	2504	Dental Hygiene Research	2
DEH	2506	Dental Materials	2
DEH	2507	Lab for Dental Materials	0
DEH	2509	Dental Hygiene Clinic II	3
DEH	2602	Clinical Dental Hygiene III	1
DEH	2603	Dental Hygiene Clinic III	3
DEH	1305	Medical Emergencies in Dental Practice	1
DEH	2508	Clinical Dental Hygiene II	2
DEH	2601	Community Dental Health	1
DEH	2604	Dental Hygiene Practice	1
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3
SOC	1101	Introduction to Sociology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent

96   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

SINCLAIR COLLEGE

Digital Media Design

Program Code: DMD.S.AAS • Credit Hours: 62-64

Description

The Associate of Applied Science degree in Digital Media Design will prepare students for careers and transfer degrees in digital media. In this interdisciplinary program, students select a pathway specific to their interest -- Video Production or Web Design. The program is creative, fast paced, and in demand by most businesses. Students will develop the knowledge and technical skills necessary to produce and design quality videos or web applications. Creativity, problem-solving and the design process are stressed. Advanced computer skills, portfolio development and job-seeking strategies are also incorporated into the curriculum.

Career Opportunities

Graduates from this program will be able to obtain positions in the field of video production (television, internet, live broadcasts, home or other purposes) or web design (web designer and coding, user experience/user interface design, search engine optimization, and motion design).

ART	2230	Art History: Ancient through Medieval Periods OR	
ART	2231	Art History: Renaissance through Contemporary Periods	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists OR	
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
SOC	1101	Introduction to Sociology	3
VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1208	Typography	4
VIS	2130	Motion Design	3
VIS	2260	Design Portfolio	4
		Video Production Pathway OR	
		Web Design Pathway	28-30

Video Production Pathway

VIS	1410	Video & Theory of Video Production
VIS	1420	Video Production
VIS	1430	Lighting & Cinematography
VIS	1440	Audio Production
VIS	2180	Video Principles
VIS	2190	Video Applications 1
VIS	2200	Video Applications 2

Video Production Pathway Electives

ART	2265	Digital Color Photography I
ENG	2256	Fictional Writing
MRK	2135	Digital Marketing
VIS	1110	Design Drawing

Web Design Pathway

CIS	1350	Web Site Development with HTML & CSS
VIS	1310	History & Theory of Web Design
VIS	1320	User Experience/User Interface
VIS	2140	Web Principles
VIS	2150	Web Applications
VIS	2170	Web Content Management

Web Design Pathway Electives

ART	2265	Digital Color Photography
CIS	1375	Javascript
IND	1240	Color Theory
MRK	2135	Digital Marketing
VIS	1110	Design Drawing
VIS	1330	Web Design
VIS	1420	Video Production

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Early Childhood Education
Program Code: ECE.S.AAS • Credit Hours: 63

Description

This program provides the knowledge, skills and competencies important to an entry-level teacher working with, or planning to work with, young children. The program includes the academic preparation required by the Ohio Department of Education to meet Pre-Kindergarten Associate Teacher Licensure standards. Students interested in completing this degree program must have a full criminal background investigation completed before enrolling in the final practicum course. A grade of "C" or better is required in all courses.

Career Opportunities

Graduates may work as pre-kindergarten associate licensed teachers, child care center directors, infant-toddler teachers, and paraprofessionals in public schools or as school age child care coordinators.

COM	2211	Effective Public Speaking	3
ECE	1100	Introduction to Early Childhood Education	3
ECE	1101	Introductory Child Development	3
ECE	1200	Observation & Assessment	4
ECE	1201	Curriculum & Planning	4
ECE	1202	Healthy & Safe Environments	3
ECE	2103	Literacy, Art & Music	4
ECE	2104	Math, Science & Social Studies	4
ECE	2200	Families, Communities & Schools	3
ECE	2201	Guidance of Young Children	3
ECE	2300	Inclusion OR	
ECE	2302	Infant & Toddler Curriculum	3
ECE	2301	Early Childhood Education Practicum OR	
ECE	2303	Early Childhood Education Practicum Part 1 AND	
ECE	2304	Early Childhood Education Practicum Part 2	5
EDU	1100	Introduction to Education	3
EDU	1105	Individuals with Exceptionalities	3
ENG	1101	English Composition I	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Natural & Physical Sciences Elective	3
PSY	1100	General Psychology	3
PSY	2242	Educational Psychology	3

Electroneurodiagnostic Technology
Program Code: END.S.AAS • Credit Hours: 64-65

Description

The associate degree program in Electroneurodiagnostic Technology prepares competent entry-level Neurodiagnostic Technologists, specializing in Electroencelphagrams (EEG) with additional expertise in the following additional areas: Evoked Potentials (EP); Intraoperative Neuromonitoring (IONM); Nerve Conduction Students (NCS) and Polysomnography (PSG), in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Electroneurodiagnostic is the allied health care profession that records, monitors, and analyzes nervous system functions to promote the effective treatment of pathologic conditions. Technologists record electrical activity arising from the brain, spinal cord, peripheral nerves, somatosensory or motor nerve systems using a variety of techniques and instruments. Technologists prepare data and documentation for interpretation by a physician. As part of the program, the students will complete a non-paid, supervised health-related practicum in a medical setting.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

Sinclair Community College's Electroneurodiagnostic Technology program is accredited by the Commission on Accreditation of Allied Health Education Program (CAAHEP: https://www.caahep.org/Home.aspx). The Committee on Accreditation for Education in Neurodiagnostic Technology (CoA-NDT) and CAAHEP's board of Directors recognized the programs substantial compliance with the nationally established accreditation standards. Commission on Accreditation of Allied Health Education Programs, 9355 113th St. N, #7709 Seminole, FL 33775 Phone: 727-210-2350 Fax: 727-210-2354

Career Opportunities

Employment may be found in hospitals, out-patient clinics and surgical centers.

SINCLAIR COLLEGE

Program Prerequisite(s):

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1121 Human Anatomy & Physiology I AND

END 1101 Introduction to Electroneurodiagnostic Technology AND

MAT 1130 Mathematics in Health Sciences OR

MAT 1450 Introductory Statistics AND

Approval of Department AND

GPA of 2.0 and TEAS Exam

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1110	Principles of Electrocardiography	3
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
CHE	1111	Introduction to Chemistry I OR	
CHE	1311	College Chemistry I	4
CHE	1151	Lab for Introduction to Chemistry I OR	
CHE	1351	Lab for College Chemistry I	0
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
END	1101	Introduction to Electroneurodiagnostic Technology	1
END	1102	Introduction to Electroencephalography (EEG)	4
END	1182	Lab for Intro to EEG	0
END	1250	Intermediate Electroencephalography (EEG)	3
END	1260	Basic Evoked Potentials	3
END	1285	Lab for Intermediate EEG	0
END	1286	Lab for Basic Evoked Potentials	0
END	1901	Seminar for END Practicum I	2
END	1991	Practicum Experience I for END	0
END	2350	Intraoperative Monitoring for Electroneurodiagnostic Technologists	2
END	2360	Neonatal/Pediatric Electroneurodiagnostic	3
END	2386	Lab for Neonatal/Pediatric EEG	0
END	2450	Nerve Conduction Studies	3
END	2460	Neurophysiology of Electroencephalography/ Sleep Disorders	3
END	2485	Lab for Nerve Conduction Studies	0
END	2550	Fundamentals of Polysomnography	3
END	2585	Lab for Polysomnogrpahy	0
END	2902	Seminar for END Practicum II	3
END	2903	Seminar for END Practicum III	3
END	2990	Electroneurodiagnostic Capstone	2
END	2992	END Practicum II	0
END	2993	END Practicum III	0
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences OR	
MAT	1450	Introductory Statistics OR	
MAT	1470	College Algebra	3-4
PSY	1100	General Psychology	3

Electronics Engineering Technology
Program Code: EET.S.AAS • Credit Hours: 61-62

Description

The Electronics Engineering Technology (EET) program provides students with exciting opportunities to put engineering technology concepts into practice. The curriculum balances instruction in theory with hands-on laboratory applications. A strong background in basics and in-depth study of advanced topics gives students careers in diversified areas, such as digital systems, microcomputers, programmable logic controllers, and analog systems. The program has modern state-of-the-art equipped laboratories and a highly qualified faculty. Those who wish to further their studies are well prepared for entry into the best four-year electronics engineering technology programs.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

Accredited by Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

Career Opportunities

Prepares graduates for careers in electronics technician troubleshooting with testing equipment and assisting engineers with design and fabrication.

COM	2211	Effective Public Speaking	3
EET		Electronics Elective	3-4
EET	1116	Electronics Schematics & Fabrication	4
EET	1131	Digital Electronics	5
EET	1150	DC Circuits	4
EET	1155	AC Circuits	3
EET	2201	Electronic Devices & Circuits	4
EET	2259	Programming for Electronics Technology	4
EET	2261	Microprocessors	4
EET	2278	Electronics Project Capstone	4
EET	2281	Programmable Logic Controllers	3
EGR	2261	Engineering Problem Solving Using "C" & "C++"	4
ENG	1101	English Composition I	3
MAT	1580	Precalculus	5
MET	2711	Ethics for Engineering Technology Professionals	1
OT36		Social & Behavioral Sciences Elective	3
PHY	1141	College Physics I	4

Electronics Electives

EET	2157	Radio Frequency Identification (RFID) Technology
EET	2257	Radio Frequency Identification (RFID) Capstone
EET	2270	Electronics Engineering Technology Internship
EET	2282	Advanced Programmable Logic Controllers
PHY	1142	College Physics II

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Emergency Medical Services
Program Code: EMSVS.S.AAS • Credit Hours: 60-61

Description

The Emergency Medical Services (EMS) degree is designed to augment the skills of the practicing paramedic. Paramedics are challenged with a variety of courses to increase their skill sets in areas of EMS management and out-of-hospital critical care medicine. Students will gain experience from currently practicing paramedics, fire fighters and managers. This degree allows students to capitalize on their paramedic education, positioning themselves for advancement within the fire service. A grade of "C" or better is required in all technical-level courses. Interested students should contact the EMS offices at 937-512-5338 or contact an academic advisor.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The EMT certification course meets the Ohio Division of EMS accreditation standards. The paramedic certification course meets the Ohio Division of EMS and CAAHEP accreditation standards.

Career Opportunities

Within the greater Miami Valley area, EMS professionals are hired by fire departments, private EMS and hospitals. These agencies typically hire entry personnel based on the candidate's state licensures/certifications - not whether the candidate is degreed. The associate degree can provide students with knowledge and skills needed to advance within an EMS career.

Program Prerequisite(s)

EMS 1150 Emergency Medical Technician: Lecture AND

EMS 1155 Laboratory for Emergency Medical Technician

BIO	1121	Human Anatomy & Physiology I OR	
BIO	1141	Principles of Anatomy & Physiology I	3-4
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
EMS	1150	Emergency Medical Technician: Lecture	5
EMS	1155	Laboratory for Emergency Medical Technician	2
EMS	2100	Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider	3
EMS	2105	Paramedic 1: Lecture	2
EMS	2110	Paramedic 1: Laboratory	2
EMS	2125	Paramedic 2: Lecture	5
EMS	2130	Paramedic 2: Laboratory	2
EMS	2135	Paramedic 2: Clinical OR	
EMS	2136	Paramedic 2a: Clinical AND	
EMS	2137	Paramedic 2b: Clinical	2
EMS	2150	Paramedic 3: Lecture	5
EMS	2155	Paramedic 3: Laboratory	2
EMS	2160	Paramedic 3: Clinical	1
EMS	2175	Paramedic 4: Lecture	2
EMS	2180	Paramedic 4: Field Experience	1
EMS	2200	Paramedic 5: Integration / Refresher Lecture	2
EMS	2205	Paramedic 5: Integration / Refresher Laboratory	1
EMS	2300	Critical Care Paramedic 1 OR	
EMS	2305	Critical Care Paramedic 2 OR	
EMS	2310	EMS Management 1 OR	
EMS	2315	EMS Management 2	6
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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100   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Emergency Medical Services/ Fire Science

Program Code: EMSFO.S.AAS • Credit Hours: 64-65

Description

The Emergency Medical Services (EMS) Fire Science option is designed to augment the skills of the practicing paramedic. Paramedics are challenged with a variety of courses to increase their skill sets in fire technical areas. Students will gain experience from currently practicing paramedics, fire fighters and managers. This degree allows students to capitalize on their paramedic education, positioning themselves for advancement within the fire service. A grade of "C" or better is required in all technical-level courses. Interested students should contact the EMS offices at (937) 512-5338 or contact an academic adviser.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The certificates within the degree meet accreditation standards. The EMT certificate meets the Ohio Division of EMS accreditation standards. The Paramedic certificate meets the Ohio Division of EMS and the CAAHEP accreditation standards. The professional firefighting program is in compliance with all appropriate state laws/rules.

Career Opportunities

Careers with the fire service are beginning to change. Most departments will not require a degree for an entry level position. But departments are beginning to acknowledge the degree and give some preference for those entry level applicants with degrees. It is clear that to advance or get promotions with the fire services, degrees are needed.

Program Prerequisite(s)

EMS 1150 Emergency Medical Technician: Lecture AND

EMS 1155 Laboratory for Emergency Medical Technician

BIO	1121	Human Anatomy & Physiology I OR	
BIO	1141	Principles of Anatomy & Physiology I	3-4
EMS	1150	Emergency Medical Technician: Lecture	5
EMS	1155	Laboratory for Emergency Medical Technician	2
EMS	2100	Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider	3
EMS	2105	Paramedic 1: Lecture	2
EMS	2110	Paramedic 1: Laboratory	2
EMS	2125	Paramedic 2: Lecture	5
EMS	2130	Paramedic 2: Laboratory	2
EMS	2135	Paramedic 2: Clinical OR	
EMS	2136	Paramedic 2a: Clinical AND	
EMS	2137	Paramedic 2b: Clinical	2
EMS	2150	Paramedic 3: Lecture	5
EMS	2155	Paramedic 3: Laboratory	2
EMS	2160	Paramedic 3: Clinical	1
EMS	2175	Paramedic 4: Lecture	2
EMS	2180	Paramedic 4: Field Experience	1
EMS	2200	Paramedic 5: Integration / Refresher Lecture	2
EMS	2205	Paramedic 5: Integration / Refresher Laboratory	1
ENG	1101	English Composition I	3
PSY	1100	General Psychology	3
COM	2211	Effective Public Speaking OR	
COM	2206	Interpersonal Communication	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
FST	1102	Firefighter I AND	
FST	1103	Firefighter II Transition AND	
FST	1442	Emergency Vehicle Operator OR	
FST	1104	Firefighter II AND	
FST	1442	Emergency Vehicle Operator	12

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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SINCLAIR COLLEGE

Exercise Science

Program Code: EXSC.S.AAS • Credit Hours: 62

Description

The Associate of Applied Science in Exercise Science is offered as a continuation of the Exercise Specialist certificate. This two-year degree gives students the opportunity to study in-depth principles and methods of fitness training and health promotion. Students have the opportunity to enter professional practice or transfer for completion of a baccalaureate degree. Students are required to demonstrate competency by earning a "C" grade or better in all ENS courses for their degree. Students will need to be in good standing before department approval is given for Practicum.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The Sinclair Community College's Exercise Science associate degree program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation for the Exercise Sciences (CoAES). Commission on Accreditation of Allied Health Education Programs, 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763

Career Opportunities

Employment for the health fitness professional is expected to increase. Aging baby boomers, one group that is increasingly becoming concerned with staying healthy and physically fit, will be the main driver of employment growth. An additional factor is the combination of a reduction in the number of physical education programs in schools with parents' growing concern about childhood obesity. This factor will increase the need for health fitness professionals to work with children in non-school settings, such as health clubs. Increasingly, parents also are hiring personal trainers for their children, and the number of weight-training gyms for children is expected to continue to grow. Businesses are also recognizing the benefits of health promotion and fitness programs for their employees. Health care reform and preventative medicine are other factors that are influencing growth.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1132	Heartsaver First Aid, CPR & AED	1
ALH	1110	Principles of Electrocardiography	3
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
COM	2211	Effective Public Speaking	3
DIT	1111	Nutrition for Health & Fitness	3
ENG	1101	English Composition I	3
ENS	1116	Introduction to Exercise Science & Health Promotion	3
ENS	1118	Lifetime Physical Fitness & Wellness	3
ENS	1212	Business Management for Exercise Science	3
ENS	1214	Personal & Community Health Behavior	3
ENS	2316	Motor Development & Motor Learning	3
ENS	2317	Methods of Teaching Lab	1
ENS	2318	Fitness Assessment & Exercise Prescription	3
ENS	2416	Certification Preparatory Course	3
ENS	2417	Methods of Teaching	3
ENS	2418	Exercise Prescription for Special Populations	3
ENS	2419	Health Promotion, Fitness & Sport Programming	3
ENS	2471	Exercise, Wellness & Sports Science Practicum	2
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
102 college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Fire Science Technology/Fire Administration

Program Code: FAO.S.AAS • Credit Hours: 63

Description

This program provides the education and skills needed by the fire service professional to function in the emergency services field. Courses include administration, inspection, investigation, building construction, fire hydraulics and water suppression systems. Graduates are prepared to enter the workforce as firefighters, fire officers, investigators, inspectors, instructors, or continue their education in fire science or public administration.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Firefighter I, II, Fire Safety Inspector, and Fire Instructor Classes are certification courses through the Ohio Department of Public Safety. Also Firefighter I and II, Fire Instructor I and Fire Officer I and II are accredited by the National Board on Fire Service Professional Qualifications. We are currently in the process of extending ProBoard certification to Fire Instructor II, Fire Officer III and Fire Officer IV.

Career Opportunities

In the next decade a majority of career fire service professionals with 25 plus years' service will be retiring under the State of Ohio "Deferred Retirement Option Plan (DROP)". Replacement employees will be needed to fill openings not only for entry-level positions, but promotions in the officer ranks as well.

BIS	1120	Introduction to Software Applications	3
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
FST	1102	Firefighter I	7
FST	1103	Firefighter II Transition	4
FST	1120	Fire Safety Inspector	4
FST	1125	Fire Investigation I	3
FST	1403	Live Fire Instructor	2
FST	1442	Emergency Vehicle Operator	1
FST	2209	Fire Service Instructor	4
FST	2251	Fire Officer I	3
FST	2252	Fire Officer II	2
FST	2253	Fire Officer III	3
FST	2254	Fire Officer IV	3
MAN	2140	Human Resource Management	3
MAN	2150	Management & Organizational Behavior	3
PSY	1100	General Psychology	3
MAT	1120	Business Mathematics OR	
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
OT36		Natural & Physical Sciences Elective	3

Geospatial Technology

Program Code: GST.S.AAS • Credit Hours: 61-63

Description

The Associate of Applied Science degree in Geospatial Technologies will prepare students for careers and transfer degrees in geographical information systems (GIS). In this interdisciplinary program, students select a pathway specific to their interest - GIS Analyst, GIS Programming Specialist, or Aerial Sensing Data Analyst. In this profession, graduates are responsible for collecting geospatial data, producing maps, analyzing spatial data, coordinating GIS projects, providing technical expertise to clients or users, and providing programming and software development expertise.

Career Opportunities

Approximately 80% of all data have a spatial or location-based component. The geospatial industry and market for it continue to expand at a phenomenal rate. The latest Dept. of Labor statistics show more than 850,000 current geospatial workers with an additional 350,000 needed by 2018. Professionals in GIS are needed in organizations of all sizes and in almost every industry, including, agriculture, health care, retail trade, urban planning, law enforcement, defense and intelligence, natural resources, utilities, marketing, unmanned aerial systems and engineering among others.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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AVT	1120	Electro-Optical & Infrared Data Analysis	2
AVT	1121	Multispectral & Hyperspectral Data Analysis	2
CIS	2165	Database Management	3
CIS	2266	Python for Data Analytics	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
GEO	1101	Global Forces, Local Diversity	3
GEO	1102	Earth's Physical Environment	4
GEO	1102	Earth's Physical Environment OR	
GEO	1300	Introduction to Weather & Climate	4
GEO	1103	Introduction to Geographic Information System I AND	
GEO	1104	Introduction to Geographic Information System II OR	
GEO	1107	Introduction to Geographic Information System (GIS)	4
GEO	1209	Map Design & Visualization	4
GEO	1212	Geospatial Data Acquisition & Management	3
GEO	2210	Advanced Spatial Analysis	4
GEO	2600	Geospatial Technology Capstone OR	
GEO	2700	Geospatial Technology Internship	3
MAT	1450	Introductory Statistics	4
MAT	1470	College Algebra	3
OT36		Social & Behavioral Sciences Elective	3
SCC	1101	First Year Experience	1
OT36		Arts & Humanities Elective OR	
		Natural & Physical Sciences Elective	3
GIS		Aerial Data Sensing Analyst Pathway OR	
GIS		Analyst Pathway OR	
GIS		Programming Specialist Pathway	6-8

GIS Aerial Data Sensing Analyst Pathway

AVT	1104	UAS Standards, Regulations & Laws
AVT	1122	Syn. Aperture Radar & Light Detection & Ranging Data Analysis
AVT	1123	Acoustic & CBRNE Data Analysis
AVT	2150	Crew Resource Management for UAS
EET	1121	UAS Remote Sensing & Analysis
EET	1158	Aerospace Spatial Visualization

GIS Analyst Pathway

CIS	2268	Structured Query Language (SQL) Programming
GEO	1215	Introduction to Remotely Sensed Imagery OR
EET	1121	UAS Remote Sensing & Analysis AND
EET	1158	Aerospace Spatial Visualization

GIS Programming Specialist Pathway

CIS	2268	Structured Query Language (SQL) Programming
CIS	1350	Web Site Development with HTML & CSS

Health Information Management
Program Code: HIM.S.AAS • Credit Hours: 62

Description

Health Information Management (HIM) professionals are experts in the field of managing and protecting patient health information, administering computer information systems and coding the diagnoses and procedures for health care services provided to patients in accordance with medical, administrative, ethical, legal, accreditation and regulatory requirements of the health care delivery system.

The Health Information Management program is designed to be completed in five (5) semesters on a full-time basis when the student begins the technical portion of the program. Students preferring to complete on a part-time basis may take longer than five sequential semesters. The degree program consists of open-enrollment courses (general education and division specific) and program-specific courses with limited enrollment. The open-enrollment courses may be taken prior to entry into the limited-enrollment courses. To qualify for entry to limited-enrollment courses, please see the Applicant Information packet located on the webpage. A minimum cumulative GPA of 2.0 and completion of prerequisite courses are required. A grade of "C" or higher is required in all program courses.

The curriculum includes a professional practice experience (PPE). Each fall term, two cohorts of students begin the technical courses that have limited enrollment. Local cohort students (students who live generally in the 14-county area surrounding Sinclair) are assigned to local PPE sites. The remote cohort students (students living generally outside of the 14-county area surrounding Sinclair) are responsible for securing an appropriate medical facility for their PPE.

Most second-year HIM courses are limited-enrollment courses. All courses in the program are available online. Students may enroll in courses face-to-face on campus, online, or a combination. Face-to-face courses on campus are only available during the day. Students are generally required to complete their PPE during daytime business hours.

Employment prospects are excellent throughout the nation. HIM graduates work in hospitals, clinics, ambulatory care centers, skilled nursing facilities, rehabilitation centers, long term care facilities, mental health care and psychiatric facilities, home health care agencies, hospice facilities, physician offices, insurance companies, law firms, colleges and universities, state and federal agencies, consulting firms, medical research institutions and companies that market health information products and services.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Accreditation

The Health Information Management program is fully accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Upon successful completion of the HIM program, students are eligible to take the national certification exam to become a Registered Health Information Technician (RHIT).

Career Opportunities

Employment prospects are excellent throughout the nation. HIM graduates work in hospitals, clinics, ambulatory care centers, skilled nursing facilities, rehabilitation centers, long term care facilities, mental health care and psychiatric facilities, home health care agencies, hospice facilities, physician offices, insurance companies, law firms, colleges and universities, state and federal agencies, consulting firms, medical research institutions and companies that market health information products and services.

Program Prerequisite(s)

| BIO | 1121 | *Human Anatomy & Physiology I AND* | |
| HIM | 1101 | *Medical Terminology* | |

ALH	1140	Fundamentals of Disease Processes	3
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
BIS	1221	Specialized Computer Applications for Health Information Management	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
HIM	1110	Health Information Processing	3
HIM	1165	Drug Classification for Coding	1
HIM	1201	Introductory Medical Office Coding	4
HIM	1204	Medicolegal & Ethics in Healthcare Records	2
HIM	1217	Alternative Health Records & Registries	3
HIM	2110	Ambulatory Coding	4
HIM	2144	Quality Improvement, Statistics & Research	3
HIM	2145	Health Information Resource Management	3
HIM	2165	Healthcare Data in Reimbursement	3
HIM	2211	Inpatient Coding	4
HIM	2233	Healthcare Information Systems	3
HIM	2252	Professional Practice Experience	2
HIM	2278	Health Information Management Capstone	1
PSY	1100	General Psychology OR	
SOC	1101	Introduction to Sociology	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3

Health Sciences
Program Code: HS.S.AAS • Credit Hours: 64-68

Description

The associate of applied science degree in Health Sciences provides students with a general degree in the health science field. Students with technical certificates or college credits in allied health courses can apply their credits toward the AAS. Graduates will be able to enter a health-related field, or continue their education toward a Bachelor's of Science degree at a four-year university.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1102	Basic Healthcare Practice & Medical Scribe	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
PSY	1100	General Psychology	3
SOC	1101	Introduction to Sociology	3
SCC	1101	First Year Experience	1
OT36		Arts & Humanities Elective	3
MAT	1130	Mathematics in Health Sciences OR	
MAT	1450	Introductory Statistics OR	
MAT	1470	College Algebra	3-4
CHE	1111	Introduction to Chemistry I OR	
CHE	1211	General Chemistry I OR	
CHE	1311	College Chemistry I	4-5
BIO	1121	Human Anatomy & Physiology I AND	
BIO	1222	Human Anatomy & Physiology II OR	
BIO	1141	Principles of Anatomy & Physiology I AND	
BIO	1242	Principles of Anatomy & Physiology II	6-8
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
XXX		Health Sciences Technical Elective	27

Health Sciences Technical Electives

AGR	1160	Introduction to Agricultural Sciences
ALH	1105	Overview of Holistic Health
ALH	1110	Principles of Electrocardiography
ALH	1113	Clinical Phlebotomy
ALH	1114	Clinical Phlebotomy Practice
ALH	1115	Specimen Processing
ALH	1120	Nurse Aide Training
ALH	1121	Acute Care Nurse Aide
ALH	1122	Pharmacy Technician I
ALH	1123	Pharmacy Technician II
ALH	1124	Pharmacy Technician Directed Practice
ALH	1130	Basic Life Support Training for Healthcare Provider

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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ALH	1132	Heartsaver First Aid, CPR & AED
ALH	1140	Fundamentals of Disease Processes
ALH	1150	Healthcare Navigator Clinical
ALH	1183	Pharmacy Technician Lab
ALH	1250	Health Science Practicum
ALH	2201	Survey of Drug Therapy
ALH	2202	General Pharmacology
ALH	2220	Pathophysiology
BIO	1107	Human Biology
BIO	1111	General Biology I
BIO	1121	Human Anatomy & Physiology I
BIO	1141	Principles of Anatomy & Physiology I
BIO	1171	Principles of Biology I
BIO	1211	General Biology II
BIO	1222	Human Anatomy & Physiology II
BIO	1242	Principles of Anatomy & Physiology II
BIO	1272	Principles of Biology II
BIO	2205	Microbiology
BIS	1120	Introduction to Software Applications
BIS	1201	Keyboarding & Document Formatting
BIS	1221	Specialized Computer Applications for Health Information Management
BIS	1400	Customer Service
BTN	1120	Laboratory Safety & Regulatory Compliance
CHE	1111	Introduction to Chemistry I
CHE	1121	Introduction to Chemistry II
CHE	1211	General Chemistry I
CHE	1221	General Chemistry II
CHE	1311	College Chemistry I
CHE	1321	College Chemistry II
CHE	2111	Organic Chemistry I
CIS	1111	Introduction to Problem Solving & Computer Programming
CIS	2165	Database Management
CIS	2269	Data Analytics Theory & Solutions
CLT	1200	Introduction to Clinical Laboratory
COM	2206	Interpersonal Communication
COM	2211	Effective Public Speaking
COM	2225	Small Group Communication
DAS	1102	Introduction to Dental Assisting Terminology
DAS	1104	Dental Assisting Techniques & Materials I
DAS	1108	Dental Assisting Office Management
DAS	1204	Dental Assisting Techniques & Materials II
DAS	1206	Dental Assisting Radiography
DEH	1102	Introduction to Dental Hygiene
DIT	1105	Introduction to Dietetics
DIT	1111	Nutrition for Health & Fitness
DIT	1210	Medical Terminology for Dietetics
DIT	1525	Human Nutrition
DIT	1630	Nutrition in the Lifecycle
DIT	1635	Community Nutrition
DIT	2101	Eating Matters for Dining Assistants
DIT	2180	Medical Nutrition Therapy for Dietary Managers
DIT	2190	Dietary Managers Nutrition Clinical

DIT	2240	Education Methods & Materials
DIT	2305	Food, Culture, & Cuisine
DIT	2310	Lab for Food, Culture, & Cuisine
DIT	2510	Institutional Foodservice Systems
DIT	2515	Foodservice Practicum I
DIT	2520	Laboratory for Foodservice Systems
DIT	2735	Foodservice Organization & Management
DIT	2740	Foodservice Practicum II
EFD	1102	Dental Anatomy for Dental Auxiliaries
EFD	1202	Expanded Functions for Dental Auxiliaries I
EFD	1203	Lab for Expanded Functions for Dental Auxiliaries I
EFD	1302	Expanded Functions for Dental Auxiliaries II
EFD	1303	Lab for Expanded Functions for Dental Auxiliaries II
EMS	1150	Emergency Medical Technician: Lecture
EMS	1155	Laboratory for Emergency Medical Technician
END	1101	Introduction to Electroneurodiagnostic Technology
END	1891	Polysomnography Practicum
END	2460	Neurophysiology of Electroencephalograph/Sleep Disorders
END	2550	Fundamentals of Polysomnography
ENS	1112	Introduction to Physical Education
ENS	1114	Introduction to Sport & Recreation Management
ENS	1116	Introduction to Exercise Science & Health Promotion
ENS	1118	Lifetime Physical Fitness & Wellness
ENS	1214	Personal & Community Health Behavior
ENS	2318	Fitness Assessment & Exercise Prescription
ENS	2414	Foundations of Coaching
ENS	2415	Coaching & Leadership
ENS	2416	Certification Preparatory Course
ENS	2417	Methods of Teaching
ENS	2420	Concepts of Lifestyle Coaching
HIM	1101	Medical Terminology
HIM	1110	Health Information Processing
HIM	1150	Survey of Electronic Health Records
HIM	1160	Medical Office Coding Concepts
HIM	1165	Drug Classification for Coding
HIM	1201	Introductory Medical Office Coding
HIM	1204	Medicolegal & Ethics in Healthcare Records
HIM	1217	Alternative Health Records & Registries
HIM	2145	Health Information Resource Management
HIM	2165	Healthcare Data in Reimbursement
HIM	2233	Healthcare Information Systems
HIM	2262	Advanced Medical Office Coding
HIM	2275	Home Health Medical Coding
HMT	1101	Basic Culinary Skills
HMT	1107	Sanitation & Safety
HMT	1112	Food Principles & Basic Preparation
MAN	1107	Foundations of Business
MAS	1101	Introduction to Medical Assisting
MAS	1110	Administrative Medical Assisting
MAS	1130	Reimbursement Specialist Practicum
MAS	2210	Medical Billing Specialist
MAT	1120	Business Mathematics

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MAT 1130 Mathematics in Health Sciences
MAT 1445 Quantitative Reasoning
MAT 1450 Introductory Statistics
MAT 1460 Mathematics for Business Analysis
MAT 1470 College Algebra
MHT 1101 Introduction to Mental Health Services
MHT 1130 Fundamentals of Addiction Counseling CDCA Preliminary
MHT 1202 Motivational Interviewing
MHT 1236 Assessment & Diagnosis of Substance Use Disorders
MHT 2137 Treatment Techniques in Substance Use Disorders
MHT 2138 Ethical Issues in Behavioral Healthcare
MHT 2235 Family Dynamics of Addiction
MHT 2253 Issues in Chemical Dependency
NSG 1111 Introduction to Nursing
NSG 1200 Introduction to Nursing
OTA 1111 Introduction to Occupational Therapy Assistant
PHI 2206 Introduction to Ethics
PHY 1106 Physics for Technology
PSY 1160 Black Psychology
PSY 2200 Lifespan Human Development
PSY 2217 Abnormal Psychology
PTA 1000 Introduction to Physical Therapy
RAT 1101 Introduction to Radiologic Technology
RAT 2640 Computed Tomography Practicum
RAT 2641 Principles of Computed Tomography
RAT 2643 Principles of Magnetic Resonance Imaging
RAT 2644 Applications of Magnetic Resonance Imaging
RAT 2645 Magnetic Resonance Imaging Practicum
RAT 2647 Principles of Mammography
RAT 2649 Mammography Practicum
RET 1100 Introduction to Respiratory Care
SOC 1145 Introduction to Cultural Anthropology
SOC 2205 Social Problems
SOC 2215 Race & Ethnicity
SUT 1100 Sterile Processing I
SUT 1101 Tissue Banking I
SUT 1107 Lab for Tissue Banking I
SUT 1200 Sterile Processing II
SUT 2101 Tissue Banking II
SUT 2107 Practicum for Tissue Banking II
SWK 2207 Anti-Oppressive Social Work
VET 1102 Introduction to Veterinary Technology I
VET 1120 Introduction to Large Animal Sciences: Handling & Husbandry
VET 1202 Introduction to Veterinary Technology II
VET 1205 Clinical Practice I: Hospital Practices & Professionalism
VET 2220 Principles of Large Animal Reproduction
VET 2225 Principles of Large Animal Nutrition

Heating, Ventilating, Air Conditioning & Refrigeration (HVACR) Technology
Program Code: HVACR.S.AAS • Credit Hours: 60

Description

This degree is designed for entry-level students pursuing careers in the HVAC-R industries, as well as experienced technicians in need of upgrade training. The program focuses on the basic operating principles of commercial and industrial HVAC systems, allowing one to pursue careers in sales, service, facilities

operation, project management, laboratory technician, building automation, and even design. These principles are presented through lecture and laboratory exercises in a step-by-step fashion by addressing refrigeration, heating, distribution, filtration and control as individual subsystems. Upper-level courses tie the subsystems together to discuss how they interact, providing the HVAC-R technician or designer with knowledge regarding proper system operation.

Accreditation

Accredited by Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

Career Opportunities

The program focuses on the basic operating principles of commercial and industrial HVAC systems, allowing one to pursue careers in sales, service, facilities operation, project management, laboratory technician, building automation, design, and many other niche and introductory technologies in HVAC.

CAT	1111	Mechanical Systems Blueprint Reading	1
CAT	1131	Introduction to Revit MEP	3
CAT	1601	Building Electric & Controls	4
CAT	2431	OSHA Construction Standards	2
CHE	1311	College Chemistry I	4
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
HVA	1201	Basic HVAC Systems with Cooling	3
HVA	1221	Heating Systems	3
HVA	1241	HVAC Installation Techniques & Practices	4
HVA	1261	HVAC Loads & Distribution for Small Buildings	4
HVA	1301	Air & Water Distribution Systems	3
HVA	1352	Psychrometrics, Health & Comfort in HVAC	2
HVA	1401	HVAC Mechanical & Electrical Troubleshooting	3
HVA	2251	Primary HVAC Equipment Operation & Selection	3
HVA	2351	HVAC Systems & Controls	5
HVA	2780	HVACR Engineering Technology Capstone Project	3
MAT	1110	Math for Technologist OR	
MAT	1200	Technical Mathematics	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Social & Behavioral Sciences Elective	3
XXX		HVACR Elective	2

HVACR Electives

CAT	1201	Construction Methods and Materials
CAT	1401	Construction Estimating
CAT	1741	Residential Electrical Systems
CIS	1130	Network Fundamentals
CIS	1411	Introduction to Networks
EGV	1251	Introduction to Energy Management Principles
EGV	1301	Architectural Energy Analysis
EGV	1401	Weatherization & Building Performance Training
EGV	2351	LEED Green Associate Exam Preparation
HVA	2297	Special Topics
HVA	2700	HVACR Engineering Technology Internship
HVA	2751	HVACR Operations & Best Practices

Hospitality Management & Tourism
Program Code: HMTT.S.AAS • Credit Hours: 64

Description

The Hospitality Management & Tourism program prepares students for entry-level positions in restaurants, private clubs, beverage establishments, and general hospitality centers and includes skills in supervision, cost controls, purchasing and human relations.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The program is accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which is recognized by the Council on Higher Education Accreditation (CHEA). Please visit acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

The hospitality/tourism industry is a broad category of fields within the service industry that includes lodging, restaurants, event planning, theme parks, transportation, cruise line, and additional fields within the tourism industry. The hospitality industry is a several billion dollar industry that mostly depends on the availability of leisure time and disposable income. It is the number one employer among service industries and is fast becoming the largest single employment category of all industries worldwide. In the United States, hospitality accounts for a larger and ever growing portion of the country's Gross National Product. Top ranked hospitality professionals have almost unlimited possibilities for career satisfaction such as front office managers, restaurant managers, convention services managers, airline attendants, assistant managers, meeting/event planners, car rental agencies, or travel firms.

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Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1110	Menu Planning & Table Service Practicum	3
HMT	1125	Beverage Management	2
HMT	1136	Front Office Operations	2
HMT	1137	Hospitality Industry Computer Systems	2
HMT	1139	Housekeeping Management	2
HMT	1143	Organization of the Travel Product	3
HMT	1148	Meeting & Events Contracts & Obligations	1
HMT	1149	Meeting & Events Set-up & Breakdown	2
HMT	2201	Commercial Kitchen Equipment & Maintenance	2
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
HMT	2226	Hospitality Purchasing & Negotiations	2
HMT	2227	Hospitality Marketing	2
HMT	2230	Risk & Prevention Management	2
HMT	2291	Hospitality Management & Tourism Cooperative Work Experience	2
HMT	2295	Hospitality Management & Tourism Capstone	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
SOC	1145	Introduction to Cultural Anthropology	3
XXX		Language Elective	3

Language Electives

ASL	1111	Beginning American Sign Language I
CHN	1100	Conversational Chinese I
FRE	1100	Conversational French
GER	1100	Conversational German
JPN	1100	Conversational Japanese I
SPA	1100	Conversational Spanish I

Hospitality Management & Tourism/Bakery & Pastry Arts
Program Code: BPAO.S.AAS • Credit Hours: 65

Description

The baking/pastry/confection program at Sinclair Community College prepares its graduates for an exciting career as a pastry chef. Skills learned in a commercial-grade bakery kitchen include proper mixing methods, shaping/sculpting techniques, advanced baking, and the science behind it all. Students will be allowed to showcase their creativity through artisan breads, pastries, chocolate and confection displays, as well as constructing show-stopping wedding cakes. Start today and allow our certified chefs to guide you through graduation and prepare you for an exciting career.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Culinary Arts program is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEF) and by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which both are recognized by the Council on Higher Education Accreditation (CHEA). Please visit acfchefs.org, acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

Students who graduate from the baking/pastry/confectionery concentration will find employment as a baker, pastry cook, pastry chef, pastry department assistant manager, or bake shop manager.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication	3
DIT	1108	Nutrition for the Culinary Professional	3
ENG	1101	English Composition I	3
HMT	1102	Kitchen Chemistry	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1108	Pastry & Confectionery Basics	4
HMT	1126	Baking I	2
HMT	1128	Baking II & Barista	2
HMT	2118	Artisan Breads	3
HMT	2126	Cake Production	2
HMT	2128	Cake Decoration	2
HMT	2200	Culinary & Baking Fundamentals & Commercial Equipment OR	
HMT	2201	Food Service Equipment, Design & Maintenance	2
HMT	2215	Hospitality Cost Controls	3
HMT	2218	Advanced Pastry Skills	3
HMT	2225	Hospitality & Tourism Supervision	3
HMT	2226	Hospitality Purchasing & Negotiations	2
HMT	2227	Hospitality Marketing	2
HMT	2230	Risk & Prevention Management	2
HMT	2293	Baking & Pastry Arts Option Cooperative Work Experience	2
MAT	1125	Math for the Culinary Arts & Baking & Pastry Arts Professional	3
OT36		Arts & Humanities Elective	3
PSY	1100	General Psychology OR	
SOC	1145	Introduction to Cultural Anthropology	3

Hospitality Management & Tourism/Culinary Arts
Program Code: CAO.S.AAS • Credit Hours: 65

Description

The Culinary Arts program provides the basic knowledge a student needs to develop into a certified chef. The serving of good food is important to the reputation of any restaurant. Chefs and cooks are responsible for preparing meals that are pleasing to the eye and taste. Through this specialized program, students develop extensive skills and knowledge of food preparation and presentation. Students also gain an understanding of the duties and responsibilities of a chef and other culinary personnel.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Culinary Arts program is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEF) and by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which both are recognized by the Council on Higher Education Accreditation (CHEA). Please visit acfchefs.org, acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

Students completing the Culinary degree would find employment as a restaurant/banquet cook, short-order cook, fast food cook, private household cook, personal chef, food preparation worker, Sous chef, baker, pastry cook, pastry chef, galley cook, executive chef, executive pastry chef, research chef, corporate chef.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication	3
DIT	1108	Nutrition for the Culinary Professional	3
ENG	1101	English Composition I	3
HMT	1101	Basic Culinary Skills	2
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1110	Menu Planning & Table Service Practicum	3
HMT	1112	Food Principles & Preparation	4
HMT	1125	Beverage Management	2
HMT	1129	Restaurant Desserts	3
HMT	2200	Baking & Culinary Fundamentals & Commercial Equipment OR	
HMT	2201	Food Service Equipment, Design & Maintenance	2
HMT	2206	Garde Manger	3
HMT	2207	Butchery & Fish Management	1
HMT	2208	Advanced Culinary & Competition Skills OR	
HMT	2209	Advanced Culinary Skills	3
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
HMT	2226	Hospitality Purchasing & Negotiations	2
HMT	2227	Hospitality Marketing	2
HMT	2230	Risk & Prevention Management	2
HMT	2292	Culinary Arts Option Cooperative Work Experience	2
MAT	1125	Math for the Culinary Arts & Baking & Pastry Arts Professional	3
OT36		Arts & Humanities Elective	3
PSY	1100	General Psychology OR	
SOC	1145	Introduction to Cultural Anthropology	3

Hospitality Management & Tourism/Lodging
Program Code: HMTTL.S.AAS • Credit Hours: 65

Description

The Hospitality Management & Tourism/Lodging program prepares students for positions in hotels/lodging organizations, resorts, and includes skills in supervision and human relations. This degree also encompasses a basic understanding of meeting & events, and the costing of food since both of these are found at all mid-level and full service properties.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The program is accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which is recognized by the Council on Higher Education Accreditation (CHEA). Please visit acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

The hospitality and tourism industry is the number one employer among service industries, and is vastly becoming the largest single employment category of all industries worldwide. In the United States, hospitality accounts for a larger and ever growing portion of the country's Gross National Product. Right now, over half a million jobs in the hospitality industry go unfilled each year, and that number is likely to continue to grow. Top ranked hospitality professionals have almost unlimited possibilities for career satisfaction as front office supervisors, front office managers, concierges, owners of bed and breakfasts, leaders in the car rental or travel agencies, tour operations, convention and visitors bureaus, and the airline industry.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

SINCLAIR COLLEGE

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1125	Beverage Management	2
HMT	1136	Front Office Operations	2
HMT	1137	Hospitality Industry Computer Systems	2
HMT	1138	Managing Lodging Operations	2
HMT	1139	Housekeeping Management	2
HMT	1141	Destination Geography	3
HMT	1143	Organization of the Travel Product	3
HMT	1148	Meeting & Events Contracts & Obligations	1
HMT	1149	Meeting & Events Set-up & Breakdown	2
HMT	1150	Meeting & Event Planning	3
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
HMT	2227	Hospitality Marketing	2
HMT	2230	Risk & Prevention Management	2
HMT	2291	Hospitality Management & Tourism Cooperative Work Experience	2
HMT	2295	Hospitality Management & Tourism Capstone	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
SOC	1145	Introduction to Cultural Anthropology	3
XXX		Language Elective	3

Language Electives

ASL	1111	Beginning American Sign Language I
CHN	1100	Conversational Chinese I
FRE	1100	Conversational French
GER	1100	Conversational German
JPN	1100	Conversational Japanese I
SPA	1100	Conversational Spanish I

Hospitality Management & Tourism/Meeting & Event Planning
Program Code: HMTTM.S.AAS • Credit Hours: 65

Description

The Hospitality Management & Tourism Meeting & Event Planning program prepares students for entry-level positions in hotels, resorts, convention and visitor centers, corporate centers, private clubs, and meeting and event operations.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The program is accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which is recognized by the Council on Higher Education Accreditation (CHEA). Please visit acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

The hospitality/tourism industry is the number one employer among service industries, and is fast becoming the largest single employment category of all industries worldwide. In the United States, hospitality accounts for a larger and ever growing portion of the country's Gross National Product. Right now, over half a million jobs in the hospitality industry go unfilled each year, and that number is likely to continue to grow as the food service industry grows. Top ranked hospitality professionals have almost unlimited possibilities for career satisfaction as meeting/event planners for corporate events, association/non-profit events, government events, special events and expositions and large-scale convention business.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1110	Menu Planning & Table Service Practicum	3
HMT	1125	Beverage Management	2
HMT	1141	Destination Geography	3
HMT	1143	Organization of the Travel Product	3
HMT	1148	Meeting & Events Contracts & Obligations	1
HMT	1149	Meeting & Events Set-up & Breakdown	2
HMT	1150	Meeting & Event Planning	3
HMT	1151	Special Events, Expositions & Festivals	3
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
HMT	2226	Hospitality Purchasing & Negotiations	2
HMT	2227	Hospitality Marketing	2
HMT	2230	Risk & Prevention Management	2
HMT	2291	Hospitality Management & Tourism Cooperative Work Experience	2
HMT	2295	Hospitality Management & Tourism Capstone	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
SOC	1145	Introduction to Cultural Anthropology	3
XXX		Language Elective	3

Language Electives

ASL	1111	Beginning American Sign Language I
CHN	1100	Conversational Chinese I
FRE	1100	Conversational French
GER	1100	Conversational German
JPN	1100	Conversational Japanese I
SPA	1100	Conversational Spanish I

Industrial Engineering Technology
Program Code: OPTIO.S.AAS • Credit Hours: 63

Description

The Industrial Engineering Technology (IET) program prepares individuals for leadership roles in the operations of business, industry, and service organizations with a special emphasis on IET skills. Students learn analysis, continuous improvement, quality assurance, and problem solving techniques that can be applied toward financial, health care, manufacturing, and service/retail fields. Students take part in lecture-lab structured courses and hands-on demonstrations of course principles, assuring that they will gain practical knowledge as well as the fundamentals. Those who wish to further their studies may transfer to four-year colleges and universities.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Graduates are employed as Industrial Engineering Technicians, Quality Control Technicians, Production Supervisors, Continuous Improvement Specialists, and similar positions. Those who wish to further their studies may transfer to four-year colleges and universities.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAN	2110	Introduction to Project Management OR	
MAN	2150	Management & Organizational Behavior OR	
MAN	2159	Supply Chain Management Concepts & Applications	3
MAT	1580	Precalculus	5
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT		Industrial Engineering Technology Elective	3
OPT	1100	Tooling & Machining Metrology	2
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1110	Operations Work Measurement & Ergonomics	3
OPT	1112	World Class Quality Systems & Procedures	3
OPT	1113	Coordinate Measurement	3
OPT	1126	Supervision, Team Leadership & Project Management	3
OPT	1130	Lean Operations & Continuous Improvement	3
OPT	2201	Statistical Process Control	3
OPT	2208	Engineering Technology Economics & Cost Analysis	3
OPT	2216	Work Flow Layout & Efficiency	3
OPT	2240	Six Sigma: Green Belt	3
OPT	2270	Operations Technology Internship OR	
OPT	2780	Operations Technology Capstone	3
OT36		Arts & Humanities Elective	3
PHY	1141	College Physics I	4

Industrial Engineering Technology Electives

OPT	1125	World Class Operations
OPT	2200	Introduction to Statistical Process Control
OPT	2205	Manufacturing Processes
OPT	2211	Industrial Risk Management
OPT	2267	Quality Certification Review

Interior Design
Program Code: IND.S.AAS Credit Hours: 64

Description

The program prepares students for careers in the creative, detail-oriented field of interior design. Students will develop the knowledge and technical skills necessary to design an interior. Developing floor plans and selecting and coordinating colors, floor and wall coverings are common tasks performed by interior designers. They also place furniture, fixture and cabinetry, and prepare drawings, cost estimates and contracts. Sustainability, building codes, the ADA and basic business practices are included, as well as the development of individual design portfolios.

Accreditation

Sinclair Community College has been accredited by the National Association of Schools of Art and Design (NASAD) since 2002.

Career Opportunities

Interior design graduates typically pursue careers as designers or consultants in design studios, architecture firms or commercial retailers. Some graduates choose to continue their education in design or a related field at a four-year institution.

CAT	1101	Architectural Graphics I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
IND	1180	History of Interior Design	3
IND	1234	Materials & Textiles	3
IND	1230	Residential Design	4
IND	1240	Color Theory	3
IND	2130	Non-Residential Design	4
IND	2135	Rendering	3
IND	2140	Sustainable Design	4
IND	2260	Interior Design Portfolio	4
PSY	1100	General Psychology	3
VIS	1100	Design Foundations	4
VIS	1110	Design Drawing	4
VIS	1140	Design Processes	4
ART	2230	Art History: Ancient through Medieval Periods OR	
ART	2231	Art History: Renaissance through Contemporary Periods	3
MAT	1120	Business Mathematics OR	
MAT	1110	Math for Technologists OR	
OT36		Mathematics Elective	3
MRK	2225	Sales Fundamentals OR	
MRK	2145	Principles of Retailing	3
XXX		Interior Design Elective	3

*****Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.**
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Interior Design Electives

ART	1101	2-D Foundations
ART	1102	3-D Foundations
ART	1111	Drawing I
ART	1141	Introduction to Ceramics
ART	1161	Black & White Darkroom Photography I
ART	2230	Art History: Ancient through Medieval Periods
ART	2231	Art History: Renaissance through Contemporary Periods
ART	2235	History of Photography
ART	2236	History of Women Artists
ART	2237	History of American Art
ART	2238	History of African Art
CAT	1121	Architectural Drafting II
CAT	1141	Architectural Blueprint Reading
CAT	1201	Construction Methods & Materials
CAT	2741	Current Topics in Architecture
IND	2280	Kitchen & Bath Design
IND	2290	Interior Construction Systems
IND	2297	Special Topics
VIS	1180	History of Design
VIS	1208	Typography
VIS	1250	Print Production
VIS	2270	Design Internship

Internet of Things (IoT) Cyber Technician
Program Code: CETT.S.AAS • Credit Hours: 63-64

Description

The Internet of Things Cyber Technician (IOTCT) program provides students with the skills and education to apply the Internet-of-Things (IOT) and programming concepts in the exciting fields of automation, robotics and cyber/network security. The curriculum balances theory and laboratory applications and provides students with a strong background in electronics, programmable logic controllers, robots, robotic programming, networking, and cybersecurity. These in-demand skills prepare graduates for careers in logistics, supply chain, automation, repair/support of existing computer systems, networks, and their associated software which utilize robots and/or automated systems. The IOTCT program provides students a quality education in state-of-the-art laboratories with courses taught by highly qualified faculty who possess industry experience. Those who wish to further their studies are well prepared to pursue a bachelor's degree in Computer Engineering or Electronics and Computer Engineering Technology programs.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Entry level Cyber technician specializing in the IoT consumer market provides students with in-demand skills in electronics, programmable logic controllers, robots, robotic programming, networking, troubleshooting, and cybersecurity. Graduates will be able to work in all areas having to do with the IoT (Internet-of-Things) from programming to engineering hardware installations, medical devices, robotics, supply chain/logistics, and networking/cybersecurity.

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals OR	
CIS	1411	Introduction to Networks	3
CIS	1140	Information Systems Analysis & Design	3
CIS	2165	Database Management	3
CIS	2265	Data Visualization with Tableau	3
CIS	2266	Python for Data Analytics	3
CIS	2640	Network Security	3
COM	2211	Effective Public Speaking	3
EET	1120	Introduction to DC & AC Circuits	2
EET	1198	Digital Technology	2
EET	2261	Microprocessors	4
EET	2281	Programmable Logic Controllers	3
EET	2282	Advanced Programmable Logic Controllers	3
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
EGR	2252	Teach Pendant Robot Programming	3
EGR	2261	Engineering Problem Solving using "C" & "C++"	4
ENG	1101	English Composition I	3
MAT	1580	Precalculus OR	
MAT	1470	College Algebra AND	
MAT	1570	Analytic Geometry & Trigonometry	5 - 6
OT36		Social & Behavioral Sciences Elective	3
PHY	1141	College Physics I	4

Interpreter Education
Program Code: ASL.S.AAS • Credit Hours: 65

Description

The Interpreter Education program provides the unique opportunity for students to develop a solid foundation in language, linguistics, culture and interpretation and to master the skills necessary to successfully function as an interpreter for deaf, hard of hearing, and DeafBlind individuals in a variety of educational and community settings. Students will gain rich insights into the American Deaf community, their beliefs, values, history, rights and cultural norms. A grade of "C" or better is required in all ASL courses.

Accreditation

This program holds accreditation by the Ohio Department of Education. Graduates are eligible to apply for the Interpreter for the Hearing Impaired Five-Year Associate Licensure.

Career Opportunities

Employment opportunities are available in areas such as educational, community interpreter referral agencies, business, medical, legal, theatrical, governmental and religious interpreting settings.

Program Prerequisite(s)

DEV 0035 Integrated Developmental Reading & Writing II

ASL	1101	Orientation to Deafness	3
ASL	1102	Interpreting Theory & Best Practices	3
ASL	1111	Beginning American Sign Language I	3
ASL	1112	Beginning American Sign Language II	3
ASL	1228	Intermediate American Sign Language I	3
ASL	1229	Intermediate American Sign Language II	3
ASL	2201	Interpreting I	3
ASL	2202	Interpreting II	3
ASL	2203	Interpreting III	3
ASL	2207	Role of the Interpreter	3
ASL	2212	Specialized Interpreting I	2
ASL	2213	Specialized Interpreting II	3
ASL	2231	Advanced American Sign Language I	3
ASL	2236	Transliterating & Signing Modalities	3
ASL	2261	Practicum I	3
ASL	2262	Practicum II	3
ASL	2300	Educational Interpreting	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
PSY	1100	General Psychology	3
OT36		Arts & Humanities Elective	3
MAT	1470	College Algebra OR	
MAT	1445	Quantitative Reasoning	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Legal Studies

Program Code: PAR.S.AAS • Credit Hours: 61

Description

The Legal Studies program educates students with practical assignments in a simulated law office environment. All student work models the professional, ethical and technology concepts they will use in the legal field. Student learning is supported by experienced paralegals who serve as team teachers. All legal studies students are required to complete an attorney-supervised internship for hands-on experience using their paralegal skills.

Classes are taught in a simulated law office environment that makes current practices and technology available to students. All full-time faculty in the Legal Studies program are licensed attorneys. Legal research is conducted by students both online and in professional law libraries. All students produce a personal portfolio of their legal work and benefit from an internship experience under the supervision of a licensed attorney.

A grade point average of 2.0 is required to enter the Paralegal program. A grade of "C" is required in all PAR courses. An overall grade point average of at least 2.0 is required to continue in the program, and is required for graduation. Students must take at least nine credits of the equivalent of legal specialty courses through synchronous instruction.

Accreditation

The Legal Studies Program is approved by the American Bar Association, and fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation. All full-time faculty in the Legal Studies Program are licensed attorneys. Sinclair is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools. Programs of study are approved by the Ohio Board of Regents. Completion of the Legal Studies Program does not authorize a graduate to practice law as an attorney, or to give legal advice.

Career Opportunities

Graduates may find work in large and small law firms, the business world, courts and government agencies. Under the supervision of a lawyer, a professional paralegal may perform such interesting duties as investigating cases, interviewing clients and witnesses, preparing legal documents and legal research. These responsibilities are carried out in a variety of legal fields, such as criminal law, probate, family law, litigation and real estate.

BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
ENG	1199	Textual Editing	3
ENG	1201	English Composition II	3
LAW	1101	Business Law	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
PAR		Legal Studies Elective	6
PAR	1101	Introduction to Legal Studies	3
PAR	1102	Legal Technology	1
PAR	1103	Litigation	3
PAR	1201	Legal Research & Writing	3
PAR	1202	Advanced Legal Technology	1
PAR	1203	Advanced Litigation	3
PAR	2301	Advanced Legal Research & Writing	3
PAR	2302	Family Law	3
PAR	2303	Probate Law	3
PAR	2401	Legal Studies Internship	2
PSY	1100	General Psychology OR	
SOC	1101	Introduction to Sociology	3
RES	1201	Real Estate Law	3

Legal Studies Electives

LAW	1102	Consumer Law
LAW	1103	Domestic Violence
LAW	1104	Employment Law
PAR	2510	Criminal Law
PAR	2511	Online Legal Research

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Mechanical Engineering Technology
Program Code: MEGT.S.AAS • Credit Hours: 60-61

Description
The Mechanical Engineering Technology program provides the courses needed to begin a career as a technician in the engineering field. As a mechanical graduate, career options are open in a diverse number of fields and companies. Using state-of-the-art laboratory equipment, students will complete relevant and practical coursework taught by knowledgeable faculty. The courses are non-calculus based, and electives can tailor the degree to an individual's needs.

Accreditation
Accredited by Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

Career Opportunities
Graduates enter industry in entry-level positions doing conceptual design, systems engineering, manufacturing, or product research and development. Graduates who complete an ABET-accredited baccalaureate program are eligible to pursue registration as a professional engineer in many states by a process of national examination and documentation of experience.

CAM	1109	Fundamentals of Tooling & Machining	3
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1470	College Algebra AND	
MAT	1570	Trigonometry OR	
MAT	1580	Precalculus	5-6
MET	1111	Preparatory Math for Engineering Technology	3
MET	1161	Software Tools for Engineering Technology	1
MET	1231	Introduction to Engineering Design Using 3D CAD OR	
MET	1301	SolidWorks Basics	4
MET	2101	Thermodynamics	3
MET	2151	Material Science	4
MET	2201	Statics	3
MET	2251	Strength of Materials	3
MET	2281	Engineering Technology Professional Practice	3
MET	2301	Fluid Mechanics	3
MET	2351	Dynamics	3
MET	2401	Machine Design	3
MET	2780	Mechanical Engineering Technology Capstone	3
OT36		Social & Behavioral Sciences Elective	3
PHY	1141	College Physics I	4
XXX		Mechanical Engineering Technology Elective	3

Mechanical Engineering Technology Electives

MET	1151	Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts
MET	1371	CAD Concepts using AutoCAD
MET	1401	Additive Design & Printing
MET	1431	Additive Manufacturing Post Process
MET	2700	Mechanical Engineering Technology Internship
PHY	1142	College Physics II

Medical Assistant Technology
Program Code: MAS.S.AAS • Credit Hours: 61

Description
Medical assistants are multi-skilled professionals who assist physicians with the administrative and clinical aspects of patient care. The Medical Assistant Technology degree is designed to be completed in four (4) semesters on a full-time basis. The degree consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. A cumulative GPA of 2.0 is required, as well as a grade of C or higher in all degree courses. The student will be required to complete 210 hours of unpaid supervised practicum during their third semester of the certificate. Note: A Healthcare Professional CPR, Health Certificate, Immunizations, Student Health Insurance, and background check must be completed prior to enrolling in the practicum component of the curriculum. The graduate is eligible to sit for a national exam to become a credentialed medical assistant.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation
Sinclair Community College's Medical Assistant certificate program is accredited the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 9355 113th Street N., #7709, Seminole, FL 33775

Career Opportunities
Currently Medical Assistant Technology is one of the fastest growing occupations in the United States. Options for individuals seeking medical services and treatment: urgent care, surgicare and ambulatory care centers, as well as health maintenance organizations (HMOs), multi-physician group practices and medical specialty clinics have opened new career opportunities.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.
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ALH	1101	Introduction to Healthcare Delivery	2
ALH	1105	Overview of Holistic Health	2
ALH	1140	Fundamentals of Disease Processes	3
ALH	1252	Medical Scribe Practice	2
ALH	2201	Survey of Drug Therapy	2
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
DIT	1111	Nutrition for Health & Fitness	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
HIM	1160	Medical Office Coding Concepts	1
MAS		Medical Assistant Technology Elective	3
MAS	1102	Clinical Medical Assisting I	3
MAS	1103	Clinical Medical Assisting II	4
MAS	1110	Administrative Medical Assisting	4
MAS	1130	Reimbursement Specialist Practicum	2
MAS	1192	Lab for MAS 1102	0
MAS	1193	Lab for MAS 1103	0
MAS	2201	Clinical Medical Assisting III	4
MAS	2210	Medical Billing Specialist	3
MAS	2220	MAS Practicum	3
MAS	2291	Lab for MAS 2201	0
MAT	1130	Mathematics in Health Sciences	3
PSY	1100	General Psychology	3
SOC	1101	Introduction to Sociology	3

Medical Assistant Technology Electives

ACC	1210	Introduction to Financial Accounting
BIO	2205	Microbiology
BIS	1120	Computer Concepts & Applications
BIS	1221	Specialized Computer Applications for Health Information Management
CIS	1107	Introduction to Operating Systems
CIS	1160	Introduction to Data Literacy
COM	2235	Principles of Interviewing
COM	2285	Organizational Communication
DIT	1108	Nutrition for the Culinary Professional
DIT	1525	Human Nutrition
ECO	1100	Introduction to Economics
EMS	1100	Emergency Medical Responder Lecture & Laboratory
HIM	2262	Advanced Medical Office Coding
LAW	1101	Business Law
MAN	2110	Introduction to Project Management
MHT	1101	Introduction to Mental Health Services
PSY	2126	Stress Management
PSY	2180	Psychology of Gender
PSY	2200	Lifespan Human Development
PSY	2205	Child Development
PSY	2206	Adolescent & Adult Development
PSY	2228	Industrial Organizational Psychology
SOC	1108	Appalachian Families
SOC	1160	Sociology of Aging
SOC	1216	Sociology of Human Sexuality
SOC	2215	Race & Ethnicity
SWK	1206	Introduction to Social Work

Mental Health Services
Program Code: MHT.S.AAS • Credit Hours: 63

Description

The Mental Health Services degree prepares entry-level mental health professionals as members of an inter-disciplinary team under clinical supervision. Duties may include client interviewing, crisis intervention, advocacy, group facilitation and case management. The Mental Health Services degree can be completed on a full-time or part-time basis. If enrolled full-time, it is designed to be completed in five (5) semesters. This degree consists of open enrollment courses (general education and division specific) and program specific courses restricted to majors. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry in to limited enrollment MHT courses, students must have a 2.0 cumulative GPA, a grade of C or higher in all program courses and complete MHAS Online Orientation and an initial faculty advising appointment while enrolled in MHT 1101 Introduction to Mental Health Services. The practicum portion of the curriculum provides 420 hours of supervised clinical experience. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Graduates may be eligible for registration by the Ohio Counselor, Social Worker, and Marriage and Family Therapist Board as a Social Work Assistant (SWA). MHT 1130 provides the educational hours required by the Ohio Chemical Dependency Professionals Board for the CDCA Preliminary credential.

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1111	General Biology I	4
ENG	1101	English Composition I	3
MHT	1101	Introduction to Mental Health Services	3
MHT	1130	Fundamentals of Addiction Counseling CDCA Preliminary	3
MHT	1201	Interviewing Skills	3
MHT	1202	Motivational Interviewing	3
MHT	1203	Professional Documentation	3
MHT	2105	Psychosocial Methods	3
MHT	2138	Ethical Issues in the Helping Professions	2
MHT	2245	Mental Health & the Family	3
MHT	2250	Child & Adolescent Mental Health	3
PSY	1100	General Psychology	3
PSY	1160	Black Psychology	3
PSY	2217	Abnormal Psychology	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
MHT	2111	Group Dynamics I	3
MHT	2112	Lab for Group Dynamics I	0
MHT	2121	Practicum I	5
MHT	2211	Group Dynamics II	3
MHT	2212	Lab for Group Dynamics II	0
MHT	2222	Practicum II	5

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Nursing

Program Code: NUR.S.AAS • Credit Hours: 65

Description

The Nursing program prepares students to meet the health needs of a diverse population in a variety of dynamic community environments. The curriculum is divided among nursing theory, nursing clinical practice, general education and the sciences, where students participate in classroom, laboratory, and clinical experiences. Graduates of the program are eligible to take the NCLEX-RN for licensure.

The Nursing program is designed to be completed in five (5) semesters on a full-time basis. The curriculum may be taken on a part time basis, but the nursing courses must be taken in sequence. This degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. Details on eligibility for the limited enrollment courses can be found online in the Nursing Student Handbook.

Advanced Placement (LPNs, Military, and Nursing Transfer Students): Sinclair offers an advance placement into the nursing program for qualified Licensed Practical Nurses (LPNs) or equivalent military experience. After successful completion of the transition course (NSG 1500), students will receive articulated credit for ALH 1101, NSG 1400 and NSG 1450. Additionally, NSG 1200 and the science elective will be waived. Those students will continue to NSG 1600/1650. Students transferring from other nursing programs must meet criteria outlined in the online Nursing Student Handbook.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The Associate Degree Nursing (ADN) program is accredited by the Accreditation Commission for Education in Nursing, Inc. (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, (404) 975-5000, and approved by the State of Ohio Board of Nursing.

Career Opportunities

Registered nurses have a variety of employment opportunities. Workplace settings may include hospitals, extended care and long-term care facilities, rehabilitation programs, physicians' offices, home health agencies and various types of clinics and outpatient services.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1141 Principles of Anatomy & Physiology I AND

ENG 1101 English Composition I AND

MAT 1130 Mathematics in Health Sciences OR

OT36 Mathematics Elective AND

NSG 1200 Introduction to Nursing AND

High School Diploma or equivalency AND

GPA 2.5 or greater AND

Proficiency on all four areas of the Test of Essential Academic Skills (TEAS) exam AND

Nurse Aide training course or equivalent work experience AND

Restricted to Majors

ALH	1101	Introduction to Healthcare Delivery	2
ALH	2202	General Pharmacology	3
BIO	1141	Principles of Anatomy & Physiology I	4
BIO	1242	Principles of Anatomy & Physiology II	4
BIO	2205	Microbiology OR	
CHE	1111	Introduction to Chemistry I	4
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
NSG	1200	Introduction to Nursing	1
NSG	1400	Health & Illness I: Foundational Concepts in Nursing	7
NSG	1450	Professional Nursing I: Introduction to the Role of the Professional Nurse	2
NSG	1600	Health & Illness II: Health & Wellness Concepts	7
NSG	1650	Professional Nursing II: Healthcare System Concepts	2
NSG	2400	Health & Illness III: Health & Wellness Concepts	7
NSG	2450	Professional Nursing III: Leadership & Management of Care	2
NSG	2600	Concept Synthesis	8
PSY	1100	General Psychology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
120   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Nutrition and Dietetics Technician
Program Code: DIT.S.AAS • Credit Hours: 65-67

Description

Graduates of the Nutrition and Dietetics Technician (DIT) program are trained food and nutrition practitioners that work under the supervision of a registered dietitian nutritionist. As an integral member of the health care and food service management teams, they influence food choices and lifestyles to promote optimal health. The program consists of five major domains that include clinical, community, education, management and foodservice systems. It is designed to be completed in five (5) consecutive semesters on a full-time basis. Some students elect to attend on a part-time basis, extending the length of study to three academic years. The curriculum consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The limited enrollment coursework includes 465 hours of unpaid directed practice experiences at area community, food service and health care facilities. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the program webpage. A cumulative GPA of 2.0 is required, as well as a grade of C or higher in all program courses. Students of Sinclair's Nutrition and Dietetics Program are eligible to become members of the Academy of Nutrition and Dietetics (AND), a nationally recognized organization located at 120 South Riverside Plaza, Suite 2190, Chicago Illinois 60606, 1-800-877-1600, www.eatright.org. This specially designed program enables students to enjoy benefits of student AND membership while attending school. Graduates are eligible for active AND membership. Benefits include networking, professional growth, educational enrichment, and developing leadership skills. The graduate is eligible to take the National Credentialing Exam to become a Nutrition and Dietetics Technician, Registered (NDTR).

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The Dietetic Technician program is fully accredited by the Accreditation Council on Education for Nutrition and Dietetics (ACEND) of the Academy on Nutrition and Dietetics (AND). It is also approved by the Association of Nutrition and Food Professionals (ANFP).

Career Opportunities

Dietetic technicians, registered work independently or in teams with registered dietitians in a variety of employment settings, including health care (hospitals, nursing homes, retirement centers, home health care programs), foodservice (schools, day-care centers, correctional facilities, restaurants, health care facilities, corporations and hospitals), community/public health (public health agencies, health clubs, weight management clinics and community wellness centers) and business and industry (food companies, food vending and distributing operations).

Program Prerequisite(s)

MAT 0100 Algebra I AND

DEV 0035 Integrated Developmental Reading & Writing II AND

DIT 1105 Introduction to Dietetics AND

DIT 1525 Human Nutrition

ALH	1101	Introduction to Healthcare Delivery	2
CHE	1111	Introduction to Chemistry I OR	
CHE	1211	General Chemistry I	4-5
CHE	1121	Introduction to Chemistry II OR	
CHE	1221	General Chemistry II	4-5
DIT	1105	Introduction to Dietetics	1
DIT	1210	Medical Terminology for Dietetics	1
DIT	1525	Human Nutrition	3
DIT	1630	Nutrition in the Lifecycle	3
DIT	1635	Community Nutrition	3
DIT	2101	Eating Matters for Dining Assistants	1
DIT	2240	Nutritional Counseling & Motivation	3
DIT	2305	Food, Culture & Cuisine	2
DIT	2310	Lab for Food, Culture & Cuisine	1
DIT	2505	Food Science with Lab	3
DIT	2510	Institutional Foodservice Systems	1
DIT	2515	Foodservice Practicum I	1
DIT	2520	Food Science with Lab II	1
DIT	2625	Medical Nutrition Therapy I	3
DIT	2630	Medical Nutrition Therapy Clinical I	3
DIT	2735	Foodservice Organization & Management	3
DIT	2740	Foodservice Practicum II	1
DIT	2845	Medical Nutrition Therapy II	3
DIT	2850	Medical Nutrition Therapy Clinical II	2
DIT	2855	Dietetics Seminar	1
ENG	1101	English Composition I	3
HMT	1101	Basic Culinary Skills	2
HMT	1107	Sanitation & Safety	2
PSY	1100	General Psychology	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Occupational Therapy Assistant
Program Code: OTA.S.AAS • Credit Hours: 65

Description

Occupational therapy assistants, under the supervision of occupational therapists, provide services to individuals whose abilities to cope with daily tasks are threatened or impaired by developmental deficits, aging, injury or illness. They help people prevent, lessen, or overcome physical, cognitive and/or psychosocial dysfunction so that they are able to function with maximum independence. The program includes extensive clinical training that must be finished within 12 months of completion of the academic course work. A grade of "C" or higher (77%) is required in all program courses to remain in the program.

The Occupational Therapy Assistant program is designed to be completed in five (5) semesters on a full-time basis, when the student begins the technical portion of the program. This degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses (OTA specific courses). To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage (http://www.sinclair.edu/program/params/programCode/OTA-S-AAS/).

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The Occupational Therapy Assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at ACOTE c/o AOTA, 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. AOTA's telephone number is (301) 652-2682. www.acoteonline.org/ The program received a 7-year reaccreditation in 2013. It is scheduled to be reaccredited in 2021/2022. (The 2020/2021 site visit was delayed due to COVID-19).

Career Opportunities

Occupational therapy is a health care field in which the demand for personnel continues to increase. There are not enough qualified personnel to fill the demand. According to the Bureau of Labor Statistics (bls.gov) the Job Outlook is 40% (much faster than average job growth 2014-2024). Occupational therapy assistants work in hospitals, clinics, schools, nursing facilities, group homes, home health agencies and rehabilitation centers.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1141 Principles of Anatomy & Physiology I AND

BIO 1147 Lab for Principles of Anatomy & Physiology I AND

ENG 1101 English Composition I AND

OTA 1111 Introduction to Occupational Therapy Assistant AND

Completion of Test of Essential Academic Skills (TEAS) Exam AND

Minimum cumulative GPA of 2.5

ALH	1101	Introduction to Healthcare Delivery	2
ALH	2220	Pathophysiology	3
BIO	1141	Principles of Anatomy & Physiology I	4
BIO	1147	Lab for Principles of Anatomy & Physiology I	0
BIO	1242	Principles of Anatomy & Physiology II	4
BIO	1248	Lab for Principles of Anatomy & Physiology II	0
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
OTA	1111	Introduction to Occupational Therapy Assistant	2
OTA	1211	Occupational Therapy Assistant Foundations I	3
OTA	1212	Functional Anatomy	2
OTA	1213	Occupational Therapy & Adults with Physical Dysfunction	2
OTA	1214	Occupational Therapy & Adults with Physical Dysfunction Lab	2
OTA	1311	Occupational Therapy Assistant Foundations II	3
OTA	1312	Occupational Therapy & Human Development	2
OTA	1313	Occupational Therapy & Adults with Neurological Dysfunction	2
OTA	1314	Occupational Therapy & Neurological Dysfunction Lab	2
OTA	1315	Therapeutic Use of Self	2
OTA	2412	Occupational Therapy Assistant & Pediatrics	1
OTA	2413	Occupational Therapy Assistant & Pediatrics Lab	2
OTA	2414	Occupational Therapy Assistant & Psychosocial Dysfunction	1
OTA	2415	Occupational Therapy Assistant & Psychosocial Dysfunction Lab	2
OTA	2416	Occupational Therapy Assistant Level 1 Fieldwork	3
OTA	2511	Occupational Therapy Assistant Level 2 Fieldwork A	2
OTA	2512	Occupational Therapy Assistant Level 2 Fieldwork B	2
OTA	2523	Occupational Therapy Assistant Clinical Issues A	1
OTA	2524	Occupational Therapy Assistant Clinical Issues B	1
PSY	1100	General Psychology	3
SOC	2215	Race & Ethnicity	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Physical Therapist Assistant
Program Code: PTA.S.AAS • Credit Hours: 65

Description

The Physical Therapist Assistant (PTA) program prepares students to provide physical therapy services under the direction and supervision of a physical therapist. The curriculum is divided among general education and technical courses, and includes classroom, laboratory, and clinical education experiences. Upon completion of the PTA program curriculum, the student is awarded the Associate of Applied Science (AAS) degree. Graduates of the program are eligible to take the National Physical Therapy Examination for Physical Therapist Assistants (NPTE-PTA) for licensure.

The PTA program is designed to be completed in five (5) semesters on a full-time basis. The degree program consists of open enrollment courses (prerequisites and general education) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. The PTA program enrolls students through two different pathways, a general admissions pathway and an Accelerated Admission for Academic Achievement (AAAA) pathway. Approximately 50% of the cohort is enrolled through the general admissions and approximately 50% is enrolled through Accelerated Admission for Academic Achievement. Details on eligibility and limited enrollment courses can be found online in the PTA Program Information Packet.

The mission of the PTA program is to provide high quality education to students seeking the opportunity to practice as a physical therapist assistant under the direction and supervision of a physical therapist.

Accreditation

The Physical Therapist Assistant Program at Sinclair Community College's Dayton Campus in Dayton, Ohio is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: accreditation@apta.org; website: http://www.capteonline.org.

Career Opportunities

Graduates, once licensed by the State of Ohio, work either full- or part-time under the supervision of a Physical Therapist in a variety of practice environments, such as out-patient clinics, rehabilitation units in hospitals or nursing homes, assisted living, home health or school-based programs.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1141 Principles of Anatomy & Physiology I AND

BIO 1147 Lab for Principles of Anatomy & Physiology I AND

ENG 1101 English Composition I AND

PHY 1106 Physics for Technology AND

PHY 1107 Lab for Physiccs for Technology AND

PTA 1000 Introduction to Physical Therapy AND

The student must be at least 18 years of age by initiation of PTA limited enrollment/restricted courses AND

The student must have PTA listed as their designated major or linked major in Sinclair's system. If the student is not already attending Sinclair, an application to the college should be completed and the PTA program should be selected as the program of study. If the student is already attending Sinclair, the student should meet with an Academic Advisor to indicate PTA as the program of study AND

Minimum cumulative GPA of 2.5 AND

Minimum overall achievement score of 50 on the Test of Essential Academic Skills (TEAS)

ALH	1101	Introduction to Healthcare Delivery	2
ALH	2220	Pathophysiology	3
BIO	1141	Principles of Anatomy & Physiology I	4
BIO	1147	Lab for Principles of Anatomy & Physiology I	0
BIO	1242	Principles of Anatomy & Physiology II	4
BIO	1248	Lab for Principles of Anatomy & Physiology II	0
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PHY	1106	Physics for Technology	3
PHY	1107	Lab for Physics for Technology	0
PSY	1100	General Psychology OR	
SOC	1101	Introduction to Sociology OR	
SOC	1145	Introduction to Cultural Anthropology	3
PTA	1000	Introduction to Physical Therapy	2
PTA	1100	Professional Issues	1
PTA	1155	Functional Anatomy	4
PTA	1165	Manual Therapy	2
PTA	1215	Functional Mobility	3
PTA	1300	Pathophysiology for PTA	2
PTA	1325	Neuropathophysiology	2
PTA	1350	Therapeutic Exercise	4
PTA	1375	Professional Issues II	1
PTA	2305	Neuromuscular Rehabilitation	3
PTA	2315	Medially Complex Patient	1
PTA	2330	Seminar for Clinical Practicum I	1
PTA	2335	Clinical Practicum I	2
PTA	2355	Physical Agents	2
PTA	2365	Orthopedics	4
PTA	2430	Seminar for Clinical Practicum II	1
PTA	2435	Clinical Practicum II	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Public Health
Program Code: PH.S.AAS • Credit Hours: 62-63

Description
The associate of applied science degree in Public Health provides students with the introductory foundations for a future career in public health. Graduates of the program will be equipped with the population health skills to address the world's most pressing health issues. The program is also designed to promote transferability to the bachelor's degree completion programs in the health field.

Career Opportunities
Career opportunities include: Health Educator; Health Promotion Program Coordinator; Public Health Study Coordinator; Injury Prevention Specialist; Healthcare Navigator; Community Health Worker; Community Activist; Disease Prevention Activist; Homeless Services Educator; Consumer Advocate.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1105	Overview of Holistic Health	2
ALH	1107	Core Concepts of Public Health	3
ALH	1140	Fundamentals of Disease Processes	3
ALH	1250	Health Science Practicum	3
ALH	1102	Basic Healthcare Practices & Medical Scribe OR	
ALH	1120	Nurse Aide Training	3-4
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
DIT	1111	Nutrition for Health & Fitness	3
ENG	1101	English Composition I	3
ENS	1118	Lifetime Physical Fitness & Wellness	3
ENS	1214	Personal & Community Health Behavior	3
ENS	2420	Concepts of Lifestyle Coaching	3
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
MHT	1101	Introduction to Mental Health Services	3
MHT	1202	Motivational Interviewing	3
MHT	2138	Ethical Issues in Behavioral Healthcare	2
PSY	1100	General Psychology	3
PSY	2126	Stress Management	3
PSY	2200	Lifespan Human Development	3
SOC	1101	Introduction to Sociology	3

Radiologic Technology
Program Code: RAT.S.AAS • Credit Hours: 62

Description
As a specialized discipline within the radiologic science profession, radiographers perform medical imaging procedures to aid the physician in the diagnosis and treatment of injury and disease. Graduates will be eligible to apply for the national credentialing examination offered by the American Registry of Radiologic Technologists (ARRT). Successful completion of the ARRT credentialing examination simultaneously satisfies the Ohio Department of Health (ODH) Radiologic Licensure Program requirements.

The Radiologic Technology program is designed to be completed in five (5) semesters on a full-time basis when the student begins the technical portion of the program. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. Completion of prerequisites and a cumulative GPA of 2.8 is required, as well as a grade of "C" or higher is required in all program courses.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation
The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), located at 20 N. Wacker Drive, Suite 2850, Chicago, IL. 60606-3182. 312-704-5300 mail@jrcert.org or www.jrcert.org

Career Opportunities
A career in Radiologic Technology can lead in many directions. Graduates may find employment in comprehensive hospitals, suburban or rural outpatient centers or physician offices. Completion of this associate degree program can also lead to additional educational opportunities such as higher degree programs in management, education, etc. and advanced imaging programs designed to prepare radiographers for specialization in imaging modalities such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI), etc.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1107 Human Biology AND

ENG 1101 English Composition I

HIM 1101 Medical Terminology AND

MAT 1470 College Algebra AND

RAT 1101 Introduction to Radiologic Technology

AND Approval of Department

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1107	Human Biology	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAT	1470	College Algebra	3
PSY	1100	General Psychology OR	
SOC	1101	Introduction to Sociology	3
RAT	1101	Introduction to Radiologic Technology	2
RAT	1111	Clinical Practicum I	1
RAT	1121	Radiographic Procedures I	5
RAT	1131	Patient Care in Radiologic Technology	3
RAT	1212	Clinical Practicum II	2
RAT	1222	Radiographic Procedures II	5
RAT	1241	Radiologic Sciences I	3
RAT	2413	Clinical Practicum III	3
RAT	2415	Radiographic Pathology	3
RAT	2423	Radiographic Procedures III	3
RAT	2442	Radiologic Sciences II	4
RAT	2429	Lab for Radiographic Procedures III	0
RAT	2514	Clinical Practicum IV	3
RAT	2526	Capstone in Radiologic Technology	4
RAT	2543	Radiologic Sciences III	2

Real Estate
Program Code: RES.S.AAS • Credit Hours: 61-62

Description

In the Real Estate degree program, students acquire a variety of skills in selling, marketing, leasing, buying, appraising, investing in and managing real property. Courses are offered which are required by the Ohio Division of Real Estate for persons taking the real estate sales examination.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Employment opportunities include but are not limited to careers in property management, investing, appraising, abstracting, and real estate sales.

ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication	3
ECO	2180	Principles of Microeconomics	3
ENG	1101	English Composition I	3
FIN	2450	Personal Finance	3
LAW	1101	Business Law	3
MAN	2150	Management & Organizational Behavior	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OT36		Arts & Humanities Elective	3
PLS	1232	State & Local Government	3
RES		Real Estate Elective	5-6
RES	1101	Real Estate Principles	3
RES	1102	Real Estate Abstracting	3
RES	1201	Real Estate Law	3
RES	1301	Real Estate Finance	1.5
RES	1401	Real Estate Appraisal	1.5
RES	1302	Real Estate Investing	3
RES	1402	Property Management	3
RES	2170	Real Estate Internship	3
SOC	1101	Introduction to Sociology	3

Real Estate Electives

ACC	1220	Introduction to Managerial Accounting
CAT	1161	Introduction to Civil & Architectural Technology
ENT	2140	Small Business Finance
MAN	2140	Human Resource Management
MRK	2135	Digital Marketing
MRK	2225	Sales Fundamentals

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Respiratory Care

Program Code: RET.S.AAS • Credit Hours: 65

Description

Respiratory care practitioners are responsible for the prevention, treatment, management and rehabilitation of patients of all ages with deficiencies or abnormalities associated with the cardiopulmonary system. The Respiratory Care program is designed to be completed in six (6) semesters on a full-time basis. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. A cumulative GPA of 2.5 is required and an overall grade point average of at least 2.0 is necessary for continuance in the program and graduation.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The program is fully accredited by the Commission on Accreditation for Respiratory Care (CoARC), www.coarc.com. For further information regarding the Sinclair College respiratory care program outcomes data, please visit the CoARC website. Upon completion of the program the graduate is eligible for the national credentialing examinations provided by the National Board for Respiratory Care (NBRC). Graduates will also be eligible for a license to practice in the State of Ohio via the State Medical Board of Ohio. In addition, graduates meet the requirements for licensure in other states.

Career Opportunities

Respiratory Care is a growing profession with opportunities for graduates to work with newborn, children, adult and geriatric patients in hospitals/acute care setting, long-term facilities, home care/durable medical equipment companies and physician offices.

Program Prerequisite(s)

BIO 1107 Human Biology AND

CHE 1111 Introduction to Chemistry I AND

HIM 1101 Medical Terminology AND

RET 1100 Introduction to Respiratory Care AND

MAT 1130 Mathematics in Health Sciences OR

OT36 Mathematics Elective

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1107	Human Biology	3
CHE	1111	Introduction to Chemistry I	4
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3
RET	1100	Introduction to Respiratory Care	1
RET	1101	Respiratory Care Fundamentals I	5
RET	1102	Lab for Respiratory Care Fundamentals I	0
RET	1124	Cardiopulmonary Pharmacology	1
RET	1125	Respiratory Care Sciences	4
RET	1201	Respiratory Care Fundamentals II	5
RET	1202	Lab for Respiratory Care Fundamentals II	0
RET	1203	Respiratory Care Clinic I	3
RET	1205	Cardiopulmonary Disease Processes	3
RET	1301	Respiratory Care Fundamentals III	2
RET	1303	Respiratory Care Clinic II	1
RET	2101	Critical Care I	5
RET	2102	Lab for Critical Care I	0
RET	2103	Respiratory Care Clinic III	3
RET	2124	Cardiopulmonary Pharmacology II	1
RET	2201	Critical Care II	4
RET	2202	Lab for Critical Care II	0
RET	2203	Respiratory Care Clinic IV	2
RET	2204	Respiratory Care Clinic V	1
RET	2220	Respiratory Care Emergency Preparedness	2
RET	2222	Lab for Respiratory Care Emergency Preparedness	0
RET	2250	Pediatrics & Neonatology	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
126   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Surgical Technology
Program Code: SUT.S.AAS • Credit Hours: 60

Description

The Surgical Technology program at Sinclair Community College has been CAAHEP approved since 1998 and offers the opportunity to prepare for a career as a member of a surgical team.

A surgical technologist works together with the surgeon, registered nurse, and anesthesiologist as a member of the surgical team. To ensure proper surgical case management, the surgical technologist prepares and passes all sterile instruments during the surgical procedure while maintaining the sterile field and anticipating the needs of the surgeon.

The surgical technologist helps to meet the needs of patients in the operating rooms of hospitals, ambulatory surgery centers, physician offices, diagnostic facilities and other agencies where surgery is performed.

The Surgical Technology program is designed to be completed in five (5) semesters on a full-time basis. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. A cumulative GPA of 2.5 is required, as well as a grade of "C" or higher in all program courses.

The program includes both didactic instruction and supervised clinical practice in all areas required by the ARC/STSA (in collaboration with CAAHEP). Supervised clinical practice in area operating rooms include participating in procedures in general surgery, obstetrics and gynecology, ophthalmology, otorhinolaryngology, plastic surgery, urology, orthopedics, neurosurgery, thoracic surgery, cardiovascular, and peripheral vascular surgery.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

Accredited by CAAHEP (Commission on Accreditation of Allied Health Education Programs), Sinclair's Surgical Technology program provides students with the opportunity to work as a Certified Surgical Technologists. In this program, students will be required to complete the academic classroom requirements, but will also have the opportunity to gain valuable supervised clinical practice. As part of the curriculum, the students will rotate through the clinical affiliates as scheduled in the course sequence. The standard surgical rotation case requirements that students must achieve is 120 cases, following the Core Curriculum for Surgical Technology, 6e (CCST6e). Students are required to complete a minimum of thirty (30) cases in General Surgery, twenty (20) of which should be in the First Scrub Role. In addition, students are required to complete a minimum of ninety (90) cases in various surgical specialties. Sixty (60) of those cases should be in the first scrub role and evenly, but not necessarily equally distributed between a minimum of four (4) surgical specialties.

Career Opportunities

A Surgical Technologist helps to meet the surgical needs of patients in the operating rooms in a variety of different environments. Employment may be found in hospital operating rooms, same day surgery centers, labor and delivery units, endoscopy units, and many other settings where invasive therapeutic or diagnostic surgical procedures are performed. Surgical Technologists may also be employed privately by a surgeon or by surgeon group practices that have specialized teams.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1121 Human Anatomy & Physiology I AND

ENG 1101 English Composition I AND

HIM 1101 Medical Terminology AND

MAT 1130 Mathematics in Health Sciences AND

Restricted to Majors

ALH	1101	Introduction to Healthcare Delivery	2
ALH	2201	Survey of Drug Therapy	2
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
BIO	2205	Microbiology	4
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences	3
PSY	1100	General Psychology	3
SUT	1110	Theory & Fundamentals	5
SUT	1117	Laboratory for Theory & Fundamentals	1
SUT	1120	The Surgical Process	2
SUT	1127	Lab for the Surgical Process	2
SUT	2110	Surgical Procedures I	2
SUT	2117	Directed Practice for Surgical Procedures I	1
SUT	2120	Surgical Procedures II	5
SUT	2127	Directed Practice Surgical Procedures II	4
SUT	2200	Surgical Procedures III	5
SUT	2207	Directed Practice for Surgical Procedures III	4
SUT	2300	Surgical Technology Review	1

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Unmanned Aerial Systems

Program Code: UAS.S.AAS • Credit Hours: 61-64

Description

The Unmanned Aerial Systems (UAS) degree program prepares students for entry level positions in the UAS industry by providing foundational knowledge and skills in UAS mission planning, applications, maintenance, laws and regulations, and data analytics, and project management using UAS platforms. Program content includes an introduction to UAS flight, history, avionics, sensors, communications systems and selectable paths including Data Analysis and applications such as First Responders, Geographic Information Systems, Precision Agriculture, and Entrepreneurship. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry observing Federal Aviation Administrations (FAA) regulations that govern UAS operations.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

The Sinclair Unmanned Aerial Systems Associate of Applied Science degree will produce graduates who will serve the immediate Dayton area, broader region, and nationally. Graduates of the associate degree program from Sinclair Community College will contribute to filling the current and growing need within the state of Ohio and nation for unmanned aerial systems related applications such as Geographic Information, Data Analytics, First Responders and Precision Agriculture.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1103	Remote Pilot Ground School	1
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1110	Private Pilot Ground School	3
AVT	1119	Aviation Meteorology	2
AVT	1246	Air Traffic Control Communications	1
AVT	2150	Crew Resource Management for UAS	1
AVT	2151	UAS Operations	3
AVT	2240	Human Factors in Aviation	3
AVT	2279	Unmanned Aerial Systems Project	3
AVT	2280	Introduction to UAS Maintenance	2
COM	2211	Effective Public Speaking	3
ECO	2160	Principles of Macroeconomics	3
EET	1120	Introduction to DC & AC Circuits	2
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2
EET	2221	UAS Sensors & Systems	4
ENG	1101	English Composition I	3
MAT	1470	College Algebra	3
MAT	1570	Trigonometry	3
MET	1131	Personal Computer Applications for Engineering Technology	1
PHY	1141	College Physics I	4
		Data Analytics Pathway OR	
		First Responders Pathway OR	
		Geographic Information Pathway OR	
		Precision Agriculture Pathway OR	
		Entrepreneurship Pathway	9-11
AVT	2700	Aviation Internship OR	
AVT		UAS Elective	1-2

Data Analytics Pathway

AVT	1120	Electro-Optical & Infrared Data Analysis
AVT	1121	Multispectral & Hyperspectral Data Analysis
AVT	1122	Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
AVT	1123	Acoustic & CBRNE Data Analysis
GEO	1107	Introduction to Geographic Information Systems (GIS)

Entrepreneurship Pathway

AVT	1115	Introduction to UAS Entrepreneurship
AVT	2115	UAS Entrepreneurship Capstone
LAW	1101	Business Law
MAN	1107	Foundations of Business

First Responders Pathway

AVT	1108	UAS First Responder Applications
CJS	1101	Introduction to Criminal Justice Science
CJS	1155	Homeland Security Issues & Administration
EMS	1100	Emergency Medical Responder Lecture & Laboratory

Geographic Information Pathway

AVT	1114	Geospatial Information for UAS
CAT	1501	Fundamentals of Surveying & Mapping
GEO	1107	Introduction to Geographic Information Systems (GIS)

Precision Agriculture Pathway

AVT	1112	UAS Precision Agriculture
AGR	1160	Introduction to Agriculture Science AND
AGR	1200	Agricultural Economics AND
AGR	1300	Agronomy

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SINCLAIR COLLEGE

Veterinary Technology
Program Code: VET.S.AAS • Credit Hours: 65

Description

The Veterinary Technology Program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. Most open enrollment courses must be taken prior to entry into the limited enrollment courses. To be considered for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. A graduate from this program will be eligible to sit for the Veterinary Technician National Exam (VTNE.) Those graduates who pass this exam with a score of 75% or better will be eligible to register with the Ohio Veterinary Medical Licensing Board in order to practice within the State of Ohio.

NOTE: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

The Sinclair College Veterinary Technology Program is fully accredited by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities (AVMA CVTEA), effective March 28, 2019.

Career Opportunities

The Associate of Applied Science degree in Veterinary Technology is designed to train Veterinary Technicians to assist Veterinarians in animal hospitals, laboratory research centers, referral centers, zoos, etc. A registered veterinary technician (RVT) is responsible for assisting the veterinarian in a general practice and performing essential animal care tasks. His or her job duties may include, but are not limited to: performing dental cleanings and radiologic procedures; surgical and anesthetic assistance; diagnostic laboratory techniques; IV catheter placement; patient monitoring; inventory control; and office staff management. In addition, this degree can be a stepping-stone to a 4-year degree at another institution, and eventually to Veterinary School (an additional 4-year program). This program provides training in animal husbandry and restraint, nursing, surgical preparation and techniques, drug administration, anesthesia, anatomy, laboratory techniques, and radiography. Preceptorships at various private practices and research institutions provide valuable on-the-job training. The veterinarians of the Miami Valley anticipate a need of nearly 60 registered veterinary technicians for hire annually for at least the next 5 years. This program is unique in that it places students within veterinary hospitals very early in the course of study, allowing students and hospitals alike to determine what the "best fit" will be for them within the hospital environment. Nearly all students are offered one or more jobs prior to the completion of the program.

Program Prerequisite(s)

ALH 1101 Introduction to Healthcare Delivery AND

BIO 1141 Principles of Anatomy & Physiology I AND

BIO 1147 Lab for Principles of Anatomy & Physiology I AND

BIO 1242 Principles of Anatomy & Physiology II AND

BIO 1248 Lab for Principles of Anatomy & Physiology II AND

CHE 1111 Introduction to Chemistry I AND

CHE 1151 Lab for Introduction to Chemistry I AND

COM 2206 Interpersonal Communication OR

COM 2211 Effective Public Speaking AND

ENG 1101 English Composition I AND

MAT 1130 Mathematics in Health Sciences AND

VET 1102 Introduction to Veterinary Technology I AND

VET 1202 Introduction to Veterinary Technology II AND

VET 1205 Clinical Practice I: Hospital Practices & Professionalism AND

Approval of Department

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1103	Test Taking Strategies	1
BIO	1141	Principles of Anatomy & Physiology I	4
BIO	1147	Lab for Principles of Anatomy & Physiology I	0
BIO	1242	Principles of Anatomy & Physiology II	4
BIO	1248	Lab for Principles of Anatomy & Physiology II	0
BIO	2205	Microbiology	4
BIO	2206	Lab for Microbiology	0
CHE	1111	Introduction to Chemistry I	4
CHE	1151	Lab for Introduction to Chemistry I	0
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3
VET	1102	Introduction to Veterinary Technology I	2
VET	1202	Introduction to Veterinary Technology II	2
VET	1205	Clinical Practice I: Hospital Practices & Professionalism	1
VET	2005	Clinical Practice II: Medical Terminology & Ethics	1
VET	2101	Comparative Anatomy & Physiology, Animal Husbandry and Disease	6
VET	2105	Veterinary Anesthesia, Surgery, Diagnostic Laboratory & Radiology	5
VET	2107	Technical Practicum I OR	
VET	2108	Veterinary Assistant Practicum	2
VET	2111	Large Animal Husbandry & Veterinary Techniques	2
VET	2205	Veterinary Dentistry, Advanced Radiology & Diagnostic Laboratory	4
VET	2207	Technical Practicum II	2
VET	2211	Veterinary Case Studies	1
VET	2250	Veterinary Pharmacology	4
VET	2300	Preceptorship	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Visual Communications

Program Code: VIS.S.AAS • Credit Hours: 64-65

Description

The program prepares students for careers in visual communication which is creative, fast paced and in demand by most businesses. Students will develop the knowledge and technical skills necessary to create both printed and digital design work. This includes the design of stationery, brochures, magazines, advertising, packaging, signage, web pages, interactive media and other pieces. Creativity, problem solving and the design process are stressed. Advanced computer skills, portfolio development and job-seeking strategies are also incorporated into the curriculum.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

Sinclair Community College has been accredited by the National Association of Schools of Art and Design (NASAD) since 2002.

Career Opportunities

Visual Communications graduates typically pursue careers as graphic designers (print) or digital designers (interactive/web) in design studios, advertising agencies, web firms, magazine and book publishing companies, printing companies or corporate design departments. Some graduates choose to continue their education in design or a related field at a four-year institution.

ART	2230	Art History: Ancient through Medieval Periods OR	
ART	2231	Art History: Renaissance through Contemporary Periods	3
ART	1161	Black & White Darkroom Photography I OR	
ART	2265	Digital Color Photography I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MAT	1110	Math for Technologists OR	
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3
VIS	1100	Design Foundations	4
VIS	1110	Design Drawing	4
VIS	1140	Design Processes	4
VIS	1180	History of Design	3
VIS	1208	Typography	4
VIS	1218	Web Design	4
VIS	1250	Print Production	4
VIS	2110	Design Principles	4
VIS	2120	Design Applications I	4
VIS	2160	Design Applications II	4
VIS	2260	Visual Communications Portfolio	4
XXX		Visual Communications Elective	3-4

Visual Communications Electives

ART	1101	2-D Foundations
ART	1102	3-D Foundations
ART	1111	Drawing I
ART	1141	Introduction to Ceramics
ART	2235	History of Photography
ART	2236	History of Women Artists
ART	2237	History of American Art
ART	2238	History of African Art
CIS	1350	Website Development with HTML & CSS
IND	1180	History of Interior Design
IND	1230	Residential Design
IND	1240	Color Theory
IND	2135	Rendering
MAN	1107	Foundations of Business
MRK	2100	Foundations of Marketing
MRK	2102	Principles of Advertising
MRK	2135	Digital Marketing (preferred)
MRK	2145	Principles of Retailing
MRK	2220	Small Business Marketing
MRK	2225	Sales Fundamentals
VIS	1320	User Experience/User Interface
VIS	1420	Video Production
VIS	2270	Design Internship
VIS	2297	Special Topics

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Certificate programs are academic programs of study designed to prepare students for a particular career area, but not at the level required for an associate degree. There are one year certificate programs and short term technical certificates. The technical certificates are much more industry-focused and designed for workforce preparation.

Published Program Length for Instructional Time

The chart below represents the normal time to complete based on the credit hours required for program completion. For example, a 24 credit hour short-term certificate will take a student going full-time, two semesters to complete. Following Sinclair's academic year, two semesters is equivalent to 1 academic year, 9 months or 32 weeks.

CREDIT HOURS IN PROGRAM	YEARS	MONTHS	WEEKS
12 or less	.5	5	16
13 to 24	1.0	9	32
25 to 36	1.5	14	48
37	2.0	18	64
60	2.5	23	80
61 to 73	3.0	27	96

Years were calculated based on (credit hours ÷ 12) ÷ 2 because there are 2 terms per year in the academic calendar.

Months were calculated based on years x 9 months because budgets for an academic year are based on 9 months.

Weeks were calculated based on the number of terms in a year x 16 weeks.

Advanced Precision Machining

Program Code: CAMAPM.S.CRT • Credit Hours: 30

Description

This program provides any student whether working full time, raising a family, or going to college, the ability to pursue the exciting and in-demand career of precision machining. Recent events have shown that these careers are essential in nature and can offer employment when others do not. Starting from basic machining through advanced machining, close tolerance grinding, introduction into the world of CNC and Conversational programming, the production of detail parts and then their fit and assembly into a working product. This program will ready the student for a wide variety of manufacturing careers through development of the skills and traits that manufacturers are looking for. This program can be started in any semester.

Career Opportunities

Careers are available for entry-level in a wide variety of manufacturing careers which include, but are not limited to, the precision machining and tool-and-die industries. The Work-Based Learning Internship opportunity gives students a host of opportunities beyond the classroom.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1110	Advanced Machine Operations	3
CAM	1111	Lab for Advanced Machine Operations	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
CAM	1142	Advanced Shop Floor Math	3
CAM	2145	Shop Floor Programming	3
CAM	2700	Computer Aided Manufacturing Internship	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2

Advanced Video Production

Program Code: VIDP.S.CRT • Credit Hours: 32

Description

This one-year certificate introduces students to video production, including lighting and cinematography, motion design, video editing, and audio production. Students will learn the design process, including use of digital photography, appropriate applications; and, video and audio equipment to create quality videos.

Career Opportunities

There are various career paths in video production. You could work in television, advertising, or news reporting. You also could apply your skills in education, government, or business industries. Within these settings, you could hold positions in a variety of positions, such as a video editor, camera operator, audio editor, live stream operator, or motion graphics. There are also freelance videographer opportunities.

ART	2265	Digital Photography I	3
VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1208	Typography	4
VIS	1410	History & Theory of Video Production	3
VIS	1420	Video Production	4
VIS	1430	Lighting & Cinematography	4
VIS	1440	Audio Production	3
VIS	2130	Motion Design	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Advanced Web Design

Program Code: WEB.S.CRT • Credit Hours: 32

Description

This one-year certificate introduces students to web coding and design, including conceptualizing, designing, developing, and maintaining websites. Students will also learn UX/UI, motion design, and working with a web content management tool. Students will learn a variety of web concepts and digital design applications.

Career Opportunities

Web designers develop, create, and test website or interface layout, functions, and navigation for usability. Web Designers typically work for corporations across industries, but they can also work for web design agencies or as self-employed individuals. They work closely with software and marketing professionals to make sure websites are designed coded correctly. Still others work in industries including publishing, management consulting, and advertising.

CIS	1350	Web Site Development with HTML & CSS	3
VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1208	Typography	4
VIS	1310	History & Theory of Web Design	3
VIS	1320	User Experience/User Interface	3
VIS	1330	Web Design	4
VIS	2130	Motion Design	3
VIS	2170	Web Content Management	4

Agribusiness Greenhouse Management

Program Code: AGM.S.CRT • Credit Hours: 33

Description

The Agribusiness Greenhouse Management certificate will prepare students for a successful business career in industries related to the food and agricultural system including input markets, farm production, greenhouse management, food manufacturing and distribution, and food and plant retailing. This program provides a broad-based study of the successful production of food, plants, and other agricultural products and will help students develop the skills for decision making and an understanding of the agricultural-food system dynamics. Upon completion, students will have the knowledge to enhance their contributions to agricultural enterprises or initiate their own entrepreneurial ventures.

Career Opportunities

Job opportunities for this certificate include greenhouse manager, farm manager, grain and livestock buyer, crop producer, marketing head, quality controller, urban landscaper, inventory technician, landscape enhancement manager, landscape technician, etc.

AGR	1201	Horticulture I	3
AGR	1202	Science of Soil	3
AGR	1204	Plant Propagation	3
AGR	1206	Horticulture II	3
AGR	1208	Sustainable Landscape Design	3
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication	3
ENT	2140	Small Business Finance	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MAN	2150	Management & Organizational Behavior	3

Agricultural Technology

Program Code: AGR.S.CRT • Credit Hours: 31

Description

The certificate will prepare students for employment in various areas of agriculture. Completers of this certificate will gain additional expertise in areas including agronomy, large animal science, agricultural economics, retail and customer service.

Career Opportunities

Potential employment in agriculture includes agricultural technician, farm operations, farm retail, farm bureau representative or farm assistant.

AGR	1160	Introduction to Agriculture Science	1
BIS	1120	Introduction to Software Applications	3
BIS	1400	Customer Service	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
MAN	1107	Foundations of Business	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
AGR	1300	Agronomy OR	
AGR	1110	Introduction to Large Animal Sciences: Handling & Husbandry	3
OT36		Arts & Humanities Elective OR	
OT36		Natural & Physical Sciences Elective	3
LAW	1101	Business Law AND	
AGR	1200	Agricultural Economics OR	
AGR	1111	Principles of Large Animal Reproduction AND	
AGR	1112	Principles of Large Animal Nutrition	6

Airframe Aviation Maintenance

Program Code: AAM.S.CRT • Credit Hours: 31

Description

The Airframe Aviation Maintenance certificate provides the knowledge and skill required by the Federal Aviation Administration (FAA) for the airframe maintenance technician student. Students will learn to apply the knowledge and skills covering the required sections of training for the Airframe certificate as required by the Federal Aviation Administration under Part 147 Appendix C. Those subjects include assembling and rigging, metallic and non-metallic structures, fuel systems, electrical power production and distribution, instruments, communication/navigation systems, cabin atmospheric control systems, landing gear, hydraulics and pneumatics, fire protection systems, aircraft finishing, ice protection systems and welding inspections.

Career Opportunities

Boeing Commercial Aircraft Company recently predicted 1,000,000 more jobs in aviation in the next 15 years. Airbus of Europe has predicted about 800,000 more jobs in the next 15-20 years. Both predictions are based on anticipated growth in aircraft production and flying passengers. Many mechanics will reach retirement age in the next three years as a result of an interruption of current certificates issued by the FAA. More jet aircraft means more need for mechanics. The general aviation sector already has a shortage of certificated mechanics.

AVT	1106	Airframe Safety Systems	2
AVT	1107	Fuel Systems	3
AVT	1133	Instruments/Communications	3
AVT	1136	Sheet Metal	4
AVT	1214	Cabin Atmospheric Control	2
AVT	1218	Utility Systems	6
AVT	2121	Assembly & Rigging	3
AVT	2132	Airframe Electrical Systems	4
AVT	2236	Non-Metallic Structures	4

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Architectural Design Technician
Program Code: ARCD.S.CRT • Credit Hours: 32

Description

This program helps students develop residential and commercial architectural design skills. Design courses are combined with construction materials and building systems courses, providing a broad foundation for entry level architectural design work. Students will receive training to help them create and understand architectural drawings as well as proper use of building materials and components. Upon completion, students will be able to utilize various design and analysis software to assist with the development of architectural projects.

Career Opportunities

Graduates are employed as designers and drafters for architectural and design-build firms. Many opportunities also exist in the building materials and assemblies' sales and supply area.

CAT	1101	Architectural Graphics I	3
CAT	1121	Architectural Graphics II	3
CAT	1201	Construction Methods & Materials	3
CAT	1341	Architectural Design I	5
CAT	2101	Architectural Design II	5
CAT	2201	Architectural Visualization	3
CAT	2431	OSHA Construction Standards	2
EGV	1301	Architectural Energy Analysis	2
IND	1234	Materials & Textiles	3
IND	1240	Color Theory	3

Architectural Project Technician
Program Code: ARCP.S.CRT • Credit Hours: 30

Description

This program is designed to build skills required for managing architectural projects in a variety of professional settings. Students will receive training to help them understand architectural practice, including an understanding of building materials and components, the financial aspects of project management, and the management skills necessary to deal with the diverse population of the industry. Upon completing this program, students will be qualified to move into project management positions in architecture and similar businesses.

Career Opportunities

Graduates are employed as project managers in the architecture and construction industry. Many opportunities exist in the building materials and assemblies sales and supply area.

CAT	1101	Architectural Graphics I	3
CAT	1201	Construction Methods & Materials	3
CAT	1241	Building Systems	3
CAT	2431	OSHA Construction Standards	2
CAT	2401	Engineering Technology Project Management	3
CAT	2610	Stakeholders & Participants for Design & Construction Projects	2
CAT	2620	Construction Documents, Legal Requirements, & Project Delivery	2
CAT	2630	Architectural Practice Project Deliverables & Contractual Obligations	2
CAT	2640	Construction Project Change Management	2
COM	2211	Effective Public Speaking	3
EGV	1301	Architectural Energy Analysis	2
ENG	1101	English Composition I	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Automotive Technology
Program Code: AUT.S.CRT • Credit Hours: 37

Description

The Automotive Certificate program is designed for students who want to become automotive technicians without pursuing an associate degree. Students will expand their knowledge of the automotive service industry and secure employment with dealerships, independent service shops, machine shops and other corporate service jobs. .

Career Opportunities

Career opportunities are available in positions for automotive service technicians in dealerships, independent shops and automotive machine shops. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors. Graduates with practical experience, education, willingness to work and a high degree of professionalism may expect to find jobs in middle management or research occupations within major automotive corporations.

AUT	1102	Introduction to Automotive Service	2
AUT	1108	Automotive Engine Systems	4
AUT	1114	Automotive Electrical/Electronic Systems I	3
AUT	1115	Automotive Engine Performance I	4
AUT	1116	Automotive Steering & Suspension Systems	3
AUT	1142	Automotive Manual Transmission & Driveline	3
AUT	1146	Automotive Heating Ventilation & Air Conditioning Systems	3
AUT	1165	Automotive Brake Systems	3
AUT	2214	Automotive Electrical/Electronic Systems II	4
AUT	2215	Automotive Engine Performance II	4
AUT	2241	Automatic Transmission Systems	4

Bakery Operations and Pastry Skills
Program Code: BOP.S.CRT • Credit Hours: 35

Description

This one year certificate focuses on basic baking as well as advanced techniques including bread making, pastry, and confections (such as chocolate work, sugar sculptures, and more).

Career Opportunities

This certificate provides career opportunities in businesses that specialize in Breads, Fine Pastries, Chocolates, Candy's, restaurants, and the opportunity to be self-employed.

COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HMT	1102	Kitchen Chemistry	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1126	Baking I	2
HMT	1128	Baking II & Barista Basics	2
HMT	2110	Pastry & Confectionary	4
HMT	2118	Artisan Breads	3
HMT	2201	Food Service Equipment, Design & Maintenance	2
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
MAT	1125	Math for the Culinary Arts & Baking & Pastry Arts Professional	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Basic Manufacturing
Program Code: BMFG.S.CRT • Credit Hours: 31

Description
This certificate in Basic Manufacturing prepares the student for entry level positions in any of the following five: General Manufacturing, Computer Aided Manufacturing, Automation Technology, Mechanical Engineering Technology, and Industrial Engineering Technology. Completion of this certificate prepares the student to earn the Industry Recognized MSSC - Certified Production Technician Certificate.

Career Opportunities
Basic Manufacturing prepares the student for entry level positions in any of the five areas within General Manufacturing, Computer Aided Manufacturing, Automation Technology, Mechanical Engineering Technology, and Industrial Engineering Technology. Completion of this certificate prepares the student to earn the Industry Recognized MSSC - Certified Production Technician Certificate.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1201	Introduction to Manufacturing Safety	2
OPT	1202	Quality Practices & Measurement for Manufacturing	2
OPT	1203	Manufacturing Processes & Production	2
OPT	1204	Maintenance Awareness for Manufacturing	2
EGR	1106	Basic Mechanical & Electrical Skills	2
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
MET	1131	Personal Computer Applications for Engineering Technology	1
MET	1161	Software Tools for Engineering Technology	1
MET	1231	Introduction to Drafting & Design using 3D CAD	4

Bioscience Lab Skills
Program Code: BLS.S.CRT • Credit Hours: 30-32

Description
The Bioscience Lab Skills certificate will prepare students for internships and some entry level jobs in bioscience laboratories. The students will learn the background of the biotechnology industry, basic lab safety and regulation, and the practical math needed to calculate reagents, dilutions and sample analysis.

BIO	1107	Human Biology	3
BIO	1108	Lab for Human Biology	0
BIO	1111	General Biology I AND	
BIO	1117	Lab for General Biology I OR	
BIO	1171	Principles of Biology I	4-5
BIS	1120	Introduction to Software Applications	3
BTN	1110	Biotechnology & Bioethics	3
BTN	1120	Laboratory Safety & Regulatory Compliance	2
BTN	1130	Biological Reagents Preparation	3
BTN	1131	Lab for Biological Reagents Preparation	0
BTN	1201	Biotechnology Careers	2
CHE	1111	Introduction to Chemistry I AND	
CHE	1151	Lab for Introduction to Chemistry I OR	
CHE	1211	General Chemistry I AND	
CHE	1251	Lab for General Chemistry I	4-5
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
MAT	1470	College Algebra	3

Business Information Systems/ Information Processing
Program Code: BUIP.S.CRT • Credit Hours: 30

Description

This one-year certificate is intended to provide advanced software application training necessary to work improve efficiency and productivity and aid in business decision making.

Career Opportunities

Employment opportunities are available in many types of businesses, including banks, insurance offices, advertising agencies, manufacturing companies, small to large businesses and educational facilities.

ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
BIS	1201	Keyboarding & Document Formatting	3
BIS	1220	Word Processing Software	3
BIS	1230	Spreadsheet Software	3
BIS	1240	Presentation Software	2
BIS	1250	Specialized Business Software Applications	1
BIS	1260	Database Software	3
BIS	1400	Customer Service	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3

Business Information Systems/ Medical Office Specialist
Program Code: BUMS.S.CRT • Credit Hours: 32

Description

In this one-year certificate, students will work with various software applications, learn medical terminology, and take medical office and customer service courses that prepare them to work in a medical office environment.

Career Opportunities

Employment opportunities include medical office receptionists, secretaries, billing/insurance clerks, and medical office administrators in physician's offices, urgent care centers, managed care organizations, laboratories, nursing homes and hospitals.

BIS	1120	Introduction to Software Applications	3
BIS	1201	Keyboarding & Document Formatting	3
BIS	1220	Word Processing Software	3
BIS	1230	Spreadsheet Software	3
BIS	1260	Database Software	3
BIS	1400	Customer Service	3
BIS	2180	Medical Office Simulation	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAN	1107	Foundations of Business OR	
MAN	2150	Management & Organizational Behavior	3
OT36		Mathematics Elective OR	
MAT	1120	Business Mathematics	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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138   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Business Information Systems/ Personal Computers in Business
Program Code: PCB.S.CRT • Credit Hours: 30

Description
This one-year certificate is intended for those who want to update their knowledge of software applications and personal computer technology. Students will learn how to use personal computers for business administration, decision support and financial applications.

Career Opportunities
Employment opportunities include paraprofessional positions in information technology, customer service and personal computer software application troubleshooting.

BIS	1120	Introduction to Software Applications	3
BIS	1201	Keyboarding & Document Formatting	3
BIS	1220	Word Processing Software	3
BIS	1230	Spreadsheet Software	3
BIS	1260	Database Software	3
CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1131	Business Writing	3
MAN	1107	Foundations of Business OR	
MAN	2150	Management & Organizational Behavior	3

Business Management
Program Code: BM.S.CRT • Credit Hours: 30

Description
Students gain an understanding of business procedures to prepare them for a management position or update the management skills of those currently employed in a managerial, administrative or office support role.

Career Opportunities
Students completing this certificate can expect to be prepared to work as supervisors or entry-level managers in retail, manufacturing or medium and small businesses.

BIS	1120	Introduction to Software Applications	3
COM	2211	Effective Public Speaking	3
ECO	1100	Introduction to Economics OR	
ECO	2180	Principles of Microeconomics	3
ENG	1131	Business Writing	3
MAN	1107	Foundations of Business	3
MAN	1110	International Business	3
MAN	2101	Introduction to Supervision	3
MAN	2150	Management & Organizational Behavior	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management	3
XXX		Business Management Elective	3

Business Management Electives

ENT	2140	Small Business Finance
ENT	2160	Business Plan Development
MAN	1106	Introduction to Radio Frequency Identification
MAN	1157	Management Applications of Radio Frequency Identification Technology
MAN	2110	Introduction to Project Management
MAN	2140	Human Resource Management
MAN	2144	Negotiation Techniques
MAN	2159	Supply Chain Management Concepts & Applications
MRK	2102	Principles of Advertising
MRK	2135	Digital Marketing
MRK	2145	Principles of Retailing
MRK	2220	Small Business Marketing
MRK	2225	Sales Fundamentals

Business Transfer
Program Code: BUS.S.CRT • Credit Hours: 30

Description

This certificate is designed for the student who desires to complete Transfer Assurance Guide (TAG) courses to transfer into a four-year business program. This certificate can be used to help students from non-business backgrounds begin preparation for entrance into a Masters of Business Administration (MBA) program by packaging the prerequisite business core courses into a convenient certificate offering. Additionally, students wanting to pursue a two-year business degree or needing to augment current work skills with academic credentials may find this certificate beneficial.

Career Opportunities

Employers more often than in the past require four-year business degrees or evidence that students are in the process of earning these credentials. This certificate serves as a credentialing tool for students to use in their career search, as well as, for currently employed students to show further evidence of growth and academic progress toward a bachelor's degree in business.

ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting	3
BIS	1120	Introduction to Software Applications	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
ENG	1131	Business Writing	3
LAW	1101	Business Law	3
MRK	2101	Principles of Marketing Management	3
OT36		Arts & Humanities Elective	3
OT36		Social & Behavioral Sciences Elective	3

Computer Support Technician
Program Code: SUP.S.CRT • Credit Hours: 31

Description

Computer Support Technicians provide first level support for users on computers, software, mobile devices and other devices connected to a network. Students will learn to provide technical support and problem-solving of operating systems, computer networks, software applications, and will utilize interpersonal communication and customer service fundamentals. Students will have the opportunity to earn A+ certification, Microsoft Office Specialist (MOS) certifications and customer service certification in specific courses in the curriculum.

Career Opportunities

Program prepares students to for entry-level positions as computer support technician, desktop support technician, IT help desk technician/representative, customer support specialist, technical support specialist, or IT service desk specialist/technician.

BIS	1120	Introduction to Software Applications	3
BIS	1201	Keyboarding & Document Formatting	3
BIS	1230	Spreadsheet Software	3
BIS	1260	Database Software	3
BIS	1400	Customer Service	3
CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	2731	A+ Hardware & Software	4
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1131	Business Writing	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Corrections

Program Code: COR.S.CRT • Credit Hours: 36

Description

This certificate is designed to provide the student with the basics necessary for entry-level employment in a correctional environment. All courses can be applied to the Associate of Applied Science Degree in Corrections, if desired.

Career Opportunities

There are openings in local and state correctional facilities, local nonprofit agencies providing correctional services, as well as employment through private prison corporations.

BIS	1120	Introduction to Software Applications	3
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	1105	Criminal Law	3
CJS	1110	Interrogation, Documentation & Testimony	3
CJS	1165	Corrections OR	
CJS	1197	Corrections Full Services Jails/Basic Correction Officer Academy	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
CJS	2200	Human Relations, Mediation, & Conflict Resolution	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
COM	2245	Intercultural Communication	3
ENG	1101	English Composition I	3
SOC	1101	Introduction to Sociology	3

CPA Exam Eligibility: Business Component

Program Code: CPABUS.S.CRT • Credit Hours: 30

Description

In order to be eligible to sit for the CPA examination in the state of Ohio, a candidate must fulfill the basic requirements in both business and accounting courses. This certificate is designed for the student to obtain the business courses necessary to sit for the CPA exam. It will provide the pathway for a student who has earned a non-business bachelor's degree to transition to a career in accounting.

Career Opportunities

Employment opportunities in addition to accounting firms, exist in private business and industry as well as not-for profit and governmental organizations. Positions available to graduates include staff accountant, cost accountant, payroll accountant, auditor, tax accountant and financial analyst.

ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting	3
BIS	1120	Introduction to Software Applications	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
LAW	1101	Business Law	3
MAN	2150	Management & Organizational Behavior	3
MRK	2101	Principles of Marketing Management	3
XXX		Accounting Elective	6

Accounting Electives

BIS	1260	Database Software
CIS	1107	Introduction to Operating Systems
CIS	1111	Introduction to Problem Solving & Computer Programming
CIS	1130	Network Fundamentals
CIS	1350	Web Site Development with HTML & CSS
ENT	2140	Small Business Finance
FIN	2450	Personal Finance
MAN	2110	Introduction to Project Management
MAN	2140	Human Resource Management
MAN	2144	Negotiation Techniques
MAN	2155	Management Information Systems
MRK	2102	Principles of Advertising
MRK	2135	Digital Marketing
MRK	2225	Sales Fundamentals

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Culinary Skills and Food & Beverage Operations

Program Code: CSFO.S.CRT • Credit Hours: 36

Description

This one-year certificate focuses on back-of-the-house talents in culinary arts as well as the skills necessary to operate and oversee front-of-house tasks in most food & beverage operations.

Career Opportunities

This certificate provides career opportunities in the businesses of Food Trucks, Restaurants, College & University Food outlets, as well as Hospital Food outlets, Grocery Stores, etc., and the opportunity to be self-employed. This certificate is not only skills oriented, but also has supervisory components as well.

COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HMT	1101	Basic Culinary Skills	2
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1110	Menu Planning & Service Practicum	3
HMT	1112	Food Principles Basic Preparation	3
HMT	1125	Beverage Management	2
HMT	1129	Restaurant Desserts	3
HMT	2201	Food Service Equipment, Design & Maintenance	2
HMT	2207	Butchery & Fish Management	1
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
MAT	1125	Math for the Culinary Arts & Baking & Pastry Arts Professional	3

Cyber Investigation

Program Code: CYSEC.S.CRT • Credit Hours: 33-34

Description

Students will learn computer network protection, maintenance and usage of computer hardware and software, management of networks and operating systems, and criminal and constitutional law and IT criminal investigation, which includes evidence procedures and computer forensics.

Career Opportunities

The Cyber Investigation Certificate will prepare students for careers in the areas of computer network protection, managing networks and operating systems and IT criminal investigation, which includes evidence procedures and computer forensics. Job titles include but are not limited to: Intelligence Analyst, IT Specialist (Government Breakout Codes 2210), Systems Administrator, Network Engineer, Information System Security Manager, Cyber Security Incident Response Specialist and Private Investigator.

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	2165	Database Management	3
CIS	2640	Network Security	3
CIS	2808	Introduction to Computer Forensics	3
CIS	2550	Linux Operating System OR	
CIS	2731	A+ Hardware & Software	3-4
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
CJS	2209	Computer Crime	3
CJS	2295	Criminal Justice Science Seminar	3

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Data Analytics
Program Code: DA.S.CRT • Credit Hours: 31

Description

This certificate prepares students for entry-level data analytics positions requiring knowledge, setup and usage of business intelligence and data analysis solutions. Data analytics is expanding in businesses, government agencies and not-for-profit organizations, enabling them to make better decisions utilizing appropriate data and information. Students will have the ability to structure data and prepare reports in a way that is meaningful to business, government agency and not-for-profit organization users. Course work will include database concepts, data modeling, SQL, data analysis, data mining tools, mathematical and statistical techniques, project management and systems analysis. Emphasis is placed on strong communication skills necessary to interact with key users and understand their requirements.

Career Opportunities

Employment opportunities in IT include entry-level positions such as software developers, web developers, help desk analysts, network administrators, user support specialists, network security analysts and network engineers.

Program Prerequisite(s)

MAT 1460 Mathematics for Business Analysis

BIS	1105	IT Fundamentals OR	
BIS	1120	Introduction to Software Applications	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1140	Information Systems Analysis & Design	3
CIS	2165	Database Management	3
CIS	2170	Computer Information Systems Internship	3
CIS	2268	Structured Query Language (SQL) Programming	3
CIS	2269	Data Analytics Theory & Solutions	3
MAT	1460	Mathematics for Business Analysis	3
MAT	2170	Business Statistics I	4
MAT	2180	Business Statistics II	3

Digital Marketing Communications
Program Code: MRK.S.CRT • Credit Hours: 33

Description

Digital Marketing professionals are essential in helping businesses and organizations establish and cultivate a strong Internet presence. Students will develop a basic understanding of critical components of a digital marketing campaign such as marketing technologies, advertising and public relations, sales fundamentals and lead generation, customer engagement and social media, as well as marketing segmentation tools including geographic information systems. Students will have the opportunity to learn new media theories and marketing approaches while gaining hands on experience with digital marketing tools.

Career Opportunities

Digital marketing specialists have opportunities for marketing communications, technical and management positions at all levels of virtually every type of business including small and medium-sized businesses, advertising agencies, global corporations, non-profit organizations and even government agencies.

COM	2206	Interpersonal Communication OR	
COM	2225	Small Group Communication OR	
COM	2286	Public Relations Principles	3
MAN	1107	Foundations of Business	3
MAN	2150	Management & Organizational Behavior	3
MAN	2155	Management Information Systems	3
MAN	2270	Management Internship	3
MRK	2102	Principles of Advertising	3
MRK	2135	Digital Marketing	3
MRK	2145	Principles of Retailing	3
MRK	2230	Social Media & Consumer Engagement	3
MRK	2250	Digital Marketing Analytics	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management	3

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Digital Marketing Technologies
Program Code: MRKTEC.S.CRT • Credit Hours: 31

Description

The Digital Marketing Technologies certificate will provide students with both theoretical and practical applications of digital marketing strategies and tools. This certificate will cover the foundational concepts in digital marketing including fundamental marketing concepts, advertising strategies, digital marketing approaches and tools, retailing and e-commerce, customer engagement and social media, graphic design, website development, consumer behavior and a marketing internship.

Career Opportunities

Students completing this certificate may obtain an entry level position in digital marketing with state and/or local government, small, medium or large sized businesses, and non-profit organizations.

BIS	1120	Introduction to Software Applications	3
CIS	1350	Web Site Development with HTML & CSS	3
MAN	1107	Foundations of Business	3
MAN	2270	Management Internship	3
MRK	2102	Principles of Advertising	3
MRK	2135	Digital Marketing	3
MRK	2230	Social Media & Consumer Engagement	3
MRK	2236	Consumer Behavior	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management	3
VIS	1140	Design Processes	4

Energy Technology
Program Code: ENRGY.S.CRT • Credit Hours: 31

Description

This program is intended for students who are interested in an entry-level position in the field of energy services. This program consists of HVAC, energy analysis and management, energy services and renewable energies courses.

Career Opportunities

Energy technicians who can perform energy audits and test structures for energy efficient characteristics are in increasing demand.

CAT	1111	Mechanical Systems Blueprint Reading	1
CAT	1601	Building Electric & Controls	4
EGV	1101	Alternate & Renewable Energy Sources	3
EGV	1251	Introduction to Energy Management Principles	3
EGV	1301	Architectural Energy Analysis	2
EGV	1401	Weatherization & Building Performance Training	3
HVA	1201	Basic HVAC Systems with Cooling	3
HVA	1221	Heating Systems	3
HVA	1261	HVAC Loads & Distribution for Small Buildings	4
MET	1131	Personal Computer Applications for Engineering Technology	1
PHY	1141	College Physics I	4

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Entrepreneurship
Program Code: ENT.S.CRT • Credit Hours: 33

Description
This certificate prepares existing or potential entrepreneurs in a wide variety of small business functions. In addition to traditional management courses, the following key areas are emphasized for entrepreneurs: financial plan development, marketing plan development and business plan development.

Career Opportunities
Students completing this certificate can expect to be prepared to begin their own businesses or to work in larger companies in an entrepreneurial role.

BIS	1120	Introduction to Software Applications	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication OR	
COM	2286	Public Relations Principles	3
ENG	1131	Business Writing	3
ENT	2140	Small Business Finance	3
ENT	2160	Business Plan Development	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MAN	2144	Negotiation Techniques	3
MAN	2150	Management & Organizational Behavior	3
MRK	2220	Small Business Marketing	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management OR	
MRK	2135	Digital Marketing	3

Food Service Management
Program Code: FSM.S.CRT • Credit Hours: 35

Description
The Food Service Management certificate program combines classroom instruction and laboratory experience in food preparation and service for the restaurant and hotel/lodging industry.

Career Opportunities
The Food Service Management certificate program is designed to provide the initial knowledge for a student to begin at a management trainee level within a corporate or franchise food service operation. With further training and experience, the student should be able to accept more responsibility at a store manager's level.

Program Prerequisite(s)
HMT 1107 Sanitation & Safety

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
BIS	1120	Introduction to Software Applications	3
ENG	1101	English Composition I	3
HMT	1101	Basic Culinary Skills	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1110	Menu Planning & Table Service Practicum	3
HMT	1112	Food Principles & Preparation	4
HMT	2225	Hospitality & Tourism Supervision	3
HMT	2226	Hospitality Purchasing & Negotiations	3
MAT	1125	Math for the Culinary Arts & Baking & Pastry Arts	3
PSY	1100	General Psychology OR	
SOC	1145	Introduction to Cultural Anthropology	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Health Information Management Technician
Program Code: HIMT.S.CRT • Credit Hours: 30

Description

The Health Information Management Technician certificate prepares students to work in a medical office setting. This certificate will focus on preparing students for an entry-level office position in a medical facility where basic electronic health record technology, medical terminology, medicolegal principles and revenue-cycle principles are utilized. A grade of "C" or higher is required in all courses to receive the certificate.

Career Opportunities

Healthcare record scanners, record clerks, receptionists, medicolegal technicians, patient-registration clerks, long-term care HIM positions, hospice HIM positions, insurance companies and healthcare facilities clerk.

BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
BIS	1221	Specialized Computer Applications for Health Information Management	3
HIM	1101	Medical Terminology	2
HIM	1110	Health Information Processing	3
HIM	1165	Drug Classification for Coding	1
HIM	1201	Introductory Medical Office Coding	4
HIM	1204	Medicolegal & Ethics in Healthcare Records	2
HIM	2145	Health Information Resource Management	3
HIM	2165	Healthcare Data in Reimbursement	3
HIM	2233	Health Information Systems	3

Healthcare Data Analytics
Program Code: HDA.S.CRT • Credit Hours: 31

Description

The Healthcare Data Analytics Certificate is designed to prepare individuals for entry-level healthcare data analytic positions. Healthcare Data Analysts usually work at healthcare agencies or hospitals gathering and compiling data needed by the company. The data is then used to understand the current trends in the healthcare system and to make well-informed decisions.

Career Opportunities

Career opportunities include working for hospitals, insurance companies, and other healthcare agencies as a Healthcare Data Analyst.

BIO	1121	Human Anatomy & Physiology I	3
BIS	1221	Specialized Computer Applications for Health Information Management	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	2165	Database Management	3
CIS	2269	Data Analytics Theory & Solutions	3
HIM	1101	Medical Terminology	2
HIM	1110	Health Information Processing	3
HIM	1150	Survey of Electronic Health Records	1
HIM	1201	Introductory Medical Office Coding	4
HIM	2165	Healthcare Data in Reimbursement	3
MAT	1460	Mathematics for Business Analysis	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Hospitality Leadership and Administration

Program Code: HLA.S.CRT • Credit Hours: 34

Description

The Hospitality Leadership and Administration one-year certificate is designed for those desiring to become a supervisor in hospitality operations. This one year certificate will benefit those interested in hospitality supervision, the calculations of cost control, front of the house menu planning and dining, POS systems, and more. There will also be other opportunities to obtain additional certificates through the National Restaurant Associations Managed First program.

Career Opportunities

This certificate provides career opportunities in the businesses of Hospitality Operations such all segments of food and restaurant industry, meeting & event planning, and lodging operations.

ACC	1100	Survey of Accounting	3
BIS	1120	Introduction to Software Applications	3
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HMT	1105	Introduction to the Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1110	Menu Planning & Service Practicum	3
HMT	1125	Beverage Management	2
HMT	1137	Hospitality Industry Computer Systems	2
HMT	2201	Food Service Equipment, Design & Maintenance	2
HMT	2215	Hospitality Cost Controls	3
HMT	2225	Hospitality & Tourism Supervision	3
MAT	1120	Business Mathematics	3

HVAC Light Commercial & Residential Service

Program Code: LCHS.S.CRT • Credit Hours: 31

Description

This program is intended for entry-level students or residential service technicians desiring careers as light commercial HVAC service technicians. This program is a hands-on troubleshooting and service program geared to the light commercial HVAC industry including convenience stores, restaurants, strip malls and any other type of small business concern. Students learn the basics of heating, cooling, distribution and control of these HVAC systems. The hands-on component uses the types of equipment installed in the field.

Career Opportunities

Students find work as service technicians, control technicians, or performing installation work for commercial and residential contractors.

CAT	1111	Mechanical Systems Blueprint Reading	1
CAT	1601	Building Electric & Controls	4
CAT	2431	OSHA Construction Standards	2
COM	2211	Effective Public Speaking	3
HVA	1201	Basic HVAC Systems with Cooling	3
HVA	1221	Heating Systems	3
HVA	1241	HVAC Installation Techniques & Practices	3
HVA	1261	HVAC Loads & Distribution for Small Buildings	3
HVA	1401	HVAC Mechanical & Electrical Troubleshooting	3
MAT	1110	Math for Technologists OR	
MAT	1200	Technical Mathematics	3
MET	1131	Personal Computer Applications for Engineering Technology	1
HVA	2700	HVACR Engineering Technology Internship OR	
EGV	1251	Introduction to Energy Management Principles OR	
EGV	1301	Architectural Energy Analysis OR	
EGV	1401	Weatherization & Building Performance Training OR	
EGV	2351	LEED Green Associate Exam Preparation OR	
CAT	1201	Construction Methods & Materials OR	
CAT	1401	Construction Cost Estimating OR	
CAT	1741	Residential Electrical Systems	2

Industrial Internet of Things Technician
Program Code: IIOT.S.CRT • Credit Hours: 33

Description

This one-year certificate provides the knowledge and basic skills needed to work in the automation industry as an entry-level support technician for Industrial Internet of Things (IIoT). In addition to advanced manufacturing and logistics warehousing, a growing number of IoT devices are created for consumer use, including connected automotive vehicles, home automation devices, wearable technology, connected health, and appliances with remote monitoring capabilities. Students who complete this certificate learn IIoT fundamentals, automation computer hardware, software, data management, and networking. Theoretical aspects are supported and supplemented by hands-on lab work to gain in-depth knowledge and necessary technical skills.

Career Opportunities

This certificate program will provide the entry level education and training necessary to operate, program, diagnose, and repair micro-controller based IIOT devices and PLC based IIOT industrial machines. Graduates will be qualified to work for original equipment/system suppliers, consultants/third party support, as well as, equipment/system end users. All courses within certificate may be applied towards a degree in Internet of Things Cyber Technician, a high demand, high paying field.

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	2165	Database Management	3
CIS	2640	Network Security	3
EET	1120	Introduction to DC & AC Circuits	2
EET	1198	Digital Technology	2
EET	2261	Microprocessors	4
EET	2281	Programmable Logic Controllers	3
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
EGR	2261	Engineering Problem Solving using "C" & "C++"	4

Industrial Robot Technician
Program Code: IRT.S.CRT • Credit Hours: 30

Description

This certificate provides the knowledge and skills required to meet the needs for technicians in industries that either provide robots systems for sale or use robots in their production facilities.

Career Opportunities

This certificate program will provide the education and training necessary to operate, program, diagnose, and repair industrial robots. Graduates will be qualified to work for original equipment/system suppliers as well as equipment/system end users.

EET	1120	Introduction to DC & AC Circuits	2
EET	1139	Electrical Machinery	3
EET	1166	Industrial Machine Wiring	3
EET	2281	Programmable Logic Controllers	3
EGR	1106	Basic Mechanical & Electrical Skills	2
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
EGR	1144	Sensors & Vision Systems	3
EGR	1217	Fluid Power & Control	2
EGR	2231	Troubleshooting of Automated Systems	3
EGR	2250	Electromechanical Repair	3
EGR	2252	Teach Pendant Robot Programming	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Law Enforcement

Program Code: CJLES.S.CRT • Credit Hours: 33

Description

This certificate prepares the learner for future training and education in the field of law enforcement. The certificate enhances law enforcement professional skills and knowledge. It may assist the student in performing well in future civil service examinations for employment or promotion. All courses in this certificate apply toward the Associate of Applied Science degree in Law Enforcement, if desired.

Career Opportunities

A broad range of career opportunities are available in the area of criminal justice/law enforcement including those in court systems, court administration, patrol, victim services, investigation, and probation/parole.

BIS	1120	Introduction to Software Applications	3
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	1105	Criminal Law	3
CJS	1110	Interrogation, Documentation & Testimony	3
CJS	1125	Policing	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
PSY	1100	General Psychology	3
SOC	1101	Introduction to Sociology	3

Legal Nurse Consultant

Program Code: LNC.S.CRT • Credit Hours: 33

Description

The Legal Studies program educates students with practical assignments in a "simulated law office" environment. All student work demonstrates the professional, ethical, and technology concepts they will use in the legal field. All full-time faculty are licensed attorneys. The objective of the Legal Nurse Consultant Certificate is to prepare the registered nurse to perform legal analysis of health care issues as well as prepare them for litigation preparation on medical malpractice and personal injury cases. Building on the nurse's education and clinical experience, the program will provide the practical skills and legal knowledge necessary to function in the legal arena. Additionally, instructors will ensure that nurses who take the program understand the role of the Legal Nurse Consultant in the greater community and what is involved in working as a consultant. This certificate is intended to enhance the attractiveness of an already obtained Nursing degree by providing students with practical skills needed to work in the legal field. All students are required to complete an attorney-supervised internship for hands-on experience using their practical skills. A grade of "C" or higher is required in all courses to remain in the program. Established in 1978, the Sinclair Legal Studies Program was the first paralegal program in the area, and the first in the area to be approved by the American Bar Association. Sinclair Legal Studies graduates hold a degree from an ABA-Approved program at a fully-accredited Ohio college. Students must take at least nine credits of the equivalent of legal specialty courses through synchronous instruction.

Career Opportunities

LNCs combine nursing expertise with legal knowledge to advise attorneys, and others, on matters involving medical malpractice, personal injury, product liability, workers' compensation, healthcare licensure investigations, and other healthcare related cases. Legal Nurse Consultants can find themselves in positions where they: review and analyze medical records, screen for record tampering, interview clients, conduct research and summarize medical literature, evaluate liabilities and damages, assist with discovery and depositions, prepare exhibits and render informed opinions to attorneys on the delivery of health care and its outcomes for specific cases, assist in the selection of expert witnesses as needed, and serve as expert witnesses in cases involving nursing standards of care or related matters.

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*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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PAR	1101	Introduction to Legal Studies	3
PAR	1102	Legal Technology	1
PAR	1103	Litigation	3
PAR	1201	Legal Research & Writing	3
PAR	1202	Advanced Legal Technology	1
PAR	1203	Advanced Litigation	3
PAR	2301	Advanced Legal Research & Writing	3
PAR	2401	Legal Studies Internship	2
HIM	1101	Medical Terminology	2
HIM	1160	Medical Office Coding Concepts	1
BIS	1221	Specialized Computer Applications for Health Information Management	3
HIM	1204	Medicolegal & Ethics in Healthcare Records	2
XXX		Legal Studies Elective	6

Legal Studies Electives

LAW	1101	Business Law
LAW	1102	Consumer Law
LAW	1103	Domestic Violence
LAW	1104	Employment Law
MHT	1101	Introduction to Mental Health Services
PAR	2302	Family Law
PAR	2303	Probate Law
PAR	2510	Criminal Law
PAR	2511	Online Legal Research
RES	1201	Real Estate Law

Legal Studies Post Baccalaureate Certificate
Program Code: PAR.S.CRT • Credit Hours: 34

Description

The Legal Studies Program educates students with practical assignments in a "simulated law office" environment. All student work demonstrates the professional, ethical, and technology concepts they will use in the legal field. All full-time faculty are licensed attorneys. Student learning is supported by experienced paralegals who serve as team teachers. This certificate is intended to enhance the attractiveness of an already obtained bachelor's degree by providing students with practical skills needed to work in the legal field. All paralegal students are required to complete an attorney-supervised internship for hands-on experience using their paralegal skills. A grade of "C" or higher is required in all courses to remain in the program. Established in 1978, the Sinclair Paralegal Program was the first paralegal program in the area, and the first in the area to be approved by the American Bar Association. Sinclair paralegal graduates hold a degree from an ABA-Approved program at a fully-accredited Ohio college. Students must take at least nine credits of the equivalent of legal specialty courses through synchronous instruction.

Career Opportunities

Sinclair led the way with the first paralegal program in the Miami Valley in 1978, and it became the first to earn approval from the American Bar Association. Nearly a thousand graduates of Sinclair's Legal Studies Program now work in large and small law firms, the business world, courts, and government agencies. Under the supervision of a lawyer, a professional paralegal may perform such interesting duties as investigating cases, interviewing clients and witnesses, preparing legal documents, and legal research. These responsibilities are carried out in a variety of legal fields, such as criminal law, probate, family law, litigation, and real estate. Employment opportunity reports for program graduates are encouraging. Completion of the Legal Studies Program does not authorize a graduate to practice law as an attorney, or to give legal advice.

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Program Prerequisite(s)

Approval of Department AND

Students must have obtained a bachelor's degree with a GPA of 2.0 or higher from an accredited institution to be eligible to pursue this certificate.

PAR	1101	Introduction to Legal Studies	3
PAR	1102	Legal Technology	1
PAR	1103	Litigation	3
PAR	1201	Legal Research & Writing	3
PAR	1202	Advanced Legal Technology	1
PAR	1203	Advanced Litigation	3
PAR	2301	Advanced Legal Research & Writing	3
PAR	2302	Family Law	3
PAR	2303	Probate Law	3
PAR	2401	Legal Studies Internship	2
RES	1201	Real Estate Law	3
XXX		Legal Studies Elective	6

Legal Studies Electives

LAW	1102	Consumer Law
LAW	1103	Domestic Violence
LAW	1104	Employment Law
PAR	2510	Criminal Law
PAR	2511	Online Legal Research

Lifestyle Wellness Coaching
Program Code: LWC.S.CRT • Credit Hours: 31

Description

This certificate provides the knowledge and skills needed to be a Lifestyle Wellness Coach. Understanding the theoretical models is important to create a foundation of knowledge about health behavior and behavioral change. However, it is critical for the health professional to be aware of and to continuously evaluate the numerous psychological, social and holistic factors that influence health. The most important skill that lifestyle wellness coaches can have in terms of application of any theoretical concept is communication. Effective listening and motivational communication processes will allow coaches to gather necessary information. Effective, successful coaching requires the development of rapport and trust with clients or patients. It must be viewed as a collaborative journey of individualized goals in which each interaction and intervention brings the client or patient closer to increased self-efficacy, program enjoyment and long-term adherence. Lifestyle Wellness Coaches help clients/patients to learn and implement personally meaningful, ongoing behavior modification strategies and continual relapse-prevention techniques.

Career Opportunities

Lifestyle Wellness coaches can provide services in a variety of settings such as hospitals, rehabilitation clinics, physician offices, primary care medical clinics, corporations, schools, mental health centers, group homes for people with physical and/or cognitive challenges, fitness facilities, detention and corrections centers, advocacy agencies, and even places of worship. The employment future for workers in the field of Lifestyle Wellness Coaching is promising.

ALH	1105	Overview of Holistic Health	2
COM	2206	Interpersonal Communication	3
DIT	1111	Nutrition for Health & Fitness	3
ENS	1118	Lifetime Physical Fitness & Wellness	3
ENS	1214	Personal & Community Health Behavior	3
ENS	2420	Concepts of Lifestyle Coaching	3
MHT	1101	Introduction to Mental Health Services	3
MHT	1202	Motivational Interviewing	3
MHT	2138	Ethical Issues in Behavioral Healthcare	2
PSY	1100	General Psychology	3
PSY	2126	Stress Management	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Mechanical Drafter
Program Code: MEDRAFT.S.CRT • Credit Hours: 32

Description

The Mechanical Drafter certificate familiarizes students to the basics of the industrial design process, industry terminology, general practices, and latest versions of computer-aided drafting software. All courses are part of the Mechanical Engineering Technology associate degree.

Career Opportunities

Professionals with basic mechanical engineering and software design skills are in demand by mechanical design firms.

COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1580	Precalculus	5
MET	1231	Introduction to Engineering Design Using 3D CAD	4
MET	1241	Principles of Engineering	2
MET	1281	Engineering Design & Development	2
MET	1301	SolidWorks Basics	4
OT36		Social & Behavioral Sciences Elective	3
MAN	2110	Introduction to Project Management OR	
MET	1151	Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts OR	
PHY	1141	College Physics I OR	
MET	1371	CAD Concepts using AutoCAD OR	
MET	2700	Mechanical Engineering Technology Internship	6

Medical Assistant
Program Code: MAS.S.CRT • Credit Hours: 37

Description

Medical assistants are multi-skilled professionals who assist physicians with the administrative and clinical aspects of patient care. This certificate is designed to be completed in three (3) semesters on a full-time basis. The certificate consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. A cumulative GPA of 2.0 is required, as well as a grade of C or higher in all certificate courses. The student will be required to complete 210 hours of unpaid supervised practicum during their third semester of the certificate. Note: Healthcare Professional CPR, health certificate, immunizations, student health insurance, and background check must be completed prior to enrolling in the practicum component of the curriculum. The graduate is eligible to sit for a national exam to become a credentialed medical assistant.

Accreditation

Sinclair Community College's Medical Assistant certificate program is accredited the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 9355 113th Street N., #7709, Seminole, FL 33775.

Career Opportunities

Currently medical assisting is one of the fastest growing occupations in the United States with an expected increase in potential jobs by as much as 23% through 2028 (US Bureau of Labor Statistics, Sept. 4, 2019). Options for individuals seeking medical services and treatment: urgent care, surgicare and ambulatory care centers, as well as health maintenance organizations (HMO's), multi-physician group practices and medical specialty clinics have opened new career opportunities.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1140	Fundamentals of Disease Processes	3
ALH	2201	Survey of Drug Therapy	2
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
HIM	1160	Medical Office Coding Concepts	1
MAS	1102	Clinical Medical Assisting I	3
MAS	1192	Lab for MAS 1102	0
MAS	1103	Clinical Medical Assisting II	4
MAS	1193	Lab for MAS 1103	0
MAS	1110	Administrative Medical Assisting	4
MAS	2201	Clinical Medical Assisting III	4
MAS	2291	Lab for MAS 2201	0
MAS	2210	Medical Billing Specialist	3
MAS	2220	MAS Practicum	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Ohio Peace Officer Basic Training Academy Professional
Program Code: BPA.S.CRT • Credit Hours: 32

Description
This program provides the Ohio Peace Officer training required by the State of Ohio for new Ohio law enforcement officers. Additionally, this program is designed specifically for cadets who wish to pursue a career in law enforcement, and the training provided enhances one's ability to successfully receive a certificate of completion from the State of Ohio. This program is the foundation for graduates to further their educational pursuits and is limited to those persons who are officially enrolled in the Sinclair Community College basic training academy. Graduates of this program shall receive certificates of completion from the Ohio Attorney General's office indicating they have completed basic training and are certified to become commissioned law enforcement officers for Ohio agencies.

Career Opportunities
Local and state law enforcement agencies as well as private investigation and personal protection agencies.

Program Prerequisite(s)
Physical fitness assessment, fingerprint check, oral interview and college level ready for English.

CJS	2280	Basic Peace Officer Training I	14
CJS	2281	Basic Peace Officer Training II	12
ENG	1101	English Composition I	3
PSY	1100	General Psychology OR	
SOC	1101	Introduction to Sociology	3

Paramedic
Program Code: EPST.S.CRT • Credit Hours: 33-34

Description
Paramedics are essential members of the health care team who provide time-sensitive care to patients. These individuals take the emergency department to people's homes, to highways and to other remote locations. Paramedics bring life-saving equipment and knowledge to bear in an effort to reduce patient's suffering and to save lives. Students will use lecture, laboratory and real-world exposure to emergencies to learn the skills needed to care for the sick and injured in the out-of-hospital environment. The program is offered to provide students with variability and flexibility in scheduling. For more information, contact the EMS department at 937-512-5338 for an entrance application packet.

Career Opportunities
Within the greater Miami Valley area, EMS professionals are hired by fire departments, private EMS and hospitals. These agencies typically hire entry personnel based on the candidates state licensures/certifications.

Program Prerequisite(s)
BIO 1107 Human Biology OR

BIO 1121 Human Anatomy & Physiology I OR

BIO 1141 Principles of Anatomy & Physiology I with a grade of C or better AND

Approval of Department AND

Valid State of Ohio EMT Certification

BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I OR	
BIO	1141	Principles of Anatomy & Physiology I	3-4
EMS	2100	Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider	3
EMS	2105	Paramedic 1: Lecture	2
EMS	2110	Paramedic 1: Laboratory	2
EMS	2125	Paramedic 2: Lecture	5
EMS	2130	Paramedic 2: Laboratory	2
EMS	2150	Paramedic 3: Lecture	5
EMS	2155	Paramedic 3: Laboratory	2
EMS	2160	Paramedic 3: Clinical	1
EMS	2175	Paramedic 4: Lecture	2
EMS	2180	Paramedic 4: Field Experience	1
EMS	2200	Paramedic 5: Integration/Refresher Lecture	2
EMS	2205	Paramedic 5: Integration/Refresher Laboratory	1
EMS	2135	Paramedic 2: Clinical OR	
EMS	2136	Paramedic 2a: Clinical AND	
EMS	2137	Paramedic 2b: Clinical	2

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Polysomnography
Program Code: PSG.S.CRT • Credit Hours: 35-36

Description

A Polysomnographic Technologist performs overnight, daytime, or home sleep studies, polysomnograms, on people with suspected sleep disorders. They work under the general supervision of a physician or designee. The polysomnographic technologist responsibilities include, but not limited to recording and analyzing related data and report their technical findings to the physician to aid in rendering a medical decision. The foundation principles of the Polysomnography certificate are geared toward the specialties of sleep, medicine, respiratory, neurology and behavioral sciences. The program includes a non-paid, supervised practicum to provide students the "hands-on" clinical experience at an SCC affiliated healthcare facility. Requires Professional Healthcare CPR; background check; immunizations prior to END 1891 – Polysomnography Practicum.

The Polysomnography Certificate Program is pursuing initial accreditation by Commission on Accreditation of Allied Health Education Programs (CAAHEP). This step in the process is neither a status of accreditation nor a guarantee that accreditation will be granted. Once accreditation is achieved completers of the program will be eligible to sit for the credentialing exam. Completers of the program are eligible for employment prior to obtaining their credential.

Career Opportunities

Kettering Health Network, Premier and Dayton Children's hospital have all expressed the need for RPSGT prepared individuals. Average salary per year for a Polysomnographic Technician in Ohio is $55,310 as of October 30, 2019, but the range typically falls between $49,730 and $61,437. Polysomnographic Technician Salary in Ohio | Salary.com

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
END	1421	Intermediate Polysomnography	3
END	1425	Lab for Intermediate Polysomnography	0
END	1430	Advanced Polysomnography	3
END	1435	Lab for Advanced Polysomnography	0
END	1801	Seminar for Polysomnography Practicum	1
END	1891	Polysomnography Practicum	3
END	2550	Fundamentals of Polysomnography	3
END	2585	Lab for Polysomnography	0
END	2460	Neurophysiology of Electroencephalography/ Sleep Disorders	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAT	1130	Mathematics in Health Sciences OR	
MAT	1450	Introductory Statistics	3-4

Pre-Actuarial Science
Program Code: ACTU.S.CRT • Credit Hours: 30

Description

Students will complete all first and second-year technical courses required for bachelor's programs in Actuarial Science. This coursework is aligned with the recommendations of the Society of Actuaries (SOA) for students preparing to take the SOA professional qualifying exams. See soa.org for more information.

Career Opportunities

Actuaries work for insurance companies and other financial institutions that use mathematical models to quantify expected gains and losses in selling consumer financial products and in making investments. Students who complete this certificate program will be well on their way to pursuing career opportunities as actuaries, financial advisers, or statistical consultants.

ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting OR	
CIS	1111	Introduction to Problem Solving & Computer Programming OR	
MAT	2600	Applied Statistics	3
ECO	2160	Principles of Macroeconomics	3
ECO	2180	Principles of Microeconomics	3
MAT	2270	Calculus & Analytic Geometry I	5
MAT	2280	Calculus & Analytic Geometry II	5
MAT	2290	Calculus & Analytic Geometry III	5
MAT	2320	Linear Algebra	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Quality Control Technology
Program Code: QCT.S.CRT • Credit Hours: 30

Description

This certificate prepares students to apply basic quality tools to the testing and inspection of mechanical systems and to take the Certified Quality Technician exam from the American Society for Quality.

Career Opportunities

This certificate is geared both to students who desire an entry-level position in the area of mechanical inspection or to skilled workers desiring upgrade training.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
COM	2211	Effective Public Speaking	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1112	World Class Quality Systems & Procedures	3
OPT	1113	Coordinate Measurement	3
OPT	1130	Lean Operations & Continuous Improvement	3
OPT	2201	Statistical Process Control	3
OPT	2240	Six Sigma: Green Belt	3

Residential Real Estate Renovation and Resale
Program Code: RERR.S.CRT • Credit Hours: 30-31

Description

This program is designed for entrepreneurial individuals seeking to purchase, renovate, and resell residential properties. Students study business practices related to real estate and construction. Courses help develop hands-on skills applicable to residential renovation work, including carpentry, electrical, and HVAC work. Construction jobsite safety is emphasized. Graduates of this program possess skills necessary for residential real estate acquisition, renovation, and resale.

Career Opportunities

Graduates have hands-on skills applicable to residential renovation work, including carpentry, electrical, and HVAC work, along with construction jobsite safety is emphasized. Graduates possess skills necessary for residential real estate acquisition, renovation, and resale.

ACC	1100	Survey of Accounting	3
CAT	1201	Construction Methods & Materials	3
CAT	1401	Construction Estimating	3
CAT	2431	OSHA Construction Standards	2
CAT		Construction Elective	5.5 - 6.5
ENG	1131	Business Writing	3
RES	1101	Real Estate Principles	3
RES	1201	Real Estate Law	3
RES	1302	Real Estate Investment: Analysis & Financing	3
RES	1401	Real Estate Appraisal	1.5

Construction Electives

CAT 1141 Architectural Blueprint Reading

CAT 1701 Construction Craft Skills/Concrete

CAT 1721 Structural Framing Systems

CAT 1741 Residential Electrical Systems

CAT 1761 Interior & Exterior Finishes

HVA 1201 Basic HVAC Systems with Cooling

HVA 1221 Heating Systems

HVA 1241 HVA Installation Techniques & Practices

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Sports Management
Program Code: SMAN.S.CRT • Credit Hours: 33

Description
This certificate is designed to prepare students for careers in the field of sport and recreation management. Sports Management provides a solid foundation in sport related business. This certificate contains an embedded Coaching short-term certificate. Course work includes sports management, coaching, and leadership along with management, marketing, communication, business law, finance, and accounting. Students are prepared to enter a sports management profession.

Career Opportunities
Students will have the opportunity to develop knowledge and relationships that lead to employment in one of Ohio's over 1,600 fitness centers and recreational sports centers. Students will have the foundational industry knowledge and business contacts necessary to pursue internships and careers.

ACC	1100	Survey of Accounting	3
COM	2286	Public Relations Principles	3
ENG	1131	Business Writing	3
MAN	1114	Introduction to Sports Management	3
MAN	2414	Foundations of Coaching	3
MAN	2415	Foundations of Leadership	3
LAW	1101	Business Law	3
ENT	2140	Small Business Finance	3
MAN	1107	Foundations of Business	3
MAN	2144	Negotiation Techniques	3
MRK	2220	Small Business Marketing	3

Supply Chain Management
Program Code: SCMC.S.CRT • Credit Hours: 30

Description
Students gain a basic understanding of supply chain management processes to prepare them for a new position or to update the skills of those currently employed in a supply chain management (SCM) role.

Career Opportunities
SCM specialists have opportunities for management positions at all levels in virtually every type of business, throughout small and medium-sized businesses, corporations, industries, nonprofit organizations and government agencies.

BIS	1120	Introduction to Software Applications	3
COM	2225	Small Group Communication	3
ENG	1131	Business Writing	3
MAN	1106	Introduction to Radio Frequency Identification	1
MAN	1157	Management Applications of Radio Frequency Identification Technology	2
MAN	2101	Introduction to Supervision OR	
MAN	2140	Human Resource Management	3
MAN	2144	Negotiation Techniques	3
MAN	2110	Introduction to Project Management OR	
MAN	2155	Management Information Systems	3
MAN	2159	Supply Chain Management Concepts & Applications	3
MAT	1120	Business Mathematics OR	
OT36		Mathematics Elective	3
OPT	1101	Introduction to Industrial Engineering	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Surveying

Program Code: SUR.S.CRT • Credit Hours: 35

Description

Certificate develops the skills needed to become employed as technicians for surveying or civil engineering firms.

Career Opportunities

Surveying technicians assist professional surveyors in surveying for construction and land transfer activities.

CAT	1300	Introduction to CAD for Applications in Civil Engineering Technology	2
CAT	1301	Civil Construction CAD	2
CAT	1501	Fundamentals of Surveying & Mapping	3
CAT	2431	OSHA Construction Standards	2
CAT	2501	GPS & GIS for Engineering Technology Professionals	2
CAT	2531	Advanced Surveying & Mapping	4
CAT	2561	Route Surveying with Construction Applications	2
CAT	2571	NSPS Certified Survey Technician Preparation	1
CAT	2581	Legal Principles for Surveyors	3
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1200	Technical Mathematics OR	
MAT	1470	College Algebra AND	
MAT	1570	Analytic Geometry & Trigonometry OR	
MAT	1580	Precalculus	5-6
OT36		Social & Behavioral Sciences Elective	3

Tool Maker

Program Code: CAMTM.S.CRT • Credit Hours: 30

Description

This certificate in tool making provides the student with the technical and hands-on experience required by employers in both an entry and apprenticeship level. This program will provide experience in safety, advanced manual machining, drafting and design, Computer Numerical Control (CNC) and conversational programming, welding and metal joining, measurement tools and techniques, and other instruction and experience needed within this trade. This program is available to anyone and works well with the apprenticeship model or those that need to work and learn at the same time.

Career Opportunities

The Tool Maker certificate gives the student the technical skills and abilities needed by someone entering this career field either independently or as an apprentice. This program is designed to compliment a full-time apprenticeship or the student that is required to work full-time while seeking a career in the precision machining industry.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1110	Advanced Machine Operations	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
CAM	1180	Welding & Metal Joining I	3
CAM	1214	Computer Numerical Control Mill Programming	3
CAM	2114	Jig & Fixture Design	3
CAM	2145	Shop Floor Programming	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2

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Urban and Community Agriculture

Program Code: UCA.S.CRT • Credit Hours: 31

Description

The Urban and Community Agriculture Certificate will equip students with basic knowledge of plant science that is used for the growth, development, and utilization of cultivated plants. This knowledge will allow the students to propagate plants, implement sustainable landscape design, understand the science of soil, and will ultimately enable the student to operate and manage a greenhouse.

Career Opportunities

This certificate will provide the skills for growing sustainable food in urban areas and communities.

AGR	1160	Introduction to Agriculture Science	1
AGR	1201	Horticulture I	3
AGR	1202	Science of Soil	3
AGR	1203	Trees & Shrubs	3
AGR	1204	Plant Propagation	3
AGR	1205	Greenhouse Management	3
AGR	1206	Horticulture II	3
AGR	1207	Greenhouse Applications	3
AGR	1208	Sustainable Landscape Design	3
AGR	1209	Greenhouse Management Capstone	3
ENT	2140	Small Business Finance	3

Unmanned Aerial Systems

Program Code: UAS.S.CRT • Credit Hours: 31-33

Description

The Unmanned Aerial Systems One Year Technical Certificate prepares students with the foundational knowledge and skills related to Unmanned Aerial System technology, tools, and applications needed to support industry as a pilot/operator, visual observer, ancillary ground crew member, or data analyst while following applicable laws, regulations, and standards governing operations in the National Airspace System. Students may choose one of the four specialization options including Precision Agriculture, First Responders, Geographic Information Systems, or Aerial Sensing Data Analysis.

Career Opportunities

The rapid growth of the Unmanned Aerial Systems industry has created many new and expanded career opportunities for those pursuing a career in civil and commercial applications of the technology. Major opportunities exist in the areas of Precision Agriculture, First Responders, Geographic Information Systems, and Aerial Sensing Data Analysis. There is current and expanding industry demand for personnel with capabilities in Unmanned Aerial System operations, maintenance and data analysis.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1110	Private Pilot Ground School	3
AVT	2150	Crew Resource Management for UAS	1
AVT	2151	UAS Operations	3
EET	1120	Introduction to DC & AC Circuits	2
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2
ENG	1101	English Composition I	3
MAT	1470	College Algebra	3
MET	1131	Personal Computer Applications for Engineering Technology	1
		Data Analytics Pathway OR	
		First Responders Pathway OR	
		Geographic Information Pathway OR	
		Precision Agriculture Pathway	9-11

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Data Analytics Pathway

AVT	1120	Electro-Optical & Infrared Data Analysis
AVT	1121	Multispectral & Hyperspectral Data Analysis
AVT	1122	Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
AVT	1123	Acoustic & CBRNE Data Analysis
GEO	1107	Introduction to Geographic Information Systems (GIS)

First Responders Pathway

AVT	1108	UAS First Responder Applications
CJS	1101	Introduction to Criminal Justice Science
CJS	1155	Homeland Security Issues & Administration
EMS	1100	Emergency Medical Responder Lecture & Laboratory

Geographic Information Pathway

AVT	1114	Geospatial Information for UAS
CAT	1501	Fundamentals of Surveying & Mapping
GEO	1107	Introduction to Geographic Information Systems (GIS)

Precision Agriculture Pathway

AVT	1112	UAS Precision Agriculture
AGR	1160	Introduction to Agriculture Science AND
AGR	1200	Agricultural Economics AND
AGR	1300	Agronomy

UAS Entrepreneurship
Program Code: UASENT.S.CRT • Credit Hours: 33

Description

This certificate integrates technical Unmanned Aerial Systems (UAS) curriculum with business and entrepreneurship courses. There is a need in the Unmanned Aerial Systems (UAS) industry for entrepreneurial technicians who have the knowledge and skills to apply advanced technology and intellectual property (IP) in a variety of high-tech applications. Related to UAS, this includes aircraft, sensors, avionics, software, data analytics, and other advanced technologies.

Career Opportunities

There are many opportunities in the Unmanned Aerial Systems (UAS) industry, both for those seeking to develop their own business or those hired as employees of an existing firm. In either case, the application of entrepreneurial knowledge and best practices, complimented by technical knowledge, is required in a competitive UAS industry that is driven by rapid advances in technology and applications. Students completing this certificate will be prepared for success as they seek to establish and grow their own ventures or support an established organization.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	2150	Crew Resource Management for UAS	1
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2
ENG	1101	English Composition I	3
ENT	2140	Small Business Finance	3
ENT	2160	Business Plan Development	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MAT	1470	College Algebra	3
MET	1131	Personal Computer Applications for Engineering Technology	1
MRK	2220	Small Business Marketing	3

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Water Utility Technician
Program Code: WUT.S.CRT • Credit Hours: 30

Description

This certificate is designed to prepare students for the Environmental Protection Agency (EPA) certification tests in water distribution and wastewater collection as well as enhance job skills in customer service, GIS mapping, backflow prevention and safety.

Career Opportunities

Completion of this certificate will help enhance the career advancement opportunities in water distribution and wastewater collections of employees within the public sector.

BIS	1400	Customer Service	3
CAT	1431	OSHA Construction Standards 10 Hour	1
COM	2225	Small Group Communication	3
EGV		Environmental and Energy Elective	9
ENG	1101	English Composition I	3
FST	1555	Hazardous Waste Operations & Emergency Response (HAZWOPER)	3
GEO	1107	Introduction to Geographic Information Systems (GIS)	4
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1

Environmental and Energy Electives

EGV	1610	Water Distribution Systems
EGV	1630	Wastewater Collection Systems
EGV	2610	Water Supply
EGV	2630	Wastewater Treatment
EGV	2701	Environmental Engineering Technology Internship
HUM	1135	Environmental Ethics

Welding, Metal Joining, & Fabrication
Program Code: CAMWMF.S.CRT • Credit Hours: 30

Description

Based on an Industry need this certificate meets specific needs in precision Welding, Metal Joining and Fabrication techniques that will align and work in conjunction with student and industry needs. This certificate will help students already working in industry and allow others to build skills that will help with entry level employment. This certificate program contains the Welding and Metal Joining (CAMWM.S.STC) embedded certificate which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate, please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

The student successfully completing this certificate will have the necessary skills and knowledge to design, build, weld and repair in a wide variety of situations which will be an addition to current skills or allow entry into many manufacturing careers which desire non-certified welders. These careers can range from entry level to higher level positions in Machine repair, Die and Mold repair, Metal Fabrication, Tool and Die shops, general repair shops and general manufacturing.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
CAM	1180	Welding & Metal Joining I	3
CAM	1181	Welding & Metal Joining II	3
CAM	1182	Welding & Metal Joining III	3
CAM	1184	Weldability of Ferrous & Nonferrous Metals	3
CAM	2114	Jig & Fixture Design	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2

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Activity Programming
Program Code: ACP.S.STC • Credit Hours: 8

Description

Provides basic skills and knowledge for activity programming professionals who work in services for the aging population including long-term care facilities. Certificate meets the Ohio Board of Health requirement for education as activity program professional. A Modular Education Program for Activity Professionals (MEPAP) certificate of completion is awarded to the short-term certificate completers, as well as an Activity Assistant Certificate of Completion. A grade of "C" or better is required in all courses.

Career Opportunities

Facilities that serve the aging populations hire persons with Activity Director Certification, and Activity Professionals are preferred when promotions or special projects become available.

ALH	1155	MEPAP I - Activity Assistant	4
ALH	1256	MEPAP II - Activity Director	4

Additive Design Specialist
Program Code: ADS.S.STC • Credit Hours: 10

Description

This certificate will introduce students to additive design and manufacturing using 3D modeling software and 3D printers.

Career Opportunities

This certificate provides students with the basic skills needed to work as a technician in rapid prototyping using 3D design, 3D printing, and post processing

MET	1231	Introduction to Engineering Design Using 3D CAD OR	
MET	1301	SolidWorks Basics	4
MET	1401	Additive Design & Printing	3
MET	1431	Additive Manufacturing Post Process	3

Aerial Sensing Data Analytics
Program Code: UASDTA.S.STC • Credit Hours: 18

Description

The Aerial Sensing Data Analytics Short-Term Technical Certificate provides an introduction to unmanned aerial systems (UAS) technologies, applications, and regulatory and legal considerations. The program prepares students for entry level positions as analysts of aerially collected electro-optical (EO) and infrared (IR), multi- and hyperspectral (MSI/HSI), synthetic aperture radar (SAR), light detection and ranging (LiDAR), acoustic, and chemical, biological, radiological, nuclear, and explosives (CBRNE) data.

Career Opportunities

The Aerial Sensing Data Analytics Short-Term Technical Certificate will produce graduates who will serve the immediate Dayton area, broader region, and nationally. Graduates of certificate program will contribute to filling the current and growing need for data analysts that can process, interpret, present, and make decisions based on a variety of unmanned and manned aircraft collected data types. Positions exist in start-ups and existing established firms, with growth expected for the foreseeable future. The Association for Unmanned Vehicle Systems International estimates that there will be 100,000 new jobs related to unmanned aerial systems created by 2025.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1120	Electro-Optical & Infrared Data Analysis	2
AVT	1121	Multispectral & Hyperspectral Data Analysis	2
AVT	1122	Synthetic Aperture Radar & Light Detection & Ranging Data Analysis	2
AVT	1123	Acoustic & CBRNE Data Analysis	1
AVT	2150	Crew Resource Management for UAS	1
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2
GEO	1103	Introduction to Geographic Information System I AND	
GEO	1104	Introduction to Geographic Information System II OR	
GEO	1107	Introduction to Geographic Information System (GIS)	4

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Agribusiness
Program Code: AGR.S.STC • Credit Hours: 16

Description

The agribusiness short-term certificate will introduce students to the agriculture industry and prepare them for entry into the agriculture workforce. Graduates of this certificate will be skilled in the foundations of business, agriculture, agricultural economics and agronomy.

Career Opportunities

Potential employment in agriculture includes entry-level positions in the following: agricultural technician, farm operations, agronomy, agricultural finance and accounting, retail sales and licensed pest control.

AGR	1160	Introduction to Agriculture Science	1
AGR	1200	Agricultural Economics	3
AGR	1300	Agronomy	3
BIS	1120	Introduction to Software Applications	3
ENG	1101	English Composition I	3
MAN	1107	Foundations of Business	3

Aircraft Dispatcher
Program Code: ADSP.S.STC • Credit Hours: 24

Description

The Aircraft Dispatcher certificate provides students with the theory and operating knowledge necessary to understand the policies, procedures and means of compliance with the applicable Federal Aviation Regulations (FARs) leading to Federal Aviation Administration (FAA) Aircraft Dispatcher Certification. The program develops the knowledge and skills required to enter a career in the aviation industry as an aircraft dispatcher. To that end, students explore aircraft performance, meteorology, crew resource management, air traffic control, advanced navigation, airline operations and FAA knowledge, oral, and practical exams.

Career Opportunities

Career opportunities are available in airline and corporate aviation.

AVT	1105	Orientation to Aviation	2
AVT	1110	Private Pilot Ground School	3
AVT	1119	Aviation Meteorology	2
AVT	1141	Principles of Aviation Leadership	2
AVT	2146	Introduction to Airline Operations	3
AVT	2157	Aircraft Performance I	2
AVT	2158	Aircraft Performance II	2
AVT	2159	Canadair Regional Jet (CRJ) Aircraft Systems	1
AVT	2166	Practical Dispatch Applications	3
AVT	2167	Instrument Flight Rules (IFR) Navigation & Planning	2
AVT	2168	Dispatcher Oral Preparation	1
MET	1131	Personal Computer Applications for Engineering Technology	1

Airline Flight Attendant
Program Code: AFAS.S.STC • Credit Hours: 12

Description

The Airline Flight Attendant certificate provides students with the basic theory of airline travel with an understanding of the policies, procedures and means of compliance with Federal Aviation Regulations. Students explore the business of air commerce and develop the skills of a travel professional. Includes exploration of communications, safety and security, air travel, customer service, airline operations and crew resource management. This program develops the knowledge and skills required to serve as a flight attendant and to enter a career in the aviation industry.

Career Opportunities

Career opportunities are available in airline and corporate aviation.

AVT	1102	Orientation to Inflight Services	2
AVT	1148	Aircrew Emergency Management	4
AVT	1151	Crew Survival & Rescue Techniques	3
AVT	2146	Introduction to Airline Operations	3

Appalachian Studies
Program Code: HUM.S.STC • Credit Hours: 15

Description

The short-term technical certificate is designed for students who are planning on using Appalachian Studies to enhance their careers in a variety of disciplines such as: Sociology, Social Work, Education, Government, Health Care, and Public Safety (i.e., fire and police work). The student who pursues this short-term technical certificate will use the certificate to supplement their professional development.

Career Opportunities

This certificate enhances careers in Sociology, Social Work, Education, Government, Health Care, Public Safety and related fields.

HUM	1140	Appalachian Folkways	3
HUM	1141	Appalachian History & Culture	3
HUM	1142	Native American History	3
GEO	1206	Appalachian Environment	3
SOC	1108	Appalachian Families	3

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Artificial Intelligence (AI)/ Autonomous Systems

Program Code: UASAI.S.STC • Credit Hours: 23

Description

This short-term certificate in Artificial Intelligence (AI)/ Autonomous Systems, which is fully embedded within the Bachelor of Applied Science degree in Unmanned Aerial Systems, gives the student the in-depth knowledge they need to transform large amounts of data into actionable decisions. The program and its curriculum focus on how complex inputs - such as vision, sensor data, robotics, and huge databases - can be used to make decisions or enhance human capabilities. The curriculum includes coursework in aviation technology, computer science, math and statistics, robotics, computational modeling, machine learning and symbolic computation. The program includes courses from the Aviation Technology, Computer Information Systems (CIS), and Mathematics Departments.

Career Opportunities

AI / ML Scientist and Engineers rank among the top emerging jobs, their roles have grown over 650% since 2012. Job growth in the next decade is expected to outstrip growth during the previous decade, creating 11.5M jobs by 2026, according to the U.S. Bureau of Labor Statistics. Based on the assets, capabilities, and resources focused on UAS / AVT technologies, the Dayton region and the State of Ohio are in a unique position to further secure their status as a destination of choice for this expertise. The region continues to transition from automotive/heavy manufacturing to high growth industries integral to UAS / AVT including sensors, robotics, advanced data analytics and management, and advanced materials and manufacturing. The Dayton Development Coalition and the State of Ohio are dedicating significant resources to support growth related to UAS / AVT. Building upon the leadership role that Wright-Patterson Air Force Base is taking in UAS, coupled with Ohio's aviation heritage and strong aerospace industry, Sinclair's UAS program will continue to benefit the students, institution, and the region. And will further strengthen the regional capabilities related to UAS / AVT and advance their commercial integration at the local, state, and national levels.

AVT	2240	Human Factors in Aviation	3
AVT	3300	Artificial Intelligence (AI) in Aviation	3
AVT	3400	Human Sensation & Perception in Aviation	3
AVT	4215	Autonomous Systems in Aviation	3
AVT	4220	Human Autonomy Teaming in Aviation	3
CIS	2266	Python for Data Analytics	3
MAT	2215	Mathematics for Machine Learning & Artificial Intelligence	5

Automotive High Performance

Program Code: AHPC.S.STC • Credit Hours: 25

Description

This short-term certificate provides in-depth, hands-on experiences in various areas of high-performance engines, an ideal choice to supplement a degree-seeking student wishing to specialize in the engine and fuel induction areas. The program is also designed to prepare students for the ASE (Automotive Service Excellence) engine machinist series. Courses are dedicated to specific areas of engine development: engine blocks, cylinder head and valve train, assembly and dynamometer testing. Fuel systems for performance engines are covered as well.

Career Opportunities

Career opportunities are available in positions for automotive service technicians in dealerships, independent shops, motor sports businesses and automotive machine shops. In addition, graduates are also employed as service managers, parts managers, sales representatives or motor sports specialist.

Program Prerequisite(s)

AUT 1108 Automotive Engine Systems OR

AUT 1115 Automotive Engine Performance I

AUT	1108	Automotive Engine Systems	4
AUT	1115	Automotive Engine Performance I	4
AUT	2221	High Performance Engine Blocks & Heads	6
AUT	2222	High Performance Engine Assembly & Dyno Testing	6
AUT	2224	High Performance Fuel Induction Systems	5

Automotive Maintenance & Light Repair
Program Code: MLR.S.STC • Credit Hours: 14

Description

This certificate provides the skills and training needed to earn an entry-level position at an automotive maintenance repair facility. Courses included in the certificate will prepare students to pass the Automotive Service Excellence Maintenance and Light Repair Certification (ASE G1) test.

Career Opportunities

Career opportunities are available in positions for automotive maintenance technicians in dealerships, independent shops and maintenance repair facilities. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors.

AUT	1102	Introduction to Automotive Service	2
AUT	1114	Automotive Electrical/Electronic Systems I	3
AUT	1116	Automotive Steering & Suspension Systems	3
AUT	1146	Automotive Heating Ventilation & Air Conditioning Systems	3
AUT	1165	Automotive Brake Systems	3

Automotive Service Consultant and Advising
Program Code: AUTS.S.STC • Credit Hours: 4

Description

The automotive service consultant short term certificate prepares for the C1 ASE Automobile Service Consultant Certificate test and the role as a service consultant/advisor in automotive repair facility.

Career Opportunities

Students can obtain gainful employment as service consultants/advisors at automotive repair facilities. Students are encouraged to take their C1 ASE exam Automobile Service Consultant Certification test to help secure employment.

AUT	1102	Introduction to Automotive Service	2
AUT	1111	Automotive Service Consulting & Advising	2

Bakery Specialist
Program Code: BPSE.S.STC • Credit Hours: 17

Description

The Bakery Specialist short-term certificate program is designed to provide students the knowledge and skills necessary to be employed in a commercial retail bakery after completion.

Career Opportunities

A student completing this short-term certificate will be eligible for a position as a baker in retail grocery baking departments or as a baker in an independent bakery.

Program Prerequisite(s)

HMT 1107 Sanitation & Safety

HMT	1102	Kitchen Chemistry	3
HMT	1107	Sanitation & Safety	2
HMT	1108	Pastry & Confectionery Basics	4
HMT	1126	Baking I	2
HMT	1128	Baking II & Barista Basics	2
HMT	2126	Cake Production	2
HMT	2128	Cake Decoration	2

Basic Baking and Fundamentals
Program Code: BBF.S.STC • Credit Hours: 13

Description

This short-term certificate focuses on the science of baking as well as basic techniques using ingredients such as flour, leaveners, salt, sugar, dairy, fats, extracts, spices and other add-ins such as vanilla extract, chocolate chips, etc.

Career Opportunities

This certificate provides career opportunities in businesses of bakeries and tortilla manufacturing, food and beverage stores, restaurants and other eating places, pretzel shops, and the opportunity to be self-employed.

HMT	1102	Kitchen Chemistry	3
HMT	1105	Introduction to Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	1126	Baking I	2
HMT	1128	Baking II & Barista Basics	2
HMT	2201	Food Service Equipment, Design & Maintenance	2

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164   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Basic Drawing
Program Code: DRWG.S.STC • Credit Hours: 9

Description

This short-term certificate provides basic proficiency in freehand drawing. The student will draw with a variety of materials including charcoal, pastel and ink. The student will be able to render three-dimensional items on a two-dimensional surface and will be able to demonstrate proficiency in value, contour and perspective. This certificate will provide the student with a broad range of styles and historic sources for his or her work, whether the individual is a graphic designer or freelance illustrator.

Career Opportunities

The Art department strives to provide students with high quality education experiences in the visual arts, and the short-term certificate in Basic Drawing prepares students to enhance their freehand drawing skills - especially professionals working in the fields of graphic design or freelance illustration.

ART	1111	Drawing I	3
ART	1112	Drawing II	3
ART	1121	Beginning Painting I OR	
ART	2111	Intermediate Drawing I OR	
ART	2216	Life Drawing & Anatomy I OR	
ART	2221	Intermediate Painting-Observation & Concept OR	
ART	2222	Intermediate Painting - The Figure	3

Basic Preparation of Food
Program Code: BFP.S.STC   Credit Hours: 9

Description

This short-term certificate focuses on sanitation, knife skills, sauce making, food grade commercial equipment, and butchery.

Career Opportunities

This certificate provides career opportunities in the businesses of Food Trucks, Restaurants, College & University Food outlets, as well as Hospital Food outlets, Grocery Stores, etc., and the opportunity to be self-employed.

HMT	1101	Basic Culinary Skills	2
HMT	1105	Introduction to Hospitality & Tourism Industry	2
HMT	1107	Sanitation & Safety	2
HMT	2201	Food Service Equipment, Design & Maintenance	2
HMT	2207	Butchery & Fish Management	1

Basic Quality
Program Code: IBQ.S.STC • Credit Hours: 18

Description

This certificate provides the student with the basics of drafting and blueprint reading while developing AutoCAD techniques, and learning software applications that will be used throughout a career in quality. Covering various measurement techniques involving shop measuring instruments; correct use and care. Students learn the application of Geometric Dimensioning and Tolerancing (GD&T) principles along with the Coordinate Measuring Machine (CMM) which also gives the student an Industry Recognized credential from Hexagon Intelligence for PC-DMIS for CMM 111 software. Basic Quality will prepare the student and give them the skills to improve customer relations, measure products, and processes, analyze current process control and capability and define and audit the quality management system. This certificate meets the needs of a student looking to enter many areas where the needs of basic quality knowledge are required to obtain an entry-level position.

Career Opportunities

This certificate is a great opportunity for entry level employment in the quality control field or as an addition to other fields that will boost career opportunities by the addition of quality techniques. In addition the student will earn an Industry Recognized Certificate in OPT 1113 Coordinate Measurement from Hexagon Manufacturing Intelligence for "PC-DMIS for CMM 111".

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1112	World Class Quality Systems & Procedures	3
OPT	1113	Coordinate Measurement	3

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Black Studies
Program Code: AFRE.S.STC • Credit Hours: 15

Description

Designed for students who are planning on using Black Studies to enhance their careers in Social Work, Public Education, Urban Planning, etc. The student who pursues this Short-term Technical Certificate would plan to use this to supplement their professional development or to strengthen a major for which Black Studies is a strong base.

Career Opportunities

This certificate enhances careers in Social Work, Public Education, Urban Planning and related fields.

AFR	1100	African-American Studies	3
HIS	1105	African-American History	3
HIS	2215	Survey of African History	3
LIT	2234	Literature of Africa, Asia, & Latin America OR	
LIT	2236	African-American Literature	3
PSY	1160	Black Psychology	3

Business Operations Systems Support
Program Code: BOSS.S.STC • Credit Hours: 19

Description

Students completing this certificate will have the written and oral communication skills, as well as the computer skills, needed to effectively support computer operations for small, medium or large companies. These skills apply equally well to an entry-level help desk support position. Technical course work emphasizes operating systems and troubleshooting skills.

Career Opportunities

Employment opportunities in IT include entry-level positions such as help desk support, PC network technicians, IT technicians, Enterprise network technicians and Network Administrators.

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
COM	2225	Small Group Communication	3
CIS	2731	A+ Hardware & Software	4
ENG	1101	English Composition I	3
CIS	1510	Windows Client Operating System OR	
CIS	2550	Linux Operating System	3

Call Center/Customer Service
Program Code: CC.S.STC • Credit Hours: 17-19

Description

This certificate is designed for those interested in working in a customer service center, help desk, call center, or medical scheduling environment. All students will learn customer service skills and telephone techniques, as well as software applications and keyboarding. Students then choose an area of focus to strengthen industry-specific knowledge in general call center, IT help desk, health care, or medical office.

Career Opportunities

Since 2008, Sinclair has actively participated in the Dayton region's Contact Center Alliance (CCA), a group of over 50 area employers with call centers ranging from 5 to 2,000 employees. This alliance forecasts double digit growth over the next three years.

BIS	1120	Introduction to Software Applications	3
BIS	1201	Keyboarding & Document Formatting	3
BIS	1400	Customer Service	3
COM	2206	Interpersonal Communication	3
HIM	1101	Medical Terminology AND	
BIS	2180	Medical Office Simulation OR	
ALH	1102	Healthcare Practice & Medical Scribe AND	
HIM	1101	Medical Terminology AND	
MAS	1110	Administrative Medical Assisting OR	
CIS	1107	Introduction to Operating Systems AND	
CIS	1130	Network Fundamentals OR	
MAN	1107	Foundations of Business OR	
MAN	2150	Management & Organizational Behavior AND	
BIS	1230	Spreadsheet Software OR	
BIS	1260	Database Software	5-7

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CDA Preparation Certificate
Program Code: CDA.S.STC • Credit Hours: 9

Description

This certificate includes three ECE courses which serve as the preparation courses for the completion of the CDA (Childhood Development Associate) certificate. These three courses provide the required content knowledge and development of the CDA portfolio. Successful completion of these courses and passage of required on-site observation will enable students to obtain the CDA certificate through the Council of Professional Recognition (CDA Council). A grade of C or better is required in all courses.

Career Opportunities

The CDA certificate is the entry level credential required for childcare professionals. As of July 2020 the state of Ohio will require a minimum of a CDA certificate. Given the current severe shortage of qualified workers in childcare and preschool settings, the job market is very favorable.

ECE	1400	Introduction to Early Childhood Education CDA Preparation	3
ECE	1401	Introductory Child Development CDA Preparation	3
ECE	1402	Healthy & Safe Environments CDA Preparation	3

Certified Production Technician
Program Code: CPT.S.STC • Credit Hours: 8

Description

This certificate covers a wide array of skills and knowledge required in manufacturing such as safety, processes and production, measurement and quality practices, and maintenance awareness. Each of the four areas allows the student to earn a certificate for that area which leads to the Manufacturing Skill Standards Council Certified Production Technician certificate. This certificate is an Industry Recognized Certificate and is approved by the Ohio Department of Higher Education. Upon completion students will be eligible for entry-level manufacturing positions where they can demonstrate these skills and knowledge in a manufacturing setting.

Career Opportunities

Employers are actively seeking the Manufacturing Skill Standards Council (MSSC) Certified Production Technician (CPT) credential holders as people that have already shown an aptitude for manufacturing along with a desire to obtain entry level jobs. This 8 credit hour certificate may be one of the best investments in education leading to gainful employment available today.

OPT	1201	Introduction to Manufacturing Safety	2
OPT	1202	Quality Practices & Measurement for Manufacturing	2
OPT	1203	Manufacturing Processes & Production	2
OPT	1204	Maintenance Awareness for Manufacturing	2

Chemical Dependency Counseling
Program Code: CDC.S.STC • Credit Hours: 12

Description

This series of courses is designed to meet the 180 clock hours of chemical dependency specific education required by the Ohio Chemical Dependency Professionals Board to apply for licensure. It is for individuals who have previously earned or are in the process of earning at least an Associate degree in behavioral science.

Career Opportunities

According to the Department of Labor, employment of social and human service assistants is projected to grow 22 percent from 2018 to 2028, much faster than the average for all occupations.

Program Prerequisite(s)

Approval of Department

MHT	1130	Fundamentals of Addiction Counseling CDCA Preliminary	3
MHT	1236	Assessment & Diagnosis of Substance Use Disorders	3
MHT	2137	Treatment Techniques in Substance Use Disorders	3
MHT	2235	Family Dynamics of Addiction	3

Chemical Dependency Counselor Assistant (CDCA) Preliminary
Program Code: CDCA.S.STC • Credit Hours: 3

Description

This one course certificate meets the educational requirements for the CDCA: Chemical Dependency Counselor Assistant Preliminary. Within this course, the following topics will be discussed: theories and fundamentals of addictive illness and physical/mental effects of psychoactive drugs; dynamics of substance related and addictive disorders on persons, families and society; knowledge of disease concept, stigmas, identification, assessment, trends in treatment and relapse process. Students will also develop insights, challenge biases and identify personal and professional issues and will learn elements of professional/ethical behaviors.

Career Opportunities

According to the Department of Labor, employment of social and human service assistants is projected to grow 22 percent from 2018 to 2028, much faster than the average for all occupations.

MHT	1130	Fundamentals of Addiction Counseling CDCA Preliminary	3

Chemical Dependency Counselor Assistant (CDCA) Renewable
Program Code: CDCAII.S.STC • Credit Hours: 2

Description

This one course certificate meets the educational requirements for the CDCA Renewable credential with the Ohio Chemical Dependency Professionals Board. Content includes: addiction and treatment knowledge, individual and group counseling, evaluation, service coordination, documentation and professionalism.

Career Opportunities

According to the Department of Labor, employment of social and human service assistants is projected to grow 13 percent from 2018 to 2028, much faster than the average for all occupations.

MHT	2130	Fundamentals of Addiction Counseling CDCA Renewable	2

Clinical Lab Assistant
Program Code: SP.S.STC • Credit Hours: 13-14

Description

The Clinical Lab Assistant certificate prepares students for entry-level employment in the clinical laboratory setting performing specimen collection, quality assurance and other techniques fundamental to specimen processing. The program is designed to develop knowledge and understanding of medical terminology, lab rules and regulations, and universal precautions for a clinical laboratory.

Note: For students under age 18 there may be restrictions on participating in certain Health Science programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Employment opportunities exist for certificate completers in hospital laboratories, research laboratories, pharmaceutical companies and biotechnology companies.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1113	Clinical Phlebotomy	2
ALH	1114	Clinical Phlebotomy Practice	2
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I OR	
BIO	1141	Principles of Anatomy & Physiology I	3-4
CLT	1200	Introduction to Clinical Laboratory	2
CLT	1203	Lab for Introduction to Clinical Laboratory	0
HIM	1101	Medical Terminology	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent
168   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Clinical Phlebotomy
Program Code: CPST.S.STC • Credit Hours: 6

Description

This certificate is intended to provide entry-level competency to students seeking employment in the area of phlebotomy in health care settings. This certificate is also intended to provide expanded competencies and proficiencies to practicing health care professionals and students enrolled in health science programs. The students will be required to complete 105 hours of unpaid practicum during ALH 1114 Clinical Phlebotomy Practice. Students who complete this course will receive a certificate of completion.

Note: For students under age 18 there may be restrictions on participating in certain Health Science programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Completers will be able to obtain positions as phlebotomists in hospital laboratories, outpatient clinics and private medical laboratories.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1113	Clinical Phlebotomy	2
ALH	1114	Clinical Phlebotomy Practice	2

Coaching
Program Code: COA.S.STC • Credit Hours: 6

Description

The short-term certificate in Coaching is designed to provide the foundational knowledge that is essential for coaching any sport. Coaches help athletes master new skills, enjoy competing with others and develop self-esteem. The certificate includes topics in coaching and leadership, sportsmanship, coaching diverse athletes, behavior management, sport first aid, drugs in sport, and the games approach to coaching.

Career Opportunities

Students with a Coaching certificate will find career opportunities in the school and community setting including youth organizations, recreation centers, YMCAs and city parks and recreation organizations.

MAN	2414	Foundations of Coaching	3
MAN	2415	Coaching & Leadership	3

Community Health Worker
Program Code: AHCN.S.STC • Credit Hours: 25-26

Description

The Community Health Worker program curriculum is designed to prepare the student for employment as community health workers, patient navigators, and health insurance navigators. The aim of this certificate is to provide individuals with the expertise and experience in assisting individuals and communities to navigate the U.S. community health, health care and health insurance systems. The certificate offers a combination of classroom, lab and practical training that will help the student succeed in their future career. A portion of this program will involve 210 hours of non-paid practice at various facilities. A State and Federal Background check will be required prior to starting the clinical practice. The program is Ohio Board of Nursing (OBN) approved and those who complete the program may become registered through OBN.

Career Opportunities

Community Health Workers will be educated to obtain the expertise and experience in assisting individuals and communities to navigate the U.S. community health, health care, and health insurance systems, as well as to improve the equality and cultural competence of service delivery and accomplish personal prevention and health care goals.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1102	Basic Healthcare Practices & Medical Scribe OR	
ALH	1120	Nurse Aide Training	3-4
ALH	1250	Health Science Practicum	3
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
PSY	1100	General Psychology	3
PSY	2200	Lifespan Human Development	3

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Computed Tomography
Program Code: CT.S.STC • Credit Hours: 5

Description
This short-term certificate in Computed Tomography (CT) is designed to provide radiographers certified by the American Registry of Radiologic Technologists (ARRT) with didactic and clinical education in computed tomography. Didactic courses focus on CT principles while clinical courses provide students with real-life experience and development of hands-on skills needed to pursue employment in computed tomography.

Career Opportunities
Completion of this short-term certificate program can lead to employment in comprehensive hospitals, suburban or rural outpatient centers, surgery centers, etc. as a Computed Tomography Technologist.

Program Prerequisite(s)
Approval of Department

RAT	2640	Computed Tomography Practicum	1
RAT	2640	Computed Tomography Practicum	1
RAT	2641	Principles of Computed Tomography	3

Computer Aided Manufacturing Basic Machining Skills
Program Code: CAMBMS.S.STC • Credit Hours: 12

Description
This short term certificate (STC) is designed to enhance the machining skills of students who have taken machining courses in high school or to allow individuals with little or no experience in machining to quickly obtain a certificate which may in turn qualify them for an entry level position in a machining company. Course work is focused on introductory levels of manual machining and basic operation of CNC machines. This STC is the first half of the Computer Numerical Control Technology short term certificate and will provide students with a milestone of completion and the ability to continue their education up to and including a two year Associate of Applied Science degree in CNC operations.

Career Opportunities
Students who complete this certificate will become eligible for employment at an introductory level in the high tech field of machining. All courses contained within this certificate may be applied towards a degree in CNC operation; a high demand, high paying field.

CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2

Computer Aided Manufacturing Precision Machining
Program Code: CAMPM.S.STC • Credit Hours: 18

Description
This certificate is designed to provide basic precision machining skills to workers entering the field of manual machining. It is the first half of the Advanced Precision Machining Certificate and is provided for students who are wishing to enter the workforce with the minimum skill level required to become an effective machinist. All courses in this short-term certificate will lead to an AAS degree in Computer Aided Manufacturing Precision Machining. Course work focuses on basic machining skills necessary to operate manual lathes, mills, and grinders.

Career Opportunities
Prepares individuals for entry level positions in precision machining (manual lathes, mills, grinders).

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1110	Advanced Machine Operations	3
CAM	1111	Advanced Machine Operations II	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2

Computer Numerical Control Technology
Program Code: CNC.S.STC • Credit Hours: 24

Description
The Computer Numerical Control (CNC) Technology short-term certificate program is designed for individuals who are looking to upgrade their current manufacturing skills along with students who are interested in pursuing entry-level careers in the area of CNC machining. Coursework is focused primarily in the area of CNC lathe and mill operation, setup and programming. The courses included in this short-term certificate apply directly to the associate degree in Computer Aided Manufacturing, CNC Technology option.

Career Opportunities
Prepares individuals for basic entry level jobs in CNC manufacturing.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1116	Fundamentals of Computer Numerical Control Operations	3
CAM	1214	Computer Numerical Control Mill Programming	3
CAM	2145	Shop Floor Programming	3
CAM	2204	Computer Numerical Control Lathe Programming	3
MAT	1110	Math for Technologists	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1100	Tooling & Machining Metrology	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Construction Administration
Program Code: CADM.S.STC • Credit Hours: 14

Description

This program is designed for experienced construction industry personnel to improve their construction administration skills. Students will receive training to help them understand construction from an administrative perspective, including an understanding of various project delivery methods, contractual obligations and responsibilities, the financial aspects of construction, change management, and the skills necessary to deal with the diverse population of the industry. Upon completing this program, personnel will be qualified to move into construction administration positions in the industry.

Career Opportunities

Upon completing this program, craftspeople will be qualified to move into construction administration positions within the construction industry.

CAT	2411	Architectural Practice, Codes & Laws	3
CAT	2401	Engineering Technology Project Management	3
CAT	2610	Stakeholders & Participants for Design & Construction Projects	2
CAT	2620	Construction Documents, Legal Requirements, & Project Delivery	2
CAT	2630	Architectural Practice Project Deliverables & Contractual Obligations	2
CAT	2640	Construction Project Change Management	2

Construction Supervisor
Program Code: CNTS.S.STC • Credit Hours: 25

Description

This program is designed for experienced craftspeople of the construction industry to improve their supervisory and leadership skills. Students will receive training to help them understand the building construction industry from a management perspective, including an understanding of building materials and components, the financial aspects of building construction and the management skills necessary to deal with the diverse population of the industry. Heavy emphasis will be placed on safety. Upon completing this program, craftspeople will be qualified to move into management positions in the construction industry.

Career Opportunities

Upon completing this program, craftspeople will be qualified to move into management positions within the construction industry.

CAT	1111	Mechanical Systems Blueprint Reading	1
CAT	1141	Architectural Blueprint Reading	2
CAT	1161	Introduction to Civil & Architectural Technology	2
CAT	1201	Construction Methods & Materials	3
CAT	1211	Construction Materials Testing	2
CAT	1401	Construction Estimating	3
CAT	2401	Engineering Technology Project Management	3
CAT	2411	Architectural Practice, Codes & Laws	3
CAT	2431	OSHA Construction Standards	2
CAT	2435	Construction Credentials	1
COM	2206	Interpersonal Communication	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Construction Technician
Program Code: CNTC.S.STC • Credit Hours: 19-21

Description

The purpose of this certificate is to develop knowledgeable construction workers with basic skills in construction. With a combination of classroom education, practical lab exercises and co-op internships, students will exit this certificate program with a solid introduction into carpentry, concrete finishing and residential electrical systems.

Career Opportunities

Entry-level construction workers are in continuous demand for residential and commercial construction.

CAT	1701	Construction Craft Skills/Concrete OR	
CAT	1810	Construction Techniques I (NCCER Core)	3-4
CAT	1721	Structural Framing Systems OR	
CAT	1820	Construction Techniques II (NCCER Level 1)	3-4
CAT	1741	Residential Electrical Systems OR	
CAT	1830	Construction Techniques III (NCCER Level 2)	3
CAT	1761	Interior & Exterior Finishes OR	
CAT	1840	Construction Techniques IV (NCCER Level 3)	3
CAT	1781	Construction Project	4
CAT	2702	Construction Management Technology Internship OR	
CAT	2431	OSHA Construction Standards	2
CAT	2435	Construction Credentials	1

Continuous Process Improvement
Program Code: CTIM.S.STC • Credit Hours: 12

Description

This short-term certificate promotes technical communication skills and teamwork, project management skills, lean manufacturing and continuous improvement skills, application of quality principles, statistics and probability theories, and problem-solving skills as they relate to process improvement. This program reflects the underlying skills necessary for the successful application of six sigma methodologies and provides practice in measuring and improving processes that suffer from quality, throughput, and waste problems. The courses in this short-term certificate apply directly to the Industrial & Systems Engineering Technology (OPTIO.S.AAS) degree.

Career Opportunities

This program reflects the underlying skills necessary for the successful application of six sigma and lean methodologies. A typical title for an employee with these skills is Process Improvement Specialist.

OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1130	Lean Operations & Continuous Improvement	3
OPT	2201	Statistical Process Control	3
OPT	2240	Six Sigma: Green Belt	3

Corrections Officer
Program Code: CJCO.S.STC • Credit Hours: 24

Description

This certificate is designed to provide the student with the basic skills necessary for entry-level employment as a corrections officer. All courses can be applied to the Associate of Applied Science Degree in Corrections.

Career Opportunities

The Corrections Officer Certificate will prepare students for a broad range of careers in local and state correctional facilities in addition to private prison corporations.

BIS	1120	Introduction to Software Applications	3
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1105	Criminal Law	3
CJS	1110	Interrogation, Documentation & Testimony	3
CJS	1165	Corrections OR	
CJS	1197	Corrections Full Service Jails/Basic Correction Officer Academy	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3
CJS	2200	Human Relations, Mediation, & Conflict Resolution	3
ENG	1101	English Composition I	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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172   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

CPA Exam Eligibility: Accounting Component
Program Code: CPAACC.S.STC • Credit Hours: 24

Description

In order to be eligible to sit for the CPA examination in the state of Ohio, a candidate must have 24 semester hours of business courses plus 30 semester hours of accounting courses. This certificate is designed for the student to obtain the accounting courses to sit for the CPA exam. It will provide the pathway for a student who has earned a business bachelor's degree to transition to a career in accounting. If a student has a non-business bachelor's degree, they will also need to complete the CPA Exam Eligibility: Business Component certificate.

Career Opportunities

Employment opportunities in addition to accounting firms, exist in private business and industry as well as not-for profit and governmental organizations. Positions available to graduates include staff accountant, cost accountant, payroll accountant, auditor, tax accountant and financial analyst.

ACC	1510	Computerized Accounting Systems	3
ACC	2101	Intermediate Accounting I	3
ACC	2102	Intermediate Accounting II	3
ACC	2211	Cost Accounting	3
ACC	2212	Managerial Accounting & Finance	3
ACC	2321	Federal Taxation	3
ACC	2435	Auditing	3
ACC	2322	Advanced Taxation OR	
ACC	2510	Advanced Accounting	3

C-Print Captioning
Program Code: CPC.S.STC • Credit Hours: 23

Description

The C-Print Captioning Certificate is designed to prepare students for a position as a captionist in the workforce. The skills obtained will train students to provide accessible communication services to individuals with hearing loss or communication barriers. A field experience is required.

Career Opportunities

Positions available to graduates include independent contractor and/or staff positions.

ASL	1101	Orientation to Deafness	3
ASL	1102	Interpreting Theory & Best Practices	3
ASL	1111	Beginning American Sign Language I	3
ASL	1112	Beginning American Sign Language II	3
ASL	2401	C-Print Captioning	3
ASL	2402	Field Placement	2
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3

Data & Information Management
Program Code: DIM.S.STC • Credit Hours: 18

Description

Business analytics is expanding across industries as data is being used to inform business decisions. Students will learn to use various software applications to extract, prepare and visualize data to make business decisions.

Career Opportunities

Prepares students for entry-level business analytics positions requiring knowledge, setup, and usage of business intelligence and business solutions.

BIS	1120	Introduction to Software Applications	3
BIS	1230	Spreadsheet Software	3
BIS	1260	Database Software	3
BIS	1600	Data Management & Visualization	3
CIS	2265	Data Visualization with Tableau	3
MRK	2135	Digital Marketing	3

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Data Fundamentals
Program Code: DF.S.STC • Credit Hours: 22

Description

This short term certificate provides the fundamental skills needed to prepare the IT professional for careers in data analytics. Students will have the ability to mine, organize, analyze, and visualize data in a way that is meaningful to organizations. All courses in this short-term certificate apply to the Data Analytics degree.

Career Opportunities

Opportunities include positions such as Data Engineer, Data Analyst, Business Intelligence Analyst, Data Manager, Visualization Analyst and Business Systems Analyst.

CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	2165	Database Management	3
CIS	2265	Data Visualization with Tableau	3
CIS	2266	Python for Data Analytics	3
CIS	2268	Structured Query Language (SQL) Programming	3
CIS	2269	Data Analytics Theory & Solutions	3
MAT	2170	Business Statistics I	4

Data Literacy Foundation
Program Code: DL.S.STC • Credit Hours: 29

Description

This certificate will prepare students to work in a business setting and assist a data technician or data scientist with data management. Students will learn how to collect, interpret, analyze, and turn raw data into meaningful, actionable insights. Students will gain the programming, math, visualization, and technical skills needed to solve specific problems and challenges within an organization. A data literate person has the ability to read, work with, analyze, and argue with data.

Career Opportunities

Include the following: Data Analyst, Business Analyst, Data Analytics Manager, Business Intelligence Analyst and Data Mining Specialist.

BIS	1120	Introduction to Software Applications	3
BIS	1600	Data Management & Visualization	3
CIS	1160	Introduction to Data Literacy	3
CIS	2165	Database Management	3
CIS	2265	Data Visualization with Tableau	3
CIS	2266	Python for Data Analytics	3
CIS	2267	Advanced Python for Data Analytics	3
CIS	2268	Structured Query Language (SQL) Programming	3
MAT	1455	Introduction to Data Science	5

Dental Assisting
Program Code: DAS.S.STC • Credit Hours: 17
Description

The student will be introduced to the fundamentals of working in a dental office as a chair-side dental assistant. Concepts and techniques of basic equipment, four-handed dentistry, oral evacuation, instrument identification, and proper use are discussed. Introduction to dental specialties are discussed. Oral examination, charting, medical and dental histories, sterilization, lab, and infection control procedures are emphasized. You are encouraged to complete Cardiopulmonary Resuscitation for the Health Care Provider (or ALH 1130 Basic Life Support Training for the Heathcare Provider) prior to entry to the Dental Assisting program. However, you can take it the first semester. Note: ALH 1130 will be waived for anyone with proof of American Heart Association Healthcare Provider Basic Life Support, see Academic Advising. Upon completion of this short-term certificate the graduate will be eligible to sit for the Ohio CDA examination.

Career Opportunities

Career options may vary according to state practice act restrictions. Dental assistants have a variety of career opportunities in a wide range of employment settings, including private practice, specialty practice, hospitals, HMOs, community health programs, school systems, dental product research, military bases, and secondary education settings.

Program Prerequisite(s)

ALH 1130 Basic Life Support Training for Healthcare Provider AND

Approval of Department AND

GPA of 2.0 or Higher AND

Completion of SCC Distance Learning Course AND

Completed Program Application

ALH	1130	Basic Life Support Training for Healthcare Provider	1
COM	2206	Interpersonal Communication	3
DAS	1102	Introduction to Dental Assisting Terminology	1
DAS	1104	Dental Assisting Techniques & Materials I	4
DAS	1105	Lab Dental Assisting Techniques & Materials I	0
DAS	1204	Dental Assisting Techniques & Materials II	4
DAS	1205	Lab Dental Assisting Techniques & Materials II	0
DAS	1108	Dental Assisting Office Management	2
DAS	1206	Dental Assisting Radiography	2
DAS	1207	Lab Dental Assisting Radiography	0

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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174   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Design Processes
Program Code: VISDP.S.STC • Credit Hours: 16

Description
This certificate provides an introduction to the design process including hand sketching, development of thumbnails, digital illustration and imaging, page layout; and, composition techniques to support a variety of entry-level design positions. Students will be exposed to the latest version of the Adobe products.

Career Opportunities
Students will be able to obtain entry-level positions in the field of print/graphic design.

VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1208	Typography	4
VIS	1250	Print Production	4

Dietary Manager
Program Code: DMST.S.STC • Credit Hours: 17-22

Description
Graduates of the Dietary Manager (DM) Program are trained foodservice professionals in health care delivery systems. They understand basic nutritional needs of clients and work in partnership with dietitians, who offer specialized nutritional expertise. Approved by the Association of Nutrition and Food Professionals (ANFP), the curriculum includes 12 semester credit hours of classroom instruction, 2 semester credit hours of food lab instruction, and 200 hours of management and clinical directed practice coordinated by a Registered Dietitian Nutritionist (RDN). A minimum of 25 clinical directed practice hours are directly supervised by a RDN. Students are required to complete these field experiences at area community, foodservice and health care facilities. The program offers two tracks; one for students pursuing careers in Nutrition and Dietetics, and another track for students pursuing careers in Hospitality Management & Tourism. Both tracks are designed to be completed in two (2) part-time consecutive terms. As an integral member of the health care and foodservice management teams, dietary managers are responsible for maintaining cost/profit objectives, purchasing goods and services for the department and supervising staff. Students of Sinclair's Dietary Manager Program are eligible to become pre-professional members of the Association of Nutrition & Foodservice Professionals (ANFP), a nationally recognized organization that can be reached at PO Box 3610, St. Charles, IL 60174, 1-800-323-1908, www.anfponline.org This specially designed program enables students to enjoy benefits of ANFP membership while attending school. Graduates are eligible for professional ANFP membership. Benefits include networking, professional growth, educational enrichment, and developing leadership skills. Completion of the DM Program and successfully passing a national credentialing exam will enable graduates to become Certified Dietary Managers, Certified Food Protection Professionals (CDM, CFPPs) in accordance with the Certifying Board for Dietary Managers at https://www.cbdmonline.org/. The DM Program is fully approved by the Association of Nutrition and Foodservice Professionals (ANFP). Students must pass all DM certificate program courses with a "C" or better.

Career Opportunities
Graduates of Sinclair's Dietary Manager program can find employment in dietary departments in hospitals, long-term care facilities, day care centers, school foodservice systems, correctional institutions and other noncommercial foodservice settings. Dietary managers may work as food service directors, assistant foodservice directors, supervisors, clinical care professionals, multi-department managers, high-level administrators in large service organizations, consultants or entrepreneurs.

HMT	1107	Sanitation & Safety	2
DIT	2180	Medical Nutrition Therapy for Dietary Managers OR	
DIT	2625	Medical Nutrition Therapy I	3
DIT	2101	Eating Matters for Dining Assistants AND	
DIT	2190	Dietary Managers Nutrition Clinical OR	
DIT	2630	Medical Nutrition Therapy Clinical I	3
DIT	2510	Institutional Foodservice Systems AND	
DIT	2515	Foodservice Practicum I AND	
DIT	2520	Laboratory for Foodservice Systems AND	
DIT	2735	Foodservice Organization & Management AND	
DIT	2740	Foodservice Practicum II OR	
HMT	1105	Introduction to the Hospitality & Tourism Industry AND	
HMT	1110	Menu Planning & Table Service Practicum AND	
HMT	2201	Food Service Equipment, Design & Maintenance AND	
HMT	2225	Hospitality & Tourism Supervision AND	
HMT	2226	Hospitality Purchasing & Negotiations AND	
HMT	2292	Culinary Arts Option Cooperative Work Experience	9 - 14

Digital Design
Program Code: VISDD.S.STC • Credit Hours: 20

Description
This certificate provides an introduction to the digital design process and digital applications that are used by designers to create interactive media. Specifically, students will learn the basics of design principles and layouts for interactive media, including web development, 2D animation, video, media optimization and file management to provide support in a variety of entry-level design positions. Students will be exposed to the latest version of the Adobe products.

Career Opportunities
Students will be able to obtain entry-level positions in the field of digital/interactive design.

VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1208	Typography	4
VIS	1218	Web Design	4
VIS	2160	Design Applications II	4

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Digital Marketing Analytics
Program Code: DMA.S.STC • Credit Hours: 12

Description

The Digital Marketing Analytics Short-Term Certificate is designed to introduce, develop and reinforce basic digital marketing analytics skills and technical applications. Graduates learn how to monitor digital campaigns, collect metrics, and report findings using Google Analytics and other industry-relevant digital analysis applications. The ten-year occupational outlook for digital marketing specialists shows an anticipated 24% growth potential. All courses in this certificate can be applied to the Associate of Applied Science in Digital Marketing.

Career Opportunities

Students obtaining the Digital Marketing Analytics Certificate will be able to work in any size organization that is using digital marketing and social media marketing. The certificate is not only for individuals that are new to the field of marketing, but to those individuals that are already working in the field, and want to update their skill set to include digital marketing analytics.

MRK	2135	Digital Marketing	3
MRK	2230	Social Media & Consumer Engagement	3
MRK	2250	Digital Marketing Analytics	3
MRK	2100	Foundations of Marketing OR	
MRK	2101	Principles of Marketing Management	3

Digital Systems
Program Code: DS.S.STC • Credit Hours: 13

Description

This short-term certificate offers knowledge and basic skills to work in the electronics industry as an entry-level support technician for digital systems. Courses provide knowledge about basic electrical measurement techniques, prototype assembly of electrical circuits, digital logic, Boolean algebra and basic digital systems. Theoretical aspects are supported and supplemented by hands-on lab work to gain in-depth knowledge and lab skills. The courses in this certificate lead into an associate degree in Electronics Engineering Technology at Sinclair.

Career Opportunities

Provides opportunity to work as a support technician in the digital electronic field.

EET	1150	DC Circuits	4
EET	2261	Microprocessors	4
EET	1131	Digital Electronics	5

Dining Assistant
Program Code: DAST.S.STC • Credit Hours: 1

Description

The Dining Assistant Program is a State of Ohio approved training course which provides practical skill development in feeding techniques and working with populations with self-feeding difficulties with a focus on the elderly. The program is designed to ensure that Dining Assistants have a basic understanding of the nutritional needs of long term care residents, communications and interactions involving the residents and staff, as well as behavior challenges and safety procedures involving residents.

Career Opportunities

Students successfully completing the Dining Assistant short term certificate program will be eligible to apply for feeding assistant positions within the nutrition departments of long term care facilities in the state of Ohio.

DIT	2101	Eating Matters for Dining Assistants	1

East Asian Studies
Program Code: EAS.S.STC • Credit Hours: 17

Description

This short-term East Asian Studies Certificate is an interdisciplinary program consisting of five courses on East Asian history, language, culture, and business in the global context. The program is designed to provide students with in-depth study and training in the listed areas to complement their major field of study. The program prepares students for multiple academic and career paths with useful skills and worldly perspectives.

Career Opportunities

Upon completion of the East Asian Studies certificate program, students will gain proficiency in East Asian history and Chinese or Japanese language with intercultural and international business skills. Students will be able to pursue careers in the following capacities: Employment in multicultural and international corporations, Work at a local company related to East Asia like Fuyao Inc. or Honda Inc., be part of the foreign services, military service, judicial system, or in language translation, work as a consultant in fields like international politics, financial advisor for Asian markets, international marketing specialist, teaching at schools or universities or become a politician or a community leader.

CHN	1101	Elementary Chinese I AND	
CHN	1102	Elementary Chinese II OR	
JPN	1101	Elementary Japanese I AND	
JPN	1102	Elementary Japanese II	8
COM	2245	Intercultural Communication	3
HIS	2217	Survey of East Asian History	3
MAN	1110	International Business	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Electrocardiography
Program Code: ELST.S.STC • Credit Hours: 3

Description

This program is intended to provide expanded skills among health care professionals as well as current Life & Health Sciences students to increase marketability for employment. The students will be required to complete 25 hours of unpaid clinical during ALH 1110 Principles of Electrocardiography. Students who complete this program will receive a Short-Term Technical Certificate in Electrocardiography.

Career Opportunities

Electrocardiography Technician.

ALH	1110	Principles of Electrocardiography	3

Emergency Medical Responder
Program Code: EMR.S.STC • Credit Hours: 2

Description

Emergency Medical Responders (EMR's) are personnel, typically not found within the healthcare setting, who as part of their job have to care for the sick and injured before an ambulance arrives. These individuals are educated to stabilize patients using very limited amounts of medical equipment. Police officers, safety officers, and others who would be expected to arrive at the scene of an injury or illness before the ambulance could benefit from this education. Students will use lecture and laboratory environments to learn the skills needed to care for patients. For more information, contact the EMS department at (937) 512-5338 for an entrance application packet.

Accreditation

This program is accredited by the Ohio Department of Public Safety, Division of Emergency Medical Services. Graduates of this program are eligible to take the National Registry of Emergency Medical Technicians EMR examination. Contact the EMS office at Sinclair Community College for additional information about accreditation or national testing.

Career Opportunities

EMRs education can be used as within firefighting, police or safety officer roles. Most companies/departments will not hire a person who is solely an EMR. The purpose of this education is to augment the skills of those who may need to care for the sick and injured before the ambulance arrives.

EMS	1100	Emergency Medical Responder Lecture & Laboratory	2

Emergency Medical Technician
Program Code: EBST.S.STC • Credit Hours: 7

Description

Emergency Medical Technicians (EMTs) are essential members of the health care team who provide time sensitive care to patients. These individuals take the emergency department to people's homes, to highways and to other remote locations. EMTs bring life-saving equipment and knowledge to bear in an effort to reduce patient's suffering and to save lives. Students will use lecture, laboratory and real world exposure to emergencies to learn the skills needed to care for the sick and injured in the out-of-hospital environment. The program is offered to provide students with variability and flexibility in scheduling. For more information, contact the EMS department at 937-512-5338 for an entrance application packet.

Career Opportunities

Within the greater Miami Valley area, EMS professionals are hired by fire departments, private EMS and hospitals. These agencies typically hire entry personnel based on the candidates state licensures/certifications - not whether the candidate is degreed. When local departments are hiring full-time employees, many of them are looking for paramedic/firefighters.

EMS	1150	Emergency Medical Technician: Lecture	5
EMS	1155	Laboratory for Emergency Medical Technician	2

Energy and Sustainability Technician
Program Code: EST.S.STC • Credit Hours: 8

Description

This short-term certificate is intended for students who are interested in an entry-level position in the energy and sustainability technician field. The student will have the opportunity to earn their OSHA-10 card and have the potential to sit for the LEED Green Associate exam and Building Analyst exam by the Building Performance Institute (BPI).

Career Opportunities

Career opportunities for students completing this short-term certificate include entry-level building positions as laborers, technicians, installers, operators, inspectors, and data collectors.

CAT	1431	OSHA Construction Standards 10 Hour	1
EGV	1401	Weatherization & Building Performance Training	3
EGV	2351	LEED Green Associate Exam Preparation	2
EGV	2700	Energy Management Technology Internship	2

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SINCLAIR COLLEGE

Exercise Specialist
Program Code: ESS.S.STC • Credit Hours: 29

Description
The Exercise Specialist certificate is designed to provide necessary knowledge and skills for employment in the fitness and exercise industry. Students acquire knowledge and skills in exercise science with the goal of being able to administer basic fitness assessments and health risk appraisals. Additionally, students acquire current information on exercise, nutrition and wellness and prepare to sit for and successfully pass a national certification exam. Students must pass all ENS courses with a grade of "C" or better.

Career Opportunities
Students completing the certificate program will find careers in many types of fitness centers (YMCA, Recreation Centers, local fitness facilities and corporate fitness) and will be employed as fitness staff, personal trainers and group fitness instructors.

ALH	1132	Heartsaver First Aid, CPR & AED	1
BIO	1121	Human Anatomy & Physiology I	3
COM	2211	Effective Public Speaking	3
DIT	1111	Nutrition for Health & Fitness	3
ENG	1101	English Composition I	3
ENS	1116	Introduction to Exercise Science & Health Promotion	3
ENS	1118	Lifetime Physical Fitness & Wellness	3
ENS	2317	Methods of Teaching Lab	1
ENS	2318	Fitness Assessment & Exercise Prescription	3
ENS	2416	Certification Preparatory Course	3
ENS	2417	Methods of Teaching	3

Expanded Functions for Dental Auxiliaries
Program Code: EFDA.S.STC • Credit Hours: 13

Description
The Expanded Functions Dental Auxiliary (EFDA) Certificate is designed to prepare graduates for positions in private practice dental offices, dental clinics, federal, state and municipal health facilities. The Ohio State Dental Board allows Certified Dental Assistants and Registered Dental Hygienists to enroll in this training. Emphasis is placed on sealants, amalgam restorations, composite restorations and temporary restorations. Students will receive instruction and hands-on experience in restorative dentistry as it relates to expanded functions in Ohio. Once the training is complete, the student must take a state written and practical exam to demonstrate proficiency in placement of dental restorations.

Career Opportunities
The Expanded Functions Dental Auxiliary Profession offers opportunities with excellent income and flexible scheduling. While most EFDAs work in general and specialty dental offices, alternative career opportunities are available. These include public health departments, community programs and clinics, teaching institutions, consumer advocate and consulting.

Program Prerequisite(s)
Approval of Department

EFD	1102	Dental Anatomy for Dental Auxiliaries	1
EFD	1202	Expanded Functions for Dental Auxiliaries I	6
EFD	1203	Lab for Expanded Functions for Dental Auxiliaries I	0
EFD	1302	Expanded Functions for Dental Auxiliaries II	6
EFD	1303	Lab for Expanded Functions for Dental Auxiliaries II	0

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178   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

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Family Advocate
Program Code: FAMA.S.STC • Credit Hours: 18

Description
A short-term certificate competency based, task-specific training for Head Start Family Specialists, Family Service Specialists and Family Workers whose job it is to provide the support services which are needed by families to enhance the quality of their family life. Courses in this curriculum will focus on achieving proficiency in the following areas: social work core knowledge, values, skills; social work ethics and theory, interviewing and documentation; group/organization and micro-level methodologies; collaboration and advocacy; understanding family dynamics, barriers to self-sufficiency, conflict resolution, cultural and social diversity issues, the relationship between social problems and institutional responses; aid in the development of beginning computer skills.

Career Opportunities
This certificate enhances career opportunities in agencies and organizations that provide a wide variety of social services.

COM	2206	Interpersonal Communication	3
SOC	1101	Introduction to Sociology	3
SOC	1115	Sociology of Marriage & Family	3
SWK	1206	Introduction to Social Work	3
SWK	1213	Introduction to Social Welfare	3
SWK	2207	Anti-Oppressive Social Work	3

Fast Track Programming
Program Code: FTPA1.S.STC • Credit Hours: 19

Description
This certificate assures that individuals are equipped with current software development skills. It is intended either for experienced programmers looking to update their skill set or for people wishing to make a career change into the Information Technology field. The certificate focuses on the latest software development languages and approaches, object-oriented concepts and database theory.

Career Opportunities
Employment opportunities in IT include entry-level positions such as software developers, web developers, help desk analysts, network administrators, user support specialists, network security analysts, and network engineers.

CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1140	Information Systems Analysis & Design	3
CIS	1202	C++ Software Development I OR	
CIS	2266	Python for Data Analysis OR	
CIS	2207	Data Structures & Algorithms	3
CIS	2165	Database Management	3
CIS	2212	Java Software Development I	3
CIS	2217	Java Software Development II	4

Fire Department Company Officer
Program Code: FCO.S.STC • Credit Hours: 5

Description
Develop management, supervision and leadership skills that company-grade officers need to manage and command multi-company fire situations. This certificate meets the objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications Level II.

Accreditation
Fire Officer I and II are accredited by the National Board on Professional Firefighter Qualifications Board.

Program Prerequisite(s)
Approval of Department AND

Certified Ohio Firefighter AND

At least three years active duty experience.

FST	2251	Fire Officer I	3
FST	2252	Fire Officer II	2

Fire Department Executive Officer
Program Code: FEO.S.STC • Credit Hours: 6

Description
Develop management, supervision and leadership skills required by upper-level executive-grade officers. These skills are needed to effectively manage fire protection and emergency services in today's complex fire service environment and command complex multi-company and multi-jurisdictional emergency incidents. This certificate meets objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications Levels III and IV.

Program Prerequisite(s)
Approval of Department

FST	2253	Fire Officer III	3
FST	2254	Fire Officer IV	3

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Firefighter EMT
Program Code: FEMT.S.STC • Credit Hours: 19

Description

This program provides training as outlined by the Ohio Division of Emergency Medical Services (state accrediting body) for Firefighter I, Firefighter II and Emergency Medical Technician. Sinclair Community College complies with all requirements as outlined by the Ohio Division of Emergency Medical Services. Successful students will be eligible to sit for state certification testing and eventually be eligible to become licensed/certified as a Firefighter I, Firefighter II, and EMT.

Accreditation

Fire Officer I and II are accredited by the National Board on Professional Firefighter Qualifications Board.

Career Opportunities

Students completing this program will find career opportunities in fire departments, private EMS agencies, and hospitals.

Program Prerequisite(s)

Approval of Department

EMS	1150	Emergency Medical Technician: Lecture	5
EMS	1155	Laboratory for Emergency Medical Technician	2
FST	1102	Firefighter I AND	
FST	1103	Firefighter II Transition AND	
FST	1442	Emergency Vehicle Operator OR	
FST	1104	Firefighter II AND	
FST	1442	Emergency Vehicle Operator	12

Food Truck and Street Foods
Program Code: FTSF.S.STC • Credit Hours: 15

Description

Food Trucks and Street Foods have moved into the epicurean spot light in recent years and have moved from the fad stage into the newest and hottest food trend sweeping across America and beyond. In this short-term certificate students will learn how to set-up and design a food truck operation as well as the requirements for food booths and mobile food stations.

Career Opportunities

Street Food & Food Trucks are ready-to-eat food or drink sold by a vendor, in a street or other public place, such as at a market or fair. It is often sold from a portable food booth, food cart, or food truck and meant for immediate consumption. Students will learn all the steps to creating a profitable operation of a street foods meals.

Program Prerequisite(s)

HMT	*1101*	*Basic Culinary Skills AND*
HMT	*1107*	*Sanitation & Safety*

HMT	1101	Basic Culinary Skills	2
HMT	1107	Sanitation & Safety	2
HMT	1112	Food Principles & Basic Preparation	4
HMT	1129	Restaurant Desserts	3
HMT	2203	Street Foods & Food Trucks	4

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180   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

General Aviation Maintenance
Program Code: GAM.S.STC • Credit Hours: 24

Description
The General Aviation Maintenance certificate provides the knowledge and skills required by the Federal Aviation Administration (FAA) for the airframe and powerplant maintenance technician student. Students will learn to apply mathematics and physics, read and interpret aircraft drawings, conduct ground operations and servicing of aircraft, interpret maintenance publications, interpret FAA regulations, make correct and legal aircraft record entries, perform weight and balance calculations, understand basic electricity, understand makeup of materials used in aircraft manufacture, understand aircraft fasteners, inspect welds, inspect for aircraft deterioration (corrosion) and understand and perform aircraft repair methods.

Career Opportunities
Boeing Commercial Aircraft Company recently predicted 1,000,000 more jobs in aviation in the next 15 years. Airbus of Europe has predicted about 800,000 more jobs in the next 15-20 years. Both predictions are based on anticipated growth in aircraft production and flying passengers. Many mechanics will reach retirement age in the next three years as a result of an interruption of current certificates issued by the FAA. More jet aircraft means more need for mechanics. The general aviation sector already has a shortage of certificated mechanics.

AVT	1113	Drawings for Aviation	3
AVT	1116	Regulations for Maintenance	3
AVT	1118	Weight & Balance	3
AVT	1131	Basic Aviation Electricity	3
AVT	1135	Materials & Processes	4
AVT	1213	Corrosion	3
AVT	2143	Review & Recommendation	2
AVT	2237	Aircraft Inspections	3

Geographic Information Systems
Program Code: GEOIS.S.STC • Credit Hours: 19

Description
The Geographic Information Systems (GIS) short-term certificate will provide students with both theoretical and practical applications of GIS. The certificate will cover the foundational concepts in GIS, including the principles of cartography and GIS, database management and analysis, data acquisition, and manipulation of georeferencing and geocoding.

Career Opportunities
Students completing the certificate will have the technical skill set in GIS required to perform a variety of entry level positions in a variety of arenas, including, regional and local government agencies, business and community organizations.

CIS	2165	Database Management	3
GEO	1103	Introduction to Geographic Information System I AND	
GEO	1104	Introduction to Geographic Information System II OR	
GEO	1107	Introduction to Geographic Information Systems (GIS)	4
GEO	1209	Map Design & Visualization	4
GEO	2210	Advanced Spatial Analysis	4
MAT	1450	Introductory Statistics	4

Geospatial Technology Analyst
Program Code: GSTA.S.STC • Credit Hours: 22

Description
The Geospatial Technology Analyst short-term certificate will provide students with both theoretical and practical applications of Geographic Information Systems (GIS). The certificate will cover the foundational concepts in GIS, database management and analysis, data acquisition, and manipulation of georeferencing and geocoding.

Career Opportunities
This certificate is designed for those students who seek to enhance their job-related skills in becoming a GIS analyst. The U.S. Department of Labor Employment and Training Administration (DOLETA), for example, cites an annual growth rate of approximately 35 percent for the geospatial technology industry. Students completing the certificate will have the technical skill set in GIS required to perform a variety of entry level positions in a variety of arenas, including, regional and local government agencies, business, and community organizations.

AVT	1120	Electro-Optical & Infrared Data Analysis OR	
AVT	1121	Multispectral & Hyperspectral Data Analysis	2
CIS	2165	Database Management	3
CIS	2266	Python for Data Analytics	3
CIS	2268	Structured Query Language (SQL) Programming	3
GEO	1107	Introduction to Geographic Information Systems (GIS) OR	
GEO	1103	Introduction to Geographic Information Systems I AND	
GEO	1104	Introduction to Geographic Information Systems II	4
GEO	1215	Introduction to Remotely Sensed Imagery OR	
EET	1121	UAS Remote Sensing & Analysis AND	
EET	1158	Aerospace Spatial Visualization	3
GEO	2210	Advanced Spatial Analysis	4

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Geospatial Technology Programming Specialist
Program Code: GST.S.STC • Credit Hours: 20

Description

Students learn advanced applications in geographical information system software, ArcGIS; C++ software programming skills; how to design and implement websites for internet delivery of data; design and administer relational databases; query databases using SQL.

Career Opportunities

Graduates of this certificate will be able to build upon already existing programming skills to find employment in government and within private industry employing computer programmers with general GIS skills and knowledge such as: Database Developer or Software Applications Programmer. According to the Bureau of Labor and Statistics (www.bls.gov), "As a result of rapid employment growth over the 2008 to 2018 decade, job prospects for computer software engineers should be excellent."

CIS	1350	Web Site Development with HTML & CSS	3
CIS	2165	Database Management	3
CIS	2266	Python for Data Analytics	3
CIS	2268	Structured Query Language (SQL) Programming	3
GEO	1103	Introduction to Geographic Information Systems I AND	
GEO	1104	Introduction to Geographic Information Systems II OR	
GEO	1107	Introduction to Geographic Information Systems (GIS)	4
GEO	2210	Advanced Spatial Analysis	4

Global Studies
Program Code: GSC.S.STC • Credit Hours: 24-25

Description

The Global Studies Certificate provides students seeking a multicultural credential an opportunity to earn a short-term certificate that is completely aligned with a variety of AA degrees. Sinclair students with the desire to acquire knowledge and analytical skills in political, social, historical, scientific, linguistic, economic and cultural aspects are well suited for pursuing this certificate.

Career Opportunities

Designed for students who are planning on using Global Studies to enhance their careers in: global cultural industries in music, film, sports, and consumer life; global environmental management; global health; global marketing; human justice organizations; international governance; international humanitarian service; international development agencies; international business; mass communication; travel, tourism and international hospitality management; and United States government offices and agencies. The student who pursues this short-term technical certificate would plan to use this to supplement their professional development or to strengthen a major for which Global Studies is a strong base.

SCC	1101	First Year Experience	1
SOC	1145	Introduction to Cultural Anthropology	3
GEO	1101	Global Force, Local Diversity OR	
GEO	1102	Earth's Physical Environment OR	
GEO	1201	World Regional Geography: People, Places & Globalization	3-4
CHN	1101	Elementary Chinese I AND	
CHN	1102	Elementary Chinese II OR	
FRE	1101	Elementary French I AND	
FRE	1102	Elementary French II OR	
GER	1101	Elementary German I AND	
GER	1102	Elementary German II OR	
JPN	1101	Elementary Japanese I AND	
JPN	1102	Elementary Japanese II OR	
SPA	1101	Elementary Spanish I AND	
SPA	1102	Elementary Spanish II	8
HIS	1101	United States History I OR	
HIS	1111	Western Civilization I OR	
HIS	1112	Western Civilization II OR	
HIS	2215	Survey of African History OR	
HIS	2216	Survey of Latin American History OR	
HIS	2217	Survey of East Asian History OR	
HIS	2219	Survey of the Middle East OR	
HUM	1125	Introduction to the Humanities OR	
PHI	2205	Introduction to Philosophy	3
PLS	2200	Political Life, Systems & Issues OR	
PLS	2220	International Relations	3
REL	1111	Eastern Religions OR	
REL	1112	Western Religions	3

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Greenhouse Technician

Program Code: GHT.S.STC • Credit Hours: 16

Description

The Greenhouse Technician Certificate will equip students with basic knowledge of plant science that is used for the growth, development, and utilization of cultivated plants. This knowledge will allow the students to propagate plants, implement sustainable landscape design, understand the science of soil, and will ultimately enable the student to operate and manage a greenhouse.

Career Opportunities

Graduates of the Greenhouse Technician Certificate program are employable as entry-level positions in the nursery, landscape, or agricultural industry. Instruction and practical application of learned skills provide a broad occupational background that appeals to prospective employers.

AGR	1160	Introduction to Agriculture Science	1
AGR	1201	Horticulture I	3
AGR	1205	Greenhouse Management	3
AGR	1206	Horticulture II	3
AGR	1207	Greenhouse Applications	3
AGR	1208	Sustainable Landscape Design	3

Home Health Aide

Program Code: HCA.S.STC • Credit Hours: 7

Description

The Home Health Aide certificate prepares students to perform the basic skills necessary to provide personal care services and activities to elderly, convalescent, or disabled persons in the home of patients or in a residential care facility. Students will be able to demonstrate basic nursing care and the skills required to promote health and healing for patient, as well as implement nursing care that decreases risks and follows safety procedures. Upon completion of ALH 1120 – Nurse Aide Training, students are eligible to sit for the State Test for Nurse Aide Training to become a State Tested Nurse Aide (STNA).

Career Opportunities

Career opportunities for Home Health Aide include, but are not limited to, hospitals, home health care, long-term care and rehabilitation centers.

ALH	1120	Nurse Aide Training	4
ALH	1250	Health Science Practicum	3

Home Health Medical Coding

Program Code: HHMC.S.STC • Credit Hours: 21

Description

The Home Health Medical Coding certificate prepares students for entry-level coding positions in home health agencies. Students will develop skills to accurately determine diagnostic code number assignments that impact medical reimbursement. Skill sets include application of ICD-10-CM coding systems; medical terminology; anatomy and physiology and disease processes. The Home Health Medical Coding certificate can be completed with some courses completed in the traditional classroom setting or completely online. Students must receive a grade of C or higher in all courses in the HHMC.S.STC and have a GPA of 2.0 to receive the certificate.

Career Opportunities

Employment prospects for home health medical coding professionals are excellent throughout the state and country. Career opportunities include employment with home health agencies or any medical institution that offers home health medical services.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1140	Fundamentals of Disease Processes	3
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
HIM	1101	Medical Terminology	2
HIM	1165	Drug Classification for Coding	1
HIM	1201	Introductory Medical Office Coding	4
HIM	2275	Home Health Medical Coding	3

Hospitality Reception & Service Specialist

Program Code: HRSS.S.STC • Credit Hours: 2

Description

This certificate prepares individuals to work in the luxury service environment, while mastering the importance of soft-skills and strategies to resolve some of the most difficult challenges involving high end hospitality clientele.

Career Opportunities

Upon completing this credential, students will have gained the knowledge for entry level employment as a guest relations associate within an upscale hotel, matre d for a fine dining establishment, receptionist at an established travel firm, or sales associate for a convention bureau. Ultimately, this is the first step toward completing a Degree in Hospitality Management.

HMT	1105	Introduction to the Hospitality & Tourism Industry	2

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Human Resource Management
Program Code: HRMT.S.STC • Credit Hours: 18

Description

This certificate provides the opportunity to develop and refine human resources skills. The curriculum covers laws and regulations related to employment, implications of decisions and their effect on business as well as employee motivation. Also addresses human resource applications in strategic human resource management, workforce planning and employment, human resource development, total compensation and rewards, employee and labor relations and risk management. Contemporary approach to human resource management using a diagnostic model of internal and external influences.

Career Opportunities

Students completing this certificate will be qualified to apply for Human Resource Specialist positions, in some cases, or will be prepared to further their studies in the human resources area within a four-year institution.

COM	2206	Interpersonal Communication	3
FIN	2450	Personal Finance	3
MAN	2140	Human Resource Management	3
MAN	2144	Negotiation Techniques	3
MAN	2150	Management & Organizational Behavior	3
MAN	2155	Management Information Systems	3

Industrial Maintenance Technician
Program Code: INDMT.S.STC • Credit Hours: 26-27

Description

The Industrial Maintenance Technician certificate provides the knowledge and skill required for installing, maintaining and troubleshooting modern industrial machinery. Students will learn to solve practical maintenance problems, read and interpret mechanical drawings and interpret maintenance publications.

Career Opportunities

This certificate will provide the necessary background to perform industrial maintenance operations on a wide range of electromechanical equipment.

EET	1120	Introduction to DC & AC Circuits	2
EET	1139	Electrical Machinery	3
EET	1166	Industrial Machine Wiring	3
EET	2281	Programmable Logic Controllers	3
EGR	1106	Basic Mechanical & Electrical Skills	2
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
EGR	1144	Sensors & Vision Systems	3
EGR	1217	Fluid Power & Control	2
EGR	2231	Troubleshooting of Automated Systems	3
MET	1101	Introduction to Engineering Drafting OR	
MET	1371	CAD Concepts Using AutoCAD	2 -3

Industrial PLC Programming Technician
Program Code: PLC.S.STC • Credit Hours: 8-11

Description

This certificate provides students and working professionals the basic necessary knowledge and skills to operate, program, and diagnose Programmable Logic Controller (PLC) based control systems in advanced manufacturing automation process operations, Original Equipment Manufacturer (OEMs), and logistics/supply chain high-tech warehousing automation operations. This program covers digital fundamentals used in all of today's computers, PLC hardware, PLC ladder logic programming, PLC I/O wiring diagrams, PLC communication architecture, networking, HMIs (Human Machine Interface) in a hands-on learning environment on several different types of PLCs.

Career Opportunities

Graduates will be qualified for entry level work as a PLC technician for original equipment/system suppliers, consultants/third party support, as well as, equipment/system end users. Manufacturing industries that require PLC Programming Technicians include food, pharmaceutical, defense, aerospace, chemical, plastics, steel, metals, paper, textiles, and automotive industries. Graduates typically work in manufacturing process support, maintenance support, engineering support, sales/service support, or consulting functions. All courses within certificate may be applied towards a degree in Automation & Control Technology with Robotics, a high demand, high paying field.

EET	1198	Digital Technology OR	
EET	1131	Digital Electronics	2-5
EET	2281	Programmable Logic Controllers	3
EET	2282	Advanced Programmable Logic Controllers	3

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Industrial Robotics & PLC Programming Technician
Program Code: IRPLC.S.STC • Credit Hours: 17-20

Description

This certificate extends the knowledge and skills students learn in the Industrial PLC Programming Technician certificate by teaching students to operate, program, and troubleshoot robotic-cells and control systems used in advanced manufacturing operations, Original Equipment Manufacturer OEMs, logistics/supply chain centers, and automated warehousing operations. This program covers digital fundamentals common to today's computers, basics of automated systems, Robotic Teach Pendant Programming (TPP), Robotic Handling Tool fundamentals, Programmable Logic Controller (PLC) hardware, PLC ladder logic programming, PLC I/O wiring diagrams, PLC communication architecture, networking, Human Machine Interface (HMIs) in a "hands-on" learning environment setting.

Career Opportunities

This certificate program will provide the education and training necessary to operate, program, diagnose, and repair PLC & industrial robots. Graduates will be qualified to work for original equipment/system suppliers, consultants/third party support, as well as, manufacturing and supply/chain logistics warehousing equipment/system end users. All courses within certificate may be applied towards a degree in Automation & Control with Robotics, a high demand, high paying field.

EET	1198	Digital Technology OR	
EET	1131	Digital Electronics	2-5
EET	2281	Programmable Logic Controllers	3
EET	2282	Advanced Programmable Logic Controllers	3
EGR	1128	Robotics in Computer Integrated Manufacturing (CIM) Systems	3
EGR	2231	Troubleshooting of Automated Systems	3
EGR	2252	Teach Pendant Robot Programming	3

Information Systems Security
Program Code: ISSC.S.STC • Credit Hours: 15

Description

This certificate will help prepare students and working professionals to perform effectively in the Information Assurance area of Information Technology. The courses required for this certificate have been reviewed and validated by the NSA. Students completing the courses outlined here will receive the ISSC Certificate jointly issued by Sinclair Community College and the NSA. Because the specified content in these six courses has been approved, course credit earned by articulated or proficiency cannot be accepted.

Career Opportunities

With the increased awareness of the need for computer and network security in government, industry and education, there are greatly increased opportunities for students prepared to work in Information Assurance. Students and working professionals completing this certificate will have significantly enhanced opportunities to pursue jobs in the Information Assurance arena within the Federal government, Department of Defense and/or private industry

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	2510	Microsoft Windows Server Operating System	3
CIS	2630	Securing a Windows Network Environment	3
CIS	2640	Network Security	3

International Business
Program Code: INTB.S.STC • Credit Hours: 16

Description

This certificate allows students to explore content and experiences relevant to employment in multinational firms and Non-Governmental Organizations (NGOs). Students will learn technical information that is applicable to further study in international business as well as direct employment in organizations operating on a global basis. Additionally, students will prepare for completion of a nationally recognized certification test in multinational business.

Career Opportunities

Students will have the opportunity to develop knowledge and relationships that lead to employment in multinational organizations. Students will have the foundational knowledge and business contacts to pursue internship and careers throughout the world, if they so choose to do so.

GEO	1201	World Regional Geography: People, Places & Globalization	3
MAN	1107	Foundations of Business	3
MAN	1110	International Business	3
MAN	2240	Emerging Markets	3
MAN	2280	International Business Certifications Prep	1
MAN	2290	International Business Capstone	3

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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SINCLAIR COLLEGE

Internet of Things Technician
Program Code: IOTT.S.STC • Credit Hours: 19

Description

This short term certificate offers knowledge and basic skills to work in the electronics/programming industry as an entry-level support technician for Internet of Things (IoT). In addition to advanced manufacturing, a growing portion of IoT devices are created for consumer use, including connected vehicles, home automation, wearable technology, connected health, and appliances with remote monitoring capabilities. Micro-controllers are the heart of any IoT device. Graduates learn micro-controller hardware, programming applications, networking, and security. Theoretical aspects are supported and supplemented by hands-on lab work to gain in-depth knowledge and necessary technical skills.

Career Opportunities

This certificate program will provide the entry level education and training necessary to operate, program, diagnose, and repair micro-controller based Internet of Things (IoT) devices. Graduates will be qualified to work for original equipment/system suppliers, consultants/third party support, as well as, equipment/system end users. This certificate is not only for individuals that are new to the field of IoT, but to those individuals that are already working in the field, and want to update their skill set. All courses within the certificate may be applied towards an Associate in Applied Science degree in Internet of Things Cyber Technician, a high demand, high paying field.

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	2640	Network Security	3
EET	1198	Digital Technology	2
EET	2261	Microprocessors	4
EGR	2261	Engineering Problem Solving using "C" & "C++"	4

IT Fundamentals
Program Code: ITFN.S.STC • Credit Hours: 18

Description

This certificate provides the fundamental courses needed to prepare for any of the multiple Computer Information Systems (CIS) programs or areas of specialization. It allows students to experience introductory courses in various disciplines as preparation for their chosen degree objective. All courses in this certificate apply to the various degree programs in the Computer Science and Information Technology Department.

Career Opportunities

Entry level positions in various areas including user support, system administration and network management will be available to students completing this certificate. Many employers are quite willing to provide job specific training to employees already possessing the broad technical experiences in this certificate. Students completing this certificate and a specific CIS degree program will be further prepared for specific employment opportunities.

BIS	1105	IT Fundamentals OR	
BIS	1120	Introduction to Software Applications	3
CIS	1107	Introduction to Operating Systems	3
CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1130	Network Fundamentals	3
CIS	1140	Information Systems Analysis & Design	3
CIS	2165	Database Management	3

Large Animal Care & Handling
Program Code: LAC.S.STC • Credit Hours: 16

Description

This program is designed to introduce the student to working within the agricultural field and will provide a baseline of business, communication, and animal handling knowledge.

Career Opportunities

Holders of this certificate may be better able to obtain employment, or increase their status as a Farm Worker, Farm Manager, Feed Store Worker, Farm Bureau Representative, or Farm Banking Assistant.

AGR	1160	Introduction to Agriculture Science	1
ENG	1101	English Composition I	3
MAN	1107	Foundations of Business	3
VET	1120	Introduction to Large Animal Sciences: Handling & Husbandry	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
MAT	1120	Business Mathematics OR	
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Law Enforcement
Program Code: CJLE.S.STC • Credit Hours: 21

Description

This certificate prepares students for future training and education in the field of law enforcement. This certificate enhances law enforcement professional skills and knowledge. It may assist the student in performing well in future civil service examinations for employment or promotion.

Career Opportunities

A broad range of career opportunities are available in the area of criminal justice and law enforcement including those in court systems, court administration, law enforcement agencies, private investigation agencies, and probation and parole.

BIS	1120	Introduction to Software Applications	3
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1103	Constitutional Law & Evidentiary Procedures	3
CJS	1110	Interrogation, Documentation & Testimony	3
CJS	1105	Criminal Law	3
CJS	1125	Policing	3
CJS	2111	Ethics & Professionalism in Criminal Justice	3

Linux Security & Network Essentials
Program Code: LSNE.S.STC • Credit Hours: 12

Description

This certificate is an information technology certificate concentrating on teaching specific skills pertaining to the fundamentals of the Linux operating system, Linux security and network and data communications.

Career Opportunities

Opportunities include Linux administrators and Linux consultants.

CIS	1107	Introduction To Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	2550	Linux Operating System	3
CIS	2640	Network Security	3

Magnetic Resonance Imaging
Program Code: MRI.S.STC • Credit Hours: 5

Description

The short term certificate in Magnetic Resonance Imaging (MRI) is designed to provide radiographers certified by the American Registry of Radiologic Technologists (ARRT) with didactic and clinical education in Magnetic Resonance Imaging. Didactic courses focus on current MRI principles while clinical courses provide students with real-life experience and development of hands-on skills needed to pursue employment opportunities MRI.

Career Opportunities

Completion of this short term certificate program can lead to employment in comprehensive hospitals, suburban or rural outpatient centers, surgery centers, etc. as a Magnetic Resonance Imaging Technologist.

Program Prerequisite(s)

Approval of Department

RAT	2643	Principles of Magnetic Resonance Imaging	3
RAT	2645	Magnetic Resonance Imaging Practicum	1
RAT	2645	Magnetic Resonance Imaging Practicum	1

Mammography
Program Code: MAMMO.S.STC • Credit Hours: 4-6

Description

The short term certificate in Mammography is designed to provide radiographers certified by the American Registry of Radiologic Technologists (ARRT) with didactic and clinical education in Mammography. Didactic courses focus on current Mammography principles while clinical courses provide students with real-life experience and development of hands-on skills needed to pursue employment opportunities Mammography.

Career Opportunities

Completion of this short term certificate program can lead to employment in comprehensive hospitals, suburban or rural outpatient centers, etc. as a Mammographer.

Program Prerequisite(s)

Approval of Department

RAT	2647	Principles of Mammography	2
RAT	2649	Mammography Practicum	2-4

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Manufacturing Management
Program Code: MM.S.STC • Credit Hours: 16

Description

This short-term certificate provides a manufacturing specific background in organizations, industrial supervision, improvement techniques, quality, teamwork and cost analysis.

Career Opportunities

The purpose of this certificate is to assist individuals in their transition from a technical job (engineer, technician, production worker, etc.) to a managerial position (foreman, supervisor, manager, etc.) in the manufacturing industry.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OPT	1101	Introduction to Industrial Engineering Technology	3
OPT	1126	Supervision, Team Leadership & Project Management	3
OPT	1130	Lean Operations & Continuous Improvement	3
OPT	2208	Engineering Technology Economics & Cost Analysis	3

Mechanical Software Technician
Program Code: METECH.S.STC • Credit Hours: 17

Description

This short term certificate introduces students to the field of mechanical engineering including using the latest versions of computer-aided drafting software. All courses are part of the Mechanical Engineering Technology associate degree.

Career Opportunities

Professionals with software skills are in demand by mechanical design firms.

MET	1161	Advanced Analytical Tools for Engineering Technology	1
MET	1231	Introduction to Engineering Design Using 3D CAD	4
MET	1241	Principles of Engineering	2
MET	1301	SolidWorks Basics	4
CAM	1109	Fundamentals of Tooling & Machining OR	
MET	1111	Preparatory Math for Engineering Technology OR	
MET	1151	Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts OR	
MET	1371	CAD Concepts using AutoCAD OR	
MET	2700	Mechanical Engineering Technology Internship	6

Medical Coding & Billing Specialist
Program Code: MCBS.S.STC • Credit Hours: 24

Description

This certificate prepares students for entry-level coding and billing positions in physician medical offices, medical insurance companies and outpatient billing services. Students will develop skills to accurately determine diagnostic and procedural code number assignments that impact medical reimbursement. Skill sets include application of ICD-10-CM, CPT and HCPCS coding systems; medical terminology; anatomy and physiology and disease processes; processing insurance claims and reimbursement practices. The Medical Billing and Coding Specialist certificate can be completed in the traditional classroom setting or completely online or a combination of both delivery systems. Students must receive a grade of C or higher in all courses in the MCBS.STC and have a GPA of 2.0 to receive the certificate.

Career Opportunities

Employment prospects for medical coding and billing specialists are excellent throughout the nation. Career opportunities include: physician medical offices, medical insurance companies and outpatient billing services.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1140	Fundamentals of Disease Processes	3
BIO	1121	Human Anatomy & Physiology I	3
BIO	1222	Human Anatomy & Physiology II	3
HIM	1101	Medical Terminology	2
HIM	1165	Drug Classification for Coding	1
HIM	1201	Introductory Medical Office Coding	4
HIM	2262	Advanced Medical Office Coding	3
MAS	2210	Medical Billing Specialist	3

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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188   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Medical Scribe
Program Code: MS.S.STC • Credit Hours: 16-17

Description
Medical Scribes are individuals trained in medical documentation who assist a physician. They serve as part of the health care team, whose primary goal is to increase the efficiency and productivity of the physician. A Medical Scribe's position is highly dependent on the physician, physician group, and setting/hospital in which the scribe is employed. In addition, this certificate will prepare the student to become a *Certified Medical Scribe Apprentice (CMSA). Note: Students will need a background check prior to clinical.

Career Opportunities
Medical Scribes are employed in a variety of healthcare facilities, including physician offices, clinics, and hospitals.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1252	Medical Scribe Practice	2
ALH	1102	Basic Healthcare Practices & Medical Scribe OR	
ALH	1120	Nurse Aide Training OR	
MAS	1102	Clinical Medical Assisting	3-4
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
HIM	1101	Medical Terminology	2
HIM	1160	Medical Office Coding Concepts	1

Microsoft Certified Solutions Associate
Program Code: MCSA.S.STC • Credit Hours: 18

Description
This certificate and the associated courses will help students prepare for the certification exams needed to earn the designation of Microsoft Certified Solutions Associate (MCSA). This credential and the technical competence, as demonstrated by the certification exams, will help students earn employment in the areas of Network Management, Network Administration and System Administration.

Career Opportunities
Students completing this short term certificate will be prepared for vendor and/or industry certification exams that are highly desired and valued in the Information Technology field. In turn, these certifications will help prepare students for careers in Network Administration, Network Management, System Administration and other aspects of computer and network management.

CIS	1107	Introduction to Operating Systems	3
CIS	1130	Network Fundamentals	3
CIS	2510	Microsoft Windows Server Operating System	3
CIS	2515	Windows Network Infrastructure	3
CIS	2520	Windows Directory Services Administration	3
CIS	2640	Network Security	3

Network Engineering Associate
Program Code: NEA.S.STC • Credit Hours: 18

Description
This certificate program will provide the student with state-of-the-art networking skills taught via the Cisco Networking Academy curriculum. The curriculum includes all aspects for an introductory network engineering position. This program is designed to provide the knowledge and skills required to understand and participate in basic networking design, installation, configuration and troubleshooting corporate network infrastructure. Included in this program are networking theory, Open Systems Interconnection (OSI) model, networking media, physical and logical design, maintaining networking equipment, designing and implementing internet protocol schemas, the basics of all current internal routing protocols, beginning security information and safety.

Career Opportunities
Employment opportunities in IT include entry-level positions such as network security analyst, network architect and network engineer.

Program Prerequisite(s)
CIS 1107 Introduction to Operating Systems

CIS	1107	Introduction to Operating Systems	3
CIS	1411	Introduction to Networks	3
CIS	2416	Routing & Switching Essentials	4
CIS	2421	Scaling Networks	4
CIS	2426	Connecting Networks	4

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Network Engineering Entry Level
Program Code: NEEA.S.STC • Credit Hours: 10

Description
This certificate program will provide the student with networking skills taught via the Cisco Networking Academy curriculum. The Cisco Certified Entry Level Networking Technician (CCENT) designation validates the ability to install, operate and troubleshoot a small enterprise branch network including basic network security. With the CCENT, a networking professional demonstrates the skills required for entry level network support positions. The curriculum covers networking fundamentals, wide area network (WAN) technologies, basic security and wireless concepts, routing and switching fundamentals and configuring simple networks. The CCENT is the first step towards achieving the CCNA designation.

CIS	1107	Introduction to Operating Systems	3
CIS	1411	Introduction to Networks	3
CIS	2416	Routing & Switching Essentials	4

Network Engineering Security Associate
Program Code: NESA.S.STC • Credit Hours: 16

Description
This certificate will provide the student with state of the art network security skills taught using the Cisco Networking Academy curriculum. This program is designed to provide the knowledge and skills required to understand basic security threats and to configure and manage Cisco devices to provide appropriate network security. Cisco switches, routers, firewalls and Intrusion Prevention Systems (IPS) methods will be used.

Career Opportunities
Security analysts plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. They may ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. They may also be involved in the response to computer security breaches and viruses.

CIS	1107	Introduction to Operating Systems	3
CIS	1411	Introduction to Networks	3
CIS	2418	Basic Firewall Security	3
CIS	2416	Routing & Switching Essentials	4
CIS	2640	Network Security	3

New Media
Program Code: NWMED.S.STC • Credit Hours: 17

Description
The New Media Short-Term Certificate is designed to cultivate skills in mass communication and message design, visual communication, journalism and marketing within the realm of new technologies including blogs, podcasts, video games, video production, websites, and social media platforms such as Facebook, Instagram, YouTube and Twitter. Students will learn valuable marketing skills, hands on visual communication design, and effective message design in mass communication channels through interdisciplinary theory and methodology. Graduates of the certificate will be able to analyze and assess the needs of a client in order to most effectively communicate and engage with their respective publics.

Career Opportunities
The New Media Certificate is built to add to the experience of students new to fields of marketing, communication, visual communication and journalism but is also beneficial to those that are currently working in the field and want to update their skill set to include new media techniques.

COM	2201	Introduction to Mass Communication	3
COM	2270	Communication Internship	1
ENG	1101	English Composition I	3
JOU	2101	Introduction to Journalism	3
MRK	2135	Digital Marketing	3
VIS	1140	Design Processes	4

Nurse Aide
Program Code: NAST.S.STC • Credit Hours: 4

Description
Provides education to individuals in the basic skills necessary to provide personal care services and activities under the delegation and supervision of a registered or licensed practical nurse to residents in a long-term care facility.

Chapter 3701-19 of the OAC for the State of Ohio establishes the requirements for Ohio's Nurse Aide Training and Competency Evaluation program. These requirements mandate all NAs working on a regular basis in Ohio's LTCFs must complete an Ohio Department of Health-approved 75-hour TCEP and pass a competency evaluation test conducted by the director.

Career Opportunities
Individuals may work as Nurse Aides; Home Health Care Aides or Patient Care Assistants.

ALH	1120	Nurse Aide Training	4

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190   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Ohio Peace Officer Basic Training Academy
Program Code: BAS.S.STC • Credit Hours: 26

Description

This program of study will provide you with the complete Ohio Peace Officer basic officer training required by the State of Ohio for new Ohio law enforcement officers. Taught by state-certified commanders and instructors, the basic academy adheres to the required content, instructional and training standards necessary for individuals to become certified peace officers in the State of Ohio. The basic academy consists of over 700 hours of instruction delivered in 24 weeks of training. The curriculum is intensive and participants must devote significant time and effort to complete the program. Academic, physical fitness, firearms and other demanding skill sets are included in the program. At the conclusion of the training, students are required to take a 200-question written final exam administered by the Attorney General's Office to receive a certificate of completion. Graduates of this program typically seek employment as police officers, sheriff's deputies, park rangers or other positions in Ohio which require a law enforcement commission. The Sinclair Academy has placed hundreds of graduates in more than 300 law enforcement agencies in Ohio. Entrance into Sinclair's Criminal Justice Training Academy is a competitive process and not all applicants are accepted. The academy is offered in both the Spring and Summer semesters.

Career Opportunities

There are openings in local and state law enforcement agencies as well as private investigation and personal protection agencies.

Program Prerequisite(s)

Physical fitness assessment, fingerprint check, oral interview and college level ready for English.

CJS	2280	Basic Peace Officer Training I	14
CJS	2281	Basic Peace Officer Training II	12

Ohio Real Estate Sales Associate
Program Code: RESS.S.STC • Credit Hours: 9

Description

This certificate program is designed for the person who is interested in a career in real estate sales. The course work meets the educational requirement of 120 classroom hours for persons to sit for the Ohio real estate license exam: 40 hours of Real Estate Principles and Practices, 40 hours of Real Estate Law, 20 hours of Real Estate Finance, and 20 hours of Real Estate Appraisal. (Further state requirements must also be satisfied). Seat hour requirements of 120 hours are strictly enforced by state rule. Successful completers will receive the Ohio Real Estate Sales Associate Certificate.

Career Opportunities

The U.S. Bureau of Labor Statistics says "Employment of real estate brokers and sales agents is projected to grow 11 percent from 2012 to 2022, about as fast as the average for all occupations" (Occupational Outlook Handbook).

RES	1101	Real Estate Principles	3
RES	1201	Real Estate Law	3
RES	1301	Real Estate Finance	1.5
RES	1401	Real Estate Appraisal	1.5

Patient Access & Scheduling Coordinator
Program Code: MOR.S.STC • Credit Hours: 14

Description

This certificate prepares students for entry-level employment in the medical office environment performing scheduling, monitoring patient appointments, out-patient procedures, medical and office equipment maintenance, storing supplies and pharmaceuticals. The program is designed to develop knowledge and understanding of medical language and documentation.

Career Opportunities

Options for those who complete the certificate include: urgent care, surgicare and ambulatory care centers, as well as health maintenance organizations (HMOs), multi-physician group practices and medical specialty clinics.

ALH	1101	Introduction to Healthcare Delivery	2
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ENG	1101	English Composition I	3
HIM	1101	Medical Terminology	2
MAS	1110	Administrative Medical Assisting	4

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Patient Care Technician
Program Code: PCT.S.STC • **Credit Hours:** 7

Description

The Patient Care Technician certificate prepares students to perform the basic skills necessary to provide personal care services and activities under the delegation and supervision of a registered or licensed practical nurse to patients within an acute care facility. Students will be able to demonstrate basic nursing care and the skills required to promote health and healing for patient, as well as implement nursing care that decreases risks and follows safety procedures. Upon completion of ALH 1120 – Nurse Aide Training, students are eligible to sit for the State Test for Nurse Aide Training to become a State Tested Nurse Aide (STNA).

Career Opportunities

Hospitals; Home Health Aide; Long-term Care Facilities; Rehabilitation Centers.

ALH	1120	Nurse Aide Training	4
ALH	1121	Acute Care Nurse Aide	3

Perioperative Nursing
Program Code: ORN.S.STC • **Credit Hours:** 4

Description

This is an advanced certificate program designed to provide Registered Nurses (RN's), graduate nurses, and nursing students, an introduction to and experiential learning opportunities in perioperative nursing. Students will be exposed to the knowledge and skills required to provide safe, patient-centered care to patients having surgical intervention during the preoperative, intraoperative, and postoperative periods. Upon completion, students will be prepared for an entry-level operating room staff nurse position. Graduates are also eligible to join the Association of PeriOperative Nurses (AORN), and, following two years of operating room experience, may sit for the CNOR exam, an accredited credentialing exam for perioperative registered nurses.

Career Opportunities

Upon completion, students will be prepared for an entry-level operating room staff nurse position. Graduates are also eligible to join the Association of PeriOperative Nurses (AORN), and, following two years of operating room experience, may sit for the CNOR exam, an accredited credentialing exam for perioperative registered nurses.

SUT	2600	Fundamentals of Perioperative Nursing	4

Pharmacy Technician
Program Code: PHT.S.STC • **Credit Hours:** 21-23

Description

This program prepares individuals to perform the technical and specialized skills of a pharmacy technician within retail, mail-order, hospital, nursing homes and home health care settings. The program is designed to develop knowledge and understanding of basic pharmacology, maintenance of patient records, drug-product preparation and distribution and record-keeping. A portion of this program will involve 80 hours of simulated lab and 210 hours of directed practice within a pharmacy. A state and federal background check will be required prior to starting the directed practice. A grade of "C" or better is required in all courses to complete the program. A grade of "B" or better is required in the pharmacy technician core courses to be eligible to participate in the directed practice. Upon completion of the program students may take the national Pharmacy Technician Certification Board Examination.

Accreditation

The Pharmacy Technician Program is accredited by the American Society of Health-System Pharmacists/Accreditation Council for Pharmacy Education (ASHP/ACPE).

Career Opportunities

Pharmacy Technician in retail and mail-order settings, hospital pharmacies, nursing homes and home health care sites.

ALH	1101	Introduction to Healthcare Delivery	2
ALH	1122	Pharmacy Technician I	5
ALH	1123	Pharmacy Technician II	5
ALH	1124	Pharmacy Technician Directed Practice	2
ALH	1183	Pharmacy Technician Lab	2
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I OR	
BIO	1141	Principles of Anatomy & Physiology I	3-4
MAT	1130	Mathematics in Health Sciences OR	
MAT	1445	Quantitative Reasoning OR	
OT36		Mathematics Elective	3

Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Photographic Technology
Program Code: PHOT.S.STC • Credit Hours: 29

Description
This short-term certificate is designed for the serious photographer or student desiring a job in the photographic studio/photographic processing industry. The certificate ensures proficiency in composing a good photograph in the studio or field and developing and printing photographs in black and white and color. The student will learn studio technique and how to operate both manual 35 mm and digital cameras. Basic computer imaging techniques will also be covered. The completion of the certificate will ensure the student has a well-rounded knowledge of photographic technique and applications.

Career Opportunities
The Art department strives to provide students with high-quality education experiences in the visual arts and the short-term certificate in Photographic Technology prepares students to enhance their skills as photographers and, if desired, to enter the photographic studio/photographic processing industry.

ART	1161	Black & White Darkroom Photography I	3
ART	1162	Black & White Darkroom Photography II	3
ART	1170	Non-Silver Photography	3
ART	1171	Studio Photography	3
ART	1175	Computer Photography	3
ART	2235	History of Photography	3
ART	2265	Digital Color Photography I	3
ART	2294	Photography Portfolio Development	1
CHE	1311	College Chemistry I	4
MAT	1110	Mathematics for Technologist OR	
MAT	1130	Mathematics in Health Sciences OR	
MAT	1445	Quantitative Reasoning	3

Postgraduate in Interior Design
Program Code: INDPG.S.STC • Credit Hours: 11

Description
The certificate will provide an introduction to REVIT, construction drawings, materials and application; and kitchen and bath designs to support additional academic requirements to gain eligibility to take the National Council for Interior Design Qualification (NCIDQ) exam.

Career Opportunities
Students will gain professional status to pursue careers as designers or consultants in design studios, architecture firms or commercial retailers.

Program Prerequisite(s)
Minimum of an AAS degree in interior design

CAT	1121	Architectural Graphics II	3
CAT	2741	Current Topics in Architecture	2
IND	2280	Kitchen & Bath Design	3
IND	2290	Interior Construction Systems	3

Powerplant Aviation Maintenance
Program Code: PPAM.S.STC • Credit Hours: 27

Description
The Powerplant Aviation Maintenance certificate provides the knowledge and skills required by the Federal Aviation Administration (FAA) for the powerplant maintenance technician student. Students will learn to apply all the knowledge and skills in the lab portion.

Career Opportunities
Boeing Commercial Aircraft Company recently predicted 1,000,000 more jobs in aviation in the next 15 years. Airbus of Europe has predicted about 800,000 more jobs in the next 15-20 years. Both predictions are based on anticipated growth in aircraft production and flying passengers. Many mechanics will reach retirement age in the next three years as a result of an interruption of current certificates issued by the FAA. More jet aircraft means more need for mechanics. The general aviation sector already has a shortage of certificated mechanics.

AVT	1128	Powerplant Safety Systems	3
AVT	2122	Ignition & Starting	4
AVT	2126	Reciprocating Engines	7
AVT	2129	Propellers	4
AVT	2138	Engine Fuel & Fuel Metering	3
AVT	2139	Induction/Exhaust/Cooling	2
AVT	2219	Turbine Engines	4

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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Processes for Interior Design
Program Code: IND.S.STC • Credit Hours: 24

Description
This certificate provides students with an introduction in the field of interior design. It will include the following introduction to the design process: problem solving techniques, space planning, production selection, ADA compliancy, ergonomics, lighting, color, furniture placement and accessorizing, scaled floor plan, elevation and detail drawings, defining/applying architectural and interior-related materials, estimating/budgeting products, writing specifications; and, presentation skills.

Career Opportunities
This certificate can provide students an opportunity to support entry level interior design positions. Many opportunities exist in retail stores (paint, flooring, lighting, and furniture), home staging, visual merchandising and as an interior designer's assistant.

CAT	1101	Architectural Graphics I	3
IND	1180	History of Interior Design	3
IND	1230	Residential Design	4
IND	1234	Materials & Textiles	3
IND	1240	Color Theory	3
IND	2130	Non-Residential Design	4
IND	2140	Sustainable Design	4

Professional Communication
Program Code: COM.S.STC • Credit Hours: 27

Description
Communication skills are critically important for everyone. Earning a professional communication certificate can be an important key to career success. Completion of the certificate will demonstrate to current and prospective employers that a student recognizes the importance of various communication skills and strategies in a variety of professional settings. The results of a 2011 survey by the National Association of Colleges and Employers showed verbal communication skills as the number one soft skill that employers sought in new college graduates looking to join their organizations.

Career Opportunities
A Professional Communication Certificate can provide opportunities in journalism, speech education, business, industry, government, broadcast media, law, ministry, social services, public relations, or provide valuable communication skills to enrich any career. Enhancing communication skills provides invaluable benefits for all students, regardless of major or career path.

COM	2201	Introduction to Mass Communication	3
COM	2206	Interpersonal Communication	3
COM	2211	Effective Public Speaking	3
COM	2220	Introduction to Communication Theory	3
COM	2225	Small Group Communication	3
COM	2230	Nonverbal Communication	3
COM	2245	Intercultural Communication	3
COM	2235	Principles of Interviewing OR	
COM	2287	Effective Listening	3
COM	2285	Organizational Communication OR	
COM	2286	Public Relations Principles	3

Professional Firefighter
Program Code: PFC.S.STC • Credit Hours: 12

Description
Provides training for full-time, part-time and volunteer firefighters to obtain the certifications necessary to meet the requirements of the National Fire Protection Association Standard 1001, Firefighter I and II. State of Ohio Certification from the Ohio Department of Public Safety and National Board on Fire Service Professional Qualifications.

Accreditation
Fire Officer I and II are accredited by the National Board on Professional Firefighter Qualifications Board.

Career Opportunities
Professional firefighter in the State of Ohio.

Program Prerequisite(s)
Must have a valid motor vehicle operator's license

FST	1102	Firefighter I AND	
FST	1103	Firefighter II Transition AND	
FST	1442	Emergency Vehicle Operator OR	
FST	1104	Firefighter II AND	
FST	1442	Emergency Vehicle Operator	12

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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194   college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

![Sinclair College logo](Sinclair College)

Professional Pilot
Program Code: AVT.S.STC • Credit Hours: 20-21

Description

This program is designed to allow the student to earn FAA certificates and ratings to become a professional pilot. The student, having completed this course work, will have the background and skills to enter the aviation industry as a professional pilot or continue towards a Bachelor's degree in aviation science (or a related field). Students may choose fixed-wing (airplane single engine and multi-engine) or helicopter certifications.

The student must obtain a Federal Aviation Administration (FAA) Third (3rd) Class medical certificate prior to enrolling in ANY flight lab. In addition to standard tuition fees, there are additional lab fees for each flight lab in the program. These lab fees are structured to cover the costs associated with the minimum flying hours required for each FAA certificate. Any additional flying time costs beyond the FAA minimums covered by the lab fee must be borne by the student. See the Department for the latest lab fee costs.

Career Opportunities

Career opportunities are available in airline, corporate, and general aviation. The current U.S. Bureau of Labor Occupational Outlook for Airline and Commercial Pilots projects five percent growth through 2024, and the expectation is there will be massive demand beyond that point due to a large wave of pilot retirements and the need to backfill the supply of pilots for commercial pilot roles of all sorts. This involves not only airline positions, but general aviation careers such as flight instruction, corporate flying, and business air services. Employment of pilots is projected to grow 10 percent through 2024, faster than the average for all occupations.

AVT	1110	Private Pilot Ground School	3
AVT	1170	Instrument Pilot Ground School	3
AVT	2250	Commercial Pilot Ground	2
AVT	1124	Private Pilot Flight Lab - Airplane Single Engine AND	
AVT	1224	Instrument Pilot Flight Lab - Airplane Single Engine AND	
AVT	2263	Commercial Pilot Flight Lab - Airplane Single Engine OR	
AVT	1126	Private Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	1226	Instrument Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	2265	Commercial Pilot Flight Lab - Rotorcraft Helicopter	5
AVT	2258	Flight Instructor Ground	4
AVT	2275	Instrument Flight Instructor Ground	1
AVT	2266	Multi Engine Flight Lab AND	
AVT	2269	Flight Instructor Flight Lab - Airplane Single Engine AND	
AVT	2277	Instrument Flight Instructor Flight Lab - Airplane Single Engine OR	
AVT	2271	Flight Instructor Flight Lab - Rotorcraft Helicopter AND	
AVT	2278	Instrument Flight Instructor Flight Lab - Rotorcraft Helicopter	2-3

Professional Writing
Program Code: PRW.S.STC • Credit Hours: 18

Description

The Professional Writing Certificate offers appropriate courses for students and professionals interested in improving their writing, editing and computer skills for a future in professional writing or to enhance their marketability. The certificate is especially useful for those in professional and administrative positions in business, hospitality, health and human services.

Career Opportunities

The Professional Writing Short Term Certificate is a valuable addition to many, if not all, majors at Sinclair. Students completing this certificate will learn writing and communication techniques essential in the workplace. Top jobs for students earning this certificate are in the copywriting, marketing, finance, grant, hospitality, legal, technical, health and business fields. Current research indicates that employers seek candidates who have expertise in writing in a professional setting, and students completing this certificate will acquire a facility with writing and language use in that environment.

BIS	1120	Introduction to Software Applications	3
BIS	1220	Word Processing Software	3
ENG	1101	English Composition I	3
ENG	1131	Business Writing	3
ENG	1199	Textual Editing	3
ENG	2257	Freelance Writing OR	
JOU	2101	Introduction to Journalism	3

Radio Frequency Identification (RFID)
Program Code: RFID.S.STC • Credit Hours: 6-7

Description

This program is an introduction to the basics of Radio Frequency Identification (RFID) principles with a business or engineering technology orientation. Various RFID technologies, RFID project planning and implementation of basic business solutions or RFID hardware setup, maintenance and troubleshooting will be covered. Emphasis is on a team approach to management and technology aspects of design and implementation of a basic system.

Career Opportunities

There is an ever-increasing use and adaptation of RFID technology in business, manufacturing and the defense industry.

EET	2257	Radio Frequency Identification (RFID) Capstone	3
MAN	1157	Management Applications of Radio Frequency Identification Technology OR	
EET	2157	Radio Frequency Identification (RFID) Technology	2-3
MAN	1106	Introduction to Radio Frequency Identification	1

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Real Estate Sales Professional
Program Code: RESPROF.S.STC • Credit Hours: 18

Description
This certificate is designed for the person who is interested in a career in real estate sales. The program includes the educational requirement for persons to sit for the Ohio real estate license exam: 40 hours of Real Estate Principles and Practices, 40 hours of Real Estate Law, 20 hours of Real Estate Finance, and 20 hours of Real Estate Appraisal. Students will also learn effective communication skills and how to use office applications.

Career Opportunities
A career in real estate can be very rewarding. The U.S. Bureau of Labor Statistics says "Employment of real estate brokers and sales agents is projected to grow 7 percent from 2018 to 2028, about as fast as the average for all occupations" (Occupational Outlook Handbook). Additional careers include positions as title officers and examiners, property managers, and loan officers.

RES	1101	Real Estate Principles	3
RES	1201	Real Estate Law	3
RES	1301	Real Estate Finance	1.5
RES	1401	Real Estate Appraisal	1.5
BIS	1120	Introduction to Software Applications	3
COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3

Reimbursement Analyst
Program Code: RMS.S.STC • Credit Hours: 19
Description
The Reimbursement Analyst short-term certificate prepares students to work in a billing office for medical providers. The certificate will focus on preparing students to take the national certification examination to earn the credential Certified Medical Reimbursement Specialist (CMRS) offered by the American Medical Billing Association (AMBA). Students will be expected to complete a practicum experience to obtain this certificate, gaining work and hands-on medical billing skills.

Career Opportunities
The Reimbursement Analyst short-term certificate prepares students to work in a billing office for medical providers. The certificate will focus on preparing students to take the national certification examination to earn the credential Certified Medical Reimbursement Specialist (CMRS) offered by the American Medical Billing Association (AMBA).

ALH	1101	Introduction to Healthcare Delivery	2
BIO	1107	Human Biology OR	
BIO	1121	Human Anatomy & Physiology I	3
COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
HIM	1101	Medical Terminology	2
HIM	1160	Medical Office Coding Concepts	1
MAS	1130	Reimbursement Specialist Practicum	2
MAS	2210	Medical Billing Specialist	3
MAT	1130	Mathematics in Health Sciences	3

Respiratory Care of the Newborn
Program Code: RCN.S.STC • Credit Hours: 4

Description
Provides education to respiratory care practitioners to be oriented to neonatal respiratory care including history, fetal development, stabilization, evidence-based practices, and multi-disciplinary approaches. Includes respiratory devices employed for ongoing support of term and pre-term infants. Graduates will have a better knowledge of newborn resuscitation and stabilization. Student must be a licensed respiratory therapist.

Career Opportunities
Graduates will have a better knowledge of respiratory care skills and pertinent information needed for newborn resuscitation and stabilization.

Program Prerequisite(s)
Approval of Department

RET	2301	Respiratory Care of the Newborn I	1
RET	2302	Respiratory Care of the Newborn II	1
RET	2303	Respiratory Care of the Newborn III	2

Retail Business
Program Code: RTB.S.STC • Credit Hours: 12

Description
The Retail Business short-term certificate gives students more of the basic tools needed to be a successful supervisor or manager in any business or industry, including retail, hospitality, healthcare, manufacturing and service industries. This certificate enables students to further build and develop their skills toolbox that will enable them to be successful in the workplace.

Career Opportunities
Individuals who complete this certificate will have gained further knowledge and skills that are crucial to being a successful supervisor. This certificate is the second step in the Retail Management Certificate which is designed to give incumbent retail workers the knowledge and skills required to be eligible for a promotion or raise within their current organization.

ACC	1100	Survey of Accounting	3
MAN	2140	Human Resource Management	3
MAN	2150	Management & Organizational Behavior	3
MRK	2100	Foundations of Marketing	3

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Retail Management
Program Code: RMC.S.STC • Credit Hours: 24

Description

The Retail Management certificate is a business program where students learn the key skills needed for retail management success. The Retail Management certificate gives students more of the basic tools needed to be a successful supervisor or manager in any business or industry, including retail, hospitality, healthcare, manufacturing and service industries. This certificate enables students to further build and develop their skills toolbox that will enable them to be successful in the workplace.

Career Opportunities

The Retail Management Certificate program was created by experts in the industry to provide relevant knowledge and skills to their workforce. This program has successfully prepared nearly 2,000 graduates for management positions. Employees and employers benefit directly from the higher level of self-confidence and engagement displayed by graduates.

Recently recognized by the White House as part of the Upskill Initiative, the certificate is currently available in a variety of formats including face-to-face, on-line, and in a competency-based model.

The certificate program was established under the direction of the Western Association of Food Chains which includes many of today's leading retailers and wholesalers, and 7,500 + supermarkets. The program also has endorsement from leading organizations including Food Marketing Institute (FMI) and National Grocers Association (NGA). Most recently, the Retail Management Certificate has gained recognition from highly respected entities such as the ACT Foundation, and the U.S. Department of Labor.

ACC	1100	Survey of Accounting	3
BIS	1120	Introduction to Software Applications	3
ENG	1131	Business Writing	3
MAN	2101	Introduction to Supervision	3
MAN	2140	Human Resource Management	3
MAN	2150	Management & Organizational Behavior	3
MAN	2275	Retail Management Capstone	3
MRK	2100	Foundations of Marketing	3

RN Scrub
Program Code: SRN.S.STC • Credit Hours: 1

Description

This advanced short-term certificate is designed to provide Registered Nurses, who specialize in Perioperative Nursing, the opportunity to learn the technical skills required to perform in the role of the Scrub during surgical intervention. Students will be exposed to the knowledge and skills required to provide assistance to the surgeon performing surgical intervention during the intraoperative period.

Career Opportunities

RN graduates of this short term certificate will be able to increase their role versatility in any facility in which surgical intervention takes place. Many students will already be employed in a surgical facility and completion will allow them to perform in the role of the Circulator or Scrub.

Program Prerequisite(s)

Approval of Department

SUT	2500	RN Scrub	1

Small Business Management
Program Code: SBM.S.STC • Credit Hours: 18

Description

This certificate prepares existing or potential entrepreneurs in a variety of small business functions.

Career Opportunities

Students completing this certificate can expect to be prepared for a management role in an existing small business or begin their own small business.

ACC	1100	Survey of Accounting	3
ENG	1131	Business Writing	3
ENT	2140	Small Business Finance	3
LAW	1101	Business Law	3
MAN	1107	Foundations of Business	3
MRK	2220	Small Business Marketing	3

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Social Service
Program Code: SOCS.S.STC • Credit Hours: 26

Description
The Social Service Short-Term Certificate is designed to provide the tools needed for employees and volunteer leaders related to human service agencies and nonprofit organizations emphasizing the skills of: communication, critical analysis of social problems, investigative techniques, an understanding of the bureaucratic social and legal system serving the community and the role of the volunteer.

Career Opportunities
This certificate enhances careers in sociology, social work, education, government, health care, public safety, human services, nonprofit organizations and related fields.

COM	2206	Interpersonal Communication	3
ENG	1101	English Composition I	3
MHT	1130	Fundamentals of Addiction Counseling CDCA Preliminary	3
MHT	2138	Ethical Issues in the Helping Professions	2
SOC	1101	Introduction to Sociology	3
SOC	1115	Sociology of Marriage & Family	3
SWK	1206	Introduction to Social Work	3
SWK	1213	Introduction to Social Welfare	3
SWK	2207	Anti-Oppressive Social Work	3

Software Applications for the Professional
Program Code: SA.S.STC • Credit Hours: 18

Description
This certificate provides office staff, managers, professionals and anyone interested in learning software applications and integration with the skills they need for their job. Students will have the opportunity to develop and refine their skills in a variety of current software used in today's work environments.

Career Opportunities
Employment opportunities are available in many types of businesses, including banks, insurance offices, advertising agencies, manufacturing companies, small to large businesses and educational facilities, to name a few.

BIS	1120	Introduction to Software Applications	3
BIS	1201	Keyboarding & Document Formatting	3
BIS	1220	Word Processing Software	3
BIS	1230	Spreadsheet Software	3
BIS	1240	Presentation Software	2
BIS	1250	Specialized Business Software Application	1
BIS	1260	Database Software	3

Software Testing
Program Code: ST.S.STC • Credit Hours: 3

Description
Students will be introduced to the field of software testing at the fundamental level. Software testing theory and terminology for this course is primarily based on the International Software Testing Qualifications Board (ISTQB) foundation level certification requirements. Students will learn about the practical application of software testing throughout the software development life cycle. Hands-on exercises will provide students with practical skills in executing test cases, documenting results and participating in peer reviews. Successful completion of this course will entitle students to sit for the ISTQB Foundation Level certification exam.

BIS	1500	Software Testing Fundamentals	3

Supervision Foundations
Program Code: SFD.S.STC • Credit Hours: 9

Description
The Supervision Foundations short-term certificate gives students the basic tools needed to be a successful supervisor in any business or industry, including retail, hospitality, healthcare, manufacturing and service industries. This certificate enables students to begin building their skills toolbox that will enable them to be successful in the workplace.

Career Opportunities
Students completing this short-term certificate can continue with the Retail Management certificate program and be positioned for a promotion or raise in their current position.

BIS	1120	Introduction to Software Applications	3
ENG	1131	Business Writing OR	
MAN	2150	Management & Organizational Behavior	3
MAN	2101	Introduction to Supervision	3

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Supervisory Skills
Program Code: BSP.S.STC • Credit Hours: 21

Description
The Supervisory Skills certificate is useful to students who need to understand the foundation of supervision, no matter in which discipline they formally study. Engineers, business managers, architects, educators, and many other professionals need to understand how to better supervise employees. This certificate includes coursework that is foundational to understanding business and personnel concepts that will benefit supervisors in any capacity. This certificate is most useful for those who are new to supervision or to those who desire to become supervisors.

ACC	1100	Survey of Accounting OR	
ACC	1210	Introduction to Financial Accounting	3
COM	2211	Effective Public Speaking OR	
COM	2225	Small Group Communication	3
ECO	1100	Introduction to Economics OR	
ECO	2160	Principles of Macroeconomics OR	
ECO	2180	Principles of Microeconomics	3
LAW	1101	Business Law	3
MAN	2101	Introduction to Supervision	3
MAN	2150	Management & Organizational Behavior	3
MRK	2101	Principles of Marketing Management	3

Surgical Instrument Technician
Program Code: SPT.S.STC • Credit Hours: 13

Description
The Surgical Instrument Technician short-term certificate program will prepare the graduate to work within a health-care facility to ensure medical and surgical supplies, instruments, and equipment are properly cleaned, prepared, processed, stored, and distributed for patient care and surgical use. Knowledge of basic human anatomy, medical terminology, and a combination of sterilization, inventory control, and information technologies are integrated into the curriculum to ensure a safe outcome for all patients. This program combines both lecture, lab, and a practicum to prepare the Sterile Processing Technician student to take the CRCST Exam upon graduation and upon completion of 400 work related hours in a Sterile Processing Department. Hours attained during practicum count as credit toward the 400 work related hours required for CRCST Exam eligibility.

ALH	1101	Introduction to Healthcare Delivery	2
HIM	1101	Medical Terminology	2
SUT	1100	Sterile Processing I	4
SUT	1200	Sterile Processing II	3
SUT	1207	Directed Practice for Sterile Processing II	2

Tax Practitioner
Program Code: TAXP.S.STC • Credit Hours: 15

Description
The Tax Practitioner certificate prepares students for work in the tax preparation field. As tax law changes and grows more complex, more people seek professional tax preparation assistance. The Tax Practitioner certificate covers federal, state and local tax law. The Tax Practitioner certificate will prepare students for the Registered Tax Preparer Exam that the Internal Revenue Service is instituted with the 2012 tax season.

Career Opportunities
Tax preparers may work as employees for companies or work as an independent tax preparer.

ACC	1210	Introduction to Financial Accounting	3
ACC	1220	Introduction to Managerial Accounting	3
ACC	1510	Computerized Accounting Systems	3
ACC	2321	Federal Taxation	3
ACC	2322	Advanced Taxation	3

Tissue Banking Technology
Program Code: TBT.S.STC • Credit Hours: 12

Description
The Tissue Banking Technology certificate program prepares individuals to attain the skills necessary to become a certified tissue banking technologist. Tissue banking technologists are integral in the recovery, processing, storage and distribution of human tissue. Students in this program will gain basic knowledge of human anatomy, medical terminology, sterile techniques, surgical recovery and processing techniques, and all ethical and regulatory standards related to the field of Tissue Banking.

Career Opportunities
Careers in Tissue Banking Technology are growing both locally and nationally, as interest in new graft technology continues to rise. Locally, CBCCTS has expanded its operations and opened a new processing facility that will increase current processing capacity by 40%.

Program Prerequisite(s)
Restricted to Majors

BIO	1107	Human Biology	3
MAT	1130	Mathematics in Health Sciences OR	
MAT	1110	Math for Technologists	3
SUT	1101	Tissue Banking I	2
SUT	1107	Lab for Tissue Banking I	1
SUT	2101	Tissue Banking II	2
SUT	2107	Practicum for Tissue Banking II	1

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SINCLAIR COLLEGE

Trauma Informed Care in Education
Program Code: EDU.S.STC • Credit Hours: 12

Description
Trauma Informed Care in Education is a four-course certificate that provides students a foundational understanding of trauma effects on the brain, culturally sensitive approaches, and resources to equip educators in a trauma-informed classroom.

Career Opportunities
This certificate will provide an overview of how adverse childhood experiences impact child development, social emotional development, and how early childhood trauma impacts brain development. The content of the courses in this certificate will aid teachers in preschool through grade 12 in assessing and addressing the needs of children who have experienced trauma and will provide strategies to develop a trauma-sensitive classroom environment. Additionally, the certificate will examine historical and current racial, ethnic, gender, sexual orientation, linguistic, and social class stereotypes and biases as related to youth in the United States and globally.

EDU	2101	Introduction to Early Childhood Trauma	3
EDU	2102	Understanding the Brain & Trauma	3
EDU	2103	Trauma-Informed Classrooms	3
SOC	2210	Cultural Humility for Working with Youth	3

UAS First Responders
Program Code: UASFR.S.STC • Credit Hours: 16

Description
The UAS First Responders Short-Term Technical certificate prepares students for entry level positions in the Unmanned Aerial Systems (UAS) industry by providing foundational knowledge, skills and proficiency in UAS theory, capabilities and scenario based objectives related to the first responder industry.

Career Opportunities
The demand for Unmanned Aerial Systems is increasing at a phenomenal rate. A shift in military strategies and the demand for use in the private sector as well as other government agencies has fueled an industry which is estimated to explode to over $80 billion in the next decade. With local government agencies and First Responder personnel in need of new technological options for fast and safe mission execution. The Dayton region and its Educational Institutions are primed to take advantage of the opportunity as industry leaders.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1108	UAS First Responder Applications	1
AVT	2150	Crew Resource Management for UAS	1
CJS	1101	Introduction to Criminal Justice Science	3
CJS	1155	Homeland Security Issues & Administration	3
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2
EMS	1100	Emergency Medical Responder Lecture & Laboratory	2

UAS for Geographic Information Systems
Program Code: UASGIS.S.STC • Credit Hours: 16

Description
The UAS for GIS (Geographic Information Systems) Short-Term Technical certificate prepares students for entry level positions as GIS analysts in the Unmanned Aerial Systems (UAS) industry by providing foundational knowledge and skills involving GIS technologies and UAS technology.

Career Opportunities
The Unmanned Aerial System platform capabilities include but are not limited to aerial mapping and remote sensing for geographic information systems. The private sector as well as governmental demands for Unmanned Aerial System personnel in geospatial information and remote sensing applications are in high demand.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1114	Geospatial Information for UAS	2
AVT	2150	Crew Resource Management for UAS	1
CAT	1501	Construction Surveying	3
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2
GEO	1107	Introduction to Geographic Information Systems (GIS)	4

UAS Precision Agriculture
Program Code: UASAG.S.STC • Credit Hours: 16

Description
The UAS Precision Agriculture Short-Term Technical Certificate prepares students for entry level positions in the Unmanned Aerial Systems (UAS) industry by providing foundational knowledge and skills involving Precision Agriculture and UAS Technology.

Career Opportunities
Precision Agriculture is expected to be 80% of the UAS market over the next decade. Industry projections and demands indicate that the UAS precision agriculture market will be one of the five industries that benefit first from FAA rules and regulation changes. With agriculture being the number one industry in the state of Ohio and contributing 107 billion dollars a year to the Ohio economy. Agricultural industry needs in drought management, disease detection, watering, and spraying pesticides make UAS an intelligent and affordable option.

AGR	1160	Introduction to Agricultural Science	1
AGR	1200	Agricultural Economics	3
AGR	1300	Agronomy	3
AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1112	UAS Precision Agriculture	2
AVT	2150	Crew Resource Management for UAS	1
EET	1121	UAS Remote Sensing & Analysis	1
EET	1158	Aerospace Spatial Visualization	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Veterinary Assistant
Program Code: VET.S.STC   Credit Hours: 19

Description

This certificate program will prepare the student to work within the veterinary hospital, assisting the veterinary technician (nurse) and veterinarian (doctor) with animal care by learning and practicing professionalism, client service, animal behavior and restraint, medical assisting, laboratory protocols and collection and preparation of samples, surgical suite care and preparation of animals, and anesthetic monitoring for the stable patient. Students will be offered the opportunity to become Fear Free (R) certified during this program. This certificate will focus on the care of small animals (dogs and cats), but students interested in large animal or exotic animal care may be able to be placed in a suitable clinic in which to gain that experience.

Career Opportunities

A Veterinary Assistant is a vital member of the medical/patient-care team in a veterinary hospital. Veterinary Assistants do not need to be certified in the state of Ohio in order to work in a veterinary practice, but this program is designed to create a professional, well-trained, experienced employee who will be able to fit into a variety of practices. The veterinary profession lacks sufficient paraprofessionals in this region, the state of Ohio, and the nation - additional trained staff can help to alleviate the stress on current workers. Veterinary assistants are also valuable in other animal-related fields, such as kennel-worker, groom, animal trainer, and animal care-giver (petsitter).

COM	2206	Interpersonal Communication OR	
COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
MAT	1130	Mathematics in Health Sciences OR	
OT36		Mathematics Elective	3
PSY	1100	General Psychology	3
VET	1102	Introduction to Veterinary Technology I	2
VET	1202	Introduction to Veterinary Technology II	2
VET	1205	Clinical Practice I: Hospital Practices & Professionalism	1
VET	2107	Technical Practicum I OR	
VET	2108	Veterinary Assistant Technical Practicum	2

Video Production
Program Code: VID.S.STC • Credit Hours: 22

Description

This certificate introduces students to the basics of video production, including lighting & cinematography and audio production. Students will learn the design process, appropriate applications and video and audio equipment to create quality videos.

Career Opportunities

There are several positions to fill in the digital video production profession. You could work in television, advertising, or news reporting. You also could apply your skills in education, government, or business industries. Within these settings, you could hold entry-level positions in a variety of positions, such as a video editor, camera operator, audio editor, or live stream operator. As well, there are freelance opportunities.

VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1410	History & Theory of Video Production	3
VIS	1420	Video Production	4
VIS	1430	Lighting & Cinematography	4
VIS	1440	Audio Production	3

Web Design
Program Code: WEB.S.STC • Credit Hours: 21

Description

This short-term certificate introduces students to the basics of web coding and design, including conceptualizing, designing, developing, and maintaining websites. Students will learn a variety of web design concepts and digital design applications.

Career Opportunities

Students successfully completing this short-term certificate will have the necessary skills to apply for entry level work in the field of web design and development for businesses, government and design agencies.

CIS	1350	Web Site Development with HTML & CSS	3
VIS	1100	Design Foundations	4
VIS	1140	Design Processes	4
VIS	1310	History & Theory of Web Design	3
VIS	1320	User Experience/User Interface	3
VIS	1330	Web Design	4

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.
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201

Web Programming
Program Code: WW1.S.STC • Credit Hours: 18

Description

The Web Programming certificate is designed to provide an individual with current web development skills. It focuses on techniques for developing web-based distributed applications using standard languages and protocols such as HTML, JavaScript, CSS, XML, PHP and ASP.NET. It is designed for experienced software developers to update their skills and for individuals wishing to make a career change into the Information Technology field. The certificate focuses on web application development in a client/server networked environment.

Career Opportunities

Employment opportunities in IT include entry-level positions such as software developers, web developers, help desk analysts, network administrators, user support specialists, network security analysts and network engineers.

CIS	1111	Introduction to Problem Solving & Computer Programming	3
CIS	1350	Web Site Development with HTML & CSS	3
CIS	2165	Database Management	3
CIS	2212	Java Software Development I	3
CIS	2222	ASP.NET with C#	3
CIS	2250	Web Site Development with php & XML	3

Welding and Metal Joining
Program Code: CAMWM.S.STC • Credit Hours: 17

Description

This certificate in welding and metal joining contains in-depth hands-on labs which will include MIG, TIG, Stick (ARC), and Ox-acetylene use along with other types of metal joining options and instruction to include sheet metal layout, shearing, bending, riveting, brazing and spot welding. Welding safety, personal protection equipment, and special welding tools will be taught in-depth and used by the students within the lab setting. The other courses within the certificate offer an introduction to the manufacturing processes used in the tooling, machining, the welding industry, a focus on blueprint reading, design using AutoCAD, various measurement techniques and the mathematics necessary to solve applications in welding and manufacturing technology.

Career Opportunities

This in-depth training will ready students for entry level positions in Machine repair, Die and Mold repair, Metal Fabrication, Tool and Die shops, general repair shops and general manufacturing.

CAM	1107	Introduction to Mechanical Drafting with AutoCAD	3
CAM	1109	Fundamentals of Tooling & Machining	3
CAM	1180	Welding & Metal Joining I	3
CAM	1181	Welding & Metal Joining II	3
MAT	1110	Math for Technologists	3
OPT	1100	Tooling & Machining Metrology	2

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

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Associate of Individualized Study

Program Code: AIS.S.AIS • Credit Hours: 60

Description

The Associate of Individualized Study (AIS) degree is open to any student who wishes to design an interdisciplinary degree program using liberal arts or combining liberal arts with technical areas of study. As an alternative, part of the student's degree requirements may incorporate credit awarded through articulation agreements with community education providers or a combination of both. The student may focus specifically on education for individual development and enrichment or may design a curriculum that allows for employment or continuation into selected four-year degree programs. Note: This program requires an approved AIS application. Please contact plaprograms@sinclair.edu to complete the process. When applying for admission to Sinclair, select the Associate of Arts (LA.S.AA) degree. Upon your AIS application being approved, you will be moved into this program of study.

General Education

COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
OT36		Mathematics Elective	3

Two of the following three areas required to total 6 semester hours

OT36	Arts & Humanities Elective	3
OT36	Natural & Physical Sciences Elective	3
OT36	Social & Behavioral Sciences Elective	3

AIS Concentration	**30**
AIS Related Electives	**15**

Associate of Technical Study

Program Code: ATS.S.ATS • Credit Hours: 60

Description

The Associate of Technical Study (ATS) degree is open to any student whose technical degree goals cannot be accomplished through enrollment in one of Sinclair's existing technical degree programs. The student may design a degree which combines two or more technical areas into a unique education plan. As an alternative, part of the student's degree requirements may incorporate credit awarded through articulation agreements with community education providers, or a combination of both. In all cases, faculty members assist the student in planning the most appropriate course of study for the individual. Note: This program requires an approved ATS application. Please contact plaprograms@sinclair.edu to complete the process. When applying for admission to Sinclair, select the Associate of Arts (LA.S.AA) degree. Upon your ATS application being approved, you will be moved into this program of study.

General Education

COM	2211	Effective Public Speaking	3
ENG	1101	English Composition I	3
OT36		Mathematics Elective	3

Two of the following three areas required to total 6 semester hours

OT36	Arts & Humanities Elective	3
OT36	Natural & Physical Sciences Elective	3
OT36	Social & Behavioral Sciences Elective	3

ATS Concentration	**30**
ATS Related Electives	**15**

*Please see your Academic Advisor for information on Ohio Transfer 36 and other electives.

Sinclair recognizes the important connection between student success and academic preparedness. Depending on placement scores and/or equivalent college course work, students may be required to complete developmental courses before enrolling in the college level courses of their program.

Aviation Technology/ Professional Pilot
Program Code: AVTP.S.BAS Credit Hours 123-125

Description

The Bachelor of Applied Science (BAS) degree in Aviation Technology/Professional Pilot is designed to enhance the technical skills of students who have earned an associate degree in Aviation Technology/Professional Pilot at Sinclair Community College, or who wish to pursue a complete bachelors degree. The degree builds upon students' foundational understanding of aviation and pilot training. Students may choose fixed wing (single engine and multi-engine) or helicopter pilot certifications. The student must obtain a Federal Aviation Administration (FAA) 3rd class medical certificate prior to enrolling in any of the flight labs.In addition to standard tuition fees there are additional course and lab fees for each of the flight labs in the program. The flight lab fees are structured to cover the costs associated with the minimum flying hours required for each FAA certificate. Any additional flying time costs beyond the FAA minimums covered by the flight lab fee must be borne by the student. See the Department for the latest course and flight lab fee costs.

Career Opportunities

Career opportunities are available in airline, corporate and general aviation. Projected overall employment growth of airline and commercial pilots from 2014 to 2024 is 5% with 10% projected employment growth of commercial pilots from 2014 to 2024, faster than the average for all occupations. Expected job growth of 2,337 jobs in Nonscheduled Air Transportation within this sector (2012-2022). Five of the 25 most concentrated occupations in Aerospace require a bachelor's degree at entry.

AVT	1105	Orientation to Aviation	2
AVT	1110	Private Pilot Ground School AND	
AVT	1124	Private Pilot Flight Lab - Airplane Single Engine AND	
AVT	1170	Instrument Pilot Ground School AND	
AVT	1224	Instrument Pilot Flight Lab - Airplane Single Engine AND	
AVT	2250	Commercial Pilot Ground AND	
AVT	2263	Commercial Pilot Flight Lab - Airplane Single Engine AND	
AVT	2269	Flight Instructor Flight Lab - Airplane Single Engine OR	
AVT	1111	Helicopter Private Pilot Ground AND	
AVT	1126	Private Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	1171	Helicopter Instrument Pilot Ground AND	
AVT	1226	Instrument Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	2251	Helicopter Commercial Pilot Ground AND	
AVT	2265	Commercial Pilot Flight Lab - Rotorcraft Helicopter AND	
AVT	2271	Flight Instructor Flight Lab - Rotorcraft Helicopter	18

AVT	1119	Aviation Meteorology	2
AVT	1140	Introduction to Business Aviation	2
AVT	1141	Principles of Aviation Leadership	2
AVT	1241	Blind Flying Hazards	1
AVT	1245	Aviation Law	2
AVT	1254	Flight Simulator Instruction	1
AVT	2125	Developments in Aviation I	2
AVT	2146	Introduction to Airline Operations	3
AVT	2211	Advanced Navigation Science	2
AVT	2240	Human Factors in Aviation	3
AVT	2242	Aircraft Accident Investigation I	3
AVT	2247	Aerodynamics & Flight Mechanics I	3
AVT	2258	Flight Instructor Ground	3
AVT	2266	Multi Engine Flight Lab AND	
AVT	2275	Instrument Flight Instructor Ground AND	
AVT	2277	Instrument Flight Instructor Flight Lab - Airplane Single Engine OR	
AVT	2275	Instrument Flight Instructor Ground AND	
AVT	2278	Instrument Flight Instructor Flight Lab - Rotorcraft Helicopter	2-3
AVT	2700	Aviation Internship	1-2
AVT	3125	Developments in Aviation II	2
AVT	3150	Crew Resource Management	3
AVT	3241	Aircraft Systems	3
AVT	3242	Aircraft Accident Investigation II	3
AVT	3247	Aerodynamics & Flight Mechanics II	3
AVT	3300	Artificial Intelligence (AI) in Aviation OR	
AVT	3400	Human Sensation & Perception in Aviation	3
AVT	4146	Advanced Airline Operations & Training	3
AVT	4154	Advanced Flight Simulator Instruction	3
AVT	4160	System Safety in Aviation	3
AVT	4170	Airport Operations	3
AVT	4290	Aviation Senior Capstone Project	3
COM	2211	Effective Public Speaking	3
ECO	2160	Principles of Macroeconomics	3
ENG	1101	English Composition I	3
ENG	1201	English Composition II	3
MAT	1470	College Algebra	3
MAT	1570	Analytic Geometry & Trigonometry	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Arts & Humanities Elective	6
OT36		Social & Behavioral Sciences Elective	6
PHY	1141	College Physics I	4
PHY	1142	College Physics II	4

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SINCLAIR COLLEGE

Bachelor of Applied Science (BAS)

Unmanned Aerial Systems (UAS)

Program Code: UAS.S.BAS Credit Hours 121-124

Description

This Bachelor of Applied Science (BAS) degree in Unmanned Aerial Systems is designed to fill a growing workforce need by enhancing the technical skills of students who have earned an associate degree in Unmanned Aerial Systems (UAS). The degree builds upon students' foundational understanding of UAS mission planning, applications, maintenance, laws and regulations, data analytics, and project management using UAS platforms.

Career Opportunities

More than 100,000 new jobs in UAS related fields are predicted nationwide by 2025. A technical baccalaureate degree in Unmanned Aerial Systems (UAS) will prepare the graduate to work in a variety of roles including UAS operations, maintenance, data analysis, sensor operations, technology integration and testing, and basic manufacturing in support of diverse industries including precision agriculture, infrastructure inspection, aerial mapping and surveying, first response, logistics, security, and other emerging applications that will continue to develop as the industry grows.

AVT	1101	Introduction to Unmanned Aerial Systems	2
AVT	1103	Remote Pilot Ground School	1
AVT	1104	UAS Standards, Regulations & Law	1
AVT	1110	Private Pilot Ground School	3
AVT	1119	Aviation Meteorology	2
AVT	1246	Air Traffic Control Communications	1
AVT	2150	Crew Resource Management for UAS	1
AVT	2151	UAS Operations	3
AVT	2240	Human Factors in Aviation	3
AVT	2279	Unmanned Aerial Systems Project	3
AVT	2280	Introduction to UAS Maintenance	2
AVT	2700	Aviation Internship	1-2
AVT	1120	Electro-Optical & Infrared Data Analysis AND	
AVT	1121	Multispectral & Hyperspectral Data Analysis AND	
AVT	1122	Synthetic Aperture Radar & Light Detection & Ranging Data Analysis AND	
AVT	1123	Acoustic & CBRNE Data Analysis AND	
GEO	1107	Introduction to Geographic Information Systems (GIS) OR	
AVT	1108	UAS First Responder Applications AND	
CJS	1101	Introduction to Criminal Justice Science AND	
CJS	1155	Homeland Security Issues & Administration AND	
EMS	1100	Emergency Medical Responder Lecture & Laboratory OR	

AVT	1114	Geospatial Information for UAS AND	
CAT	1501	Fundamentals of Surveying & Mapping AND	
GEO	1107	Introduction to Geographic Information Systems (GIS) OR	
AVT	1112	UAS Precision Agriculture AND	
AGR	1160	Introduction to Agriculture Science AND	
AGR	1200	Agricultural Economics AND	
AGR	1300	Agronomy OR	
AVT	4215	Autonomous Systems in Aviation AND	
CIS	2266	Python for Data Analytics AND	
MAT	2215	Mathematics for Machine Learning & Artificial Intelligence OR	
AVT	1115	Introduction to UAS Entrepreneurship AND	
AVT	2115	UAS Entrepreneurship Capstone AND	
MAN	1107	Foundations of Business AND	
LAW	1101	Business Law	9-11
AVT	3100	Contemporary Technical, Legal & Regulatory Issues in UAS	3
AVT	3151	UAS Operations II	1
AVT	3152	UAS Operations II Lab	2
AVT	3200	UAS Logistics	3
AVT	3300	Artificial Intelligence (AI) in Aviation	3
AVT	3400	Human Sensation & Perception in Aviation	3
AVT	3500	UAS Design Concepts	4
AVT	4151	Unmanned Systems Mission Planning	3
AVT	4210	Advanced UAS Maintenance	3
AVT	4215	Autonomous Systems in Aviation OR	
AVT	4220	Human Autonomy Teaming in Aviation	3
AVT	4270	UAS Internship II	2
AVT	4279	Unmanned Aerial Systems Senior Project	4
COM	2211	Effective Public Speaking	3
ECO	2160	Principles of Macroeconomics	3
EET	1120	Introduction to DC & AC Circuits	2
EET	1121	UAS Remote Sensing & Analysis	1
EET	2221	UAS Sensors & Systems	4
MAT	1470	College Algebra	3
MAT	1570	Analytic Geometry & Trigonometry	3
MET	1131	Personal Computer Applications for Engineering Technology	1
OT36		Any Group	3
OT36		Arts & Humanities Elective	6
OT36		Social & Behavioral Sciences Elective	6
PHY	1141	College Physics I	4
PHY	1142	College Physics II	4
AVT	1120	Electro-Optical & Infrared Data Analysis AND	
AVT	1121	Multispectral & Hyperspectral Data Analysis AND	
AVT	1122	Synthetic Aperture Radar & Light Detection & Ranging Data Analysis AND	
AVT	1123	Acoustic & CBRNE Data Analysis OR Unmanned Aerial Systems Elective	

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This portion of the catalog provides information about the courses offered at Sinclair Community College. A brief description of each course is provided. For details regarding the additional information included with each course, see below.

Course Numbering

Each section begins with a subject followed by a three letter prefix which identifies the subject area of the course. The number identifies the level. Courses that begin with a zero are developmental in nature. Credits earned in developmental courses will not apply to the overall program hours. Courses in the 1000 series are usually considered first-year courses, courses in the 2000 series are usually considered second-year courses, courses in the 3000 series are considered third-year courses, while courses in the 4000 series are considered fourth-year courses.

Credit Hours

The number of semester credits for each course is indicated after the course title. Note that the number of credits for a course does not necessarily equal the number of hours that the course meets in one week. The actual number of hours per week varies by modality and will be reflected in the course schedule.

Prerequisites

Prerequisites, if any, are listed at the end of each course description in italics. Prerequisites are established by each department to ensure that the student has an adequate and sufficient background to enroll in the course and achieve success in that course. If there are no prerequisites listed, none are required for the course.

Co-requisites

Sometimes courses must be taken concurrently. If this is the case the courses are designated as co-requisites. For example, a biology lecture course and its associated lab course must be taken simultaneously. Lab information is usually noted. Co-requisites, if any, are listed at the end of the course description in italics.

Repeatable

An "R" indicates the course may be repeated for additional credit. These courses will be counted in the cumulative GPA each time the course is taken.

NOTE: Courses described in this catalog are those approved by Sinclair Community College at the time of publication. Inclusion of a course description does not obligate the College to offer the course in any given semester or academic year.

Accounting (ACC)

1100 Survey of Accounting
3 Cr. Hrs.

Survey of financial accounting for non-accounting majors. Accounting concepts, financial statements, internal control, cash, and payroll.

1210 Introduction to Financial Accounting
3 Cr. Hrs.

An introduction to preparation and use of accounting reports for business entities; focus on uses of accounting for external reporting, emphasizing accounting as a provider of financial information. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0050 OR MAT 1120*

1220 Introduction to Managerial Accounting
3 Cr. Hrs.

An introduction to the use of accounting information by managers. Topics include the use of accounting information for planning and control, performance evaluation, decision-making and the statement of cash flows, along with financial statement analysis. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): ACC 1210*

1510 Computerized Accounting Systems
3 Cr. Hrs.

This course uses general ledger software and spreadsheets to record, report and analyze accounting information. *Prerequisite(s): (ACC 1100 OR ACC 1210) AND BIS 1120*

2101 Intermediate Accounting I
3 Cr. Hrs.

Development of accounting standards, conceptual framework of financial accounting. Review of the accounting cycle, preparation of income statement, statement of owner's equity, balance sheet, statement of cash flows and additional reporting issues. Time value of money, current asset and current liability accounting and reporting. It is strongly recommended that you complete ACC 1510 prior to registering for ACC 2101. However ACC 1510 may be taken concurrently. *Prerequisite(s): ACC 1220*

2102 Intermediate Accounting II
3 Cr. Hrs.

Transaction analysis and financial reporting for long-term assets, long-term liabilities and stockholder's equity. *Prerequisite(s): ACC 2101*

2211 Cost Accounting 3 Cr. Hrs.

Application of cost accounting concepts and techniques to complex problems in manufacturing accounting and service firms. It is strongly recommended that you complete ACC 1510 prior to registering for ACC 2211. However ACC 1510 may be taken concurrently. *Prerequisite(s): ACC 1220*

2212 Managerial Accounting & Finance
3 Cr. Hrs.

This course uses accounting and finance concepts to effectively analyze and manage business finances. *Prerequisite(s): ACC 1220*

2270 Accounting Internship R
1 - 4 Cr. Hrs.

Students will secure a work site in the field of accounting and prepare and complete appropriate accounting learning outcomes for the work site. The accounting learning outcomes must be approved by the work site supervisor and the chairperson of the Accounting Instruction Department or full-time accounting faculty/work site coordinator. *Prerequisite(s): ACC 2102*

2321 Federal Taxation 3 Cr. Hrs.

Introductory course including the basic tax model, personal gross income, personal deductions and credits, property transactions, special tax computations and introduction to corporate taxation.

2322 Advanced Taxation
3 Cr. Hrs.

Course covers tax research, federal, state and local business income tax returns and preparation of information returns, tax filings for trusts, estates and nonprofit organizations, and the reporting of advanced tax compliance issues for individual and business tax returns. *Prerequisite(s): ACC 2321*

2435 Auditing 3 Cr. Hrs.

Review of accounting information systems and an overview of auditing. Covers internal controls and system documentation, transaction processing and databases, professional standard and ethics. Review of legal liability, audit evidence, risk evaluation and audit planning, audit procedures and audit reports. *Prerequisite(s): ACC 2101*

2510 Advanced Accounting
3 Cr. Hrs.

Review of different accounting areas, including investment accounting, consolidation accounting, governmental accounting and partnership accounting. Review of International Accounting Financial Standards. *Prerequisite(s): ACC 2102*

African-American Studies (AFR)

11100 African-American Studies
3 Cr. Hrs.

Social science introduction to the origins, relevance and scope of African American Studies. Topics include African American history, religion, sociology, politics, economics and psychology within a multicultural context.

Agriculture (AGR)

1110 Introduction to Large Animal Sciences: Handling & Husbandry
3 Cr. Hrs.

Introduction to Large Animal Sciences will provide the student with knowledge and practical experience of safe handling practices and husbandry management for various farm animal species. Specifically, students will learn about animal contributions to our society, production systems, animal breeding, nutrition, and contemporary agriculture issues today.

1111 Principles of Large Animal Reproduction
3 Cr. Hrs.

The course will provide students with in-depth information on the physiological mechanisms controlling the reproductive processes in production animals. Students will understand comparative differences in the anatomy, function, and regulation of male and female reproductive systems. Students will also learn key concepts in reproduction as it applies to animal management systems. *Prerequisite(s): (AGR 1110 OR VET 1120) AND Restricted to Majors*

1112 Principles of Large Animal Nutrition
3 Cr. Hrs.

The course will discuss the fundamentals of animal nutrition and feedstuffs dealing with principles of digestion, absorption, assimilation and utilization of nutrients, balancing of rations, and feeding of livestock. *Prerequisite(s): AGR 1110 OR VET 1120*

1160 Introduction to Agriculture Science
1 Cr. Hr.

This class is an overview of the Agriculture Industry. Guest lecture presentations, field trips, career research, and industry personnel interviews provide students with real-world examples of the skills and abilities necessary to compete in the world of Agriculture Science. *Prerequisite(s): DEV 0035*

1200 Agricultural Economics 3 Cr. Hrs.

Introductory course on the basic principles of agricultural economics. Principles of supply and demand, resource economics, production optimization, price elasticity, market price determination, competitive versus noncompetitive market models, and agricultural public policy. These principles are applied to agriculture and the role of agriculture in the United States and world economies.

1201 Horticulture I 3 Cr. Hrs.

An overview of the horticulture profession, including its role and importance throughout history, current trends, and career opportunities, will be covered. Particular attention is given to horticulture crops, plant classification, use, and the interrelationships between environment, plant growth, and plant development. Two classroom, two lab hours per week.

1202 Science of Soil 3 Cr. Hrs.

Soil as part of natural and managed ecosystems and landscapes. Solid, liquid, and gas phases and their interactions in the soil. Water, gas and heat movement in soil. Soil biology. Plant nutrient acquisition and use. Soil development, management and use. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1201*

1203 Trees & Shrubs 3 Cr. Hrs.

Emphasizes the growth process in production of fruits, vegetables, flowers, lawns, trees, and shrubs. Studies include planning, preparation and care of home grounds. Fundamental concepts in plant identification, growth, culture, landscape and design are also studied. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1201*

1204 Plant Propagation 3 Cr. Hrs.

This course will familiarize the student with methods of increasing plant numbers and producing a marketable product. Topics include growth structures, media, plant culture, sexual and asexual reproduction, grafting, and nursery management. Practical greenhouse and field experience included. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1201*

1205 Greenhouse Management 3 Cr. Hrs.

This course is designed to prepare students to manage a greenhouse operation. Students in this class will learn to produce various ornamental and food crops. An understanding of structures, crop selection, and growing systems will be explored. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1201*

1206 Horticulture II 3 Cr. Hrs.

This course will allow students to apply knowledge of plant growth in field containers, pot-in-pot methods while integrating acquired plant production methods. Students will use binomial nomenclature of trees, flowers and turf grasses to accurately label and classify plant product. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1201*

1207 Greenhouse Applications 3 Cr. Hrs.

This course will give hands on practical experience in greenhouse employment. One classroom, four lab hours per week. *Prerequisite(s): AGR 1206*

1208 Sustainable Landscape Design 3 Cr. Hrs.

This course will assess the design problems/situations, the development of solutions and the communication of those solutions to the client through the design. Specific topics include designing for ecosystem maintenance/enhancement, introduction to using color in landscape designs and rendering section/elevation views. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1206*

1209 Greenhouse Management Capstone 3 Cr. Hrs.

This course is the culminating course in the greenhouse management certificate. This course combines the knowledge obtained in AGR 1201 through AGR 1208 resulting in an applicable working understanding of how to manage a greenhouse in today's economy. Two classroom, two lab hours per week. *Prerequisite(s): AGR 1206*

1300 Agronomy 3 Cr. Hrs.

Crop growth and development, pesticide safety and application, properties of the soil, and conservation practices of Ohio's row crops are all covered in detail in this engaging curriculum dealing with the form and function of the crops that shape agriculture in Ohio, and the practices that we as agriculturalists take daily to keep them healthy and pertinent in society.

1400 Agriculture Internship 3 Cr. Hrs.

Agricultural Internship provides an opportunity for students to apply concepts learned to learning in a professional setting. Twenty-one practicum hours per week. *Prerequisite(s): Approval of Department*

Allied Health (ALH)

1101 Introduction to Healthcare Delivery 2 Cr. Hrs.

Orientation to the health care delivery system, including history, economics, medical/legal issues, professionalism, ethics, sociological aspects and wellness concepts. Orientation to the use of technology in the health care system will also be provided, including user interfaces, telecommunications and networks. The development of health care team skills, including critical thinking and problem-solving strategies and multicultural health care perspectives, will be presented. One classroom, three lab hours per week.

1102 Basic Healthcare Practices & Medical Scribe 3 Cr. Hrs.

Orientation to safe and effective basic health care practice including medical scribe, community health worker, patient assessment and documentation, infection control, body mechanics, and environmental safety considerations. Two classroom, two lab hours per week.

1103 Test Taking Strategies R 1 Cr. Hr.

This course provides strategies and techniques to maximize individual test performance through prioritized learning and focused study time for the Health Sciences programs. Test-taking strategies and techniques are presented using simulated testing situations. Techniques learned will help improve thinking and discrimination skills to enhance test performance. *Prerequisite(s): Approval of Department*

1105 Overview of Holistic Health 2 Cr. Hrs.

Holistic models of health and wellness; value of integrating holistic models in traditional healthcare settings; overview of specific holistic health models such as aromatherapy, reflexology, guided imagery, supplements, and neuro linguistic programming; efficacy data; indications and contraindications.

1107 Core Concepts of Public Health 3 Cr. Hrs.

The course will introduce core concepts of public health, including analytical methods, biomedical basis of public health, social and behavioral factors in health, environmental issues, medical care and public health and the future of public health.

1110 Principles of Electrocardiography 3 Cr. Hrs.

Principles of electrocardiography, including equipment operation, recording and troubleshooting, as well as fundamental principles of the cardiovascular physiology and basic ECG interpretation. Students will also gain knowledge and skills to provide CPR for victims of all ages and will practice CPR in a team setting. Students will receive an American Heart Association Basic Life Support for Healthcare Provider card upon successful completion of skills. One classroom, three lab hours per week. A simulated clinical rotation will be completed during the course.

1113 Clinical Phlebotomy 2 Cr. Hrs.

Introduction to the fundamental and clinical methods and practices of phlebotomy, including basic hematology, venipuncture and microcollection techniques, along with routine processing and special testing procedures. One classroom, three lab hours per week.

1114 Clinical Phlebotomy Practice 2 Cr. Hrs.

Introduction to the phlebotomy clinical setting involving structured observation and participation in the blood collection aspects of patient care under the supervision of a phlebotomist; performing venipunctures and microcollection techniques on adult and pediatric patients. One hour seminar on main campus and 105 hours un-paid practicum per term. *Prerequisite(s): ALH 1113 AND background check, health certificate and student health insurance will be required to complete the clinical portion of the course*

1120 Nurse Aide Training 4 Cr. Hrs.

Provide education to individuals in the basic skills necessary to provide personal care services and activities, under the delegation and supervision of a registered or licensed practical nurse, to residents in a long-term care facility. Three classroom, three clinical lab hours per week. *Prerequisite(s): DEV 0015 AND MAT 0050 AND Approval of Division Advisor AND background check, health certificate and student health insurance will be required to complete the clinical portion of the course*

1121 Acute Care Nurse Aide 3 Cr. Hrs.

Acute Care Nurse Aide will provide a supplement to nurse aide training and provide the student with the knowledge and skills required for care of the patient within an acute care facility as a Patient Care Technician. One classroom, two lab, three clinical hours per week. *Prerequisite(s): ALH 1120 OR Documented current work as State Tested Nurse Aide AND background check, health certificate and student health insurance will be required to complete the clinical portion of the course*

1122 Pharmacy Technician I 5 Cr. Hrs.

This course is the first of two core courses in the Pharmacy Technician Program and will help prepare students for the Pharmacy Technician Certification Board Exam. Course content includes the duties and responsibilities of the pharmacy technician, as well as the mathematical components and the pharmacology foundation necessary to become a successful pharmacy technician. Scope of pharmacy practice including handling of infectious and hazardous waste, interpersonal skills and beginning pharmacology and dose calculations. *Prerequisite(s): MAT 0100 or MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445. MAT 1445 may be taken concurrently with ALH 1122*

1123 Pharmacy Technician II 5 Cr. Hrs.

This course is the second of two core courses in the Pharmacy Technician Program and will continue to help prepare students for the Pharmacy Technician Certification Board Exam. Course content will continue to include the duties and responsibilities of the pharmacy technician, as well as the mathematical components and the pharmacology foundations necessary to become a successful pharmacy technician. Additional skills learned will include sterile compounding, non-sterile compounding and inventory control. Course contains a simulated directed practice. *Prerequisite(s): ALH 1122 AND (MAT 1130 OR MAT 1445) with a grade of C or better in ALH 1122 or Permission of instructor if repeating ALH 1123 AND Must possess a high school equivalency certificate or a high school diploma, be 18 years or older, demonstrate English language proficiency (including reading, writing, and speaking)*

1124 Pharmacy Technician Directed Practice R 2 Cr. Hrs.

This course will provide the students with real world experience in a pharmacy (i.e. hospital and retail pharmacy). Students will be provided with a valuable learning experience and potential contacts and/or references for employment. This course will also provide the student with additional review for the Pharmacy Technician Certification Board Exam. Students will complete 210 hours of non-paid, supervised directed practice in a hospital and retail pharmacy. Background checks will be required prior to attending the directed practice. *Prerequisite(s): ALH 1123 AND ALH 1183 with a grade of B or better*

1130 Basic Life Support Training for Healthcare Provider R 1 Cr. Hr.

The American Heart Association (AHA) Basic Life Support for Healthcare Providers (BLS-HCP) is designed to train participants to save lives of victims in cardiac arrest through high-quality cardiopulmonary resuscitation (CPR). This course prepares healthcare professionals (those currently working in a healthcare setting or potential for working in a healthcare setting) to know how to perform CPR in both in- and out-of-hospital settings. The course includes adult, child, and infant rescue techniques, administration of the AED, and first aid. Those who successfully complete the course will receive an AHA Heartsaver First Aid Provider Card and AHA BLS for Healthcare Provider card, valid for two years.

1132 Heartsaver First Aid, CPR & AED R 1 Cr. Hr.

The American Heart Association (AHA) Heartsaver First Aid with Cardiopulmonary Resuscitation (CPR) and Automated or Automatic External Defibrillator (AED) course is designed for the individuals who are not working or planning to work within a healthcare environment. The course provides students with training in basic first aid procedures, including the first aid skills recommended by OSHA, CPR and AED. Students who complete the course qualify for the AHA Heartsaver First Aid with CPR and AED course completion card.

1140 Fundamentals of Disease Processes 3 Cr. Hrs.

Pathological changes associated with the most commonly occurring diseases of each body system. Correlates changes with patient's response, diagnostic studies, and treatment modalities. *Prerequisite(s): BIO 1107 OR BIO 1121 OR BIO 1141*

1155 MEPAP I - Activity Assistant 4 Cr. Hrs.

This course is a Sinclair provided Activity Assistant Certificate based on NCCAP's MEPAP I program core competencies for activity practice settings. The course includes colloquy, agency regulation and support, advocacy, resident assessment, care planning, and therapeutic programming. After successful completion of the course the student will receive a certificate of completion for NCCAP's MEPAP I program by a preapproved instructor of NCCAP. Three classroom, three clinical hours per week.

1183 Pharmacy Technician Lab 2 Cr. Hrs.

This is a laboratory course designed to provide pharmacy technician students with simulations to practice a variety of pharmacy technician's activities and responsibilities, such as product preparation, sterile compounding, non-sterile compounding, inputting prescriptions, calculations, pharmacy tools and equipment. Six lab hours per week. *Prerequisite(s): ALH 1122*

Corequisite(s) : ALH 1123

1250 Health Science Practicum 3 Cr. Hrs.

Enhances practicum skills in health concepts and resources related to the role and responsibility of Healthcare professional. Emphasis on working in community-based settings, publicly and privately funded health and social services. 210 unpaid practicum hours are required. background check, health certificate, immunizations, and student health insurance will be required to complete the practicum portion of this course. *Prerequisite(s): ALH 1102 OR ALH 1120 OR MAS 1102 AND background check, health certificate, immunizations, and student health insurance will be required to complete the practicum portion of this course*

1252 Medical Scribe Practice 2 Cr. Hrs.

This course provides the students an opportunity to gain practical experience in a real medical setting. The course is designed to facilitate the development of the skill set used in becoming a medical scribe in today's electronic medical world. Additionally, students will gain valuable insight into today's medical world, along with a new understanding of modern healthcare that is directly applicable to a future career as a healthcare provider. One classroom, two lab hours per week. *Prerequisite(s): (ALH 1102 OR ALH 1120 OR MAS 1102) AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND background check, health certificate and student health insurance will be required to complete the clinical portion of the course*

1256 MEPAP II- Activity Director 4 Cr. Hrs.

This course is a Sinclair provided Activity Programming Certificate based on NCCAP's MEPAP II program core competencies for activity practice settings. The course includes the practices and principles of managing and leading an activity department and the collaboration needed for interaction with other departments and agencies. After successful completion of the course the student will also receive a certificate of completion for NCCAP's MEPAP II course by a preapproved instructor of NCCAP. Three classroom, three clinical hours per week. *Prerequisite(s): ALH 1155*

2201 Survey of Drug Therapy 2 Cr. Hrs.

Overview of the conventional drug classes presenting only the more commonly prescribed preparations primarily emphasizing common effects and indications for use. *Prerequisite(s): BIO 1107 OR BIO 1121 OR BIO 1141*

2202 General Pharmacology 3 Cr. Hrs.

General principles of drug absorption, distribution, metabolism, actions and effects presented according to conventional drug classification with emphasis on the prototype of each class; for registered nursing and medical assistant technology students but may be of interest to other allied health students or general studies students majoring in biological sciences. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): BIO 1121 OR BIO 1141 OR BIO 2211*

2220 Pathophysiology 3 Cr. Hrs.

Study of human disease using a system approach emphasizing abnormal physiological processes that result in the signs and symptoms of each disorder. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): BIO 1107 OR BIO 1121 OR BIO 1141 OR BIO 2211*

Art (ART)

1101 2-D Foundations 3 Cr. Hrs.

The study of composition/visual elements with color theory applied to utilizing design principles (using line, shape, texture, value and color) and color psychology emphasizing the Josef Albers color theories in a studio setting with emphasis on hands-on learning. Six studio hours per week.

1102 3-D Foundations 3 Cr. Hrs.

Basic foundation studio course dealing with methods, materials, principles of organization and elements of design applied to the third dimension. Six studio hours per week.

1107 Beginning Photoshop 3 Cr. Hrs.

An introductory course in the Photoshop imaging program. Basic introduction to scanning, capturing and altering images for the art major or non-art major.

1110 Art Appreciation - Introduction to Art & Art Media 3 Cr. Hrs.

Emphasis on the language of art, exposure to many different art forms, formulative ideas about what is viewed and exploration of specific media.

1111 Drawing I 3 Cr. Hrs.

Studio drawing develops visual skills relative to the drawing process, with emphasis on traditional as well as contemporary problems on representation and composition. Six studio hours per week. It is strongly recommended that you complete ART 1101 prior to registering for ART 1111. However ART 1101 may be taken concurrently.

1112 Drawing II 3 Cr. Hrs.

Personal expression developed through a variety of two-dimensional media, cubistic techniques, gestural and figure studies. Six studio hours per week. *Prerequisite(s): ART 1111*

1121 Beginning Painting I
3 Cr. Hrs.

Studio painting with an emphasis on color, form and space in compositional design. Introduction to personal expression and modern applications. Six studio hours per week. *Prerequisite(s): ART 1111*

1122 Beginning Painting
3 Cr. Hrs.

Personal expression with instruction in 20th-century techniques and concepts. Complex problems in color and composition. Six studio hours per week. *Prerequisite(s): ART 1121*

1131 Introduction to Sculpture
3 Cr. Hrs.

Introduces basic principles of sculpture and expands personal definitions and interpretations of contemporary three-dimensional art. Introduces methods of sculpture with clay, wood, plaster and other materials for constructing three-dimensional art work. Six studio hours per week. *Prerequisite(s): ART 1102*

1132 Intermediate Sculpture
3 Cr. Hrs.

Develop complex visual principles of sculpture and develop a personal expression of individual style in interpretations of contemporary three-dimensional art. Six studio hours per week. *Prerequisite(s): ART 1131*

1133 Figurative Sculpture
3 Cr. Hrs.

Study of the human anatomy of the head and figure as applied to three-dimensional form. Six studio hours per week. *Prerequisite(s): ART 1131*

1141 Introduction to Ceramics
3 Cr. Hrs.

Materials and processes of ceramic art for the beginning student; handbuilding and wheel-throwing and glazing demonstrated through a variety of functional and sculptural projects. Six studio hours per week.

1142 Intermediate Ceramics
3 Cr. Hrs.

Materials and processes of ceramic art for the intermediate student; intermediate skills of wheel throwing and glazing are demonstrated through a variety of functional and sculptural projects. Six studio hours per week. *Prerequisite(s): ART 1141*

1161 Black & White Darkroom Photography I
3 Cr. Hrs.

An introduction to the art and technique of black and white photography. Photographic shooting, processing and printing are stressed. Students to supply their own adjustable camera, (35mm or 120) film and print paper. Six studio hours per week.

1162 Black & White Darkroom Photography II
3 Cr. Hrs.

Intermediate course in black and white photography. Further introduction and application of the tools/techniques of photographic art with emphasis on artistic portfolio development. Students shoot a minimum of 15 rolls of film to satisfy the portfolio project. Film and correct contact sheets must be included in the working portfolio. Six studio hours per week. *Prerequisite(s): ART 1161*

1170 Non-Silver Photography
3 Cr. Hrs.

Principles and theories of nonsilver chemical processes used for print production including gum, cyanotype, Van Dyke Brown, palladium, salt printing and wet-plate collodion process. Six studio hours per week. *Prerequisite(s): ART 1161*

1171 Studio Photography
3 Cr. Hrs.

Mechanics and aesthetics of photography in a studio environment covering a range of subjects and emphasizing lighting techniques and equipment as well as use of all camera formats and digital media. Six studio hours per week. *Prerequisite(s): ART 1161*

1175 Computer Photography
3 Cr. Hrs.

Techniques for transforming photographic images through use of computers and digital cameras. Use of a computer to create fine art digital images. Advanced PhotoShop techniques including layers, color correction, masking and special effects. Students will be challenged to address learning outcomes in their work to demonstrate creative process and critical thinking. *Prerequisite(s): ART 1161*

2111 Intermediate Drawing I
3 Cr. Hrs.

Definition of a personal expression through the drawing process; traditional and modern approaches to drawing the figure, still life, and other contemporary subjects. Six studio hours per week. *Prerequisite(s): ART 1112*

2112 Intermediate Drawing II
3 Cr. Hrs.

Emphasis on the technical process and the language of drawing; a variety of media and techniques focusing on personal expression. Six studio hours per week. *Prerequisite(s): ART 2111*

2141 Advanced Ceramics
3 Cr. Hrs.

Materials and processes of ceramic art for the advanced student; advanced skills of wheel throwing and glazing are demonstrated through a variety of functional and sculptural projects. Six studio hours per week. *Prerequisite(s): ART 1142*

2216 Life Drawing & Anatomy I
3 Cr. Hrs.

Figure drawing with a foundation in anatomical study. Emphasis on proportion as well as design with an application towards mood and expression. Six studio hours per week. *Prerequisite(s): ART 1111*

2217 Life Drawing & Anatomy II
3 Cr. Hrs.

Advanced figure drawing with a foundation in anatomical study. Development of mood and content through form and topic. Six studio hours per week. *Prerequisite(s): ART 2216*

2221 Intermediate Painting-Observation & Concept
3 Cr. Hrs.

Art as a means of communication, through content and expression. Incorporation of contemporary concepts and styles of art. Six studio hours per week. *Prerequisite(s): ART 1122*

2222 Intermediate Painting - The Figure
3 Cr. Hrs.

The figure as the subject of study and how it has been used academically and expressively. Six studio hours per week. *Prerequisite(s): ART 1122*

2230 Art History: Ancient through Medieval Periods
3 Cr. Hrs.

Art history from early cave paintings through the Medieval period of Western civilization.

2231 Art History: Renaissance through Contemporary Periods
3 Cr. Hrs.

Art history from the early Italian Renaissance through the contemporary period.

2235 History of Photography
3 Cr. Hrs.

Historical survey of photography as an art form from its beginnings in the 1830's until the present day; developments in photographic processes, artistic trends, and study of major photographic artists.

2236 History of Women Artists
3 Cr. Hrs.

A history of women artists from the Middle Ages to the present day, with emphasis on the history of style, and on women's historical roles.

2237 History of American Art
3 Cr. Hrs.

Art history of the United States from the pre-colonial to contemporary periods.

2238 History of African Art
3 Cr. Hrs.

History of African art from ancient to contemporary periods.

2239 History of Asian Art
3 Cr. Hrs.

Art history focusing on major cultural styles of Indian, Chinese, and Japanese art from ancient through contemporary periods, including the styles and specific work of major artists.

2265 Digital Color Photography I
3 Cr. Hrs.

An introduction to the technique of digital color photography, printing techniques, the presentation of digital prints and various camera and computer techniques will be employed to enhance the print. Student will supply own digital Single-lens Reflex (SLR) camera and pigment-based photographic printer. Six studio hours per week. *Prerequisite(s): ART 1161 AND ART 1175 (if ART major) OR VIS 1140 (if VIS major)*

2266 Digital Color Photography II
3 Cr. Hrs.

An advanced digital color photographic course focusing on creative computer and camera techniques. Student to supply own Single-lens Reflex (SLR) digital camera and pigment-based printer. Six studio hours per week. *Prerequisite(s): ART 2265*

2269 Printmaking I
3 Cr. Hrs.

Examines the philosophy, history and techniques of multiple image preparation including woodcut and intaglio processes. Six studio hours per week. *Prerequisite(s): ART 1111 OR ART 1161 OR VIS 1100 OR VIS 1110 OR VIS 1140*

2270 Fine Art Internship 1 Cr. Hr.

Practicum providing student with experience in organizing and hanging art exhibits, assisting in studios or working in arts administration. Seven practicum hours per week. *Prerequisite(s): Approval of Department*

2279 Printmaking II
3 Cr. Hrs.

Exploration of color printing in relief, intaglio, lithographic, and monotype processes. Six studio hours per week. *Prerequisite(s): ART 2269*

2280 Intermediate Printmaking I
3 Cr. Hrs.

Examines an advanced use of combined processes, mixed-media, and interdisciplinary approaches to image-making in printmaking. Six studio hours per week. *Prerequisite(s): ART 2279*

2281 Intermediate Printmaking II
3 Cr. Hrs.

Focused development of individualized concepts and independent expression in printmaking with intensive concentration on selected processes. Six studio hours per week. *Prerequisite(s): ART 2280*

2285 Printmaking - Monotype
3 Cr. Hrs.

Variety of image-making techniques to explore monotype printing methods in black-and-white and color. Six studio hours per week. *Prerequisite(s): ART 2269*

2294 Photography Portfolio Development
R
1 Cr. Hr.

One-on-one instruction regarding the student's final graduating photography portfolio. Instructor will meet with the student during final term of study to help the student compose his or her final graduating portfolio. Student may repeat course up to three times to achieve a passing grade. Failure to satisfactorily complete this course will make the student ineligible for the Photographic Technology Short-Term Certificate. *Prerequisite(s): Restricted to Majors AND student must complete 28 semester hours of coursework prior to enrolling in ART 2294. Course should be completed during the final terms of study.*

2295 Graduation Portfolio Development & Exhibition
1 Cr. Hr.

The student will write an artist statement and an art-related resume, attend lectures and demonstrations on professional presentation of artwork, take quality promotional images of his/her artwork and select a portfolio of his/her original artwork for graduation exhibition. *Prerequisite(s): 50 credit hours earned; 24 of which must be in ART*

American Sign Language (ASL)

1101 Orientation to Deafness
3 Cr. Hrs.

Study the culture of the American Deaf community. Issues raised include the relationship between language and culture, the history of deaf education, the Deaf President Now revolution and the collective goals and values of the Deaf community. Gain an understanding of the effects of hearing loss by way of basic audiology, speech pathology and the anatomy of the ear. We will also address access to services for the Deaf, hard-of-hearing, and Deaf-Blind consumers.

1102 Interpreting Theory & Best Practices
3 Cr. Hrs.

An in-depth examination of the multiple facets that constitute effective interpreting. These include communication theory, cognitive processing skills, cultural adjustments, contextual and situational factors, expansion techniques, controlling legislation and ethics and best practices. Various interpreting settings are examined, with special emphasis on educational interpreting, interpreter licensure and the national interpreting evaluation process. *Prerequisite(s): ASL 1101 AND ASL 1112*

1111 Beginning American Sign Language I
3 Cr. Hrs.

This course provides a foundation for non-signers to study American Sign Language (ASL) and learn about deaf culture. It includes principles, methods and techniques for communicating with deaf individuals who sign. Focusing on development of receptive and expressive sign skills, manual alphabet, numbers, sign vocabulary, syntax, grammar and culture. *Prerequisite(s): DEV 0035*

1112 Beginning American Sign Language II 3 Cr. Hrs.

Continue to study American Sign Language (ASL) grammatical structure, vocabulary, fingerspelling, use of signing space, conversational regulators and introductory aspects of deaf culture. *Prerequisite(s): ASL 1111 AND ENG 1101*

1228 Intermediate American Sign Language I 3 Cr. Hrs.

Express abstract concepts in ASL using appropriate grammatical structure, signing space, vocabulary, fingerspelling and nonmanual markers. The course also features continued development of conversational regulators and aspects of deaf culture. *Prerequisite(s): ASL 1112*

1229 Intermediate American Sign Language II 3 Cr. Hrs.

Expands ability to express abstract concepts in American Sign Language (ASL), further develops vocabulary and receptive and expressive fluency. Read and discuss topics related to deaf culture. Deaf community interaction required. *Prerequisite(s): ASL 1101 AND ASL 1228 AND ENG 1101*

2201 Interpreting I 3 Cr. Hrs.

An introduction to the theories and models of interpreting, cognitive process techniques, interpreting logistics and strategies, as well as the code of professional conduct and all aspects of confidentiality. *Prerequisite(s): ASL 1101 AND ASL 1228*

2201 Interpreting I 3 Cr. Hrs.

An introduction to the theories and models of interpreting, cognitive process techniques, interpreting logistics and strategies, as well as the code of professional conduct and all aspects of confidentiality. Student may repeat course up to three (3) times to achieve a passing grade. *Prerequisite(s): ASL 1101 AND ASL 1228*

2202 Interpreting II 3 Cr. Hrs.

Students further develop and demonstrate mastery of advanced interpreting principles and techniques. Classroom activities include platform interpreting, team interpreting and application of the Registry of Interpreters for the Deaf (RID) Code of Professional Responsibility to a variety of interpreting situations. Two classroom, two lab hours per week. Students may repeat course up to three (3) times to achieve a passing grade. *Prerequisite(s): ASL 1229 AND ASL 2201 AND ENG 1201*

2203 Interpreting III 3 Cr. Hrs.

Students will demonstrate proficiency in both simultaneous and consecutive interpreting while executing the necessary techniques, principles, and models to effectively interpret between source and target languages. Two classroom, two lab hours per week. *Prerequisite(s): ASL 2202 AND ASL 2231*

2207 Role of the Interpreter 3 Cr. Hrs.

This course will address how setting, register and preferred language mode of clients impacts the role of the interpreter. During weekly in-class role plays, students will employ interpreting techniques learned in other advanced interpreting courses as well as elements of the Demand-Control Schema. *Prerequisite(s): ASL 1102 AND ASL 2202 AND ASL 2231*

2212 Specialized Interpreting I 2 Cr. Hrs.

A study of interpreting in settings with specialized vocabulary such as medical, technical, and employment. Practice and performance of the vocabulary used in these settings is designed to increase student's comfort and skills for interpreting in these specialized settings. One classroom, two lab hours per week. *Prerequisite(s): ASL 1102 AND ASL 1229 AND ASL 2201 AND Restricted to Majors*

2213 Specialized Interpreting II 3 Cr. Hrs.

A study of interpreting in legal, mental health, sexuality, and substance abuse settings. The course will focus on the comprehension and sign production of the unique and specialized vocabulary used in these settings. Two classroom, two lab hours per week. *Prerequisite(s): ASL 2202 AND ASL 2212 AND ASL 2231 AND Restricted to Majors*

2231 Advanced American Sign Language I 3 Cr. Hrs.

The first advanced course in the study of American Sign Language (ASL) is an intensive study of the linguistic structure of English and American Sign Language (ASL). Students explore the syntactic similarities and differences between the two languages and learn how to find functional equivalence between the two languages. *Prerequisite(s): ASL 1229 AND ENG 1201*

2236 Transliterating & Signing Modalities 3 Cr. Hrs.

Course includes practice in Signing Exact English II (SEE II), transliterating and various signing modalities used in special settings or by various special populations such as deaf-blind or individual with other disabilities. Students will focus on transliterating signed/spoken English in educational and technical situations and develop specialized vocabulary in areas typically utilizing transliterators. *Prerequisite(s): ASL 2201 AND ASL 2231*

2261 Practicum I 3 Cr. Hrs.

Students are required to complete 150 hours of socialization in the deaf community, interpreting and observation at an off-campus setting under the supervision of a mentor. Weekly seminar provides opportunities to synthesize on-site experiences with instructor and peers. Two classroom, seven practicum hours per week. *Prerequisite(s): ASL 2207 AND Restricted to Majors*

2262 Practicum II 3 Cr. Hrs.

Students are required to attend weekly seminar class and complete 150 hours of interpreting/observation and socialization at off-campus settings under the supervision of a mentor(s). Two classroom, seven practicum hours per week. *Prerequisite(s): ASL 2261 AND Restricted to Majors*

2300 Educational Interpreting 3 Cr. Hrs.

This course presents an overview of educational interpreting with a focus on the K-12 setting. Topics include: the role of the educational interpreter, deafness and other disabilities, the Individualized Educational Plan (IEP) process and the Ohio Department of Education's (ODE) Educational Interpreter Guidelines and licensure process. *Prerequisite(s): Restricted to Majors*

2401 C-Print Captioning 3 Cr. Hrs.

Students will learn the C-Print Captioning software, abbreviations, and applications in order to effectively caption communication between individuals who are Deaf or Hard of Hearing and hearing.

2402 Field Placement 2 Cr. Hrs.

This directed practice requirement allows students to complete 75 hours of mentored C-Print observation/captioning at off-campus settings under the supervision of a mentor(s).

Astronomy (AST)

1111 The Solar System 3 Cr. Hrs.

Patterns and movements of celestial objects; history of astronomy; gravity, light, and matter; various types of telescopes; origins of the solar system; properties of planets and their moons; asteroids, comets, meteoroids and space exploration. Students must sign up for concurrent lab sections. *Prerequisite(s): MAT 0100 or MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445 OR MAT 1450*

1112 Stars, Galaxies & the Universe 3 Cr. Hrs.

Properties and evolution of stars including the Sun; black holes and other stellar remnants; Milky Way and other galaxies; origin and fate of the universe. Students must sign up for concurrent lab sections. *Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445*

1117 Lab for the Solar System 1 Cr. Hr.

Laboratory and field activities to supplement The Solar System. Three lab hours per week. *Corequisite(s): AST 1111*

1118 Lab for Stars, Galaxies & the Universe 1 Cr. Hr.

Lab and field activities to supplement Stars, Galaxies & the Universe. Three lab hours per week. *Corequisite(s): AST 1112*

Automotive Technology (AUT)

1100 Consumer Automotive 2 Cr. Hrs.

Language of automotive systems and functions. Students will perform a series of activities related to vehicle maintenance such as oil change, chassis lubrication, safety inspections, ignition tune-up, cooling system testing, brake inspections and evaluation of a used vehicle. Basic hands tools are required. One classroom, three lab hours per week.

1102 Introduction to Automotive Service R 0.5 - 2 Cr. Hrs.

Work assignment practices that are necessary for beginning automotive service technicians. Hand tool usage, correcting wind noise and water leaks, oil changes, tire rotations and balancing, new vehicle prep, used car inspection. Eye protection and hand tools are required.

1108 Automotive Engine Systems 4 Cr. Hrs.

Engine operation, nomenclature, measurements and tolerances, including service and overhaul procedures. Cooling, lubrication and valve train systems are discussed. Basic engine machining practices are covered. Basic hand tools are required for the course.

1111 Automotive Service Consulting & Advising 2 Cr. Hrs.

Introduction to service department as it pertains to a service consultant or service advisor at automotive repair facility. Skill development for intake of vehicle, preparing repair order, communicating with customer and selling of labor and parts.

1114 Automotive Electrical/Electronic Systems I 3 Cr. Hrs.

Comprehension of Ohm's law, basic electrical circuits, digital meter usage, batteries, starting and charging system operation. Diagnosis of wire harness repair procedures and service. One classroom, six lab hours per week.

1115 Automotive Engine Performance I 4 Cr. Hrs.

Operation and service of fuel injection systems. Testing and evaluation of emission controls, on-board diagnostic systems and engine condition. Basic hand tools required. Two classroom, six lab hours per week. *Prerequisite(s): AUT 1114*

1116 Automotive Steering & Suspension Systems 3 Cr. Hrs.

Steering system diagnosis and service including front and rear suspension components, wheel and tire and front and rear wheel alignment. Basic hand tools are required. One classroom, six lab hours per week.

1142 Automotive Manual Transmission & Driveline 3 Cr. Hrs.

Theory and operation of clutch, manual transmission and transaxle, rear axle, limited slip differential, drive shaft, universal joint, four- wheel drive/all-wheel drive, diagnosis and repair. Basic hand tools required. One classroom, six lab hours per week.

1146 Automotive Heating Ventilation & Air Conditioning Systems 3 Cr. Hrs.

Theory and operation of automotive heating and air-conditioning systems. Includes lab activity in diagnosis, service and repair procedures. Basic hand tools required. One classroom, six lab hours per week.

1165 Automotive Brake Systems 3 Cr. Hrs.

Theory and operation of hydraulic braking systems, drum brake, disc brake and power assist diagnosis and service. One classroom, six lab hours per week.

1170 Automotive Internship I R 2 Cr. Hrs.

Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. *Prerequisite(s): Approval of Department*

1171 Automotive Internship II R 2 Cr. Hrs.

Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Students will practice service procedures on steering and suspension, electrical systems and engines following their second semester. Twenty co-op hours per week. *Prerequisite(s): Approval of Department*

1172 Automotive Internship III R 2 Cr. Hrs.

Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Students will practice service procedures on engine performance, manual transmissions and axles following their third semester. Twenty co-op hours per week. *Prerequisite(s): Approval of Department*

1173 Automotive Internship IV R 2 Cr. Hrs.

Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Students will practice service procedures on automatic transmissions and air-conditioning systems following their fourth semester. Twenty co-op hours per week. *Prerequisite(s): Approval of Department*

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2214 Automotive Electrical/ Electronic Systems II 4 Cr. Hrs.

Advanced electrical/electronic system diagnosis and troubleshooting of starting and charging systems, lighting systems, dashboard instrumentation, body control and accessory circuits. SRS system operation, testing and diagnosis. AC and DC motor theory, operation and diagnosis. Schematic utilization. Diagnose serial data bus communication and module systems. Two classroom, six lab hours per week. *Prerequisite(s): AUT 1114*

2215 Automotive Engine Performance II 4 Cr. Hrs.

Advanced diagnosis and repair of computer controlled fuel delivery, fuel injection, ignition, emission systems and proper use of advanced engine performance diagnostic equipment. Basic handtools required. *Prerequisite(s): AUT 1115*

2221 High Performance Engine Blocks & Heads 6 Cr. Hrs.

High-performance engine building plan development. Disassembly, cleaning and inspection of components. Reconditioning/ modification of components. Preparation of components prior to final/trial assembly. Three classroom, nine lab hours per week. *Prerequisite(s): AUT 1108 OR Approval of Department*

2222 High Performance Engine Assembly & Dyno Testing 6 Cr. Hrs.

High-performance engine block and cylinder head final assembly. Finished engine assembly is dynamometer tested for performance output. Three classroom, nine lab hours per week. *Prerequisite(s): AUT 1108 OR Approval of Department*

2224 High Performance Fuel Induction Systems 3 Cr. Hrs.

Performance rebuilding and tuning of Holley carburetors. Introduction to the operation and performance application of electronic fuel injection. Introduction to superchargers, turbochargers and nitrous oxide. Engine performance evaluation and tuning utilizing engine and chassis dynamometers. Basic hand tools required. One and one-half classroom, four and one-half lab hours per week. *Prerequisite(s): AUT 1115*

2226 High Performance Fabrication 4 Cr. Hrs.

Basic chassis design and construction for high-performance racing applications. Suspension design, types and fabrication. Interior and exterior sheet-metal design and fabrication. Two classroom, six lab hours per week.

2230 Hybrid Electric Vehicle Systems 2 Cr. Hrs.

Hybrid vehicle safety, theory and operation of automotive hybrid high voltage systems, batteries, charging systems, drivetrain components and emission systems. One classroom, three lab hours per week. *Prerequisite(s): AUT 2214*

2240 Automotive Diesel Systems 2 Cr. Hrs.

This course provides content on light duty diesel applications in automobiles. Students will receive instruction on theory and operation, maintenance, service, repair, and diagnostic skills of diesel engines, fuel systems, exhaust systems, induction, and emission systems. One classroom, three lab hours per week.

2241 Automatic Transmission Systems 4 Cr. Hrs.

Theory and operation of automotive transmissions and transaxle systems. Lab experience in the overhaul and service of automatic transmissions and transaxles including mechanical, hydraulic and electronic systems diagnostics and testing.

2250 Automotive Service Operations 8 Cr. Hrs.

Actual experience in the laboratory with diagnosis, repair, use of manuals, customer relations, safety, communications, supervision and delegation of work. Automotive service facility and operation consideration. Basic hand tools required. Four classroom, twelve lab hours per week. *Prerequisite(s): AUT 1108 AND AUT 1114 AND AUT 1115 AND AUT 1116 AND AUT 1146 AND AUT 1165 OR Approval of Department*

Aviation Technology (AVT)

1101 Introduction to Unmanned Aerial Systems 2 Cr. Hrs.

Foundations of unmanned aerial systems (UAS), including history, elemental systems including payloads, data links, ground support equipment, classes of UAS, categories, applications, mission planning and control, and launch/recovery systems.

1102 Orientation to Inflight Services 2 Cr. Hrs.

Provides students with the knowledge of the duties and responsibilities of flight attendants, inflight service procedures, safety briefing announcements, customer service skills, airline terminology, airline schedules, airport identifiers and airline flight attendant interview techniques.

1103 Remote Pilot Ground School 1 Cr. Hr.

The application of unmanned aerial systems (UAS) for commercial and civil purposes requires an understanding of contemporary technical, legal and regulatory issues. This course provides the foundational knowledge to take the FAA-mandated Part 107 Remote Pilot exam to operate as a commercial UAS pilot.

1104 UAS Standards, Regulations & Law 1 Cr. Hr.

This course reviews the current legal considerations of unmanned aerial system (UAS) operations, provides an outlook on future considerations, and informs students on existing and trending UAS related standards and regulations.

1105 Orientation to Aviation 2 Cr. Hrs.

Overview of aviation career specialties required for successful entry into aviation industry-related fields. Evaluation of career interests relative to the market for aviation opportunities. Guest lecturers and site visits will be used to illustrate the broad spectrum of aviation occupations available. *Prerequisite(s): DEV 0035*

1106 Airframe Safety Systems 2 Cr. Hrs.

Aircraft safety systems will cover the following: chemical and electric/pneumatic ice and rain protection systems, fire warning and extinguishing systems, landing gear and throttle safety warning systems, aural warning systems and troubleshooting and repair of wiring for these systems. One classroom, two lab hours per week.

1107 Fuel Systems 3 Cr. Hrs.

Inspection, operational checkout and repair of fuel systems and components to include tanks, transfer pumps, indicating systems and fuel heating; leak detection, identification and repair; proper servicing and regulatory compliance. Two classroom, three lab hours per week.

1108 UAS First Responder Applications 1 Cr. Hr.

Students will learn the fundamental principles of Unmanned Aerial Systems (UAS) technologies, capabilities, regulations, legal responsibilities, cost and benefit consideration for potential use in law enforcement, fire, rescue, emergency medical and disaster response applications.

SINCLAIR COLLEGE

**1110 Private Pilot Ground School
3 Cr. Hrs.**

Prepares students with the knowledge necessary to successfully complete the Federal Aviation Administration (FAA) Private Pilot knowledge exam. Topics include pilot training, aircraft systems, aerodynamic principles, safety of flight, air traffic control procedures, weather theory, weather hazards and conditions, federal aviation regulations, aircraft performance, weight and balance principles and navigation procedures. *Prerequisite(s): Approval of Department*

1111 Helicopter Private Pilot Ground 3 Cr. Hrs.

Prepares students with the knowledge necessary to successfully complete the Federal Aviation Administration (FAA) Private Pilot knowledge exam. Topics include pilot training, aircraft systems, aerodynamic principles, safety of flight, air traffic control procedures, weather theory, weather hazards and conditions, federal aviation regulations, aircraft performance, weight and balance principles and navigation procedures. *Prerequisite(s): Approval of Department*

**1112 UAS Precision Agriculture
2 Cr. Hrs.**

This course describes the current state of Unmanned Aerial Systems and related technologies as they may be applied to precision agriculture. Students will determine the commercial viability of Unmanned Aerial System applications in precision agriculture and will review current regulatory and operational considerations for their use. One classroom, two lab hours per week.

**1113 Drawings for Aviation
3 Cr. Hrs.**

Knowledge and skill development in using and making aircraft drawings, graphs and wiring diagrams; drawing symbols, electrical schematics, drawing repairs and alterations to industry and Federal Aviation Administration (FAA) standards; aviation performance charts and graphs, aviation gas laws, force and motion, work and power, energy and weight, mass and matter that affect aircraft performance. Two classroom, three lab hours per week.

1114 Geospatial Information for UAS 2 Cr. Hrs.

This course defines common terms used in the Geographic Information System (GIS) community, explains common geospatial applications, compares and contrasts the difference between data and information, and presents how to evaluate data from multiple sources in terms of usefulness, accuracy and potential uses. In addition to examining sources of data, the course also discusses production methods and analysis procedures for geospatial data as they relate to unmanned aerial system (UAS) operations. A fundamental grounding is also provided in the technical aspects to underpin geospatial data and key geospatial technologies that support Unmanned System operations. One classroom, two lab hours per week.

1115 Introduction to UAS Entrepreneurship 2 Cr. Hrs.

Provides students with an introduction to the principles of entrepreneurship and how they can leverage UAS technologies and applications to create or expand a successful business. Lectures, case studies, and experiential learning are used to develop critical thinking and interpersonal skills.

1116 Regulations for Maintenance 3 Cr. Hrs.

This course provides the aviation mechanic with critical knowledge in the following areas: FAA regulations, airworthiness directives, mechanics' privileges, legal aircraft record entries, maintenance publications, repair manuals, wiring diagrams, structural repair manuals, Air Transport Association (ATA) numbering system and human factors. Two classroom, two lab hours per week.

1118 Weight & Balance 3 Cr. Hrs.

This course covers aviation maintenance performance calculations to include theory of aircraft weight and balance encompassing documentation, weighing the aircraft, locating the center of gravity, adverse center of gravity checks, large aircraft weight and balance computations and determination of ballast requirements. Two classroom, three lab hours per week.

**1119 Aviation Meteorology
2 Cr. Hrs.**

Prepares students with the knowledge necessary to comprehend the fundamentals of meteorology, analyze weather factors, hazards and in-flight weather conditions and weather conditions as they relate to aircraft and flight performance using aviation meteorology charts and internet weather resources.

1120 Electro-Optical & Infrared Data Analysis 2 Cr. Hrs.

Introduces the foundations of electro-optical and infrared data analysis. Students will acquire knowledge of the characteristics of electro-optical and infrared sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. One classroom, two lab hours per week. *Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format*

1121 Multispectral & Hyperspectral Data Analysis

2 Cr. Hrs.

Introduces the foundations of multispectral and hyperspectral data analysis. Students will acquire knowledge of the characteristics of multispectral and hyperspectral sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. One classroom, two lab hours per week. *Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format*

1122 Synthetic Aperture Radar & Light Detection & Ranging Data Analysis 2 Cr. Hrs.

Introduces the foundations of synthetic aperture radar and light detection and ranging data analysis. Students will acquire knowledge of the characteristics of synthetic aperture radar and light detection and ranging sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. One classroom, two lab hours per week. *Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format*

1123 Acoustic & CBRNE Data Analysis 1 Cr. Hr.

Introduces the foundations of acoustic and chemical, biological, radiological, nuclear, and explosives data analysis. Students will acquire knowledge of the characteristics of acoustic and chemical, biological, radiological, nuclear, and explosives sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. *Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format*

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

1124 Private Pilot Flight Lab - Airplane Single Engine 2 Cr. Hrs.

Prepares students with the knowledge necessary to successfully obtain the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Private Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 61. Topics include familiarization with the training aircraft, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, solo flight, night flying, cross country operations and navigation procedures. Course Performance Standards require 40 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee, a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): AVT 1110*

1126 Private Pilot Flight Lab - Rotorcraft Helicopter 2 Cr. Hrs.

Prepares students to successfully obtain the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Private Pilot Certification with a rotorcraft helicopter class rating. The course is conducted under 14 CFR Part 61. Topics include familiarization with the training aircraft, flight maneuvers, takeoff and landing procedures, solo flight, night flight, cross country operations and navigation procedures. Course Performance Standards require 40 hours of flight time and 100% completion of the syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): AVT 1111*

1128 Powerplant Safety Systems 3 Cr. Hrs.

Troubleshooting of electrical wiring and connections on instruments, legal repairs allowed on instruments by Airframe and Powerplant (A&P) mechanics, different types of fire protection systems, different extinguishing agents used, Auxiliary Power Unit (APU) use, inspection, operation, removal, and replacement of APUs requiring servicing and troubleshooting and unducted fan engines. Two classroom, two lab hours per week.

1131 Basic Aviation Electricity 3 Cr. Hrs.

Basic electrical principles to include the following: alternating and direct current (A/C and D/C) circuits, production of electricity, batteries, Ohm's law, capacitance, load analysis, electrical load circuits, integrated circuits, parallel, series, and compound circuits, and A/C and D/C motors. Two classroom, three lab hours per week.

1133 Instruments/ Communications 3 Cr. Hrs.

Inspection, removal and installation of flight instruments and controls to include gyroscopic and magnetic instruments, pitot-static lines, wiring and legal repairs by mechanics. Communications equipment operation, inspection, removal and installation of radios, antennas, coax cables, wave guides and next generation of combination instrument/ communication equipment to include GPS/ satellite communication. Two classroom, three lab hours per week.

1135 Materials & Processes 4 Cr. Hrs.

Selection and proper use of nondestructive inspection techniques and equipment; basic heat treatments, identification and selection of correct aircraft hardware. Inspection of welds and precision measurements. Tube bending, cutting and flaring, high-pressure (MS) flareless fittings, repair of rigid lines, identification of fluid lines, fabrication of high and low pressure hose lines, bulkhead fittings. Two classroom, six lab hours per week.

1136 Sheet Metal 4 Cr. Hrs.

Identification and selection of sheet metal types; inspection, cleaning, preparation, forming, layout, bending, cutting, dimpling, countersinking, drilling, installing special fasteners and rivets in sheet metal. Fabrication of sheet metal projects is required. Two classroom, six lab hours per week.

1140 Introduction to Business Aviation 2 Cr. Hrs.

Overview of International Civil Aviation Organization (ICAO) definitions of aviation activities; definition of business and private aviation, reasons for using business aviation, the actual costs of use versus airlines and other modes of transportation, differences from job opportunities in other areas of aviation, opportunities for specific kinds of jobs from architect to aero engineering, discussions with professionals from the field.

1141 Principles of Aviation Leadership 2 Cr. Hrs.

Strategic planning in business aviation operations, relationship among management, flight crews, corporate business aviation flight department employees and those external to the flight department, including fixed based operators (FBOs); team building, decision making, communication with the corporate business aviation flight department.

1148 Aircrew Emergency Management 4 Cr. Hrs.

Provide students with the knowledge of the duties and responsibilities of airline crew during emergency operations which will include smoke/fire, first aid, evacuations/ ditchings, decompressions, security and hazardous materials.

1151 Crew Survival & Rescue Techniques 3 Cr. Hrs.

Overview of the psychology of survival, post-crash survival techniques, prioritization and necessities, survival physiology in the emergency environment, clothing protection and improvised shelter, signaling, air and ground search and rescue, survival kits and emergency equipment and survival skills. Includes winter, desert, jungle, water, hostile territories and extended in-plane hostage survival.

1170 Instrument Pilot Ground School 3 Cr. Hrs.

Basic nonvisual cockpit instrument reference education, including principles of basic attitude instrument flight and limitations of flight instruments, instrument flight procedures for departure, en-route and arrival operations, federal aviation regulations, weather factors and emergency situations. *Prerequisite(s): AVT 1110 AND AVT 1124 AND Approval of Department*

1171 Helicopter Instrument Pilot Ground 3 Cr. Hrs.

Basic nonvisual cockpit instrument reference education, including principles of basic attitude instrument flight and limitations of flight instruments, instrument flight procedures for departure, en-route and arrival operations, federal aviation regulations, weather factors and emergency situations. *Prerequisite(s): AVT 1111 AND AVT 1126 AND Approval of Department*

1213 Corrosion 3 Cr. Hrs.

Causes of corrosion, the chemical process, types of corrosion, locations susceptible to corrosion, detecting corrosion, removing and treating corrosion, cleaning of the interior and exterior of the airplane, polishing windshields and windows and paint removal and protection of bare surfaces. Two classroom, two lab hours per week.

1214 Cabin Atmospheric Control 2 Cr. Hrs.

Inspection, operation, troubleshooting, repair and service of the following items: heating, cooling, air conditioning, pressurization, air cycle machines and gaseous oxygen systems. One classroom, two lab hours per week.

1218 Utility Systems 6 Cr. Hrs.

Hydraulic and pneumatic aircraft systems, introduction to landing gear systems, development of repair and inspection skills, critical thinking and development of analysis used in troubleshooting and repair of hydraulic and pneumatic systems and landing gear. Three classroom, nine lab hours per week.

1224 Instrument Pilot Flight Lab - Airplane Single Engine 2 Cr. Hrs.

Prepares students with the skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Instrument Pilot Certificate. The course is conducted under 14 CFR Part 141.Topics include attitude instrument flying, instrument navigation, holding patterns, instrument approaches and instrument cross-country flight including instrument flight rules en-route procedures. Course Performance Standards require 35 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. *Prerequisite(s): AVT 1110 AND AVT 1124 AND Approval of Department AND Student must hold Private Pilot Certificate Corequisite(s): AVT 1170*

1226 Instrument Pilot Flight Lab - Rotorcraft Helicopter 2 Cr. Hrs.

Prepares students with the skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Instrument Pilot certificate with a rotorcraft helicopter Class Rating. The course is conducted under 14 CFR Part 141. Topics include attitude instrument flying, instrument navigation, holding patterns, instrument approaches and instrument cross country flight including instrument flight rules enroute procedures. Course Performance Standards require 40.5 hours of flight time 100% completion of the syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. *Prerequisite(s): AVT 1111 AND AVT 1126 AND Student must hold Private Pilot-Rotorcraft Certificate AND Approval of Department Corequisite(s): AVT 1171*

1241 Blind Flying Hazards 1 Cr. Hr.

Provides pilots with an understanding of spatial disorientation, its causes and prevention and techniques for safe recovery. Two lab hours per week. *Prerequisite(s): DEV 0035*

1245 Aviation Law 2 Cr. Hrs.

Prepares students with knowledge of the origins of aviation law, legal terminology and a general understanding of aviation industry laws, legislation and court decisions affecting the aviation community.

1246 Air Traffic Control Communications 1 Cr. Hr.

Overview of the history of air traffic control, air traffic control tower procedures, radar systems, radar separation, radio communications and techniques, flight plan clearances, traffic management and emergency procedures and priority handling.

1254 Flight Simulator Instruction 1 Cr. Hr.

Prepares students with the knowledge and practice necessary to successfully control an aircraft solely by reference to flight instruments. Topics include full and partial panel reference, accuracy and proficiency in flying holding patterns and instrument approach procedures and recovery from unusual attitudes and spatial disorientation scenarios. Contact the Department for the current course fee. *Prerequisite(s): (AVT 1110 AND AVT 1124) OR (AVT 1111 AND AVT 1126) AND Approval of Department Corequisite(s): AVT 1170 OR AVT 1171 AND AVT 1226 AND AVT 1224*

2115 UAS Entrepreneurship Capstone 2 Cr. Hrs.

Provides students with a real-world design challenge during which they will develop their own UAS related business concepts or explore a provided scenario. Tasks include market analysis, business case and plan development, creation of a business proposal, and delivery of a presentation as is common for those pursuing venture capital or other investment opportunities. One classroom, two lab hours per week. *Prerequisite(s): AVT 1115*

2121 Assembly & Rigging 3 Cr. Hrs.

This course covers proper adjustment of cables and torque tubes, proper alignment of primary and secondary control surfaces, proper inspection and alignment of landing gear components and associated controls, correct alignment of all structures in both fixed wing and rotary wing aircraft. Two classroom, three lab hours per week.

2122 Ignition & Starting 4 Cr. Hrs.

This course covers magneto removal, inspection, repair and installation; internal and external magneto timing; inspection, repair and installation of powerplant wiring and ignition harnesses. One classroom, six lab hours per week.

2125 Developments in Aviation I 2 Cr. Hrs.

Provides pilots and other aviation professionals with an in-depth understanding of how aviation technology has evolved. This course begins with the earliest balloon flights, the invention of the airplane and covers all of the subsequent technology developments through the end of WWII. *Prerequisite(s): DEV 0035*

2126 Reciprocating Engines 7 Cr. Hrs.

This course covers reciprocating engine removal, engine configurations, firing order, inspections, critical parts measurement, use of overhaul manual, powerplant troubleshooting, installation and repair. One classroom, eighteen lab hours per week.

2129 Propellers 4 Cr. Hrs.

Removal, inspection, repair, dressing and installation of propellers. Propeller pitch, angle of attack and forces. Metal, wood and composite propellers. Variable pitch propellers including constant speed, reversing, feathering and ground adjustable propellers. Propeller systems including governors, ice control and auxiliary systems. Propeller storage and return to service. Propeller certificate data. Two classroom, six lab hours per week.

2132 Airframe Electrical Systems 4 Cr. Hrs.

Electrical distribution, controls, switches, transformers and solid-state devices. Use of electrical measuring devices in troubleshooting and testing circuits. Repair of wiring and terminal ends. Use of electrical schematics and wiring diagrams to troubleshoot systems and trace electrical signals. Two classroom, six lab hours per week.

2138 Engine Fuel & Fuel Metering 3 Cr. Hrs.

Fuel system components for turbine and reciprocating engines, carburetor adjustment and overhaul, installation and removal of carburetors, repair of fuel metering components, repair and installation of fuel system components, inspection, adjustment and servicing of engine fuel metering system components. Two classroom, three lab hours per week.

2139 Induction/Exhaust/Cooling 2 Cr. Hrs.

Powerplant ice protection, reciprocating engine induction system, superchargers, turbochargers, heat exchangers, turbine engine inlet designs, exhaust system inspection, repair, removal, and installation, and thrust reversers. One classroom, three lab hours per week.

2143 Review & Recommendation 2 Cr. Hrs.

This course provides the aviation mechanic with critical review for the required Federal Aviation Administration (FAA) knowledge exams in the following areas under Part 147 Appendixes B, C and D: General, Airframe, and Powerplant aviation maintenance subjects with hands-on review in preparation for oral and practical exams. *Prerequisite(s): Approval of Department*

2146 Introduction to Airline Operations 3 Cr. Hrs.

An introduction to the structure of an airline, including the functions of the operational control center, airline marketing, maintenance control, fleet planning and scheduling, dispatch release, airline operating certificates and specifications, Part 121 Federal Aviation Regulations and an understanding of the principles and concepts of crew and dispatcher resource management (CRM) through interactive discussion and scenario analysis as it relates to aircraft dispatchers and airline flight crews.

2150 Crew Resource Management for UAS 1 Cr. Hr.

Provides students with an introduction to the principles and concepts of crew resource management (CRM) through interactive discussion and scenario based analysis as it relates to UAS operations and the challenge of optimizing the human/machine interface and accompanying flight operations. Discussion and scenario based activities include CRM markers, principles and concepts of CRM, team building, information transfer, problem solving, risk management and decision making, communications process, conflict resolution and maintaining situational awareness when dealing with UAS automated systems. *Prerequisite(s): Restricted to Majors*

2151 UAS Operations I 3 Cr. Hrs.

This course consists of lecture, simulator instruction and flight operation demonstration specific to an unmanned aerial system (UAS). Lecture will cover topics in UAS: aerodynamic theory, operations theories and techniques, platform categories, sensors and payloads, technical documents and processes of automation. Students will observe and participate in flight operations on various UAS platforms. Two classroom, two lab hours per week. *Prerequisite(s): AVT 1101 AND AVT 1104 AND AVT 1110 AND AVT 2150*

2157 Aircraft Performance I 2 Cr. Hrs.

Principles of advanced aerodynamics, high-speed flight, takeoff, enroute and landing jet aircraft performance. Operational factors affecting aircraft performance in aircraft dispatch. *Prerequisite(s): AVT 1119*

2158 Aircraft Performance II 2 Cr. Hrs.

Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Aircraft Dispatcher Certificate. Topics include DC-9, B-727, B-737 and BE-1900 weight and balance and advanced transport category aircraft performance calculations. *Prerequisite(s): AVT 1119*

2159 Canadair Regional Jet (CRJ) Aircraft Systems 1 Cr. Hr.

Prepares students with the knowledge necessary to successfully complete the Federal Aviation Administration (FAA) Aircraft Dispatcher Practical exam. Topics include theory of Canadair Regional Jet (CRJ) aircraft systems, including minimum equipment and configuration deviation list items and their application to aircraft dispatch applications. *Prerequisite(s): Approval of Department*

2166 Practical Dispatch Applications 3 Cr. Hrs.

In-depth coverage of joint Aircraft Dispatcher/Pilot responsibilities and dispatch functions including communications, operational control, fuel planning, flight planning, aircraft weight and balance, abnormal and emergency situations, weather, NOTAMs (Notices to Airmen) and airport facilities as they relate to flight planning. *Prerequisite(s): AVT 1119 AND AVT 1246 AND AVT 2146 AND AVT 2157 AND AVT 2158 AND AVT 2167 AND Approval of Department*

2167 Instrument Flight Rules (IFR) Navigation & Planning 2 Cr. Hrs.

Principles of aeronautical charts, national airspace system, aircraft navigation instruments, navigational systems and global differences in navigational operations. Air traffic control procedures and pilot responsibilities as they relate to enroute operations, terminal area and radar operations; including instrument departure and approach procedures. *Prerequisite(s): AVT 1119*

2168 Dispatcher Oral Preparation 1 Cr. Hr.

Preparation for the Federal Aviation Administration (FAA) Aircraft Dispatcher Certificate through an in-depth understanding of regulations, meteorology, navigation, aircraft systems, communications, air traffic control, emergency and abnormal procedures and practical dispatch applications. At the completion of the course, students will be prepared for the Federal Aviation Administration Aircraft Dispatcher oral examination. *Prerequisite(s): AVT 1119 AND AVT 1246 AND AVT 2146 AND AVT 2157 AND AVT 2158 AND AVT 2167 AND Approval of Department*

2211 Advanced Navigation Science 2 Cr. Hrs.

Study of advanced navigational systems used in commercial and corporate flight operations. Global Positioning Systems (GPS), Flight Management Systems (FMS) and automated flight planning programs will be demonstrated and practiced. Study of long range navigational procedures. *Prerequisite(s): AVT 1170 AND Approval of Department*

2219 Turbine Engines 4 Cr. Hrs.

Physics of gas turbine engines, air and non-air breathing engine types, production of thrust, engine sections, types of accessories, engine operations, maintenance requirements, inspections, repair of electrical connections, troubleshooting electrical and pneumatic systems and testing/trimming of engines. Two classroom, six lab hours per week.

2236 Non-Metallic Structures 4 Cr. Hrs.

This course covers composites, different types of composite glass, wood structures, types of wood used in aircraft, defects in wood, proper repair of fabric and wood structures, types of fabrics used to cover aircraft structures, sewing, lacing and finishing, and the required inspection of fabrics on aircraft. Two classroom, six lab hours per week.

2237 Aircraft Inspections 3 Cr. Hrs.

Conduct an annual/100-hour inspection for a complete aircraft including the airframe, engine and related components. Perform necessary servicing related to an annual inspection and check for airworthiness directives, service bulletins and compliance with manufacturer's directives. Operation, servicing, hand communications, aircraft movement and airport operations safety. Two classroom, three lab hours per week.

2240 Human Factors in Aviation 3 Cr. Hrs.

Provides pilots and other aviation professionals with an in-depth knowledge of human performance capabilities and limitations and their relationship with aircraft systems operation. Automation and human errors, fatigue, diet, motivation and learning, training principles, human sensory capabilities and limitations, supervisory control and Crew Resource Management (CRM) are among the topics this course will address. *Prerequisite(s): DEV 0035*

2242 Aircraft Accident Investigation I 3 Cr. Hrs.

Provides pilots and other aviation professionals with an understanding of techniques used by investigators to identify causes of accidents and how to make recommendations to reduce the likelihood of recurrence and reduce the consequences. *Prerequisite(s): DEV 0035*

2247 Aerodynamics & Flight Mechanics I 3 Cr. Hrs.

Properties of the Standard Atmosphere. Applies basic physics conservation concepts to incompressible, low-speed aerodynamics to develop analytical equations for lift and drag. Develops methods for basic aircraft performance analysis to include maximum angle and rate of climb, cruise and gliding flight. Discusses basic static and dynamic stability requirements. *Prerequisite(s): PHY 1141*

2250 Commercial Pilot Ground 3 Cr. Hrs.

Prepares fixed-wing students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. Topics include federal aviation regulations applicable to commercial pilot operations, airspace, flight information, meteorology, aeronautical decision making, Visual Flight Rules (VFR) cross-country flight planning and navigation. *Prerequisite(s): AVT 1170 AND AVT 1224 AND Approval of Department*

2251 Helicopter Commercial Pilot Ground 3 Cr. Hrs.

Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate for Helicopter pilots. Topics include federal aviation regulations applicable to commercial pilot operations, airspace, flight information, meteorology, aeronautical decision making, Visual Flight Rules (VFR) cross-country flight planning and navigation. *Prerequisite(s): AVT 1171 AND AVT 1226 AND Approval of Department*

2258 Flight Instructor Ground 3 Cr. Hrs.

Prepares students with the knowledge necessary to complete the Federal Aviation Administration (FAA) Fundamentals of Instruction and Certified Flight Instructor knowledge exams. Topics include foundations of learning, communication process, the fundamentals of instruction, flight instructor responsibilities and professionalism, development of lesson plans and evaluations, logbook endorsements and review of private and commercial pilot aeronautical knowledge areas as it pertains to the FAA Certified Flight Instructor. *Prerequisite(s): (AVT 2250 AND AVT 2263) OR (AVT 2251 AND AVT 2265) AND Approval of Department*

2263 Commercial Pilot Flight Lab - Airplane Single Engine 3 Cr. Hrs.

Prepares students with the aeronautical knowledge, skills and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include familiarization with the complex training aircraft, commercial flight maneuvers, simulated emergency procedures, maximum performance takeoff and landing procedures and extended cross-country flight operations. Course Performance Standards require 120 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Nine lab hours per week. *Prerequisite(s): AVT 1170 AND AVT 1224 AND Approval of Department AND Student must hold Instrument Pilot Certificate Corequisite(s): AVT 2250*

2264 Commercial Pilot Single Engine Additional Rating
3 Cr. Hrs.

Prepares students with the aeronautical knowledge, skills and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include familiarization with the complex training aircraft, commercial flight maneuvers, simulated emergency procedures, maximum performance takeoff and landing procedures and extended cross-country flight operations. Course Performance Standards require 120 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Nine lab hours per week. *Prerequisite(s): Approval of Department*

2265 Commercial Pilot Flight Lab - Rotorcraft Helicopter 3 Cr. Hrs.

Prepares students with the aeronautical knowledge, skills and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with a rotorcraft helicopter Class Rating. The course is conducted under 14 CFR Part 141. Topics include familiarization with Commercial flight maneuvers, simulated emergency procedures, maximum performance takeoff and landing procedures and extended cross-country flight operations. Course Performance Standards require 115 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Nine lab hours per week. Additional flights outside of the scheduled weekly lab hours are required for course completion. *Prerequisite(s): AVT 1171 AND AVT 1226 AND Approval of Department AND Private and Instrument Pilot Rotorcraft-Helicopter certificate*
Corequisite(s): AVT 2251

2266 Multi Engine Flight Lab
1 Cr. Hr.

Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Multi Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include multi-engine aircraft systems, aerodynamics, flight maneuvers, single-engine operations, maximum performance takeoff and landing procedures, attitude control by instrument reference during single engine operations and single engine emergency procedures. Course Performance Standards require 15 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Two lab hours per week. *Prerequisite(s): AVT 1224 AND AVT 2263 AND Approval of Department*

2269 Flight Instructor Flight Lab - Airplane Single Engine
2 Cr. Hrs.

Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the training aircraft, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, solo flight, night flying, cross-country operations and navigation procedures. Course Performance Standards require 30 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. *Prerequisite(s): AVT 2250 AND AVT 2263 AND Approval of Department AND Student must hold Commercial Pilot Certificate*
Corequisite(s): AVT 2258

2271 Flight Instructor Flight Lab - Rotorcraft Helicopter 2 Cr. Hrs.

Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Pilot Certificate with rotorcraft helicopter class rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the training helicopter, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, night flying, cross-country operations and navigation procedures. Course Performance Standards require 25 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. *Prerequisite(s): AVT 2251 AND AVT 2265 AND Approval of Department AND Student must hold Commercial Pilot-Helicopter/Rotorcraft Certificate*
Corequisite(s): AVT 2258

2275 Instrument Flight Instructor Ground 1 Cr. Hr.

Prepares students with the knowledge necessary to complete the Federal Aviation Administration (FAA) Certified Flight Instructor Instrument knowledge exam. Topics include flight instructor responsibilities and professionalism, development of instrument flight lesson plans and evaluations, instrument pilot logbook endorsements and review of instrument pilot aeronautical knowledge areas as it pertains to the FAA Certified Flight Instructor Instrument certificate. Both fixed-wing and helicopter sections are offered. *Prerequisite(s): AVT 2258 AND (AVT 2269 OR AVT 2271) AND Approval of Department*

2277 Instrument Flight Instructor Flight Lab - Airplane Single Engine 1 Cr. Hr.

Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Pilot Certificate with rotorcraft helicopter class rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the training helicopter, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, night flying, cross-country operations and navigation procedures. Course Performance Standards require 25 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Three lab hours per week. *Prerequisite(s): AVT 2258 AND AVT 2269 AND Approval of Department AND Student must hold Certified Flight Instructor Certificate*
Corequisite(s): AVT 2275

2278 Instrument Flight Instructor Flight Lab - Rotorcraft Helicopter 1 Cr. Hr.

Prepares students with aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Instrument Pilot certificate with rotorcraft - helicopter class rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the instrument pilot certificate, instrument flight maneuvers, instrument scanning techniques, instrument fundamentals, attitude control by instrument reference, cross country instrument flight, and instrument approach procedures. Course Performance Standards require 15 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Three lab hours per week. *Prerequisite(s): AVT 2258 AND AVT 2271 AND Approval of Department AND Commercial, Instrument and Instructor Pilot Rotorcraft-Helicopter certificates*
Corequisite(s): AVT 2275

2279 Unmanned Aerial Systems Project 3 Cr. Hrs.

Demonstration of command and control simulations of unmanned aerial system (UAS) operations, including mission planning, decision making, data management, avionics, sensors, communications, and situational awareness during UAS operations. One classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

2280 Introduction to UAS Maintenance 2 Cr. Hrs.

This course will concentrate on the repair of the components of unmanned aerial systems (UAS). Students will develop knowledge in operator maintenance, composites, fuel systems, communication and instrumentation systems, rigging and assembly, and trouble shooting of UAS and their respective components. This course prepares students with the knowledge to determine and identify the technical problems associated with UAS. One classroom, two lab hours per week. *Prerequisite(s): EET 1120*

2700 Aviation Internship R 1 - 2 Cr. Hrs.

Supervised work experience related to the students' major or career program to develop new skills and professional work experience which will enhance marketability and networking. Note: UAS students should have their FAA Part 107 certificate prior to enrolling in this course. *Prerequisite(s): Approval of Department*

3100 Contemporary Technical, Legal & Regulatory Issues in UAS 3 Cr. Hrs.

The application of unmanned aerial system (UAS) for commercial and civil purpose requires an understanding of contemporary technical, legal and regulatory issues. This course builds on a foundational knowledge obtained in prerequisite courses by developing an expanded view of application specific guidance augmented by case studies and scenarios. *Prerequisite(s): AVT 1101 AND AVT 1104*

3125 Developments in Aviation II 2 Cr. Hrs.

Provides pilots and other aviation professionals with an in-depth understanding of how aviation technology has evolved. Covers the time period beginning with the development of jet aircraft and their sophisticated flight systems to the development of space flight and modern unmanned systems.

3150 Crew Resource Management 3 Cr. Hrs.

Understanding of cognitive and interpersonal skills and mental processes used by the flight crew. Topics include situational awareness, planning, decision-making, workload management, adaptability, teamwork, communications, and advanced aircraft automation integration, constituting the traditional crew resource management markers. *Prerequisite(s): AVT 2240*

3151 UAS Operations II 1 Cr. Hr.

This course builds on the knowledge and skills developed in prerequisite unmanned aerial system (UAS) courses to develop an understanding of advanced UAS operations. The course includes knowledge relating to proper implementation of safety risk mitigation, crew resource management, procedures, mission planning, and data management to enable successful execution of fixed-wing and vertical-takeoff-and-landing operations. *Prerequisite(s): AVT 2151 AND AVT 2280 AND Possession of FAA Part 107 Remote Pilot certificate required AND Restricted to Majors*
Corequisite(s): AVT 3152

3152 UAS Operations II Lab 2 Cr. Hrs.

This is a companion course to AVT 3151 in which students will gain advanced hands-on training with a variety of UAS vehicles via a lab format. This course builds on the knowledge and skills developed in prerequisite unmanned aerial system (UAS) courses to develop an understanding of advanced UAS operations. The course includes proper implementation of safety risk mitigation, crew resource management, procedures, mission planning, and data management to enable successful execution of fixed-wing and vertical-takeoff-and-landing operations. Four lab hours per week. *Prerequisite(s): AVT 2151 AND AVT 2280 AND Possession of FAA Part 107 Remote Pilot certificate required AND Restricted to Majors*
Corequisite(s): AVT 3151

3200 UAS Logistics 3 Cr. Hrs.

The capability of unmanned aerial systems (UAS) to support airborne cargo delivery and inventory control and continues to be advanced. This course reviews current and future applications, technologies, regulations, processes, and other considerations related to UAS logistical support with focuses on aerial cargo delivery, inventory, distribution system support. *Prerequisite(s): AVT 2151 AND AVT 2280*

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

3241 Aircraft Systems 3 Cr. Hrs.

A study of basic systems common to transport category aircraft. Topics include aircraft structures, emergency equipment, electrical, hydraulics, pneumatics, fuel, flight controls, landing gear, powerplant, pressurization and air conditioning and how they are related to the Federal Aviation Regulations. *Prerequisite(s): AVT 1170*

3242 Aircraft Accident Investigation II 3 Cr. Hrs.

Building upon skills and knowledge learned in Aircraft Accident Investigation I, the student will expand into areas of accident site field investigation and demonstrate the ability to study what they observe and make conclusions based upon the evidence seen. *Prerequisite(s): AVT 2242*

3247 Aerodynamics & Flight Mechanics II 3 Cr. Hrs.

Advanced Aerodynamics is studied in this course, students will examine current flight applications and problems. Specifically, this includes transonic, supersonic, and hypersonic aerodynamics, principles of aircraft stability and control, and operational strength considerations. Emphasis is placed on the applications of the rapidly changing technological innovations in aerodynamics and the solutions to the problems created by these advances. Use the wind tunnel and set up and perform experiments with various airfoils. Two classroom, two lab hours per week. *Prerequisite(s): AVT 2247*

3300 Artificial Intelligence (AI) in Aviation 3 Cr. Hrs.

Introduction to the main foundational concepts and techniques used in Artificial Intelligence (AI); including decision making, planning, machine learning, and perception. Includes a range of real-world applications in which AI is currently used in aeronautical and aerospace systems. *Prerequisite(s): MAT 1470 AND MAT 1570*

3400 Human Sensation & Perception in Aviation 3 Cr. Hrs.

Examines how the human senses transform stimulus patterns of physical energy into the neural codes that become our perceptions of the world. Vision, audition, smell, taste, touch, balance, and phenomena common to all sensory modalities, such as feature enhancement, inhibition, adaptation, and stages of neural coding will be studied. This course will provide a basis for the understanding of these perceptual capabilities as components in Artificial Intelligence in aviation/aerospace systems. *Prerequisite(s): AVT 2240*

3500 UAS Design Concepts 4 Cr. Hrs.

Unmanned Aerial Systems (UAS) applications have resulted in an array of designs. This course reviews considerations that influence UAS design and includes an analysis of applications and requirements to inform the development of a proposed preliminary UAS design proposal. Includes aerodynamic, structural and sensor design considerations. Two classroom, four lab hours per week. *Prerequisite(s): AVT 2151 AND AVT 2280 AND PHY 1142*

4146 Advanced Airline Operations & Training 3 Cr. Hrs.

Advanced study of airline operations and training procedures with emphasis on training targeted at what a new-hire pilot would experience during Part 121 initial aircraft training, to include cockpit flows, checklist usage, and flight management systems indoctrination. *Prerequisite(s): AVT 2211 OR Approval of Department*

4151 Unmanned Systems Mission Planning 3 Cr. Hrs.

This course provides an in-depth exploration of UAS mission planning for a variety of commercial and civil applications. Includes a review of considerations, resources, and tools that will be used to create UAS flight plans that meet mission requirements while maintaining safety, following regulations, and considering commercial viability. One classroom, four lab hours per week. *Prerequisite(s): AVT 3151 AND Approval of Department*

4154 Advanced Flight Simulator Instruction 3 Cr. Hrs.

Practical application of cross-country flight operations for the advanced pilot including air traffic control communications, flight planning, advanced instrument flight procedures and normal and abnormal flight procedures. *Prerequisite(s): AVT 1254 AND AVT 2211 AND (AVT 2263 OR AVT 2265) AND Approval of Department*

4160 System Safety in Aviation 3 Cr. Hrs.

Advanced system safety management and the structured processes for recognizing the role of the flight crew and flight operations management in accident prevention, safety promotion, institution of a just safety culture, and the methods of assessing risk before a system fails. *Prerequisite(s): AVT 2242 AND AVT 3242*

4170 Airport Operations 3 Cr. Hrs.

A study of airport management and government regulatory requirements under Part 139 including but not limited to, construction and maintenance of runways, taxiways, and ramps, noise abatement procedures, security, Notice to Airmen generation, and environmental impact studies. *Prerequisite(s): AVT 2240*

4171 Advanced Flight Operations 2 Cr. Hrs.

Practical application of complex, high performance aircraft in and out of controlled airspace and tower controlled airfields, advanced instrument procedures and simulated airline operations. One classroom, three lab hours per week. *Prerequisite(s): AVT 2266 AND AVT 2277 AND Approval of Department*

4210 Advanced UAS Maintenance 3 Cr. Hrs.

This course builds on the knowledge and skills developed in previous UAS maintenance courses. Topics include safety procedures, operator and depot level maintenance procedures, composite repair, fuel systems, data link and instrumentation systems, rigging and assembly, reliability testing and trouble shooting of UAS and their respective components. One classroom, four lab hours per week. *Prerequisite(s): AVT 2280*

4215 Autonomous Systems in Aviation 3 Cr. Hrs.

Introduction to Autonomous Systems. Surveys the fundamentals of autonomous aircraft system operations, from sensors, controls, and automation to safety procedures, human factors and Human Autonomy Teaming (HAT). Presents the latest major commercial uses of UAS, and manned aircraft that will be going from 2-pilot operations to 1-pilot operations to unmanned operations. Research and design an Autonomous System, build it, and test it. *Prerequisite(s): AVT 3300 AND AVT 3400 AND CIS 2266 AND MAT 2215*

4220 Human Autonomy Teaming in Aviation　　3 Cr. Hrs.

The field of human-autonomy teaming (HAT) is fast becoming a significant area of research, especially in aviation. The basic objective is to create natural and effective interactions between people and machines. HAT is highly interdisciplinary, bringing together methodologies and techniques from robotics, artificial intelligence, human-computer interaction, cognitive psychology, neuroscience, neuroergonomics, education, and other fields. The topics covered will include technologies that enable human-machine interactions, the psychology of interaction between people and machines, how to design and conduct HAT studies, and real-world applications such as assistive machines. *Prerequisite(s): AVT 3300 AND AVT 3400*

4270 UAS Internship II 2 Cr. Hrs.

This course provides a senior supervised work experience related to aviation and unmanned aerial systems (UAS) major and career focuses. Students will apply knowledge and skills while gaining professional work experience, which will enhance marketability and networking. Note: Students should have their FAA Part 107 certificate prior to enrolling in this course. *Prerequisite(s): AVT 2700 AND AVT 3300 AND Approval of Department*

4279 Unmanned Aerial Systems Senior Project　　4 Cr. Hrs.

This course provides a senior capstone project experience. Areas of focus that may be incorporated into the student designed project include but are not limited to entrepreneurial business plan development, application focused UAS flight operations, data analytics, and system and component design, prototyping, and testing. Two classroom, four lab hours per week. *Prerequisite(s): AVT 3500 AND Approval of Department*

4290 Aviation Senior Capstone Project　　3 Cr. Hrs.

Concludes the Bachelor of Applied Science degree where the student develops an aeronautical project that draws on all phases of aviation studies in the degree program. Working with their instructor and industry partners, students will develop a subject of research, evaluate data, and complete a project in a specific area of aviation study. Areas of focus that may be incorporated into the student designed project includes but are not limited to flight operations, aeronautical system and component design, prototyping, testing, artificial intelligence and autonomous systems. Two classroom, two lab hours per week. *Prerequisite(s): Approval of Department*

Biology (BIO)

1101　Body Structure & Function　　3 Cr. Hrs.

Basic anatomy and physiology background for medical personnel emphasizing basic principles of body structure and function.

1104　HIV/AIDS　　2 Cr. Hrs.

Basic understanding and function of the human immune system and the effects of viruses (HIV/AIDS) on the human immune system.

1107　Human Biology　　3 Cr. Hrs.

The survey course studying the structure and function of the human body. Topics include introductory terminology, cytology, the integumentary system, the skeletal system, the muscular system, the nervous system, the endocrine system, the cardiovascular system, (blood, heart and blood vessels), the lymphatic system, the respiratory system, the digestive system, the urinary system and the reproductive system. Two classroom, two lab hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0050 OR MAT 1120 OR MAT 1130) Corequisite(s): BIO 1108*

1108　Lab for Human Biology　　0 Cr. Hrs.

The lab component of a survey course that studies the structure and function of the human body. Lab work topics include histology, cytology and the anatomy of the skeleton, muscles, nervous system structures, blood components, the heart, blood vessels and structures within the respiratory, digestive, urinary and male and female reproductive systems. Summarization is achieved through the dissection of a preserved fetal pig. *Corequisite(s): BIO 1107*

1111　General Biology I　　4 Cr. Hrs.

This course is designed as the first in a series of two general education science courses. Covers basic chemistry and biochemistry; cellular and molecular biology. Three classroom, two lab hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0600 OR MAT 0100 OR MAT 1130) Corequisite(s): BIO 1117*

1117　Lab for General Biology I　　0 Cr. Hrs.

The lab for this course is the first in a series of two general education science courses. Covers laboratory exercises relevant to basic chemistry and biochemistry; cellular and molecular biology. *Corequisite(s): BIO 1111*

1121　Human Anatomy & Physiology I　　3 Cr. Hrs.

The first course in a two-semester sequence studying the structure and function of the human body. Topics include introductory terminology, biochemistry, cytology, the integumentary system, the skeletal system, the muscular system, the nervous system and the endocrine system. Two classroom, two lab hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0050 OR MAT 1120 OR MAT 1130)*

1141　Principles of Anatomy & Physiology I　　4 Cr. Hrs.

The first course in a two-semester sequence studying the structure and function of the human body. Topics include introductory terminology, biochemistry, cells, the integumentary system, the skeletal system, the muscular system, the nervous system and the endocrine system. Three classroom, two lab hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0100 OR MAT 0600 OR MAT 1130) Corequisite(s): BIO 1147*

1147　Lab for Principles of Anatomy & Physiology I　　0 Cr. Hrs.

Lab for the first course in a two semester sequence studying the structure and function of the human body. *Corequisite(s): BIO 1141*

1171　Principles of Biology I　　5 Cr. Hrs.

The first course of a two-semester university-parallel sequence for biology and science majors. Topics include scientific method; chemical and biochemical foundations; cell structure, function and reproduction; cellular respiration, photosynthesis, Mendelian genetics, chromosomal genetics, molecular genetics, protein synthesis, gene regulation, genomes, viruses and biotechnology. Three classroom, six lab hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0100 OR MAT 0600)*

1211　General Biology II　　4 Cr. Hrs.

This course is designed as the second in a series of two general education science courses. Covers evolution, biodiversity and ecology. Three classroom, two lab hours per week. *Prerequisite(s): BIO 1111 Corequisite(s): BIO 1217*

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1217 Lab for General Biology II
0 Cr. Hrs.

This second lab is in a series of two general education science courses. Covers laboratory exercises relevant to evolution, biodiversity and ecology. *Corequisite(s): BIO 1211*

1222 Human Anatomy & Physiology II
3 Cr. Hrs.

The second course in a two-semester sequence studying the structure and function of the human body. Topics include the cardiovascular system, the lymphoid system, immunity, the digestive system, the urinary system and the reproductive system. Two classroom, two lab hours per week. *Prerequisite(s): BIO 1121*

1242 Principles of Anatomy & Physiology II
4 Cr. Hrs.

The second course in a two-semester sequence studying the structure and function of the human body. Topics include the cardiovascular system, the respiratory system, the digestive system, metabolism, the urinary system, fluid and electrolyte balance, acid-base balance and the reproductive system. Three classroom, two lab hours per week. *Prerequisite(s): BIO 1141 Corequisite(s): BIO 1248*

1248 Lab for Principles of Anatomy & Physiology II
0 Cr. Hrs.

Lab for the second course in a two-semester sequence studying the structure and function of the human body. *Corequisite(s): BIO 1242*

1272 Principles of Biology II
5 Cr. Hrs.

The second course of a two-semester university-parallel sequence for biology and science majors. Topics include Darwinian evolution, evolution of populations, origin of species, history of life on Earth, phylogeny and systematics, prokaryotes, protists, plants, fungi, animals and ecology. Three classroom, six lab hours per week. *Prerequisite(s): BIO 1171*

2205 Microbiology
4 Cr. Hrs.

Morphology and physiology of microorganisms and selected human parasites, mechanisms of disease production, host responses, spread of infectious diseases. Three classroom, three lab hours per week. *Prerequisite(s): BIO 1107 OR BIO 1111 OR BIO 1141 OR BIO 1121 OR BIO 1171 OR LPN Diploma Corequisite(s): BIO 2206*

2206 Lab for Microbiology
0 Cr. Hrs.

Students carry out aseptic techniques; simple and special staining procedures; methods utilized for culturing, isolation and identification of bacteria (known and unknown); molecular genetic and immunological methods dealing with microbes. Also, exercises involving eukaryotic microbes (fungi, protozoa and helminths) are conducted. *Corequisite(s): BIO 2205*

2211 Human Physiology
4 Cr. Hrs.

Essentials of human physiology for students who have previous course work in human anatomy and physiology. Topics include biochemistry, cell physiology and physiology of the major organ systems. Three classroom, three lab hours per week. *Prerequisite(s): BIO 1107 OR BIO 1111 OR BIO 1141 OR CHE 1111 OR LPN Diploma Corequisite(s): BIO 2212*

2212 Lab for Human Physiology
0 Cr. Hrs.

Corequisite(s): BIO 2211

2222 Evolution
3 Cr. Hrs.

Emphasis on Charles Darwin, speciation, fossils, radiometric dating, natural selection, mutations, macroevolution, mass extinctions, coevolution, sexual reproduction, human evolution and religious issues.

2225 Ecology
4 Cr. Hrs.

General concepts in ecology and application to current environmental issues. Focus on evolutionary ecology, populations, communities, ecosystems and global ecology. Field experiences and lab techniques emphasizing data collection, analysis and interpretation. Three classroom, three lab hours per week.

2235 Genetics
4 Cr. Hrs.

Fundamental principles, concepts and techniques of genetics. Lab work includes basic methods of genetic research and analysis. Three classroom, two lab hours per week. *Prerequisite(s): BIO 1111 OR BIO 1171 Corequisite(s): BIO 2236*

2236 Lab for Genetics
0 Cr. Hrs.

Corequisite(s): BIO 2235

Business Information Systems (BIS)

1105 IT Fundamentals
R 3 Cr. Hrs.

This course is designed for students who are interested in Information Technology but have limited technical knowledge of computing systems at the fundamental level. Students will explore foundational concepts related to computer hardware and software, networking, databases, programming, Information Systems, and data security.

1120 Introduction to Software Applications
3 Cr. Hrs.

Use word processing, spreadsheet, database and presentation software applications to create reports, spreadsheets, databases and presentations for business and other applications.

1201 Keyboarding & Document Formatting
3 Cr. Hrs.

Students will learn and develop "touch" keyboarding skills, including the ten-key numeric keypad. By the end of the course, students must perform keyboarding speed and accuracy on three-minute timed writings at a minimum of 30 wpm with three or fewer errors. Students will learn to use word processing software to format and produce reports, letters, memos, and other business documents. Traditional testing (proctored or in Testing Center) is used in all online sections.

1220 Word Processing Software
3 Cr. Hrs.

Beginning to advanced word processing software concepts including editing, formatting, desktop publishing design and editing techniques, document control and automation. *Prerequisite(s): BIS 1120 OR BIS 1221*

1221 Specialized Computer Applications for Health Information Management
3 Cr. Hrs.

Introduces students to personal computer concepts including hardware, system software, application software, and the Internet. Learn the components of computer systems and develop a broad understanding of computer hardware and emerging technologies. Students will be introduced to Office application software (word processing, spreadsheets, presentation software, and databases,) and specific features of those applications for medical reports, narrating presentations, Autofilters, form creation and software integration will be applied.

1230 Spreadsheet Software 3 Cr. Hrs.

Students will learn techniques to properly manage large and multi-sheet spreadsheets, use spreadsheets to arrange and manage data, develop advanced spreadsheet formulas and functions, perform "What-If" analysis using spreadsheet tools and design and create end-user spreadsheet applications. *Prerequisite(s): BIS 1120 OR BIS 1221*

1240 Presentation Software 2 Cr. Hrs.

Beginning to advanced presentation software techniques including editing and formatting presentations, fundamentals of effective presentations, transitions, animations, multimedia content, advanced navigation tools and master and template modification. *Prerequisite(s): BIS 1120 OR BIS 1221*

1250 Specialized Business Software Application 1 Cr. Hr.

Introduction to a specialized business software application such as MS SharePoint, MS Outlook, etc., that will provide an overview of the application's features and common uses.

1260 Database Software 3 Cr. Hrs.

Students will learn to design and manage databases using the relational model, use database objects to manage data including data integrity, data analysis and reporting, learn to derive useful information from raw data using functions and querying techniques, and create end-user database applications. *Prerequisite(s): BIS 1120 OR BIS 1221*

1400 Customer Service 3 Cr. Hrs.

Introduction to concepts of customer service. Topics to include: face-to-face and phone-based communication with customers, professionalism and workplace behavior, decision making, problem solving, conflict resolution and negotiation skills, use of emerging technologies, role-play scenarios, case studies and preparation for career advancement.

1500 Software Testing Fundamentals 3 Cr. Hrs.

In this course, students will be introduced to the field of software testing at the fundamental level. Software testing theory and terminology for this course are primarily based on the International Software Testing Qualifications Board (ISTQB) foundation level certification requirements. Students will learn about the practical application of software testing throughout the software development life cycle. Hands-on exercises will provide students with practical skills in executing test cases, documenting results and participating in peer reviews. Successful completion of this course will entitle students to sit for the ISTQB Foundation Level certification exam.

1600 Data Management & Visualization 3 Cr. Hrs.

In today's business environment, the need to work effectively and efficiently with data is critical. This course primarily focuses on using spreadsheet software to acquire data from various sources, transform that data into useful information and create analytical tools in the form of powerful visualizations that will enhance business intelligence. *Prerequisite(s): BIS 1120*

2170 BIS Capstone 3 Cr. Hrs.

Analyze business problems and apply critical-thinking skills and software knowledge and communication skills learned in previous classes to solve problems and perform work-related tasks. *Prerequisite(s): Approval of Department*

2180 Medical Office Simulation 3 Cr. Hrs.

Basic principles of office support, bookkeeping, record-keeping and reporting responsibilities pertinent to the medical office and health care agencies. *Prerequisite(s): BIS 1120 AND HIM 1101*

2270 Business Information Systems Internship 3 Cr. Hrs.

Students will work in a technical or software support capacity for a cooperating organization for 210 hours during a semester. Responsibilities are established by the worksite supervisor, and students will use the listed responsibilities to develop learning outcomes and identify action steps that are approved by the worksite supervisor and internship faculty member. Students will be evaluated by their worksite supervisor at the middle and end of the semester. Students will post weekly journal entries online regarding their experience, and complete projects specific to their degree concentration. Thirty co-op hours per week. Recommended prerequisites: BIS 1220, BIS 1230, BIS 1250 and BIS 1260. *Prerequisite(s): Approval of Department*

Business Information Technology (BIT)

0010 Computer Fundamentals 3 Cr. Hrs.

This hands-on class focuses on the components of a personal computer, an introduction to the Windows environment, and use of the mouse and understanding icons, buttons, and menus. Also includes file management including creating directories, copying and moving files, and changing and enhancing desktop features. The Internet and Sinclair's Learning Management System will be explored. Students with little or no current computer skills will find this fundamental course helpful. Note: As with all courses that begin with a zero, this course is developmental in nature. Credits earned in developmental courses will not apply to the overall program hours.

Biotechnology (BTN)

1110 Biotechnology & Bioethics 3 Cr. Hrs.

Introduction to the major fields in biotechnology and the basic science involved in understanding those fields.

1120 Laboratory Safety & Regulatory Compliance 2 Cr. Hrs.

Introduction to lab safety culture, precautionary labels, Material Safety Data Sheets, using personal protective equipment, handling lab equipment safely, handling , storing and disposing of chemicals safely, using emergency equipment as well as safety planning.

1130 Biological Reagents Preparation 3 Cr. Hrs.

Basic understanding and overview of chemical grades of reagents used in biological research with an emphasis on chemical formulas and preparation of biological media and reagents. Two classroom, three lab hours per week. *Prerequisite(s): BTN 1120 AND MAT 1470 AND (CHE 1111 OR CHE 1211) AND Restricted to Majors*
Corequisite(s): BTN 1131

1131 Lab for Biological Reagents Preparation 0 Cr. Hrs.

Corequisite(s): BTN 1130

1140 Cell Culture 2 Cr. Hrs.

Introduction to cell culturing techniques. One classroom, two lab hours per week. *Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors*
Corequisite(s): BTN 1141

1141 Lab for Cell Culture 0 Cr. Hrs.

Prerequisite(s): Restricted to Majors
Corequisite(s): BTN 1140

1201 Biotechnology Careers 2 Cr. Hrs.

Discover career opportunities, develop a resume/cover letter and increase interviewing skills for the biotechnology industry. *Prerequisite(s): BTN 1110 AND Restricted to Majors*

2210 Protein Purification & Analysis 4 Cr. Hrs.

Introduction to protein purification, isolation quantification and analysis. Two classroom, four lab hours per week. *Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors*
Corequisite(s): BTN 2211

2211 Lab for Protein Purification & Analysis 0 Cr. Hrs.

Fundamental principles, concepts, and techniques of protein purification techniques. Lab work includes basic methods of protein research and analysis. *Corequisite(s): BTN 2210*

2220 Microbiology & Fermentation Methods 3 Cr. Hrs.

Introduction to fermentation and microbial metabolism. Two classroom, three lab hours per week. *Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors*
Corequisite(s): BTN 2221

2221 Lab for Microbiology & Fermentation Methods 0 Cr. Hrs.

Introduction into fermentation and microbial metabolism within the laboratory setting. *Corequisite(s): BTN 2220*

2230 Molecular Biology Techniques 4 Cr. Hrs.

Structure and function of macromolecules and their interactions in DNA replication, DNA cloning and genetic engineering techniques analysis, introduction to public domain DNA and protein sequence databases, use of software and internet resources for database searching. Two classroom, four lab hours per week. *Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors*
Corequisite(s): BTN 2231

2231 Lab for Molecular Biology Techniques 0 Cr. Hrs.

Structure and function of protein and nucleic acids, DNA replication mechanisms, DNA cloning, genetic engineering techniques, use of plasmids, nucleic acid analysis by electrophoresis, Southern hybridization, DNA amplification and sequencing, introduction to public domain DNA and protein sequence databases, use of software and internet resources for database searching. *Corequisite(s): BTN 2230*

2700 Biotechnology Internship R 1 - 4 Cr. Hrs.

Students work at an approved biotechnology industry site and will earn credits toward degree requirements for their work experiences. Students already working may apply to use that experience to meet internship requirements. Students prepare and submit reports and/or projects describing their industry experience and are evaluated by the course instructor as well as their on-site supervisor. Ten work hours per week per credit hour. *Prerequisite(s): BTN 1120*

Computer Aided Manufacturing (CAM)

1100 Manufacturing Boot Camp 2 Cr. Hrs.

This one-week boot camp style course will offer an overview of the history and lucrative opportunities in computer numerical control (CNC) while providing a hands-on introduction to the basics of safety, programming, setup, operation of both milling centers and lathes. Included is also an interactive introduction to precision measurement, blueprint reading, and AutoCAD which will provide useful terminology and language used when seeking employment in manufacturing.

1107 Introduction to Mechanical Drafting with CAD 3 Cr. Hrs.

The course focuses on the study and interpretation of the graphic language used in manufacturing and engineering. This will include principles of: shape description, axonometric projection, specifications, symbology and spatial relationships. The student will apply problem solving and critical thinking skills using both standard and automated communication methods. Two classroom, two lab hours per week.

1108 Machine Shop Fundamentals 3 Cr. Hrs.

An introduction to the manufacturing processes used in the tooling and machining industry. Safety, mechanical hardware, hand tools, metrology, drill press, vertical mill, and lathe, will be the major focus of this course. Two classroom, two lab hours per week.

1109 Fundamentals of Tooling & Machining 3 Cr. Hrs.

An introduction to the manufacturing processes used in the tooling and machining industry. Safety, mechanical hardware, hand tools, metrology, drill press, vertical mill, lathe, and the surface grinder will be the major focus of this course. Two classroom, two lab hours per week.

1110 Advanced Machine Operations 3 Cr. Hrs.

This course will increase student's proficiency in the use of manually operated machine shop equipment with an emphasis on high tolerance parts where precision machining is necessary for project completion. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1107 AND CAM 1107 AND MAT 1110 OR Approval of Department*

1111 Advanced Machine Operations II 3 Cr. Hrs.

An advanced lab in the manufacturing processes used in the tooling and machining industry. Safety, handtools, metrology, engine lathe, milling, sawing, and precision grinding, working within close tolerances along with assembly and fit will be the major focus of this course. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1110 with a grade of C or better*

1116 Fundamentals of Computer Numerical Control Operations 3 Cr. Hrs.

This course will cover machine safety, setup and operation of computer numerical control (CNC) milling machines and lathes. Adjusting tool and work offsets to hold part tolerances on both types of equipment. Calculation of spindle speeds and feed rates. Introduction to basic programming codes and development of CNC programs for three axis mills and two axis lathes. Two classroom, two lab hours per week.

1142 Advanced Shop Floor Math 3 Cr. Hrs.

This course applies the principles of geometry and trigonometry and the computing of angles using law of sines and law of cosines dealing with situations encountered in the machining industry. It also gives a brief introduction to the calculations required in computer numerical control programming. Two classroom, two lab hours per week. *Prerequisite(s): MAT 1110*

1180 Welding & Metal Joining I 3 Cr. Hrs.

This course is a broad introduction to welding with in-depth hands-on labs to include SMAW, GMAW, OAW, GTAW, and Resistance, commonly known as MIG, TIG, Ox-acetylene, and Stick (ARC) welding along with other types of metal joining options and instruction to include sheet metal layout, shearing, bending, riveting, brazing and spot welding. Welding safety, personal protection equipment, special welding tools will be taught in-depth and used by the students within the lab setting. The student will apply critical thinking and problem-solving skills to achieve the end results required using blue prints, verbal instructions or a combination of both. Two classroom, two lab hours per week.

1181 Welding & Metal Joining II 3 Cr. Hrs.

This course, the second course in this series, on welding and metal joining will dive further into the this career field providing further in-depth hands-on labs which will include MIG, TIG, Stick (ARC), and Ox-acetylene use along with other types of metal joining options and instruction to include sheet metal layout, shearing, bending, riveting, brazing and spot welding. This course will include a deeper understanding of design and blueprints along with manual machining integration and new fabrication techniques like waterjet and laser technology. The student will apply critical thinking and problem solving skills to achieve the end results required using blue prints, verbal instructions and a combination of both. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1109 AND CAM 1180 with a grade of C or better*

1182 Welding & Metal Joining III 3 Cr. Hrs.

This course is the third course in this series on welding and metal joining. This course will dive further into this career field providing further knowledge needed by the student to be prepared to enter the manufacturing field with the skills necessary for entry-level positions in welding. The course will include in-depth hands-on labs using MIG, TIG, Stick (ARC), and OX-acetylene use along with other metal joining options. This particular course will be available for students wishing to take welding to the next level. This course will also include a deeper understanding of design and blueprints along with manual machining integration and new fabrication techniques like waterjet and laser technology which will involve projects that utilize CAD design along with a stronger focus on GTAW welding skills. A student must receive a grade of C or higher in CAM 1181 in order to take this course. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1107 AND CAM 1109 AND 1181 with a grade of C or better*

1214 Computer Numerical Control Mill Programming 3 Cr. Hrs.

This is an intermediate course covering the development of Computer Numerical Control (CNC) programs for three axis milling machines including spindle controls, tool changes, linear and circular interpolation, drilling and tapping, subroutines, and G&M codes. Setup and operation of milling machines. Adjusting tool and work offsets to hold part tolerance. Two classroom, two lab hours per week. *Prerequisite(s): (CAM 1109 OR CAM 1161) AND CAM 1116*

2114 Jig & Fixture Design 3 Cr. Hrs.

Theory, principles and drawing techniques for the design of jigs and fixtures. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1107 AND CAM 1109*

2145 Shop Floor Programming 3 Cr. Hrs.

Operation and programming of conversational controlled lathe and milling machines. Includes programming and manufacturing a variety of machined parts utilizing ProtoTRAK two-axis and three-axis conversational CNC controls. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1109*

2204 Computer Numerical Control Lathe Programming 3 Cr. Hrs.

Development of Computer Numerical Control (CNC) programs for two axis CNC lathes including linear and circular interpolation, turning, grooving and threading cycles; drilling and tapping; G & M codes. Review setup and operation of CNC lathe; adjusting tool offsets to hold part tolerance. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1109 AND CAM 1116*

2212 Computer Assisted Programming 3 Cr. Hrs.

An introductory course in the use of Computer Aided Design (CAD)/Computer Aided Manufacturing (CAM) software (MasterCAM) as applied to computer numerical control vertical machining centers. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1107 AND CAM 1214*

2225 Tool Design 3 Cr. Hrs.

Design theory, principles and drawing techniques for the tool design industry. Two classroom, two lab hours per week. *Prerequisite(s): CAM 2114*

2700 Computer Aided Manufacturing Internship R 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience, especially related to a co-op experience. Ten co-op hours per credit hour per week. *Prerequisite(s): Approval of Department*

2780 Computer Aided Manufacturing Capstone
3 Cr. Hrs.

Assessment of achievement by Computer Aided Manufacturing students in attaining program-related outcomes by completing a project demonstrating principles and practices of the major. Two classroom, two lab hours per week. *Prerequisite(s): CAM 1110 AND CAM 2114 AND CAM 2204 AND CAM 2212 OR Approval of Department*

2781 Precision Machining Capstone
3 Cr. Hrs.

Assessment of achievement by Precision Machining students in attaining program related outcomes with the completion of a comprehensive project. They will demonstrate the principles and practices of the Precision Machining major. Two classroom, two lab hours per week. *Prerequisite(s): CAM 2700 AND CAM 2114 AND CAM 2145 OR Approval of Department*

Civil Architectural Technology (CAT)

1101 Architectural Graphics I
3 Cr. Hrs.

Introduction to various graphic media tools and techniques, including sketching, manual drafting, and computer assisted drafting as appropriate to the built environment. Includes developing 3D visualization and analysis skills. Two classroom, two lab hours per week.

1111 Mechanical Systems Blueprint Reading
1 Cr. Hr.

Reading blueprints of commercial buildings, emphasizing plumbing, electrical, HVAC and fire protection systems. One half classroom, one and one half lab hours per week. *Prerequisite(s): DEV 0035 AND (MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445)*

1121 Architectural Graphics II
3 Cr. Hrs.

Learn Building Information Modeling (BIM) techniques and methodology. Develop proficiency with Revit Architecture modeling software including: user interface, modeling techniques, proper modeling workflow and document generation. Learn rendering and animation communication techniques. Two classroom, two lab hours per week. *Prerequisite(s): CAT 1101*

1131 Introduction to Revit MEP
3 Cr. Hrs.

Study and application of advanced drawing using AutoDesk Revit. Major emphasis on building information modeling (BIM) theory along with construction of Mechanical, Electrical and Plumbing (MEP) systems. Two classroom, two lab hours per week. *Prerequisite(s): CAT 1101 OR CAT 1111 OR CAT 1121*

1141 Architectural Blueprint Reading
2 Cr. Hrs.

Basic techniques for reading and interpreting construction plans and specifications, both residential and commercial. Includes all major building uses and types of construction as defined by the building code. One classroom, two lab hours per week. *Prerequisite(s): DEV 0035 AND (MAT 0100 OR MAT 0600)*

1161 Introduction to the Built Environment
3 Cr. Hrs.

An introduction to career fields of Architecture, Civil Engineering, Construction Management, and Sustainability & Energy Management Technologies. Two classroom, two lab hours per week.

1201 Construction Methods & Materials
3 Cr. Hrs.

Construction methods of materials for both residential and commercial structures. Emphasis on processes and techniques. Understanding of blueprint reading of architectural and civil drawings. Hands-on exercises of residential and commercial applications. Two classroom, three lab hours per week. *Prerequisite(s): CAT 2431 Note: CAT 2431 may be taken concurrently*

1205 Construction Engineering Technology
3 Cr. Hrs.

Organization, planning, and control of construction projects, including a study of the use of machinery, methods, materials, estimates, cost control, and fundamentals of project scheduling. Contracts, bonds, and legal aspects of contracting. Engineering economics including present and annual worth analysis, evaluation of alternatives. Two classroom hours, two lab hours per week.

1211 Construction Materials Testing
2 Cr. Hrs.

This course presents some of the basics of testing materials (concrete, steel, wood, etc.) used in the construction industry. Emphasis on how properties of materials affect their use in the construction process. Utilizes American Society for Testing and Materials (ASTM) Standards. One classroom, three lab hours per week. *Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445*

1241 Building Systems 3 Cr. Hrs.

Basic mechanical and electrical system design principles for residential and commercial structures. Structural engineering principles for designing residential and commercial structures using wood, steel and concrete. Research appropriate building codes and apply knowledge to solve engineering challenges. Two classroom, two lab hours per week. *Prerequisite(s): CAT 1101 OR CAT 1201*

1300 Introduction to CAD for Applications in Civil Engineering Technology
2 Cr. Hrs.

Develop proficiency in CAD software to develop civil-construction working drawings. Proper generation of plans to connect the earth's topography and land records will be emphasized. One classroom, two lab hours per week.

1301 Civil Construction CAD
2 Cr. Hrs.

Develop proficiency in CAD software to develop civil-construction working drawings. Proper generation of plans to connect the earth's topography and land records will be emphasized. One classroom, two lab hours per week.

1341 Architectural Design I
3 Cr. Hrs.

Architecture is the manifestation of history, the values of a society, and our collective human sensibility. Introductory survey of world architectural history and theory. Develop understanding of architectural vocabulary, form and expression. Examine worlds major monuments and buildings. Two classroom, two lab hours per week.

1401 Construction Cost Estimating — 3 Cr. Hrs.

Construction estimating, beginning with an understanding of the costs of labor equipment and materials, as well as profit and overhead. Quantity measurements of basic construction materials will be used to develop bidding packages. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): CAT 1101 OR CAT 1201*

1431 OSHA Construction Standards 10 Hour — 1 Cr. Hr.

Introduction to rules, interpretations, record keeping and standards required by OSHA (29CFR Part 1926) for the construction industry to ensure employees a safe, healthful work place. The course complies with the guidelines and requirements for the OSHA 10 hour outreach training completion card.

1501 Fundamentals of Surveying & Mapping — 3 Cr. Hrs.

This course covers the fundamental principles of distance, elevation and angular measurements used in the practice of engineering surveys. It also includes basic error theory in field observations and mathematical calculations, level circuit and traverse field techniques and basic principles of digital map making. Two classroom, three lab hours per week. *Prerequisite(s): MAT 1200 OR appropriate Math placement test score*

1601 Building Electric & Controls — 4 Cr. Hrs.

An introduction to building electrical and control systems for HVAC technicians. Includes AC/DC circuits, single phase and three phase motors and motor control, HVAC equipment control, wiring techniques, control components including sequencers, and an introduction to building pneumatic and DDC control. Two classroom, four lab hours per week.

1701 Construction Craft Skills/ Concrete — 4 Cr. Hrs.

An orientation to construction trades and working with concrete with strong emphasis on hands-on learning exercises. Includes Occupational Safety & Health Administration (OSHA) 10-hour construction safety. Two classroom, four lab hours per week.

1721 Structural Framing Systems — 4 Cr. Hrs.

Advanced technical training in wood and light-gauge steel framing systems, including exterior wall finishing and roof construction. Two classroom, four lab hours per week.

1741 Residential Electrical Systems — 3 Cr. Hrs.

Basic safety procedures, use of power and hand tools, electrical circuit theory and basics of residential wiring observing the National Electric Code (NEC). One classroom, four lab hours per week.

1761 Interior & Exterior Finishes — 3 Cr. Hrs.

An orientation to interior and exterior finishes on frame construction. One classroom, four lab hours per week.

1781 Construction Project — 4 Cr. Hrs.

Students will work on a significant construction project such as a home for Habitat for Humanity. This course gives students hands-on experience in all phases of a construction project. Most class sessions will be at a construction site in the Greater Dayton Metropolitan area. One classroom, six lab hours per week. *Prerequisite(s): CAT 1701*

1810 Construction Techniques I (NCCER Core) — R 3 Cr. Hrs.

Basic safety, hand and power tools, wood building materials and fasteners and framing systems. May be taken for two semesters. One classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

1820 Construction Techniques II (NCCER Level 1) — R 3 Cr. Hrs.

Construction of concrete structures including forming, placing and finishing. May be taken for two semesters. One classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

1830 Construction Techniques III (NCCER Level 2) — R 3 Cr. Hrs.

Exterior and interior finishing of frame structures including roofing materials, siding, drywall, stairs, doors and trim. May be taken for two semesters. One classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

1840 Construction Techniques IV (NCCER Level 3) — R 3 Cr. Hrs.

Development of advanced skills for construction technicians including site layout, floor and roof systems and metal buildings. An introduction to welding, light equipment operation and project management. May be taken for two semesters. One classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

2101 Architectural Design II — 5 Cr. Hrs.

Develop proficiency with Revit design techniques, developing architectural models and coordinating a set of construction documents. Includes architectural and Mechanical, Electrical and Plumbing (MEP) problem-solving skills. Two classroom, six lab hours per week. *Prerequisite(s): CAT 1101 AND CAT 1121 AND CAT 1201*

2201 Architectural Visualization — 3 Cr. Hrs.

Learn the philosophy of building information modeling and how Revit and other computer-based modeling software can assist in the design, analysis and documentation of buildings. Two classroom, two lab hours per week. *Prerequisite(s): CAT 1121 OR CAT 1131*

2301 Land Development Design in Civil 3D — 3 Cr. Hrs.

Application of civil engineering technology principles to land development. Design elements include boundary and topographic surveying, remote sensing, roadway, hydrology and quality estimates within Computer Aided Design software. Emphasis is placed upon federal, state and local regulations related to the development of real property. Two classroom, two lab hours per week. *Prerequisite(s): CAT 1301 AND CAT 1401 AND CAT 1501*

2401 Construction Project Management — 3 Cr. Hrs.

Practical planning and control of construction and engineering-based projects. Interrelationships and operations of project management and skills required for success in the current engineering environment. Theory, nomenclature and practical application of engineering management using computer software. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): CAT 1241 OR CAT 1401*

2411 Architectural Practice, Codes & Laws 3 Cr. Hrs.

Building code history, development, application and review processes. Analysis of existing building to determine code status, form recommendations and make presentation. Examine Ohio law impacting various codes, safety, contracting and personnel issues with regard to built environment professions. Develop sample contract specifications. Two classroom, two lab hours per week. *Prerequisite(s): CAT 1201*

2421 Soil Mechanics 3 Cr. Hrs.

Theories of soil mechanics including soil classifications, sampling and testing methods, stress distribution, shearing resistance and strength of soils. Two classroom, two lab hours per week. *Prerequisite(s): MAT 1200*

2431 OSHA Construction Standards 2 Cr. Hrs.

Rules, interpretations, record keeping and standards required by Occupational Safety & Health Administration (OSHA) (29CFR Part 1926) for the construction industry to ensure employees a safe, healthful workplace. Successful completion of the course provides the 30 hour OSHA Construction Safety Card.

2425 Introduction to Structural Analysis & Design 3 Cr. Hrs.

Introduction to elastic analysis of structural framing systems for buildings and bridges. Two classroom and two lab hours per week. *Prerequisite(s): MAT 1200*

2435 Construction Credentials 1 Cr. Hr.

Certifications commonly used in the construction industry. Emphasis on worker health and welfare, and jobsite safety. Three lab hours per week.

2501 GPS & GIS for Engineering Technology Professionals 2 Cr. Hrs.

This course covers collection, adjustment, analysis and management of geospatial data used in land development. Integration of Global Positioning Systems field collected data with Geographic Information Systems to maintain public works, cadastrial and utility record keeping systems. One classroom, three lab hours per week. *Prerequisite(s): CAT 1501*

2531 Advanced Surveying & Mapping 3 Cr. Hrs.

Utilization of surveying equipment and Computer Aided Drafting (CAD) software to perform field data collection and produce civil engineering drawings. Two classroom, three lab hours per week. *Prerequisite(s): CAT 1501 AND (MAT 1470 OR MAT 1580 OR MAT 2270)*

2561 Route Surveying with Construction Applications 2 Cr. Hrs.

Solving complex surveying problems for construction layout of buildings, sites and roads using appropriate mathematical calculations and surveying equipment. One classroom, two lab hours per week. *Prerequisite(s): CAT 1501*

2571 NSPS Certified Survey Technician Preparation R 2 Cr. Hrs.

This course is an in-depth review of the eleven areas of concentration in preparation of the Level I and/or Level II Survey Technician Certification used by the National Society of Professional Surveyors (NSPS). One classroom, two lab hours per week. *Prerequisite(s): CAT 1501*

2581 Legal Principles for Surveyors 3 Cr. Hrs.

Legal principles of surveying. Field investigation and case studies are used to understand the elements that govern establishment of real property boundaries.

2610 Stakeholders & Participants for Design & Construction Projects 2 Cr. Hrs.

Understanding the role and responsibilities of those individuals and organizations actively involved in the project delivery process. Development of interrelationships, communication skills and procedures required for the successful administration of the construction process from start-up to close out. Traditional testing (proctored or in Testing Center) is used in all online sections. Two classroom, three lab hours per week.

2620 Construction Documents, Legal Requirements, & Project Delivery 2 Cr. Hrs.

Understanding the content of contract and construction documents with respect to the responsibilities and legal obligations for the stakeholders and participants of a construction project. Development of knowledge base for different types of project delivery systems. Develop an understanding of project control methods and procedures that comply with industry standards and practice. Traditional testing (proctored or in Testing Center) is used in all online sections. Two classroom, three lab hours per week.

2630 Architectural Practice Project Deliverables & Contractual Obligations 2 Cr. Hrs.

Develop a working knowledge of the architectural program development process for the design of a construction project. Understanding of the design process with owner review, comment, and questions. Working knowledge of the contractual obligations and project deliverables for the architect and their consultants for the construction project. Practical planning and control of the drawings, revisions, requests for interpretations, submittals, shop drawings and close out documents. Traditional testing (proctored or in Testing Center) is used in all online sections. Two classroom, three lab hours per week.

2640 Construction Project Change Management 2 Cr. Hrs.

Practical initiation and control of changes to design documents for construction projects. Implementation and documentation of procedures to approve and distribute the changes deemed necessary to accommodate unforeseen conditions, omissions and errors in the design and construction of the project. Development of effective meeting management and communication skills.

2700 Architectural Technology Internship R 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work-based learning experience. Students already working may apply to use that experience to meet internship requirements. In collaboration with faculty and employers, students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

2701 Civil Engineering Technology Internship R 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work-based learning experience. Students already working may apply to use that experience to meet internship requirements. In collaboration with faculty and employers, students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

2702 Construction Management Technology Internship R 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

2741 Current Topics in Architecture 2 Cr. Hrs.

Explore recent developments in the architectural profession, especially as related to the architectural technology curriculum. Topics to include environment, green building, energy conservation, building technology, etc. One classroom, two lab hours per week. *Prerequisite(s): CAT 1101 AND CAT 1201*

2780 Architectural Technology Capstone 4 Cr. Hrs.

Assessment of achievement by Architectural Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Only offered spring semester. Should be taken last spring term of program. Two classroom, six lab hours per week. *Prerequisite(s): Approval of Department*

2781 Civil Engineering Technology Capstone 4 Cr. Hrs.

Assessment of achievement by Civil Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practices of the major. Teamwork on projects will be emphasized. Only offered spring semester. Should be taken last spring term of program. Two classroom, six lab hours per week. *Prerequisite(s): Approval of Department*

2782 Construction Management Technology Capstone 4 Cr. Hrs.

Assessment of achievement by Construction Management Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Only offered spring semester. Should be taken last spring term of program. Two classroom, six lab hours per week. *Prerequisite(s): Approval of Department*

Chemistry (CHE)

1111 Introduction to Chemistry I 4 Cr. Hrs.

An introductory survey course for students pursuing health science degrees or who have not previously taken high school chemistry. Topics include matter and measurement, atoms and molecules, chemical reactions, energy changes, atomic structure and bonding, acid/base chemistry, chemical kinetics, and organic chemistry. Three classroom hours, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445*
Corequisite(s): CHE 1151

1121 Introduction to Chemistry II 4 Cr. Hrs.

The second half of an introductory survey course for students pursuing health science degrees or biotechnology. Topics include organic functional groups, biomolecules, enzymes, body fluids and the metabolism of carbohydrates, proteins and lipids. Three classroom, three lab hours per week. *Prerequisite(s): CHE 1111*
Corequisite(s): CHE 1161

1151 Lab for Introduction to Chemistry I 0 Cr. Hrs.

Corequisite(s): CHE 1111

1161 Lab for Introduction to Chemistry II 0 Cr. Hrs.

Corequisite(s): CHE 1121

1211 General Chemistry I 5 Cr. Hrs.

A university-parallel course in chemistry for the science major. The first half of a comprehensive first-year survey of chemistry. Topics include the basics of matter, atoms and molecules, chemical reactions, bonding, molecular geometry and gases. Students registering for this course should have previously taken high school chemistry or equivalent. Four classroom hours, three lab hours per week. *Prerequisite(s): MAT 0300 OR MAT 1450 OR MAT 1470 OR MAT 1570 OR MAT 1580 OR MAT 2270 OR MAT 2280 OR MAT 2290*
Corequisite(s): CHE 1251

1221 General Chemistry II 5 Cr. Hrs.

The second half of a university-parallel course in chemistry for the science or engineering major. Topics include liquids and solids, solutions, chemical reaction kinetics, chemical equilibrium, acid/base chemistry, electrochemistry, representative metals, metalloids and non-metals and organic chemistry. Four classroom hours, three lab hours per week. *Prerequisite(s): CHE 1211*
Corequisite(s): CHE 1261

1251 Lab for General Chemistry I 0 Cr. Hrs.

Corequisite(s): CHE 1211

1261 Lab for General Chemistry II 0 Cr. Hrs.

Corequisite(s): CHE 1221

1311 College Chemistry I 4 Cr. Hrs.

A university-parallel course in chemistry for the nonscience major. Atomic theory, periodic law, chemical bonds, chemical reactions, states of matter, solutions, acids and bases and the impact of chemistry upon the world and the environment. Three classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445*
Corequisite(s): CHE 1351

1321 College Chemistry II
4 Cr. Hrs.

A university-parallel course in chemistry for the non-science majors. A continuation of College Chemistry I. Oxidation/reduction reactions, nuclear reactions, organic chemistry, polymers, energy, structure of biomolecules and biochemistry, nutrition, medicines, chemistry of useful materials. Three classroom, two lab hours per week. *Prerequisite(s): CHE 1111 OR CHE 1211 OR CHE 1311 Corequisite(s): CHE 1361*

1351 Lab for College Chemistry I
0 Cr. Hrs.

Lab for CHE 1311. *Corequisite(s): CHE 1311*

1361 Lab for College Chemistry II
0 Cr. Hrs.

Lab for CHE 1321. *Corequisite(s): CHE 1321*

2111 Organic Chemistry I
5 Cr. Hrs.

The study of alkanes, stereochemistry, alkyl halides, organometallic compounds, alkenes, alkynes, aromatic hydrocarbons and spectroscopic methods of organic analysis. Four classroom, three lab hours per week. *Prerequisite(s): CHE 1221 Corequisite(s): CHE 2151*

2121 Organic Chemistry II
5 Cr. Hrs.

The study of alcohols, ethers, epoxides, aldehydes, ketones, carboxylic acids, derivatives of carboxylic acids, enolates, carbanions, amines, polycyclic and heterocyclic aromatic compounds, pericyclic reactions, and polymers. Four classroom, three lab hours per week. *Prerequisite(s): CHE 2111 Corequisite(s): CHE 2161*

2151 Lab for Organic Chemistry I
0 Cr. Hrs.

Lab for CHE 2111. *Corequisite(s): CHE 2111*

2161 Lab for Organic Chemistry II
0 Cr. Hrs.

Lab for CHE 2121. *Corequisite(s): CHE 2121*

2781 Methods & Practice of Teaching Science in Secondary Schools
3 Cr. Hrs.

This course provides the framework for the development of methods and pedagogy for the effective teaching of science content in secondary schools. Designed to immerse the future teacher in the areas of problem solving, science in everyday life, scientific methods, process-oriented learning, scientific inquiry and integrating technology. The development of pedagogical content knowledge as it pertains to the teaching and learning of science is emphasized. Various assessment strategies are introduced including using data to improve student achievement. *Prerequisite(s): BIO 1107 AND CHE 1121 AND MAT 1430 AND PHY 1100*

Chinese (CHN)

1100 Conversational Chinese I
3 Cr. Hrs.

A foundation for gaining knowledge about Chinese culture and basic phrases related to simple spoken Chinese, including travel situations.

1101 Elementary Chinese I
4 Cr. Hrs.

Foundation for understanding, speaking, reading and writing Chinese. Work outside of class and/or in the language laboratory is required.

1102 Elementary Chinese II
4 Cr. Hrs.

This Elementary Chinese II class intends to help students reach a basic level of Chinese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on essential speaking and writing skills while helping students develop contextual readings and listening competencies. *Prerequisite(s): CHN 1101 with a grade of C or better*

1105 Conversational Chinese II
3 Cr. Hrs.

Develops the conversational skills to a greater degree of complexity and covering more situations. Promotes free expression in Chinese within more specific and complex cultural contents. *Prerequisite(s): CHN 1100*

2201 Intermediate Chinese I
3 Cr. Hrs.

This intermediate Chinese class intends to help students reach a higher level of Chinese proficiency in speaking, listening, reading, and writing in the cultural context. While continuing to enhance speaking and listening skills, competency in contextual readings and character writing will be emphasized. *Prerequisite(s): CHN 1102 with a grade of C or better*

2202 Intermediate Chinese II
3 Cr. Hrs.

This course is to help students reach an intermediate level of Chinese proficiency in speaking, listening, reading, and writing in the cultural context. It takes an integrated and balanced approach to enable students to apply learned Chinese knowledge to effective oral and written expressions and presentations. *Prerequisite(s): CHN 2201 with a grade of C or better*

Computer Information Systems (CIS)

1107 Introduction to Operating Systems
3 Cr. Hrs.

In this class, you will learn the foundation of introduction to operating systems, virtualization and basic networking concepts. You will learn how to manage and administer current desktop operating systems (Windows, Linux, and Mac OS X). In addition, you will explore operating systems for mobile devices (Apple IOS, Google Android) and will be introduced to widespread applications for IoT and Cloud concepts. This class will also cover personal and enterprise cybersecurity principles to help protect yourself from common cyber-attacks.

1111 Introduction to Problem Solving & Computer Programming
3 Cr. Hrs.

Introduction to problem solving techniques used in programming. Students learn to use tools such as flowcharts and pseudocode to plan solutions. Using C++ programming languages, students will design, code and test programs using the basic structures of sequence, selection, iteration, functions and arrays. *Prerequisite(s): MAT 0200 OR MAT 1120*

1130 Network Fundamentals
3 Cr. Hrs.

Introduction to computer networking. Topics include network standards and the Open Source Interconnection (OSI) model, topologies and Ethernet standards, network hardware, remote connectivity, wireless networking, in-depth TCP/IP, network security, network troubleshooting and network management.

1140 Information Systems Analysis & Design
3 Cr. Hrs.

Introduction to the systems development life cycle and the four-phase model (planning, analysis, design and implementation). Emphasis on requirements gathering, methodology, modeling and skills related to specifications, design and documentation. Discussion of business processes, law, legal issues and ethics for IT professionals.

1160 Introduction to Data Literacy
3 Cr. Hrs.

In this course, students will learn how to identify data sources and evaluate whether data is credible and relevant. The course will introduce techniques to cleanse, analyze, and manage data. Visualization tools are covered in the course to assist in identifying and communicating data patterns and trends. Presentation of data findings and communicating meaning through storytelling is an important element of this course. In addition, students will gain an understanding on the impact of data in our society.

1202 C++ Software Development
3 Cr. Hrs.

A continuation of C++ software development building on prior software development studies. Topics include arrays, searching and sorting, pointers, characters and strings, structures, file operations, C++ classes, inheritance, polymorphism, virtual functions, exceptions, templates, the Standard Template Library (STL), problem analysis and C++ software solution design, coding and testing. *Prerequisite(s): CIS 1111*

1350 Web Site Development with HTML & CSS
3 Cr. Hrs.

HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) are widely used technologies to create and display content on the web. HTML is the primary language used for creating web pages including basic text formatting, linking between pages and adding images and other media. CSS is a styling language that enables the separation of content from style and provides precision control over the display including layout, colors and fonts. Students will learn to apply best practices for web design and create sites that enhance the usability and interactivity of the pages.

1375 JavaScript
3 Cr. Hrs.

This class introduces the JavaScript language, with a focus on the language features and client-side programming. Topics covered include basic syntax, object-oriented programming, functions, the DOM. The class will also introduce recent libraries, including jQuery. The class will include in-class coding exercises and assignments consisting of implementation of web applications. *Prerequisite(s): CIS 1350*

1411 Introduction to Networks
3 Cr. Hrs.

This course covers networking architecture, structure, and functions. The course introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations to provide a foundation for the Network Engineering curriculum. Students will understand the functions and services associated with the two major models (OSI and TCP/IP) used to plan and implement networks. Students will be able to design an IP addressing scheme to provide network connectivity for a small to medium sized network. Use Command Line Interface (CLI) to configure initial settings on routers and switches to implement basic network connectivity between devices.

1510 Windows Client Operating System
3 Cr. Hrs.

Installing and administering systems that incorporate the current Microsoft desktop operating system. Administering shared resources including files, folders and printers; installing, managing and troubleshooting hardware devices; monitoring and optimizing system performance and reliability; implementing network protocols and configuring security elements. *Prerequisite(s): CIS 1107 AND (CIS 1130 OR CIS 1411)*

2165 Database Management
3 Cr. Hrs.

Introduction to database management systems. Discussion of database environments, design, planning, implementation and administration in a relational model environment. Students will design and develop a simple database and implement a portion of this application including forms, queries and reports. Emphasis on database design techniques, normalization and the SQL database language. *Prerequisite(s): MAT 0200 OR MAT 1120*

2170 Computer Information Systems Internship
**R
1 - 4 Cr. Hrs.**

Students earn academic credit toward their graduation requirement by working in a professional information technology environment. Students must work at 5 - 10 hours per week per credit hour for one semester and be supervised/mentored by a professional in the field. The BPS internship coordinator can help guide students in their search, but students are ultimately responsible for obtaining a qualifying position. Students already working in the field may apply to use that experience to meet the internship requirement if they can prove that new learning will take place *Prerequisite(s): CIS 1107 OR CIS 1411 OR CIS 2510 OR CIS 1202 OR CIS 2212 AND Approval of Department*

2178 Computer Information Systems Capstone
3 Cr. Hrs.

Assessment of skills and competencies of Computer Information Systems students through project-based activities. Demonstration of achievement of degree option outcomes via oral and written presentations and creation of a professional growth plan. Course should be taken in the last term prior to graduation. *Prerequisite(s): CIS 2515 AND (CIS 2520 OR CIS 2416) AND (CIS 2421 OR CIS 2207) AND (CIS 2212 OR CIS 2309) AND CIS 2314*

2207 Data Structures & Algorithms
3 Cr. Hrs.

This course covers data structures using the C++ Programming Language. Topics include data abstraction, encapsulation, information hiding, the use of recursion, searching and sorting algorithms, and the creation and manipulation of various data structures: lists, queues, tables, trees, heaps, and graphs. *Prerequisite(s): CIS 1202 OR CIS 2217*

2212 Java Software Development I   3 Cr. Hrs.

Introduction to Java software development. Topics include object orientation, Java syntax, data types, logic structures of sequence, selection and iteration, processing calculations, files, methods, classes and objects, graphical user interface (GUI) applications, arrays and the ArrayList class, problem analysis and Java software solution design, coding and testing. *Prerequisite(s): CIS 1111*

2217 Java Software Development II   4 Cr. Hrs.

This course builds on prior Java studies and includes abstract classes and interfaces, binary input/output, recursion, generics, use of collection framework lists, stacks, queues, and priority queues, use of sets and maps, developing efficient algorithms and computational complexity, sorting algorithms, implementing lists, stacks, queues and priority queues, software development ethics, binary search trees, problem analysis and Java software solution design, coding and testing. *Prerequisite(s): CIS 2212*

2222 ASP.NET with C# 3 Cr. Hrs.

This course introduces server side web programming to develop web applications based on ASP.NET. Students will learn how to develop ASP.NET applications employing web forms and data controls. Microsoft SQL Server will be used for database manipulations. *Prerequisite(s): CIS 1350 OR CIS 2212 AND CIS 1202*

2240 Introduction to Mobile Applications   3 Cr. Hrs.

Students will plan, develop, and code mobile applications, learn the syntax of the programming language, store data in mobile devices and the internet and prepare an application for upload to an application stores across multiple platforms. *Prerequisite(s): CIS 1111*

2250 Web Site Development with php   3 Cr. Hrs.

PHP is a server-side scripting language and is used to create web sites. This course provides the knowledge necessary to design and develop dynamic, database-driven web pages. Emphasis is placed on programming techniques to design, code, test, debug and create a dynamic web site using PHP. Students will be introduced to MySQL, which is a popular relational database management system. *Prerequisite(s): CIS 1350 AND CIS 2165*

2265 Data Visualization with Tableau   3 Cr. Hrs.

This course will introduce students to the field of data preparation and visualization including design and hands-on experience with Tableau. Students will learn how to collect, transform, curate, and analyze datasets. The course will introduce students to design and build principles for telling stories for effective communications to facilitate data-driven decision-making, provide insights, and help speed up organizations that are data rich and information poor. *Prerequisite(s): MAT 0200 OR MAT 1120*

2266 Python for Data Analytics   3 Cr. Hrs.

This course introduces students to analyzing data using Python. The basics of Python will be taught. Students will learn how to obtain, cleanse and prepare data for analysis. Data analytic and statistical tools will be used to visualize data, predict outcomes and categorize data. *Prerequisite(s): MAT 0200*

2267 Advanced Python for Data Analytics   3 Cr. Hrs.

Students will learn how to obtain, cleanse, and prepare data, use supervised and unsupervised methods to predict and categorize data, and present their findings. *Prerequisite(s): CIS 2266*

2268 Structured Query Language (SQL) Programming   3 Cr. Hrs.

Introduction to database management system in a client/server environment. The course covers Structured Query Language (SQL) and development and administrative tools. Students are taught to create and maintain database objects and to store, retrieve and manipulate data, and create blocks of application code that can be shared by multiple forms, reports, and data management applications. *Prerequisite(s): CIS 2165*

2269 Data Analytics Theory & Solutions   3 Cr. Hrs.

An introduction to business intelligence, data analysis, data warehousing, data mining theory and tools, and how to structure the data and prepare reports in a way that is meaningful to business users. Emphasis is placed upon understanding business intelligence techniques to construct and use business intelligence solutions for decision support. *Prerequisite(s): CIS 2165 AND MAT 2170*

2416 Routing & Switching Essentials   4 Cr. Hrs.

This course focuses on learning the architecture, components and operations of routers and switches in a small network. Students will learn how to configure a router and a switch for basic functionality. Commonly used network services and protocols will be studied. *Prerequisite(s): CIS 1411 AND must be completed within the last two years*

2418 Basic Firewall Security   3 Cr. Hrs.

This course offers an understanding of security principles and tools available to achieve an appropriate level of network security. Hardware devices (routers and switches from multiple vendors), protocols and switching technologies will be considered including Virtual Local Area Networks (VLANs), VLAN Trunking Protocol (VTP), Rapid Spanning Tree Protocol (RSTP) and others. *Prerequisite(s): CIS 2416 AND must be completed within the last two years*

2421 Scaling Networks 4 Cr. Hrs.

The focus of this course is on the architecture, components and operations of routers and switches in a larger and more complex network. Students will learn how to configure routers and switches for advanced functionality. Students will be able to configure and troubleshoot routing protocols and wireless networks using IPv4 and IPv6 on equipment from various vendors. *Prerequisite(s): CIS 2416 AND must be completed within the last two years*

2426 Connecting Networks   4 Cr. Hrs.

This course focuses on Wide Area Network (WAN) technologies and services required by converged applications in a complex network. Students will learn the selection criteria for devices and technologies to meet WAN requirements. Configuring devices and resolving issues with data link protocols will be emphasized. *Prerequisite(s): CIS 2416 AND CIS 2421 AND must be completed within the last two years*

2427 IoT Fundamentals   R   4 Cr. Hrs.

This course will focus on defining Internet of Things (IoT), what the IoT Ecosystem is, and how to support IoT on a network. Students will learn how to support, configure, and secure IOT devices on a network. Students will be able to integrate IOT devices into modern networks and help protect them from cyber threats. *Prerequisite(s): CIS 1111 AND CIS 1411 OR CIS 1130*

2510 Microsoft Windows Server Operating System 3 Cr. Hrs.

Introductory and Intermediate aspects of Windows Server administration. Outcomes include installation of the current Windows Server operating system, setup of roles and features, virtualization, client server networking, and knowledge of Active Directory and Group Policy. *Prerequisite(s): CIS 1107 AND CIS 1130 OR CIS 1411*

2515 Windows Network Infrastructure 3 Cr. Hrs.

Intermediate administration and support functions of the current Windows Server operating system. Focus is on more detailed functions of common roles and features such as core networking, security, and Windows Updating. Also more advanced use of Active Directory and Group Policy. *Prerequisite(s): CIS 2510*

2520 Windows Server Advanced Services 3 Cr. Hrs.

Advanced windows services such as advanced network services, security, backups, and IP Address Management (IPAM). High availability through Network Load Balancing, Failover Clustering, Site failover. Also features such as Federation Services, Certificate Services and Rights Management Services and other advanced topics included. *Prerequisite(s): CIS 2510*

2550 Linux Operating System 3 Cr. Hrs.

Linux operating system installation, management, administration, troubleshooting techniques, writing and debugging shell procedures, pipes and interprocess communications, command lists and network configuration for beginning and intermediate students. This course prepares students for the CompTIA Linux + exam. *Prerequisite(s): CIS 1107 AND CIS 1130 OR CIS 1411*

2630 Securing a Windows Network Environment 3 Cr. Hrs.

Successfully plan, build, and secure systems for a Microsoft Windows Server environment. The primary purpose of this course is to provide experience using actual enterprise state-of-the-art class servers hardware and software. Our classroom is equipped with many new enterprise servers for a hands-on experience. It also includes sections on introductory forensics and securing servers with penetration testing. *Prerequisite(s): CIS 2510*

2640 Network Security 3 Cr. Hrs.

Intermediate computing and network security fundamentals. Topics include network vulnerabilities and attacks, network defenses, wireless network security, access control, network assessment and auditing, cryptography and organizational security. Preparation will also be given for the ComptTIA Security + exam. *Prerequisite(s): CIS 1107 AND CIS 1130 OR CIS 1411*

2642 PenTest 3 Cr. Hrs.

Intermediate computer and Penetration Testing fundamentals. Topics include: Penetration testing, and vulnerability assessment and attacks, social engineering, network and application exploitation and best practices to communicate recommended strategies to improve the overall state of IT security. Preparation will also be given for the ComptTIA PenTest+ exam. *Prerequisite(s): CIS 2550 AND CIS 2640*

2650 Ethical Hacker 3 Cr. Hrs.

Intermediate level system and network security related topics including legal ramifications, assessment, social engineering, vulnerability testing, system hacking, network scanning and analysis, mobile device security, Cloud and IoT, cryptography, and remediation. This course includes the TestOut Ethical Hacker certification exam and will help students in their preparation for the ECCouncil Certified Ethical Hacker CEH exam. *Prerequisite(s): CIS 1130 OR CIS 1411 AND CIS 2640*

2670 Fundamentals of Information Systems Security 4 Cr. Hrs.

Intermediate security related topics including security and risk management, security engineering, communication and network security, identity management, security assessment and operations, and software development security. This course will help students in their preparation for the Certified Information Systems Security Professional (CISSP) exam. *Prerequisite(s): CIS 2640*

2711 Enterprise Desktop Support Technician 3 Cr. Hrs.

Intermediate and advanced problem solving techniques for Windows desktop operating systems. Includes network and cloud applications and remote access administration. Configure and problem solve operating system functions in real world hands on labs. *Prerequisite(s): CIS 1107 AND CIS 2731*

2731 A+ Hardware & Software 4 Cr. Hrs.

This class is for intermediate to advanced students seeking both the theoretical and practical aspects of building a PC. The class covers CPU, storage devices, printers, and networking devices. This class also includes functions and installation of operating systems as well as troubleshooting steps and common tools. Will help students in preparation for the CompTIA A+ Certification. *Prerequisite(s): CIS 1411 OR CIS 1130 AND CIS 1107*

2808 Introduction to Computer Forensics 3 Cr. Hrs.

Computer forensics is the study of obtaining and analyzing evidence/information for use as evidence in civil, criminal or administrative cases. *Prerequisite(s): CIS 2640 AND CIS 2731*

Criminal Justice Science (CJS)

1101 Introduction to Criminal Justice Science 3 Cr. Hrs.

Overview of the criminal justice system and an analysis of the interdependence of its components, including legislative, law enforcement, prosecution, court and correctional systems. Examination of responsibilities of professionals in each of these systems, including ethical and legal responsibilities. *Prerequisite(s): DEV 0015*

1103 Constitutional Law & Evidentiary Procedures 3 Cr. Hrs.

Survey and interpretation of the Federal Constitution, and an overview of state and federal law and court systems. Emphasis on the Bill of Rights with particular attention to the Fourth, Fifth, Sixth, Eighth, and Fourteen amendments. Study, analysis, and application of the Rules of Evidence and Rules of Criminal Procedure from investigation to arrest, trial, and the appellate process. Additionally, ethical guidelines for Criminal Justice professionals in the detection, apprehension, and prosecution of the accused and constitutional restrictions on government actions. *Prerequisite(s): DEV 0035 AND CJS 1101 OR CIS 1107*

1105 Criminal Law 3 Cr. Hrs.

Basic concepts of Criminal Law and analysis of state and federal criminal statutes. Elements of crimes, criminal liability, jurisdiction over criminal offenses and criminal defenses and criminal responsibility will be examined. Additionally, crimes against property, crimes against persons and alcohol and drug crimes will be covered. *Prerequisite(s): DEV 0035 AND CJS 1101*

1110 Interrogation, Documentation & Testimony 3 Cr. Hrs.

Development of communication skills applicable to criminal justice professionals. Emphasis on interviewing, interrogation, documentation of evidence in various documents, forms, reports and oral testimony. *Prerequisite(s): ENG 1101 AND CJS 1101*

1125 Policing 3 Cr. Hrs.

Management and leadership of law enforcement agencies, including investigations, patrol, internal affairs, traffic enforcement and an overview of community based and problem-oriented policing theory and practice. Emphasis on crime analysis and prevention, community partnerships to reduce crime and community education. Principles of organization, staffing, budgeting, controlling, training and planning. *Prerequisite(s): DEV 0035*

1155 Homeland Security Issues & Administration 3 Cr. Hrs.

Overview of homeland security threats, statutes, resources and the role of law enforcement as first responders with the emphasis on inter-agency cooperation. Examination of contemporary security issues in public and private spaces including risk analysis, critical incident management, inter-agency collaboration, specialized security fields, intelligence gathering and litigation. Exploration of the career opportunities in homeland security. *Prerequisite(s): DEV 0015 AND CJS 1101*

1165 Corrections 3 Cr. Hrs.

Analysis of operations of correctional facilities from historical, functional and management perspectives. Attention to administrative and management issues in different types of facilities, with different populations and in community-based programs. Examination of best practices in the field of corrections, including state and federal programs for institutional and community settings. *Prerequisite(s): DEV 0035*

1197 Corrections Full Service Jails/Basic Correction Officer Academy 3 Cr. Hrs.

Mandated Ohio Attorney General/Ohio Peace Officer Training Academy training for individuals to attain certification for performing corrections officer functions in full-service jail facilities. Not open to the general student population. Consists of minimum 158 mandated classroom hours of both academic/physical training. *Prerequisite(s): Approval of Training Academy Coordinator*

2111 Ethics & Professionalism in Criminal Justice 3 Cr. Hrs.

Examination and analysis of legal and ethical obligations of criminal justice professionals in law enforcement, corrections and the courts. Study and assessment of policy and actions of individuals and organizations within the criminal justice system regarding conformity to accepted ethical and legal standards. *Prerequisite(s): DEV 0035 AND CJS 1101 OR CIS 1107*

2145 Correctional Case Management 3 Cr. Hrs.

Survey of case management theories and approaches for criminal offenders. Understanding of intervention strategies for different types of offenders in institutional and community-based correctional programs. *Prerequisite(s): DEV 0035 AND CJS 1101*

2200 Human Relations, Mediation & Conflict Resolution 3 Cr. Hrs.

Examination of cultural differences and the handling of special needs population by the criminal justice system, including current trends in meeting community needs. Emphasis on development of the knowledge and skill sets required of the criminal justice professional to address the needs and issues of diverse clientele throughout the criminal justice process. Strategies for mediation, conflict resolution and critical incident management. Prerequisite(s): DEV 0015 AND CJS 1101

2205 Introduction to Criminal Investigation & Forensic Science 3 Cr. Hrs.

Survey of legal, technical and ethical aspects of criminal investigation. Common principles and techniques of criminal investigation, including crime scene procedures, collection and preservation of evidence, development of leads and criminalistics (current terminology for forensics). Skills necessary to investigate crimes and obtain legally admissible evidence. Basic science of physical, chemical and biological evidence. *Prerequisite(s): DEV 0035 AND CJS 1101*

2209 Computer Crime 3 Cr. Hrs.

Overview of criminal investigation of crimes committed in conjunction with computer technology. Types of crimes, prosecution and prevention strategies. *Prerequisite(s): DEV 0015 AND CJS 1101 OR CIS 1107*

2270 Criminal Justice Science Internship 3 Cr. Hrs.

Observation and participation in a criminal justice agency appropriate to the student's professional goals. Opportunity for integration and application of learning in a professional setting. One classroom, fourteen hours field experience per week. *Prerequisite(s): DEV 0035 AND Approval of Department*

2280 Basic Peace Officer Training I 14 Cr. Hrs.

First half of the mandated Ohio Attorney General/Ohio Peace Officer Training Academy training for individuals to attain certification as peace officers in Ohio law enforcement agencies. Consists of mandated cognitive and psychomotor skills training for entry level Ohio law enforcement officers. *Prerequisite(s): DEV 0035 AND Federal Bureau of Investigation (FBI) and Bureau of Criminal Identification (BCI) fingerprint checks, a successful five panel drug screening and successful physical fitness assessment required as well as permission and signature of the Sinclair Community College Training Academy Coordinator*

2281 Basic Peace Officer Training II 12 Cr. Hrs.

Second half of the mandated Ohio Attorney General/Ohio Peace Officer Training Academy training for individuals to attain certification as peace officers in Ohio law enforcement agencies. Consists of mandated cognitive and psychomotor skills training for entry level Ohio law enforcement officers. *Prerequisite(s): CJS 2280 with a grade of C or better*

2295 Criminal Justice Science Seminar   3 Cr. Hrs.

Capstone experience for Criminal Justice Science students that focuses on the integration of learning throughout the program through case study analysis, research and service learning. Additionally, attention will be given to the preparation for employment in the field of criminal justice. *Prerequisite(s): Approval of Department*

Clinical Laboratory Technology (CLT)

1200 Introduction to Clinical Laboratory   2 Cr. Hrs.

The course will introduce students to the terms, concepts, procedures, and equipment used in a professional medical laboratory. One classroom, three lab hours per week. *Prerequisite(s): ALH 1101 AND (BIO 1121 OR BIO 1107 OR BIO 1141) Note: Prerequisites may be taken concurrently Corequisite(s): CLT 1203*

1203 Lab for Introduction to Clinical Laboratory   0 Cr. Hrs.

Lab portion of CLT 1200 - Introduction to Clinical Laboratory *Corequisite(s): CLT 1200*

2110 Urine & Body Fluid Analysis/Immunology/Serology   2 Cr. Hrs.

The course will provide instruction on the structure and function of the kidney, renal pathology and the principles, sources of error and interpretation of test results in urinalysis. Principles of CSF and serous fluid analysis are covered. This course is also an introduction to the principles of immunology, covering the broad areas of the body's defense mechanisms, the nature of the mammalian immune system and the immune response, and discusses immunological disease states of auto-immunity, tumor immunology, transplant immunology, immunodeficiency, and the theory behind immunoassays used in the laboratory environment. One classroom, two lab hours per week. *Prerequisite(s): CLT 1200 AND BIO 1222 AND Restricted to Majors Corequisite(s): CLT 2113*

2113 Lab for Urine & Body Fluid Analysis/Immunology/Serology   0 Cr. Hrs.

Lab portion of CLT 2110 - Urine & Body Fluid Analysis/Immunology/Serology *Corequisite(s): CLT 2110*

2210 Hematology   4 Cr. Hrs.

The course will introduce the students to the theory and practical application of routine and special hematology procedures, both manual and automated; red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases. Three classroom, three lab hours per week. *Prerequisite(s): ALH 2220 AND BIO 1171 AND Restricted to Majors Corequisite(s): CLT 2213*

2213 Lab for Hematology   0 Cr. Hrs.

Lab portion of CLT 2210 - Hematology *Corequisite(s): CLT 2210*

2310 Clinical Chemistry   3 Cr. Hrs.

The course will introduce the students to the theory and application of human biochemistry and principles of chemistry techniques used in the analysis of blood and other body fluids. Two classroom, four lab hours per week. *Prerequisite(s): ALH 2220 AND (CHE 1121 OR CHE 1221 OR CHE 1321) AND Restricted to Majors Corequisite(s): CLT 2313*

2313 Lab for Clinical Chemistry   0 Cr. Hrs.

Lab portion of CLT 2310 - Clinical Chemistry. *Corequisite(s): CLT 2310*

2410 Clinical Microbiology/ Parasitology   4 Cr. Hrs.

Basic concepts of microbiology with emphasis on microbial pathogenesis and immunity. Medically important microorganisms including bacteria, fungi, viruses, rickettsia, protozoa, and the diseases which they produce. This course will also introduce students to the basic knowledge of the physical and chemical properties of clinically significant micro-organisms, the emphasis will be on describing phenotypic characteristics of clinically relevant organisms and the principles of antimicrobial action. Three classroom, three lab hours per week. *Prerequisite(s): BIO 1222 AND CLT 1200 AND Restricted to Majors Corequisite(s): CLT 2413*

2413 Lab for Clinical Microbiology/Parasitology   0 Cr. Hrs.

Lab portion of CLT 2413 - Clinical Microbiology/Parasitology *Corequisite(s): CLT 2410*

2510 Immunohematology   2 Cr. Hrs.

An introduction to theory and practice of blood banking and transfusion medicine. Various Blood typing and Antibody identification tests will be performed in the Clinical blood banking simulated lab. This course presents the physiological basis for the test, the principle and procedure for the test, and the clinical significance of the test results, including quality control. One classroom, three lab hours per week. *Prerequisite(s): CLT 2410 AND Restricted to Majors*

2513 Lab for Immunohematology   0 Cr. Hrs.

Lab portion of CLT 2510 - Immunohematology *Corequisite(s): CLT 2510*

2810 CLT Practicum   6 Cr. Hrs.

Practical training in clinical chemistry, microbiology, hematology and serology under the direction of a National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) approved/accredited hospital educational program personnel. *Prerequisite(s): CLT 2110 AND CLT 2210 AND CLT 2310 AND CLT 2410 AND Restricted to Majors AND Approval of Department*

Communication (COM)

2201 Introduction to Mass Communication   3 Cr. Hrs.

An extensive examination of media theory and social effects. Topics covered include history, practices and functions of the press, television, radio, film, advertising, digital media and public relations. Course investigates mass media's influence on modern society. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2206 Interpersonal Communication   3 Cr. Hrs.

Exploration of the development, maintenance and termination of interpersonal relationships. The focus is on effective verbal and nonverbal interactions between two people, highlighting methods of initiating and maintaining effective communication with, and understanding of, others through learning and applying interpersonal communication theory. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2211 Effective Public Speaking
3 Cr. Hrs.

Designed to improve speaking and listening skills through the study and application of public speaking structure, content and style. This course requires 5 speeches in front of a live audience. The online course sections require the recordings to be created by the student with at least 8 adults present for each speech. Any questions, please contact the Communication Department at com.dept@sinclair.edu. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2220 Introduction to Communication Theory 3 Cr. Hrs.

Examination of major foundational theories that inform the field of communication. Special emphasis on communication theories that examine the self and the message, relationship development, groups and organizations, the public and the media, as well as culture and diversity. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2225 Small Group Communication 3 Cr. Hrs.

Focusing on development of effective small group decision-making and leadership skills, stressing better methods of expressing oneself and understanding others through learning group communication, theory and participating in small group decision-making experiences. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2230 Nonverbal Communication
3 Cr. Hrs.

Development of effective nonverbal skills for the successful communicator, stressing better methods of expressing oneself and understanding others through the learning of nonverbal theory and Impression Management. *Prerequisite(s): COM 2206 OR COM 2225*

2235 Principles of Interviewing
3 Cr. Hrs.

Development of theoretical understanding and effective skills in the interviewing process, as both interviewer and interviewee. Practical experience in key types of interviews including informational, employment, appraisal and survey interviews. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2245 Intercultural Communication 3 Cr. Hrs.

Analysis of issues associated with communicating across cultures, including the study of communication norms, communication characteristics of major contemporary cultures and effective cross-cultural communication in interpersonal and organizational contexts. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2270 Communication Internship
R
1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience related to the discipline of communication. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes related to communication and prepare reports and/or projects each term, detailing how the experience allowed for the application of communication theory and/or skills. Seven work hours per credit hour each week. *Prerequisite(s): Approval of Department AND 12 hours of COM or JOU*

2278 Communication Capstone
1 Cr. Hr.

Demonstration of communication skills and competencies through the development of a communication portfolio; independent study under the direction of a Communication faculty member. Five directed practice hours per week. *Prerequisite(s): COM 2201 AND COM 2206 AND COM 2211 AND COM 2220 AND COM 2225 AND One additional COM or JOU course AND Approval of Department*

2285 Organizational Communication 3 Cr. Hrs.

Study of the theories of communication in organizations. Analysis of the initiation, diffusion, and reception of messages in organizational environments. Exploration of effective communication strategies for work relationships, management practices, and organizational culture. *Prerequisite(s): DEV 0035 OR Other Any other college level English course*

2286 Public Relations Principles
3 Cr. Hrs.

Theories, principles and skills of public relations in organizations and in society, integrating organizational communication and management practices. *Prerequisite(s): DEV 0035 OR Any other college level English course*

2287 Effective Listening
3 Cr. Hrs.

Development of effective listening skills. Practical experience in comprehensive, empathic, critical and appreciative listening. Solid foundation in relevant listening theory. *Prerequisite(s): DEV 0035 OR Any other college level English course*

Dance (DAN)

1155 Dance History 3 Cr. Hrs.

Historical development of dance from the earliest beginnings to the Renaissance birth of ballet to the twentieth-century emergence of modern dance.

1157 Dance Appreciation
3 Cr. Hrs.

Introduction to dance from a nonperforming perspective focusing on its many artistic, theatrical and social forms relating to culture and other arts and humanities.

1162 Beginning Middle Eastern Dance R
1 Cr. Hr.

Basic fundamentals and theory of Middle Eastern dance for beginning students. Class work consists of hip work, isolations, rhythm, history and cultural comparisons.

1172 Ballet R
3 Cr. Hrs.

Basic fundamentals and theory of classical ballet for beginning students. Class work consists of barre work, center combinations and steps. Two classroom, two lab hours per week.

1173 Modern Dance R
3 Cr. Hrs.

Basic fundamentals and theory of Modern Dance for beginning students. Two classroom, two lab hours per week.

1174 Jazz Dance I R
3 Cr. Hrs.

Introduction of the fundamentals of Jazz dance technique for the beginning student. Two classroom, two lab hours per week.

1175 Tap Dance R
3 Cr. Hrs.

Basic fundamentals of Tap dance technique for the beginning student. Two classroom, two lab hours per week.

Sinclair College

Dental Assisting (DAS)

1102 Introduction to Dental Assisting Terminology   1 Cr. Hr.

Orientation to terms related specifically to the science of dentistry. Includes dental terminology application along with definitions and relationships of words to other similar dental terms, the use of root words, prefixes and suffixes related to dentistry. Introduction to the profession of dental assisting and the ethics, laws and rules. *Prerequisite(s): Approval of Department*

1104 Dental Assisting Techniques & Materials I   4 Cr. Hrs.

Principles of dental assisting skills with emphasis on exposure control, dental instrument differentiation, patient anatomy, collecting data and basic dental laboratory procedures. Two classroom, six lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): DAS 1105*

1105 Lab Dental Assisting Techniques & Materials I   0 Cr. Hrs.

Laboratory experiences for DAS 1104. *Prerequisite(s): Approval of Department Corequisite(s): DAS 1104*

1108 Dental Assisting Office Management   2 Cr. Hrs.

This course will introduce the learner to business operating systems in a dental office. Includes procedure manuals, HIPPA, record keeping, accounts receivable, inventory and scheduling. *Prerequisite(s): Approval of Department*

1204 Dental Assisting Techniques & Materials II   4 Cr. Hrs.

Principles of dental assisting skills with emphasis on dental procedure instrument differentiation. Basic dental laboratory materials and equipment utilization. Two classroom, six lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): DAS 1205*

1205 Lab Dental Assisting Techniques & Materials II   0 Cr. Hrs.

Laboratory experiences for DAS 1204. *Prerequisite(s): Approval of Department Corequisite(s): DAS 1204*

1206 Dental Assisting Radiography   2 Cr. Hrs.

The learner will be introduced to Dental Radiography for the Dental Assistant. The course will prepare the learner for the state license examination for exposing radiographs in a dental office setting. Includes properties of x-rays, the dental x-ray machine, radiation effects, radiation safety, digital imaging, dental films, and the processing of radiographs. One classroom, two lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): DAS 1207*

1207 Lab Dental Assisting Radiography   0 Cr. Hrs.

Scientific principles of radiation, radiographic production and patient management in dental practice. *Prerequisite(s): Approval of Department Corequisite(s): DEH 1206*

Dental Hygiene (DEH)

1102 Introduction to Dental Hygiene   1 Cr. Hr.

Orientation to terms related specifically to the science of dentistry to prepare students for the dental hygiene program. Includes dental terminology application along with definitions and relationships of words to other similar dental terms, the use of root words, prefixes and suffixes related to dentistry. Introduction to the profession of dental hygiene and the ethics, laws and rules. Students are strongly encouraged to take SCC 1101 prior to this course.

1202 Head, Neck & Dental Anatomy   3 Cr. Hrs.

Gross anatomy of the head and neck region including the oral cavity. Morphology and function of permanent and primary dentition. Two classroom, two lab hours per week. *Prerequisite(s): BIO 1141 AND Restricted to Majors Corequisite(s): DEH 1203*

1203 Lab for Head, Neck & Dental Anatomy   0 Cr. Hrs.

Prerequisite(s): Restricted to Majors Corequisite(s): DEH 1202

1204 Preclinical Dental Hygiene I   4 Cr. Hrs.

Scientific principles of dental hygiene practice with emphasis on preventive dental health concepts, promotion of dental health, exposure control, data collection, patient assessment, oral health education and basic dental hygiene instrumentation. Two classroom, six lab hours per week. *Prerequisite(s): ALH 1101 AND BIO 1141 AND DEH 1102 AND Restricted to Majors Corequisite(s): DEH 1205*

1205 Lab for Preclinical Dental Hygiene I   0 Cr. Hrs.

Prerequisite(s): Restricted to Majors Corequisite(s): DEH 1204

1206 Nutrition & Oral Health   2 Cr. Hrs.

An introduction to biochemistry and basic fundamentals of the science of nutrition, the role of nutrition in oral health and disease, nutrition standards and guidelines, nutrition and oral structures, nutrition through the life cycle, dietary analysis and nutritional counseling. *Prerequisite(s): Restricted to Majors*

1302 Preclinical Dental Hygiene II   4 Cr. Hrs.

Scientific principles of dental hygiene practice with emphasis on preventive dental health concepts, pedodontic care, promotion of dental health, care planning, patient referral and dental specialties, periodontal instrumentation, care of the removable prosthesis and oral health education. Two classroom, six lab hours per week. *Prerequisite(s): DEH 1204 AND DEH 1206 AND Restricted to Majors*

1303 Lab for Preclinical Dental Hygiene II   0 Cr. Hrs.

Prerequisite(s): Restricted to Majors Corequisite(s): DEH 1302

1304 Oral Histology & Embryology   1 Cr. Hr.

Microscopic anatomy of the human cell and tissues. Embryologic development of the head and neck. Histology of tooth development. *Prerequisite(s): Restricted to Majors*

1305 Medical Emergencies in Dental Practice   1 Cr. Hr.

Principles of general first aid and managing medical emergencies in dental practice. Two lab hours per week. *Prerequisite(s): DEH 1202 AND DEH 1203 AND American Heart Association Health Care Provider BLS Corequisite(s): DEH 1303*

1306 General & Oral Pathology 4 Cr. Hrs.

Study of human disease processes and their physiological manifestations with emphasis on the etiology, signs and symptoms of pathological conditions within the oral cavity and associated structures. *Prerequisite(s): DEH 1202 AND DEH 1203 AND Restricted to Majors*

1308 Dental Radiology 3 Cr. Hrs.

Scientific principles of radiation, radiographic production and patient management in dental practice. Two classroom, two lab hours per week. *Prerequisite(s): DEH 1202 AND DEH 1203 AND Restricted to Majors Corequisite(s): DEH 1309*

1309 Lab for Dental Radiology 0 Cr. Hrs.

Corequisite(s): DEH 1308

2402 Clinical Dental Hygiene I 1 Cr. Hr.

Foundations of periodontics with emphasis on periodontal disease progression and classification, etiology of periodontal diseases including gingival disease and periodontitis, assessment for clinical decision making, nonsurgical periodontal therapy. *Prerequisite(s): DEH 1302 AND Restricted to Majors Corequisite(s): DEH 2403*

2403 Dental Hygiene Clinic I 1 Cr. Hr.

Clinical dental hygiene practice with emphasis on the process of dental hygiene care, exposure control, dental imaging and diagnostic assessment procedures, care planning and education, prophylaxis and preventive procedures, pedodontic patient care and management, utilization of practice management technology. Twenty-one clock hours each week will be spent seeing patients over an 8-week term. *Prerequisite(s): DEH 1302 AND Restricted to Majors Corequisite(s): DEH 2402*

2502 Pharmacology in the Dental Practice 2 Cr. Hrs.

Overview of the conventional drug classes with emphasis on the actions, effects and indications for those used in the dental practice. *Prerequisite(s): DEH 2402 AND DEH 2403 AND Restricted to Majors*

2503 Pain Control in the Dental Practice 1 Cr. Hr.

Laboratory and clinical training in the administration of local anesthesia and nitrous oxide sedation. *Prerequisite(s): DEH 2402 AND DEH 2403 Restricted to Majors*

2504 Dental Hygiene Research 2 Cr. Hrs.

Overview of statistical terminology needed to evaluate research literature and prepare and present dental hygiene research papers. *Prerequisite(s): Restricted to Majors*

2506 Dental Materials 2 Cr. Hrs.

General knowledge and use of various dental materials commonly used in the dental practice setting. Introduces the physical and chemical properties, structures, uses and manipulation of materials. One classroom, three lab hours per week. *Prerequisite(s): Restricted to Majors Corequisite(s): DEH 2403 AND DEH 2507*

2507 Lab for Dental Materials 0 Cr. Hrs.

Laboratory and clinical training in Dental Materials. Laboratory sessions give the student skill development for correctly using dental materials with an emphasis on safety and infection control. *Prerequisite(s): Restricted to Majors Corequisite(s): DEH 2506*

2508 Clinical Dental Hygiene II 2 Cr. Hrs.

A continuation of the dental hygiene process of care, powered instrumentation, child abuse and neglect, risk assessment, medically compromised and special needs patient care, periodontal maintenance, adjunctive therapies, periodontal surgical concepts, dental implant maintenance and periodontal emergencies. *Prerequisite(s): DEH 2402 AND Restricted to Majors Corequisite(s): DEH 2509*

2509 Dental Hygiene Clinic II 3 Cr. Hrs.

Clinical dental hygiene practice with emphasis on diagnostic procedures and assessment, care planning and education, preventive and therapeutic procedures, nonsurgical periodontal therapy, periodontal maintenance, medically compromised and special needs patient care, professional communication and case presentation. Twenty-one practicum hours per week. *Prerequisite(s): DEH 2403 AND Restricted to Majors Corequisite(s): DEH 2508*

2601 Community Dental Health 1 Cr. Hr.

Introduction to community and public health concepts and community health education. Two lab hours per week. *Prerequisite(s): Restricted to Majors*

2602 Clinical Dental Hygiene III 1 Cr. Hr.

A continuation of the dental hygiene process of care, advanced instrumentation and procedures, dietary assessment and counseling, tobacco education and cessation, emerging trends and special topics, professional philosophy and life-long learning. *Prerequisite(s): DEH 2508 AND Restricted to Majors Corequisite(s): DEH 2603*

2603 Dental Hygiene Clinic III 3 Cr. Hrs.

Clinical dental hygiene practice with emphasis on advanced instrumentation and procedures, adjunctive therapies, dietary assessment and nutritional counseling, tobacco education and cessation strategies, risk assessment, coding strategies, pain control, evaluation of dental hygiene care and prognosis. *Prerequisite(s): DEH 2509 AND Restricted to Majors Corequisite(s): DEH 2602*

2604 Dental Hygiene Practice 1 Cr. Hr.

Examines current trends in dental hygiene including resume and interviewing strategies, practice setting selection, legal and ethical issues, business of dental hygiene, professional development and organized dental hygiene. *Prerequisite(s): DEH 2509 AND Restricted to Majors*

Developmental Language Arts (DEV)

0015 Integrated Developmental Reading & Writing I 4 Cr. Hrs.

Overview of basic elements of modern English usage. Includes utilization of correct grammar, college-level paragraph writing, context, structure analysis, vocabulary, and text marking reading skills. *Prerequisite(s): Placement Test Score*

0035 Integrated Developmental Reading & Writing II   4 Cr. Hrs.

Integrated reading/writing course focusing on essay writing and critical reading/thinking skills. Includes stated and implied main ideas, college-level vocabulary development, and the stages of the essay writing process. *Prerequisite(s): DEV 0015 or Placement Test Score*

Dietetics Technology (DIT)

1105   Introduction to Dietetics   1 Cr. Hr.

Exploration of the dietetics profession. Introduces the professional organization and structure. Covers credentialing and the Academy of Nutrition and Dietetics Code of Ethics. Clarifies the roles and requirements of different nutrition professionals. Investigates areas of employment.

1108   Nutrition for the Culinary Professional   3 Cr. Hrs.

Introduction to general nutrition principles emphasizing foundations of healthy cooking. Explores how to gauge customers' needs/wants while developing and implementing healthy menu options. Includes National Restaurant Association Education Foundation ManageFirst Nutrition Exam. Successful completion of exam fulfills requirements toward American Culinary Federation (ACF) certification.

1111   Nutrition for Health & Fitness   3 Cr. Hrs.

Overview of general nutrition principles focusing on healthy food choices, disease prevention and sports nutrition. Explores fad diets, herb/supplements and use of ergogenic aids. Incorporates effective use of nutrition information from reliable sources as well as personal responsibility in a professional setting.

1210   Medical Terminology for Dietetics   1 Cr. Hr.

The use of root words, combining forms, prefixes and suffixes related to pathology, diagnosis and treatment of body systems pertaining to the practice of dietetics. Exposure to research journal articles and medical terminology application.

1525   Human Nutrition   3 Cr. Hrs.

This is an in-depth study of the principles of nutrition with emphasis on the functions of the nutrients, their digestion, absorption, metabolism, inter-relationships and nutrition requirements. Incorporates assessment of nutritional health risks, health promotion and disease prevention theories. Explores the influence of socioeconomic, cultural, psychological and environmental factors on food and nutritional behavior.

1630   Nutrition in the Lifecycle   3 Cr. Hrs.

Nutritional needs of individuals from conception to maturity, including physiological, psychological, environmental and sociological factors affecting nutrition. The Nutrition Care Process is introduced. Incorporates weekly sessions on weight management strategies with a client. Examines nutrition concerns for special health conditions. Two classroom, two clinical hours per week. *Prerequisite(s): DIT 1525*

1635   Community Nutrition   3 Cr. Hrs.

Addresses community food/nutrition issues and federal/nongovernmental programs designed to meet needs of at-risk populations. Focuses on tools, strategies and resources to evaluate effectiveness of community programs. Students participate with community agencies providing nutrition programs and education. Two classroom, three clinical lab hours per week.

2101   Eating Matters for Dining Assistants   1 Cr. Hr.

Practical skill development in feeding techniques for the elderly. Ensures understanding of nutritional needs of residents, communication and interactions between residents/staff, behavior challenges and safety procedures. Students receive a Dining Assistant Certificate from Ohio Department of Health upon completion.

2180   Medical Nutrition Therapy for Dietary Managers   3 Cr. Hrs.

Introductory course for nutrition care personnel in health care institutions. Overview of nutrition principles, medical nutrition therapy and menu planning. Exploration of diseases/health conditions that require nutrition intervention. Addresses multidisciplinary team approach to resident care. Nutrition Care Process introduced with basic nutrition-related calculations. *Prerequisite(s): DEV 0035 AND MAT 0050 Corequisite(s): DIT 2190*

2190   Dietary Managers Nutrition Clinical   2 Cr. Hrs.

Hands-on experiences in health care institutions. Incorporates the Nutrition Care Process with emphasis on screening/documentation of client information. Utilizes basic nutrition principles for menu planning, medical nutrition therapy while providing quality care. Requires Registered, Licensed Dietitian preceptor for a portion of the four clinical lab hours per week. *Corequisite(s): DIT 2180*

2240 Motivational Interviewing, Nutrition Counseling & Communication   3 Cr. Hrs.

Integrated approach to the theory, techniques, skills, and values of Motivational interviewing, nutrition-focused interviewing and counseling. Practice through written assignments, self study, classroom exercises, and role-playing. Explore teaching methods/materials to maximize educator effectiveness while accommodating different learning styles and diverse audiences. Evaluation of learning is included. Use of media/education resources and equipment materials addressed. Research design methods are introduced and analyzed. Service Learning projects are incorporated into course activities.

2305 Food, Culture & Cuisine   2 Cr. Hrs.

Explore cuisines of Asia, Middle East, Africa, Europe, Mediterranean and the Americas. Identify the demographics and research/evaluate the differences and similarities among the various cultures of the world. Demonstrate the relationship between traditional foods, cultural and current food practices. One classroom, two clinical hours per week. *Prerequisite(s): HMT 1112 Corequisite(s): DIT 2310*

2310 Lab for Food, Culture & Cuisine   1 Cr. Hr.

This laboratory component of DIT 2305 explores cuisines of Asia, Middle East, Africa, Europe, Mediterranean and the Americas. Indigenous ingredients and flavor profiles of international cuisines are addressed. Advanced preparation methods and cooking techniques will be utilized and demonstrated. Two lab hours per week. *Prerequisite(s): HMT 1112 Corequisite(s): DIT 2305*

2505 Food Science & Production/Lab I 3 Cr. Hrs.

This course is an introduction to the science of food in relation to chemical composition, nutritional value, processing methods, quality, safety, and standards of identity using an ecological approach, experimentation, and research. Students will demonstrate cooking methods and procedures, use basic and advanced knife skills, maintain nutritional quality of food and present proper plate composition for aesthetic value. One classroom, two lab hours per week. *Prerequisite(s): HMT 1101 and HMT 1107 AND Restricted to Majors*

2510 Institutional Foodservice Systems 3 Cr. Hrs.

This course incorporates food delivery and production systems, facility and materials management, menu planning, food and non-food procurement, cost and quality control methods. Food safety and sanitation principles will be applied. *Prerequisite(s): HMT 1112 Corequisite(s): DIT 2515*

2515 Foodservice Practicum I 1 Cr. Hr.

Hands-on experience completed in an institutional foodservice kitchen. Covers menu development including modified diets, recipe scaling, forecasting and food production, equipment care and use, kitchen layout and design, safety and sanitation. Five hours per week at assigned practicum site. *Corequisite(s): DIT 2510*

2520 Food Science Lab II 1 Cr. Hr.

This laboratory component of DIT 2510 course addresses food science principles for the functions of ingredients in modified textured and therapeutic recipe preparation. This is a continuation of quantity cooking principles, sensory evaluation of food, recipe standardization, kitchen equipment and food safety and sanitation. Hazard analysis critical control point standards are reinforced. Two lab hours per week. *Corequisite(s): DIT 2510*

2625 Medical Nutrition Therapy I 3 Cr. Hrs.

Medical nutrition therapy for physiologic stress, diabetes mellitus, cardiovascular disease and disorders of the upper gastrointestinal tract. Content includes modified texture/therapeutic feeding strategies, dietary interventions for swallowing difficulties and enteral/parenteral/IV feeding routes. Incorporates the nutrition care process with emphasis on nutritional assessments, minimum data sets, care assessment triggers and care plans. *Prerequisite(s): DIT 1630 AND Restricted to Majors Corequisite(s): DIT 2630*

2630 Medical Nutrition Therapy Clinical I 3 Cr. Hrs.

Clinical component of medical nutrition therapy I series: for physiologic stress, diabetes mellitus, cardiovascular disease and disorders of the upper gastrointestinal tract. Menu writing for therapeutic interventions; feeding routes for enteral, parenteral and IV therapy; patient interviews, nutrition screening and nutrition care process. Ohio Department of Health Dining Assistant certification is embedded in this course. Nine clinical lab hours per week. *Prerequisite(s): DIT 1630 AND Restricted to Majors Corequisite(s): DIT 2625*

2735 Foodservice Organization & Management 3 Cr. Hrs.

Describe functions of management and identify a variety of tools used to assist with organizational performance. Application of marketing concepts, financial reports/budget, quality improvement and current trends/regulations. *Prerequisite(s): DIT 2510 AND DIT 2515 AND DIT 2520 Corequisite(s): DIT 2740*

2740 Foodservice Practicum II 1 Cr. Hr.

Hands-on experience completed in an institutional foodservice setting. Covers five major aspects of human resource management: planning, organizing, directing, controlling and evaluating and the tools used to assist with organizational performance. Includes marketing of services, budget concerns and cost control measures while maintaining quality service within regulatory guidelines. Five hours per week at assigned practicum site. *Corequisite(s): DIT 2735*

2845 Medical Nutrition Therapy II 3 Cr. Hrs.

Capstone course for the medical nutrition therapy series. Course content includes medical nutrition therapy for cancer, AIDS, disorders of the lower gastrointestinal tract, gallbladder, liver and renal disease. Incorporates review modules, case studies, critical thinking exercises and the nutrition care process addressing feeding routes and diseases. *Prerequisite(s): DIT 2625 AND Restricted to Majors Corequisite(s): DIT 2850*

2850 Medical Nutrition Therapy Clinical II 2 Cr. Hrs.

Clinical component covering topics in Medical Nutrition Therapy II: cancer, childhood obesity, disorders of the lower gastrointestinal tract, gallbladder, liver, renal diseases. Practicum includes: menu writing for modified texture/therapeutic interventions; feeding routes; patient interviews, nutrition screening/education and the nutrition care process from admission to discharge. Six clinical lab hours per week. *Prerequisite(s): DIT 2630 AND Restricted to Majors Corequisite(s): DIT 2845*

2855 Dietetics Seminar 1 Cr. Hr.

Capstone course prepares students for national credentialing dietetic technician examination/employment. Reviews Food and Nutrition, Food Service Systems and Sanitation, Education Methods and Management domains. Includes job interviewing skills and resume writing. Reviews professional ethics, including life-long learning and the Academy of Nutrition and Dietetics Professional Portfolio. *Prerequisite(s): Restricted to Majors*

Early Childhood Education (ECE)

1100 Introduction to Early Childhood Education 3 Cr. Hrs.

Professional issues in the field of Early Childhood Education. Review of related historical and current trends. Types of programs of early education and care. Center observation required. *Prerequisite(s): Approval of Department*

1101 Introductory Child Development
3 Cr. Hrs.

Theories and principles of child development. Promoting positive growth from prenatal through age eight. Impact of the environment including the family, educational experiences, peer relationships, community and culture on each child's development. *Prerequisite(s): Approval of Department AND Open to ELEE students*

1200 Observation & Assessment
4 Cr. Hrs.

Observing, documenting and assessing young children in programs of early education and care. Center observations required. *Prerequisite(s): Approval of Department AND Must have a C or better in course*

1201 Curriculum & Planning
4 Cr. Hrs.

Current curriculum standards recognized in the field of Early Childhood Education. Planning high-quality developmentally appropriate learning experiences and environments for young children. Integrating social studies into the early childhood curriculum. *Prerequisite(s): Approval of Department*

1202 Healthy & Safe Environments
3 Cr. Hrs.

Students will examine and discuss content and issues related to the health, safety, and nutrition of young children birth through age 5. Students will explore information that relates to positive interactions that support optimal growth and development of young children. Students will identify ways to engage the family in supporting these practices as well as licensing rules and state standards. *Prerequisite(s): Approval of Department*

1400 Introduction to Early Childhood Education CDA Preparation
3 Cr. Hrs.

Professional issues in the field of early childhood education, review of related historical and current trends, types of early childhood programs. Center observation required. This course includes additional materials and assignments related to the preparation for the Child Development Associate Credential (CDA). *Prerequisite(s): Approval of Department*

1401 Introductory Child Development CDA Preparation
3 Cr. Hrs.

Theories and principles of child development. Promoting positive growth from prenatal through age eight. Impact of the environment including family, educational experiences, peer relationships, community, and culture on children's development. This course includes additional materials and assignments related to the preparation for the Child Development Associate Credential (CDA). *Prerequisite(s): Approval of Department*

1402 Healthy & Safe Environments CDA Preparation
3 Cr. Hrs.

Issues related to the health, safety, and nutrition of young children birth through age five including licensing rules and state standards. Information relating to positive interactions that support the optimal growth and development of young children. This course includes additional materials and assignments related to the preparation for the Child Development Associate Credential (CDA). *Prerequisite(s): Approval of Department*

2103 Literacy, Art & Music
4 Cr. Hrs.

Classroom experience with an emphasis on planning developmentally appropriate curriculum for preschool children following guidelines of professional standards. Content areas include literacy, creative art, and music. *Prerequisite(s): Approval of Department*

2104 Math, Science & Social Studies
4 Cr. Hrs.

Classroom experience with an emphasis on planning developmentally appropriate curriculum for preschool children following guidelines of professional standards. Content areas include math, science, and social studies. *Prerequisite(s): Approval of Department AND Must complete with C or better*

2200 Families, Communities & Schools
3 Cr. Hrs.

Family and community characteristics, supporting and empowering families and communities through respectful, reciprocal relationships and involving families and communities in the development and learning of children. *Prerequisite(s): Approval of Department AND Open to ELEE majors*

2201 Guidance of Young Children
3 Cr. Hrs.

Guidance and behavioral intervention strategies used by early childhood professionals to help develop positive social and emotional skills in children birth through age 5. Practical application of guidance, problem-solving techniques and collaboration with families. Center observation required. *Prerequisite(s): Approval of Department*

2300 Inclusion
3 Cr. Hrs.

Philosophical, historical and legal foundations. Inclusion of learners with special needs. Learning characteristics, instructional and behavioral strategies. Team members, collaboration with family and professionals. *Prerequisite(s): Approval of Department AND Open to ELEE students*

2301 Early Childhood Education Practicum
5 Cr. Hrs.

Coordinated practicum experience in an assigned program of early education and care. Weekly seminar. Written application required one semester in advance. Two classroom, twenty-one practicum hours per week. *Prerequisite(s): Approval of Department*

2302 Infant & Toddler Curriculum
3 Cr. Hrs.

This course engages participants in exploration and discussion about high-quality care giving and developmentally appropriate practices when engaging with infants and toddlers and their families. The importance of quality environments that support development, language and literacy, family engagement, advocacy, positive guidance, and professionalism are discussed as they relate to required standards and the care of infants and toddlers. *Prerequisite(s): Approval of Department AND Must complete with a C or better*

2303 Early Childhood Education Practicum Part 1
3 Cr. Hrs.

Coordinated practicum experience in an assigned program of early education and care. Weekly seminar. Twelve and one half hours of classroom time per week. Must also complete ECE 2304 for total required amount of hours. *Prerequisite(s): Approval of Department*

2304 Early Childhood Education Practicum Part 2
2 Cr. Hrs.

Coordinated practicum experience in an assigned program of early education and care. Weekly seminar. Twelve and one half hours of classroom time per week. Must also complete ECE 2303 for total required amount of hours. *Prerequisite(s): Approval of Department*

Economics (ECO)

1100   Introduction to Economics
3 Cr. Hrs.

Survey of basic microeconomic and macroeconomic issues and concepts. Coverage includes: Supply, Demand, Equilibrium, the U.S. Economy, the Global Economy and Trade, Competition and Monopoly, Gross Domestic Product, Business Cycles, Unemployment, Inflation, Aggregate Demand and Aggregate Supply, Economic Growth, Fiscal and Monetary Policies.

2160   Principles of Macroeconomics   **3 Cr. Hrs.**

Basic economic principles with macro sequence. Interrelationship of households, business and government with an examination of Keynesian theory, fiscal policy and monetary policy. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): DEV 0035 AND (MAT 0050 OR MAT 1120)*

2180   Principles of Microeconomics   **3 Cr. Hrs.**

Microeconomic theory including price theory, the theory of the firm, resource demand and wage determination. Also includes public policy toward business, economic inequality, labor, trade, balance of payments and the economics of third-world nations. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): DEV 0035 AND (MAT 0050 OR MAT 1120)*

Education (EDU)

1100   Introduction to Education
3 Cr. Hrs.

Introduction to the teaching profession. A variety of experiences to facilitate exploration of the role of school and its relationship to society. The knowledge, skills, dispositions and performances necessary for an individual to become an effective teacher.

1103   Educational Technology
3 Cr. Hrs.

This is a required course for all preservice teachers. It encompasses effective identification, location, evaluation, design, preparation and efficient usage of technology as an instructional resource in the classroom. Candidates will develop increased classroom communication abilities through lectures, discussions, modeling, laboratory experiences and completion of a comprehensive project.

1105   Individuals with Exceptionalities   **3 Cr. Hrs.**

Introduction to the identification, developmental characteristics, foundations, theory, legal issues and intervention strategies for exceptional children and youth across educational and community settings.

1107   Art & Music for Elementary Education   **3 Cr. Hrs.**

This course includes art and music education for elementary education teachers. Including philosophy, skills, teaching techniques, concepts, and materials. Focus on using art and music as teaching tools with other subjects to enhance student learning.

1109   Effective Classroom Management & Learning Environments   **3 Cr. Hrs.**

Students will be introduced to concepts of creating and preserving a setting in which children are afforded a safe, productive and responsive learning environment. The course intentions are for pre-service teachers to be exposed to, interact with and become prepared through an array of practical theories and practices to develop and maintain sustainable classroom cultures and climates affording all students the opportunity for an equitable quality of education.

1111   Classroom Observation K-12 Field Experience   **1 Cr. Hr.**

As a part of the teacher education program students are to spend time observing and engaging in K-12 classroom. The nature of this course requires the student to be in a K-12 school classroom for weeks 1-8. The student will spend a total of 25 hours observing in a K-12 classroom as well as one class period on the first day of the semester and the last week of the semester in class on Sinclair's campus. Students will have required reading, projects and connection engagement log and weekly reflective journal writings. *Prerequisite(s): Restricted to Majors*

2101   Introduction to Early Childhood Trauma   **3 Cr. Hrs.**

This course is an introductory course that looks at the effects of trauma on the brain, learning, and social and emotional intelligence.

2102   Understanding the Brain & Trauma   **3 Cr. Hrs.**

This course explore brain development and the impact of trauma on individual development. Students will learn about social emotional development and apply trauma sensitive approaches that align with brain development.

2103   Trauma-Informed Classrooms   **3 Cr. Hrs.**

Trauma-Informed Classrooms will explore and create a foundational understanding of the characteristics, effects, teaching strategies, and teacher expectations and responsibilities to assist in working with children in grades K-5 who experienced trauma .

Electronics Engineering Technology (EET)

1116   Electronics Schematics & Fabrication   **4 Cr. Hrs.**

Draw circuits using Multisim. Compose directories using Windows commands. Identify schematic symbols and components. Produce a technical document with text, graphs and schematics. Assembly of circuits. Three classroom, three lab hours per week.

1120   Introduction to DC & AC Circuits   **2 Cr. Hrs.**

Introduction to direct and alternating current (DC/AC) circuits, power, three phase and test equipment. One classroom, two lab hours per week. *Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445*

1121   UAS Remote Sensing & Analysis   **1 Cr. Hr.**

This course introduces the foundations of remote sensing and data analysis. Students will acquire knowledge of the characteristics of various sensors and remote sensing applications applicable to civil unmanned aerial system (UAS) operations. Emphasis is placed on data acquisition and processing.

1131   Digital Electronics
5 Cr. Hrs.

Number systems, operations and codes, logic gates, Boolean algebra, DeMorgan's theorem and logic simplification, combination logic circuits, encoders/decoders, multiplexers/demultiplexers, adders, subtractors and ALUs, flip-flops and related devices, counters, shift registers, memory and storage, integrated circuit technologies. Four classroom, three lab hours per week. *Prerequisite(s): EET 1116*

1139   Electrical Machinery
3 Cr. Hrs.

Basic principle, theory, operation and characteristics of common DC and AC machinery. Two classroom, two lab hours per week. *Prerequisite(s): EET 1120 OR (EET 1150 AND EET 1155)*

1150 DC Circuits   4 Cr. Hrs.

Electrical components and quantities, voltage, current and resistance, Ohm's law; analysis of series, parallel and series-parallel circuits, circuit theorems, capacitors and inductors, transient response of capacitive and inductive circuits. Three classroom, three lab hours per week. *Prerequisite(s): MAT 0200*

1155 AC Circuits   3 Cr. Hrs.

Sinusoidal wave properties, complex numbers and phasors, behavior of transformers, steady-state behavior of RC circuits under AC conditions, steady-state behavior of RL circuits under AC conditions, steady-state behavior of RLC circuits under AC conditions, analysis of basic filter circuits, AC network theorems such as superposition, Thevenin's and Norton's theorems, three phase and polyphase power and power factor analysis. Two classroom, two lab hours per week. *Prerequisite(s): EET 1150 AND MAT 1580*

1158 Aerospace Spatial Visualization   2 Cr. Hrs.

This course provides a basic overview of remote sensing, highlights the need for space astronomy, describes the composition of the space environment, principles of black/white and color photography, highlights the importance and different aspects of aerial photography and videography, aerial ground control and land mapping, visual image interpretation, thermal radiation principles associated with thermal sensing, remote sensing history from space as well as the U.S. Landsat program operations and contribution, digital image processing and classification, and microwave sensing principles and applications. One classroom, two lab hours per week.

1166 Industrial Machine Wiring   3 Cr. Hrs.

Elementary industrial machine wiring principles; schematics, panel layouts, assembly, wiring techniques and equipment used in automated industry; standards for safe operation of equipment and protection of personnel with emphasis given to hands-on work and actual wiring of panels. Two classroom, two lab hours per week. Note: EGR 1106 may be taken concurrently with department approval. *Prerequisite(s): EET 1120 AND EGR 1106*

1181 Electrical Construction I R   2 - 3 Cr. Hrs.

Basic safety procedures, use of hand and power tools; electrical circuit theory; use of test equipment; basics of residential, commercial and industrial wiring observing National Electric Code (NEC). One classroom, six lab hours per week

1182 Electrical Construction II R   2 - 3 Cr. Hrs.

Alternating current theory, motors, grounding, conduit bending, conductor installation, National Electric Code (NEC) for cables, terminations and splices, electrical single and three phase installation, circuit breakers and fuses, contactors and relays. One classroom, six lab hours per week. *Prerequisite(s): EET 1181*

1183 Electrical Construction III R   2 - 3 Cr. Hrs.

Load calculations for branch circuits, overcurrent protection, wiring devices, distribution equipment, transformers, calculations for motor circuits: motor maintenance and controls and basics of HVAC systems. One classroom, six lab hours per week. *Prerequisite(s): EET 1182*

1184 Electrical Construction IV R   2 - 3 Cr. Hrs.

Calculation procedures for residential, commercial and farming applications, various wiring systems, stand-by and emergency systems, basic electronics, fire alarms, special transformers, solid-state controls, welding techniques, heat and freeze protection and high-voltage termination. One classroom, six lab hours per week. *Prerequisite(s): EET 1183*

1198 Digital Technology   2 Cr. Hrs.

Electrical fundamentals, introduction to basics of digital logic and circuits, digital systems and basic digital circuit design. One classroom, two lab hours per week.

2157 Radio Frequency Identification (RFID) Technology   3 Cr. Hrs.

Review of basic radio frequency identification (RFID) terminology, emerging electronic product code (EPCglobal) standards, tag design and applications; interrogators configuration, installation and maintenance of common peripherals, various hardware and software components of a complete system, hands-on lab experience and basic RFID applications. Two classroom and two lab hours per week. *Prerequisite(s): EET 1116 OR EET 1120 OR EET 1198 OR MAN 1106*

2201 Electronic Devices & Circuits   4 Cr. Hrs.

Semiconductor properties, diode applications, special-purpose diodes, bipolar junction transistors (BJTs), BJT biasing circuits and stability, BJT amplifier circuits, multistage amplifier design, power amplifiers, field effect transistors (FETs), JFET and MOSFET biasing circuits, FET amplifier circuits, frequency analysis, thyristors and applications, negative and positive feedback concepts, oscillators, Op-Amp circuits and applications, and electronically regulated power supplies. Three classroom, three lab hours per week. *Prerequisite(s): EET 1155*

2201 Electronic Devices & Circuits   4 Cr. Hrs.

Semiconductor properties, diode applications, special-purpose diodes, bipolar junction transistors (BJTs), BJT biasing circuits and stability, BJT amplifier circuits, multistage amplifier design, power amplifiers, field effect transistors (FETs), JFET and MOSFET biasing circuits, FET amplifier circuits, frequency analysis, thyristors and applications, negative and positive feedback concepts, oscillators, Op-Amp circuits and applications, and electronically regulated power supplies. Three classroom, three lab hours per week. *Prerequisite(s): EET 1155*

2221 UAS Sensors & Systems   4 Cr. Hrs.

Course will provide students a foundational understanding encompassing all elements of an unmanned aerial system (UAS). Students will be provided the knowledge and necessary skill set to support UAS application. Three classroom, three lab hours per week. *Prerequisite(s): EET 1120 AND EET 1121*

2257 Radio Frequency Identification (RFID) Capstone   3 Cr. Hrs.

Initiating best analysis, design and implementation of a Radio Frequency Identification (RFID) solution. Configuration and troubleshooting exercises designed to illustrate the power of today's RFID readers and their interaction with input/output, practical, in-depth instruction and hands-on guidance for leveraging RFID in the real world. Two classroom, two lab hours per week. *Prerequisite(s): EET 2157*

2259 Programming for Electronics Technology 4 Cr. Hrs.

Computer solutions of engineering technology problems using LabVIEW. Covers the LabVIEW programming environment and virtual instruments, data types, debugging, sub-virtual instruments, programming structures, arrays, graphical presentation and analysis, file input/output, instrument control, data acquisition, and applications to electronic circuits. Three classroom, two lab hours per week. *Prerequisite(s): EET 2201 AND EET 1131*

2261 Microprocessors 4 Cr. Hrs.

Microprocessor architecture, assembly language programming, bus structures and timing diagrams, memory technologies and interfacing, input/output interface and systems, interrupt-processed input/output, direct memory access (DMA), microcontroller applications and microprocessor-based communications. Three classroom, three lab hours per week. *Prerequisite(s): EET 1131 OR EET 1198*

2261 Microprocessors 4 Cr. Hrs.

Microprocessor architecture, assembly language programming, bus structures and timing diagrams, memory technologies and interfacing, input/output interface and systems, interrupt-processed input/output, direct memory access (DMA), microcontroller applications and microprocessor-based communications. Three classroom, three lab hours per week. *Prerequisite(s): EET 1131*

2270 Electronics Engineering Technology Internship 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten co-op hours per week per credit hour. *Prerequisite(s): Approval of Department*

2278 Electronics Project Capstone 4 Cr. Hrs.

Review of electronic circuits, analog and digital electronics, microcontrollers, design and layout of printed circuit board, fabricate-assemble-test-troubleshoot working prototype, write report. Two classroom, four lab hours per week. *Prerequisite(s): EET 2201 AND EET 2261*

2281 Programmable Logic Controllers 3 Cr. Hrs.

Provides history of control systems and PLCs, use of number systems, ladder logic programming devices, Control I/O modules, relays, contacts, coils, and timers, counters and sequencers, fundamental PLC programming, and data transfer. Two classroom, two lab hours per week. *Prerequisite(s): EET 1120 OR EET 1131 OR EET 1198 OR (EET 1181 AND EET 1182)*

2282 Advanced Programmable Logic Controllers 3 Cr. Hrs.

Demonstrate the use of control and set analog I/O, bit and project based programming, control servos with analog & High Speed Counter (HSC) cards, the use of ethernet network for programmable logic controllers (PLCs), the interaction between PLCs and sensors, installation and repair. Two classroom, two lab hours per week. *Prerequisite(s): EET 2281*

Expanded Functions for Dental (EFD)

1102 Dental Anatomy for Dental Auxiliaries 1 Cr. Hr.

A study of form and function of the human dentition. This course is designed to provide an overview of the terminology and characteristics of all teeth in the adult and primary dentition. Includes identification of all anatomical tooth structures, eruption schedule and occlusion. *Prerequisite(s): Acceptance into EFDA program*

1202 Expanded Functions for Dental Auxiliaries I 6 Cr. Hrs.

Lecture and clinical course designed to teach more extensively the concepts of dental materials and their use in restorative techniques. The principles of the manipulation and placement of dental materials used in delegated intra-oral functions for the expanded function dental auxiliary in Ohio are taught. Three classroom, four lab hours per week plus ten hours of co-op experience per week in the dental office. *Prerequisite(s): EFD 1102*

1203 Lab for Expanded Functions for Dental Auxiliaries I 0 Cr. Hrs.

Laboratory experiences in advanced remediable intra-oral dental tasks and/or procedures involved in the art and placement of restorative materials including amalgam and nonmetallic restorative materials including resin restorations. *Prerequisite(s): EFD 1102*

1302 Expanded Functions for Dental Auxiliaries II 6 Cr. Hrs.

This course is the third in a three-part series for the Expanded Functions Dental Auxiliary Program. Greater emphasis on topics covered in EFD 1202 is examined. Detailed concepts with regards to amalgam, esthetic and preventive resins are discussed. Concepts involving Class IV resin restorations and dental sealants are introduced. Mock boards are included. Three classroom, four lab hours per week, plus ten hours of co-op experience per week in a dental office. *Prerequisite(s): EFD 1202 AND Restricted to Majors*

1303 Lab for Expanded Functions for Dental Auxiliaries II 0 Cr. Hrs.

Laboratory experiences in advanced remediable intra-oral dental tasks and/or procedures involved in the art and placement of preventive or restorative materials including amalgam, dental sealants and nonmetallic restorative materials including resin restorations. *Prerequisite(s): Restricted to Majors*

Engineering (EGR)

1101 Introductory Mathematics for Engineering Applications 4 Cr. Hrs.

An overview of math topics used in engineering courses: algebra, trigonometry, vectors, complex numbers, sinusoids, systems of equations, matrices, differentiation, integration, differential equations. All math topics are presented within the context of engineering applications, reinforced through examples from engineering courses. Also introduces the engineering analysis software MATLAB. Three classroom, three lab hours per week. *Prerequisite(s): MAT 0300 OR MAT 1570*

1106 Basic Mechanical & Electrical Skills 2 Cr. Hrs.

Utilization of general/specialized hand/power tools that are typically used in the electromechanical industry; use of various dimension measurement devices; simple machine repair procedures from belt replacement to complete subsystem repair; drilling, reaming and tapping holes for various mechanical fasteners. Elementary industrial machine wiring principles; schematics, panel layouts, assembly and wiring techniques. One classroom, two lab hours per week.

SINCLAIR COLLEGE

1111 Introduction to Nanotechnology 3 Cr. Hrs.

Introduction to nanotechnology and its application to engineering systems, emphasizing basic principles, materials, measurement tools, fabrication techniques, and applications. Two classroom, two lab hours per week.

1121 Introduction to the Intelligence Community 3 Cr. Hrs.

Presents an overview of the Intelligence Community (IC), the origin and purpose of the IC, its current structure and the diverse roles and missions of its members. Students will study the intelligence cycle, the heart of the IC, by examining the entire process used for creating intelligence: identifying requirements; tasking appropriate agencies and systems to collect data; the processing, exploiting and analyzing of the data and the production and delivery of timely, accurate and relevant intelligence products. This course will also introduce students to operations and communications security, counterintelligence and covert action, homeland security, intelligence oversight and ethics. Two classroom, two lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): EGR 1122*

1122 Fundamentals of Remote Sensing in Intelligence 3 Cr. Hrs.

This course emphasizes the science, technology and applications of remote sensing, bringing together related information in materials science, physics, optics, electronics, computer processing and other disciplines. Students completing this course will be equipped to approach problems ranging from environmental to social to industrial data gathering and interpretation. Two classroom, two lab hours per week. *Prerequisite(s): Approval of Department Corequisite(s): EGR 1121*

1128 Robotics in Computer Integrated Manufacturing (CIM) Systems 3 Cr. Hrs.

This course serves as an introduction to automated systems. The basics of sensors, logic control systems, motion control systems, robotics and flexible manufacturing systems will be covered. The course will be taught using demonstration and discussion combined with individual and team centered project-based learning. One classroom, four lab hours per week.

1144 Sensors & Vision Systems 4 Cr. Hrs.

Introduction to basic sensors used in Computer Integrated Manufacturing (CIM) systems. Theory of operation, wiring, installation, testing and troubleshooting sensors and circuits. The analysis of various methods of utilizing vision systems in industrial applications using camera, lighting and software. Three classroom, three lab hours per week. *Prerequisite(s): EET 1120 AND EGR 1128*

1144 Sensors & Vision Systems 3 Cr. Hrs.

Introduction to basic sensors used in Computer Integrated Manufacturing (CIM) systems. Theory of operation, wiring, installation, testing and troubleshooting sensors and circuits. The analysis of various methods of utilizing vision systems in industrial applications using camera, lighting and software. Two classroom, three lab hours per week. *Prerequisite(s): EET 1120 AND EGR 1128*

1201 Introduction to Spectral Sensing with Applications in Intelligence 3 Cr. Hrs.

Concepts of spectral remote sensing as they are applied to military / intelligence applications with special emphasis on commercial sensors and solutions. Advantages and disadvantages of special remote sensors. Content will cover available unclassified spectral instruments (both hyper-spectral and multi-spectral sensors), their characteristics and how to best employ them. Topics include Basic Spectral Phenomenology, the Spectral Signature, Sensor Analysis, Data Products and Data Fusion. Two classroom, two lab hours per week. *Prerequisite(s): EGR 1121 AND Approval of Department Corequisite(s): EGR 1202*

1202 Introduction to Radar 3 Cr. Hrs.

Capabilities and limitations of radar, the performance and implementation of its critical sub-systems and the requirements particular radars must meet in order to perform common Measurement and Signature Intelligence (MASINT) and Advanced Geospatial Intelligence (AGI) missions (e.g. Synthetic Aperture Radar (SAR), Line of Sight and Over the Horizon). Students will become conversant in Radar and able to exploit its use in a variety of potential intelligence tasks with a basic knowledge enabling them to predict the expected performance of a radar system. Two classroom, two lab hours per week. *Prerequisite(s): EGR 1122 AND Approval of Department Corequisite(s): EGR 1201*

1211 Introduction to Large Area Surveillance 3 Cr. Hrs.

This course is designed to familiarize the student with the concepts of electro-optical remote sensing of important objects that can appear anywhere in the world without warning for a limited period of time. Some of these objects can also be rapidly moving. Such objects include missiles and aircraft in powered flight, nuclear and conventional explosions, fires and other military activity. Discussion includes the unique object signature and sensor characteristics that make detection of these objects possible while continuously monitoring large areas. Two classroom, two lab hours per week. *Prerequisite(s): EGR 1202 AND Approval of Department AND Secret Clearance*

1212 Measurement & Signal Intelligence 3 Cr. Hrs.

Overview of Measurement and Signature Intelligence (MASINT) and Advanced Geospatial Intelligence (AGI) disciplines including the science behind geophysical signatures such as Chemical, Biological, Radiological and Nuclear Weapons. MASINT as it relates to Seismic and Acoustic phenomena, Geophysical Materials and Radio Frequency Spectrum. Different technologies used in lethal and nonlethal Directed Energy Weapons identifying strengths and vulnerabilities of electromagnetic and chemically powered artillery. Students will apply MASINT/AGI collection and processing techniques and capabilities to develop a collection and analysis plan targeting one of today's challenging intelligence problems. Two classroom, two lab hours per week. *Prerequisite(s): EGR 1202 AND Approval of Department AND Secret Clearance*

1217 Fluid Power & Control 2 Cr. Hrs.

Fundamentals and basic applications of fluid power components, systems, controls and accessories. The design parameters and the terminology required to specify and plan fluid power systems. Basic electrical and Programmable Logic Control (PLC) control of fluid power components. One classroom, three lab hours per week.

2131 Engineering Digital Design 4 Cr. Hrs.

Binary systems, Boolean algebra, combinational and sequential circuits, digital design using computer-aided design (CAD) tools with hardware description language. Laboratory exercises include simulation using CAD tools and implementation of designs on breadboards and on field-programmable-gate-array boards. This course is designed for Engineering University Transfer students. Three classroom, three lab hours per week. *Prerequisite(s): MAT 1470 OR MAT 1570 OR MAT 1580 OR MAT 2270 OR MAT 2280*

2201 Circuit Analysis 4 Cr. Hrs.

Principles of linear circuit analysis, covering circuits containing passive and active components. Analysis of direct-current (DC) and alternating-current (AC) circuits, including transient behavior and sinusoidal steady-state behavior. This calculus-based course is designed for Engineering University Transfer students. Three classroom, three lab hours per week. *Prerequisite(s): MAT 2270 OR EGR 1101*

2211 Nanotechnology Applications & Fabrications Techniques 3 Cr. Hrs.

Discussions and examples of applications of nanotechnology in Biology, Physics, Chemistry, Medical, Material Science, and Engineering. Introduction to nanofabrication tools, clean room and scanning electron microscope (SEM) via remote lab demonstrations. *Prerequisite(s): EGR 1111*

2231 Troubleshooting of Automated Systems 3 Cr. Hrs.

Concept of troubleshooting and its importance in manufacturing systems. Troubleshooting philosophies, flowchart examination, electrical and mechanical troubleshooting. Techniques for troubleshooting systems containing sensors, PLCs, Robots, HMIs and other common automation equipment. Fault determination using software to monitor the performance of small automated systems. Two classroom, three lab hours per week. *Prerequisite(s): EET 2281 AND EGR 1128*

2250 Electromechanical Repair 4 Cr. Hrs.

Teaches the student theory of controller operation, function of power inputs and supply units, command and feedback loops. Also, troubleshooting, diagnostics and repair including removal and replacement of belts, pulleys, bearings and gears. Finalizing with alignment and recalibration through the computer controller. Three classroom, three lab hours per week. *Prerequisite(s): EGR 2252*

2250 Electromechanical Repair 3 Cr. Hrs.

Teaches the student theory of controller operation, function of power inputs and supply units, command and feedback loops. Also, troubleshooting, diagnostics and repair including removal and replacement of belts, pulleys, bearings and gears. Finalizing with alignment and recalibration through the computer controller. Two classroom, three lab hours per week. *Prerequisite(s): EGR 2252*

2252 Teach Pendant Robot Programming 2 Cr. Hrs.

Introduction to Teach Pendant Programming (TPP) for robots, including TPP program development on the teach pendant and through offline programming software. Programs, tested using Fanuc robots, will be written for motion control, input/output activation and palletizing. One classroom, two lab hours per week. *Prerequisite(s): EGR 1128*

2252 Teach Pendant Robot Programming 3 Cr. Hrs.

Introduction to Teach Pendant Programming (TPP) for robots, including TPP program development on the teach pendant and through offline programming software. Programs, tested using Fanuc robots, will be written for motion control, input/output activation and palletizing. Two classroom, three lab hours per week. *Prerequisite(s): EGR 1128*

2256 Automated Data Acquisition Systems 3 Cr. Hrs.

Data acquisition technologies with the use of bar coding, image recognition, optical character recognition, Charge Coupled Device (CCD) camera images, laser scanning, voice recognition, radio frequency and microwave transponder. Two classroom, two lab hours per week. *Prerequisite(s): EET 1198 AND EGR 2252 AND EGR 2261*

2261 Engineering Problem Solving using "C" & "C++" 4 Cr. Hrs.

Solve representative engineering problems with a focus on: writing in object-oriented style, computer control of input/output port control, stand-alone executable code and library linking. Computer solutions of engineering problems using C and C++ incorporating compiling, running, editing and debugging techniques along with language-specific functions, array and pointer structures and stream I/O. Three classroom, three lab hours per week. *Prerequisite(s): MAT 1470 OR MAT 1580*

2270 Automation & Control Internship I R 1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour. *Prerequisite(s): Approval of Department*

2271 Automation & Control Internship II R 1 - 4 Cr. Hrs.

Students will earn credit toward degree requirements for work learning experience for a second semester. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare reports and/or projects each semester. Ten hours work per week per credit hour. *Prerequisite(s): EGR 2270*

2272 Automation & Control Internship III R 1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour. *Prerequisite(s): EGR 2271*

2273 Automation & Control Internship IV R 1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour. *Prerequisite(s): EGR 2272*

2274 Automation & Control Internship V R 1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour. *Prerequisite(s): EGR 2273*

2275 Automation & Control Technology Internship R 1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour. *Prerequisite(s): Approval of Department*

2278 Automation & Control Capstone 3 Cr. Hrs.

Project-based review of robotic workcell system design, layout and integration of related industrial systems, and skills from the following areas: robots and programming languages, electronic systems, component installation, troubleshooting, mechanical repair and preventative maintenance. Additional focus on graphics, work processing, analytical and simulation tools, assembly, testing, troubleshooting and repair of a functional robot workcell. One classroom, four lab hours per week. *Prerequisite(s): EGR 2231 AND EGR 2252 AND EET 2281 OR Approval of Department*

2279 Mechatronics Capstone 3 Cr. Hrs.

Project-based review of electro-mechanical system design, layout and integration of related industrial systems, and skills from the following areas: robots and programming languages, electronic systems, component installation, motors, troubleshooting, mechanical design, mechanical repair and preventative maintenance. Additional focus on schematics, teamwork and communications, analytical and simulation tools, assembly, testing, troubleshooting and repair of a functional electro-mechanical device. One classroom, four lab hours per week. *Prerequisite(s): EGR 1128*

Environmental & Energy Engineering Technology (EGV)

1101 Alternate & Renewable Energy Sources 3 Cr. Hrs.

Overview of past, recent and current research to find viable alternative sources of energy. Examples include water, wind, solar, bio-mass, alternative liquid fuels and introduction to fuel cell technology. Study of applied technologies in the context of how to relieve complete dependence on petrochemical-based products. A case study approach to learning is used. Two classroom, two lab hours per week.

1251 Introduction to Energy Management Principles 3 Cr. Hrs.

The course introduces the principles of energy management and an effective energy management plan. This course provides an overview of energy consuming systems and operations of commercial and industrial buildings and systems and energy saving opportunities for them. Two classroom, two lab hours per week.

1301 Architectural Energy Analysis 2 Cr. Hrs.

Critical examination of energy consumption in building, both residential and commercial, for the purpose of identifying energy conservation opportunities. One classroom, two lab hours per week.

1401 Weatherization & Building Performance Training 3 Cr. Hrs.

This course covers energy assessment and weatherization methods for single and multifamily dwellings. The course covers the operation of the equipment: blower door, duct blaster, pressure pan, flow meter, infrared camera, and combustion analyzer. This course is designed to prepare students for the Building Performance Institute Building Analyst written and field test. Two classroom, two lab hours per week.

1501 Environmental Assessment & Analysis 3 Cr. Hrs.

Sampling and analysis techniques for site characterization and assessment. Sampling methods and protocols are presented in detail with respect to environmental liability, compliance and property transfer. Environmental monitoring is explained with emphasis on air quality, surface water and groundwater. Two classroom, three lab hours per week.

1610 Water Distribution Systems 3 Cr. Hrs.

Examination of the basic concepts pertaining to the operation and maintenance of water and wastewater treatment plants. Students will become familiar with analyzing and solving operational problems, operator performance, contingency procedures, and water treatment equipment. This course is designed to prepare students to sit for EPA Operator Certifications. Two lecture, two lab hours per week. *Prerequisite(s): DEV 0035*

1620 GIS Mapping 3 Cr. Hrs.

Examination of geographic information systems (GIS) as they relate to water and wastewater treatment, collection, and distribution systems. Students are exposed to theoretical and practical application of GIS devices and mapping software. Two classroom, two lab hours per week. *Prerequisite(s): DEV 0035*

1630 Wastewater Collection Systems 3 Cr. Hrs.

Examination of topics related to the operation and maintenance of wastewater collection systems (WWCS). The course will cover basic concepts related to the inspection, testing, cleaning of pipes, maintenance, underground repair, new construction, administration, and organization of WWCS. Designed to prepare students to sit for Ohio EPA Operator Certifications. Two classroom, two labs hours per week. *Prerequisite(s): DEV 0035*

1640 Introduction to Backflow 1 Cr. Hr.

Examination of backflow prevention concepts designed to meet the Ohio Administrative Code (OAC) 3745-95 Backflow Prevention and Cross Connection Control requirements. A water supply employee may be eligible to sit for the State of Ohio Department of Commerce Certified Backflow Technician exam. One half classroom hour, one and one half lab hours per week. *Prerequisite(s): DEV 0035*

2101 Solar Photovoltaic Design & Installation 3 Cr. Hrs.

This course covers components of solar PV systems and components and the sizing of PV systems and components. Designed to prepare the student to take the NABCEP PV Entry Level Exam. Two classroom, two lab hours per week.

2151 Solar Thermal Systems 3 Cr. Hrs.

This course covers some of the basic cognitive materials needed to install and maintain solar thermal systems. Designed to help individuals better prepare for the North American Board of Certified Energy Practitioner (NABCEP) Solar Thermal Installer examination but does not provide all of the materials needed to complete the certification examination. Two classroom, two lab hours per week.

2201 Electrical Lighting & Motors 2 Cr. Hrs.

This course covers components of lighting systems, control strategies, current technologies and electric motors. Energy efficiency opportunities and environmental impacts are identified and analyzed. One classroom, two lab hours per week. *Prerequisite(s): EET 1120 AND EGV 1251 AND (PHY 1100 OR PHY 1131 OR PHY 1141 OR PHY 2201)*

2251 Energy Control Strategies 3 Cr. Hrs.

This course covers the use of utility data to conduct a 'Lean Energy Analysis', utility rate structures, the use of both whole building computer simulation and discrete system computer simulation to estimate building and system energy use, energy demand and carbon footprint. Two classroom, two lab hours per week. *Prerequisite(s): EGV 1251*

2301 Commercial & Industrial Assessment 3 Cr. Hrs.

This course covers methods of collecting data (utility, envelope, mechanical systems, and operational procedures) for both commercial and industrial facilities and analyzing the data with statistical procedures and simulation software to develop energy-saving management plans. Two classroom, two lab hours per week.

2351 LEED Green Associate Exam Preparation 2 Cr. Hrs.

This course helps prepare the student for the first of the LEED Green Associate Exams and meets the requirement of the student having involvement on a LEED- registered project, or employment in a sustainable field of work or completion of an education program that addresses green building principles in LEED, to qualify to take the LEED Green Associate Exam. One classroom, two lab hours per week.

2501 Waste Management 3 Cr. Hrs.

Develop a working knowledge of present waste-management practices including minimization, storage, transportation, treatment and disposal of various waste related to the life cycle of a given activity and corrective actions related to contamination. Two classroom, three lab hours per week.

2610 Water Supply 3 Cr. Hrs.

Examination of the concepts related to the operation of water treatment systems. The course will cover basic concepts related to contaminant identification, safety procedures, regulations and treatment technologies along with other properties related to water supply. This course is designed to prepare students to sit for Ohio EPA Operator Certification. Two classroom, two lab hours per week.

2630 Wastewater Treatment 3 Cr. Hrs.

Examination of the concepts related to the operation of wastewater treatment systems. The course will cover basic concepts related to pollutant identification, safety procedures, regulation and treatment theory along with properties related to wastewater treatment. This course is designed to prepare students to sit for Ohio EPA Operations Certifications. Two classroom, two lab hours per week.

2700 Energy Management Technology Internship R 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten co-op hours per week per credit hour. *Prerequisite(s): Approval of Department*

2701 Environmental Engineering Technology Internship 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten co-op hours per week per credit hour. *Prerequisite(s): Approval of Department*

2780 Energy Management Technology Capstone 4 Cr. Hrs.

Assessment of achievement by Energy Management Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Two classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

2781 Environmental Engineering Technology Capstone 4 Cr. Hrs.

Assessment of achievement by Environmental Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Two classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

Emergency Medical Services (EMS)

1100 Emergency Medical Responder Lecture & Laboratory 2 Cr. Hrs.

Emergency medical responders provide initial care for the sick and injured prior to the arrival of the ambulance. This education can be valuable to safety officers working in industry, police officers and some rural fire departments. This course will meet a total of 16 lecture hours and 32 laboratory hours. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): At least 18 years of age*

1150 Emergency Medical Technician: Lecture 5 Cr. Hrs.

The Emergency Medical Technician Lecture provides students with the didactic information needed to understand the care of the sick and injured at the emergency medical technician level. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): DEV 0015 AND Approval of Division Advisor AND 18 years old Corequisite(s): EMS 1155*

1155 Laboratory for Emergency Medical Technician 2 Cr. Hrs.

The Emergency Medical Technician Laboratory provides students with the psychomotor information needed to understand the care of the sick and injured at the emergency medical technician level. Student will attend a total of 64 hours of laboratory time. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Corequisite(s): EMS 1150*

1175 Emergency Medical Technician Refresher 2 Cr. Hrs.

This course meets or exceeds the national standard curriculum for EMT refresher. Designed to meet the needs of two types of emergency medical services providers: 1) Students who are recertifying their state licensure cards can use this course to complete their state requirements. 2) Students who need to remediate on material before taking their national registry examination can use this course to meet those needs. This course will meet a total of 16 lecture hours and 32 laboratory hours.

2100 Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider 3 Cr. Hrs.

This course provides the fundamental anatomy, physiology and pathophysiology information necessary to understand the care of the sick and injured at the paramedic level. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): BIO 1107 OR BIO 1121 AND Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required*

2105 Paramedic 1: Lecture 2 Cr. Hrs.

The paramedic student is introduced to the fundamental concepts of patient assessment, airway management and pharmacology. These concepts are reinforced within the laboratory setting of EMS 2110. Successful students will then be prepared to begin applying this knowledge within the clinical setting. Clinical activity begins in the second semester of the paramedic program. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2110 Paramedic 1: Laboratory 2 Cr. Hrs.

This is the introductory laboratory experience within the paramedic program. Skills will be reviewed and retested from the Emergency Medical Technician level. CPR will be retested. New skills will involve patient assessment, airway management and pharmacology, including drug math. Four lab hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2125 Paramedic 2: Lecture 5 Cr. Hrs.

The paramedic student will explore cardiology, pulmonology and pediatrics. This course covers ECG acquisition, interpretation and appropriate patient management, cardiovascular pathology and management, respiratory pathology and management and care for the pediatric patient. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2130 Paramedic 2: Laboratory 2 Cr. Hrs.

This course covers the assessment and management of patients with cardiac/respiratory disease. Also covered will be care of the pediatric patient. Specific skills covered include ECG, cardiac monitor use, CPR, advanced cardiac life support (adult and pediatric) and management of respiratory emergencies. Four lab hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2135 Paramedic 2: Clinical 2 Cr. Hrs.

The paramedic student is introduced to the hospital clinical setting where he/she will apply knowledge learned from the lecture and laboratory setting in the direct supervised care of patients. Fourteen practicum hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required*

2136 Paramedic 2a: Clinical 1 Cr. Hr.

The paramedic student is introduced to the hospital clinical setting where he/she will apply knowledge learned from the lecture and laboratory setting in the direct supervised care of patients. All students must complete 112 hours in the hospital setting. Seven practicum hours per week. This course must be followed by EMS 2137. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required*

2137 Paramedic 2b: Clinical 1 Cr. Hr.

The paramedic student is introduced to the hospital clinical setting where he/she will apply knowledge learned from the lecture and laboratory setting in the direct supervised care of patients. All students must complete a 112-hour hospital experience. Seven practicum hours per week. This course occurs after EMS 2136. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required*

2150 Paramedic 3: Lecture 5 Cr. Hrs.

The paramedic student will explore management of the trauma patient and an in-depth discussion of the medical patient including assessment and management. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2155 Paramedic 3: Laboratory 2 Cr. Hrs.

This course covers the assessment and management of patients suffering from traumatic injuries, basic rescue techniques, obstetrical emergencies and medical emergencies. Specific skills covered include managing patients in vehicles, traumatic airway management, neonatal care and differential diagnosis. Four lab hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2160 Paramedic 3: Clinical 1 Cr. Hr.

This course is divided into two settings: hospital and out-of-hospital. Within the hospital clinical setting, the student will work to master knowledge learned related to the direct supervised care of patients. Once mastery is demonstrated, the student will be cleared to apply his/her education in the out-of-hospital setting. All students must complete a 112-hour field experience/ambulance assignment. Seven practicum hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required*

2175 Paramedic 4: Lecture
2 Cr. Hrs.

This course is a complaint based approach to patient care. Students will focus on integrating pathology, assessment and patient care knowledge in the care of patients with multiple pathologies. Four classroom hours per week for eight weeks. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2180 Paramedic 4: Field Experience
1 Cr. Hr.

Under direct supervision, students work to integrate lecture, laboratory and hospital clinical knowledge to treat patients in the out-of-hospital setting. The goal is to establish mastery of patient care skills as they apply to the out-of-hospital care setting. All students must complete a 112-hour field internship. Seven practicum hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required*

2200 Paramedic 5: Integration / Refresher Lecture
2 Cr. Hrs.

This course reviews all materials from the entire paramedic program. Its goals are to integrate past knowledge and skills into a comprehensive approach to out-of-hospital patient care. Four classroom hours per week for eight weeks. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2205 Paramedic 5: Integration / Refresher Laboratory
1 Cr. Hr.

This course will review all psychomotor skills covered within the paramedic program as students are prepared for the comprehensive practical examination. Students will also have applied knowledge evaluated within the field setting. Students will discuss appropriate patient care with the medical director of the EMS program. Four lab hours per week for eight weeks. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326. *Prerequisite(s): Approval of Department*

2250 Paramedic Refresher
3 Cr. Hrs.

This course meets or exceeds the national standard curriculum for paramedic refresher. Designed to meet the needs of two types of emergency medical services providers: 1) Students who are recertifying their state licensure cards can use this course to complete their state requirements. 2) Students who need to remediate on material before taking their national registry examination can use this course to meet those needs. Two classroom, two lab hours per week.

2300 Critical Care Paramedic 1
3 Cr. Hrs.

This course explores the technologically challenging area of critical care medicine. The use of advanced diagnostics such as arterial lines and swan ganz catheters and patient management skills such as ventilators, LVADs and advanced pharmacology will be explored. *Prerequisite(s): Approval of Department AND Paramedic*

2305 Critical Care Paramedic 2
3 Cr. Hrs.

This course explores the technologically challenging area of critical care medicine. The use of advanced diagnostics such as laboratory results, x-rays and ultrasounds and the management of patients with trauma, shock and various medical conditions will be explored. *Prerequisite(s): Approval of Department AND Paramedic*

2310 EMS Management 1
3 Cr. Hrs.

This course is for Emergency Medical Services (EMS) personnel who need to understand the roles and responsibilities of EMS managers. Various aspects of management, including finance, injury prevention, communication, public access and EMS system management will be discussed. *Prerequisite(s): ENG 1101*

2315 EMS Management 2
3 Cr. Hrs.

This course is for Emergency Medical Services (EMS) personnel who need to understand the roles and responsibilities of EMS managers. Various aspects of management, including EMS law, quality assurance, customer service and the evaluation of specific mass casualties will be addressed. *Prerequisite(s): ENG 1101*

Electroneurodiagnostic Technology (END)

1101 Introduction to Electroneurodiagnostic Technology
1 Cr. Hr.

Introduction and orientation to health careers in field of electroneurodiagnostic including specific duties, certifications and licensure requirements, work setting and conditions, and career ladder opportunities. Overview of standards of practice of clinical neurophysiology with emphasis on neuroscience technique, instrumentation, terminology of electoneurodiagnostic practices and recording/monitoring techniques utilized in determination of treatment plans for neurological disorders. *Prerequisite(s): DEV 0015 AND MAT 0050*

1102 Introduction to Electroencephalography (EEG)
4 Cr. Hrs.

Provides basic knowledge of electroencephalography, understanding EEG concepts utilized for diagnosis of various cerebral disorders. Includes history, development, basic neurophysiology concepts of EEG, normal and abnormal brain wave patterns in adults and children, with emphasis on instrumentation and recording techniques. Two classroom, six lab hours per week. *Prerequisite(s): ALH 1101 AND END 1101 AND Restricted to Majors Corequisite(s): END 1182*

1182 Lab for Intro to EEG
0 Cr. Hrs.

This is the laboratory portion of the Introduction to Electroencephalography (EEG) and will provide the "hands-on" aspects to the basic knowledge of electroencephalography, understanding EEG concepts utilized for diagnosis of various cerebral disorders. Includes basic neurophysiology concepts of EEG, normal and abnormal brain wave patterns in adults and children, with emphasis on instrumentation and recording techniques *Corequisite(s): END 1102*

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1250 Intermediate Electroencephalography (EEG) 3 Cr. Hrs.

Discussion of clinical significance of epileptiform patterns, pharmacological effects on EEG recordings; EEG correlation of infection; and vascular and structural disease. Presentation and discussion of criteria for specialized recording techniques used in prolonged EEG recordings, specialized areas of the hospital, such as intensive care and operating room. Discussion of EEG signal analysis. Two classroom, two lab hours per week. *Prerequisite(s): ALH 1110 AND END 1102 AND HIM 1101 AND (CHE 1111 OR CHE 1311) AND (MAT 1130 OR MAT 1450 OR MAT 1470) AND Restricted to Majors*
Corequisite(s): END 1285

1260 Basic Evoked Potentials 3 Cr. Hrs.

Basic discussion of evoked potential recording techniques. Emphasis on equipment, principles of operation, associated waive related to normal and abnormal waveforms, placement and calibration, obtaining clearly resolved and replicated obligated waveforms of brainstem auditory, visual, and somatosensory evoked potentials in adults and pediatric subjects. Two classroom, three lab hours per week. *Prerequisite(s): BIO 1222 AND END 1101 AND (CHE 1111 OR CHE 1311) AND (MAT 1130 OR MAT 1450 OR MAT 1470) AND Restricted to Majors*
Corequisite(s): END 1286

1285 Lab for Intermediate EEG 0 Cr. Hrs.

Lab for Intermediate Electroencephalography (EEG) will identify clinical significance of epileptiform patterns, pharmacological effects on EEG recordings; EEG correlation of infection; and vascular and structural disease. Analyze criteria for specialized recording techniques used in prolonged EEG recordings, specialized areas of the hospital, such as intensive care and operating room. Perform EEG signal analysis. *Corequisite(s): END 1250*

1286 Lab for Basic Evoked Potentials 0 Cr. Hrs.

Lab for Basic Evoked Potential Basic demonstrate evoked potential recording techniques. Emphasis on equipment, principles of operation, associated waive related to normal and abnormal waveforms, placement and calibration, obtaining clearly resolved and replicated obligated waveforms of brainstem auditory, visual, and somatosensory evoked potentials in adults and pediatric subjects.
Corequisite(s): END 1260

1421 Intermediate Polysomnography 3 Cr. Hrs.

The course will focus on discussion of the classification of sleep disorders, and the physiological effects of sleep disorders and ramifications/implications on patient health. In addition there will be discussion of medication effects on sleep stages/patterns. Discussion of various therapies for sleep disordered breathing, and other sleep disorders. Discussion on monitoring of nocturnal seizures, and seizure types. Two classroom, three lab hours per week. *Prerequisite(s): END 2550*
Corequisite(s): END 1425

1425 Lab for Intermediate Polysomnography 0 Cr. Hrs.

Lab includes demonstration of pattern recognition of sleep disorders, physiological effects of sleep disorders and ramifications/implications on patient health, Positive Airway Pressure (PAP) set-up, nocturnal O2, CO2 monitoring. Recognizing medication effects on sleep stages/patterns. Determining various therapies for sleep disordered breathing, and other sleep disorders, nocturnal seizures, and seizure types. *Prerequisite(s): END 2550*
Corequisite(s): END 1421

1430 Advanced Polysomnography 3 Cr. Hrs.

The course will discuss parameters, digital and technical specifications of polysomnography, staging and scoring of sleep patterns, identification of various forms of sleep breathing and movement disorders. Discuss sleep calculations and daytime sleep studies, advanced PAP therapies, esophageal pH and NPT testing, sleep disorders lab management, and Home Sleep Testing. Two classroom, three lab hours per week. *Prerequisite(s): END 1421*
Corequisite(s): END 1435

1435 Lab for Advanced Polysomnography 0 Cr. Hrs.

Lab for this course involves parameters, digital and technical specifications of polysomnography, staging and scoring sleep patterns, identification breathing and movement disorders. Demonstrating sleep calculations and daytime sleep studies advanced PAP therapies, esophageal pH and NPT testing. Evaluating the aspects of sleep disorders lab management, and Home Sleep Testing. *Prerequisite(s): END 1421*
Corequisite(s): END 1430

1801 Seminar for Polysomnography Practicum 1 Cr. Hr.

Classroom portion to enhance the END 1881 Polysomnography practicum experience in a selected polysomnography lab or an affiliated health care facility under the direct supervision of a PSG technologist or physician. Emphasis on PSG concepts. *Prerequisite(s): END 1421 AND END 1430 AND END 2460 AND END 2550*
Corequisite(s): END 1891

1891 Polysomnography Practicum 3 Cr. Hrs.

Practicum in the clinical setting in a sleep laboratory or a sleep center. Departmental orientation, policies and procedures, individual body mechanics and patient transfer techniques. Gather and analyze patient information, perform testing preparation procedures, perform polysomnographic procedures. Emphasis on performing overnight diagnostic and therapeutic polysomnograms. Twenty-one practicum hours per week.
Corequisite(s): END 1801

1901 Seminar for END Practicum I 2 Cr. Hrs.

Classroom portion to enhance the Clinical electroencephalography experience in a selected neurodiagnostic lab or an affiliated health care facility under the direct supervision of an EEG technologist or physician. Emphasis on EEG concepts. One classroom, seven practicum hours per week. *Prerequisite(s): END 1101 AND END 1102 AND Restricted to Majors AND Current Healthcare Provider CPR/AED Required*

1991 Practicum Experience I for END 0 Cr. Hrs.

Clinical electroencephalography experience in a selected neurodiagnostic lab or an affiliated health care facility under the direct supervision of an EEG technologist or physician. Emphasis on EEG concepts. Performance of EEG testing on clinical patients, medical record keeping and clinical history taking. *Corequisite(s): END 1901*

2350 Intraoperative Monitoring for Electroneurodiagnostic Technologists 2 Cr. Hrs.

Discussion of intraoperative monitoring of CNS (brain, brainstem, spinal cord) function during surgical procedures. Types of recordings, technologist's role, recording parameters, reason for surgical monitoring, variables affecting monitoring, and outcome of surgery. *Prerequisite(s): END 1250 AND END 1260 AND Restricted to Majors*

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2360 Neonatal/Pediatric Electroneurodiagnostic 3 Cr. Hrs.

Discussion of recording neonatal and pediatric EEG and polysomnograms. Development of sleep-wake cycle, monitoring the EEG in neonatal and pediatric populations, and differential diagnosis based on polysomnographic variables. Two classroom, two lab hours per week. *Prerequisite(s): BIO 1222 and END 1250 AND Restricted to Majors Corequisite(s): END 2386*

2386 Lab for Neonatal/ Pediatric EEG 0 Cr. Hrs.

Lab for Neonatal/Pediatric Electoneurodiagnostic will demonstrate recording neonatal and pediatric EEG and polysomnograms. Development of sleep-wake cycle, monitoring the EEG in neonatal and pediatric populations, and differential diagnosis based on polysomnographic variables. *Corequisite(s): END 2360*

2450 Nerve Conduction Studies 3 Cr. Hrs.

Basic discussion of nerve conduction studies and electromyography. Emphasis on equipment, knowledge of placement stimulation sites, sources of error in nerve conduction studies, electronics, pathology (abnormal nerve conduction studies, anatomy as it pertains to entrapment sites and nerve conduction studies), waveforms identification and case presentation. Two classroom, two lab hours per week. *Prerequisite(s): BIO 1222 and END 1250 AND Restricted to Majors Corequisite(s): END 2485*

2460 Neurophysiology of Electroencephalography/Sleep Disorders 3 Cr. Hrs.

Analysis of the central and peripheral nervous systems, electrophysiology, and nerve conducting velocities in health and disease. Includes discussion of neurophysiology of sleep and the role of the autonomic nervous system. Emphasis on respiratory and cardiovascular effects, regulation of sleep, circadian rhythms and maturation of the sleep stages addressing neonates to adults. *Prerequisite(s): END 1250 AND Restricted to Majors*

2485 Lab for Nerve Conduction Studies 0 Cr. Hrs.

The lab for nerve conduction studies and electromyography will emphasis equipment, knowledge of placement stimulation sites, sources of error in nerve conduction studies, electronics, pathology (abnormal nerve conduction studies, anatomy as it pertains to entrapment sites and nerve conduction studies), waveforms identification and case presentation. *Corequisite(s): END 2450*

2550 Fundamentals of Polysomnography 3 Cr. Hrs.

Overview of field of polysomnography including job responsibilities and credentialing. Normal and abnormal sleep disorders, integrating the physiologic functions of nervous, respiratory, and cardiovascular systems. Discussion of recording sleep apnea montage, placement and calibration of diagnostic, electrodes, and associated equipment. Emphasis on monitoring, diagnosis, scoring, and treatment of sleep disorders. Continuous Positive Airway Pressure (CPAP) and Bilevel Positive Airway Pressures equipment, artifact and troubleshooting of sleep montage results. Two classroom, three lab hours per week. *Prerequisite(s): END 2450 AND END 2460 AND Restricted to Majors Corequisite(s): END 2585*

2585 Lab for Polysomnography 0 Cr. Hrs.

Lab for the fundamentals of polysomnography including assessing normal and abnormal sleep disorders, integrating the physiologic functions of nervous, respiratory, and cardiovascular systems. Recording sleep apnea montage, placement and calibration of diagnostic, electrodes, and associated equipment. Emphasis on monitoring, diagnosis, scoring, and treatment of sleep disorders. Continuous Positive Airway Pressure (CPAP) and Bilevel Positive Airway Pressures equipment, artifact and troubleshooting of sleep montage results. *Corequisite(s): END 2550*

2902 Seminar for END Practicum II 3 Cr. Hrs.

Continuation of practicum in clinical setting at neurology laboratory or neurodiagnostics department. Departmental orientation, policies and procedures, assist patient setup, performance and discontinuance of neurodiagnostic activities performed at the assigned clinical site. One classroom, fourteen practicum hours per week. *Prerequisite(s): (COM 2206 OR COM 2211 OR COM 2225) AND ENG 1101 AND END 1260 AND END 1901 AND Restricted to Majors Corequisite(s): END 2992*

2903 Seminar for END Practicum III 3 Cr. Hrs.

Directed practice in clinical setting at neurology laboratory or neurodiagnostics department. Departmental orientation, policies and procedures, assist patient setup and discontinuance in monitoring of electromyography (EMG) activities. Experience with nerve conduction studies, and continuation of performance of EEG testing. One classroom, fourteen practicum hours per week. *Prerequisite(s): END 2450 AND END 2460 AND END 2902 AND Restricted to Majors Corequisite(s): END 2993*

2990 Electroneurodiagnostic Capstone 2 Cr. Hrs.

Capstone course in Electroneurodiagnostic Technology. Assessment of one's knowledge, experience and skills as electroneurodiagnostic technologist. Preparation and presentation of qualifications through written resume and portfolio. Guidelines and preparation for employment interview. Investigation into electroneurodiagnostic issues. *Prerequisite(s): END 2902 AND Restricted to Majors*

2992 END Practicum II 0 Cr. Hrs.

Continuation of practicum in clinical setting at neurology laboratory or neurodiagnostics department. Departmental orientation, policies and procedures, assist patient setup, performance and discontinuance of neurodiagnostic activities performed at the assigned clinical site. *Corequisite(s): END 2902*

2993 END Practicum III 0 Cr. Hrs.

Practicum in clinical setting at neurology laboratory or neurodiagnostics department. Departmental orientation, policies and procedures, assist patient setup and discontinuance in monitoring of electromyography (EMG) activities. Experience with nerve conduction studies, and continuation of performance of EEG testing. *Corequisite(s): END 2903*

English (ENG)

0101 English Composition I Booster 1 Cr. Hr.

This course is taken in conjunction with ENG 1101, English Composition I. ENG 0101 will be designed to provide additional instruction in writing conventions, practice in critical reading, and other supports for the major assignments in ENG 1101. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Prerequisite(s): Approval of Division Advisor*

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1101 English Composition I 3 Cr. Hrs.

In English Composition I students learn reflective, analytical and argumentative writing strategies, incorporating sources and personal experience. Students will negotiate between public and private rhetorical situations and purposes to achieve academic literacy. They will write multiple drafts using a recursive writing process as they work toward fluency in style and mechanics. *Prerequisite(s): DEV 0035 OR Placement Test Score*

1131 Business Writing 3 Cr. Hrs.

Using audience analysis, a writing process and grammatical and formatting skills in an electronic environment, students write letters and messages for both internal and external business situations; they conduct business research and write and document short, informal research business reports, incorporating graphics and presentation materials. *Prerequisite(s): DEV 0035 OR Placement Test Score*

1199 Textual Editing 3 Cr. Hrs.

Strategies to achieve a clear, concise, cohesive and emphatic writing style; sentence structure; contemporary grammar and usage. *Prerequisite(s): DEV 0035 OR Placement Test Score*

1201 English Composition II 3 Cr. Hrs.

English Composition II, building on the skills in English Composition I, develops rhetorical literacy through research, critical reading and multigenre writing tasks. Through major and minor, cumulative and stand-alone assignments, students construct arguments and analyses, ethically incorporating academic sources while developing their own voices as writers and citizens. *Prerequisite(s): ENG 1101*

2250 Introduction to Creative Writing 3 Cr. Hrs.

Develop skills for understanding and analyzing the art and craft of writing fiction, literary nonfiction, poetry, and drama, focusing on the basics of writing creatively including description, image, rhythm, sound, metaphor, voice, storytelling, and character. Develop critical editorial skills for peers' work. Discuss how a particular work is successful and how to make it stronger. Read published stories, essays, poems, and plays that represent a variety of diverse voices in terms of craft. Learn how to apply the techniques of a diverse array of writers to their own writing. Explore hybrid forms and emerging media.

2255 Poetry Writing 3 Cr. Hrs.

Writing and critical reading of poetry. Manuscript form, publication and market information.

2256 Fiction Writing 3 Cr. Hrs.

Traditional elements of short stories (character, scene, conflict, exposition, dialogue, plot and point of view) will be studied, involving student practice in a workshop setting. In addition to extensive student practice, students will read and analyze the work of published writers, learn how to submit their own work for publication and extensively study and write in one or more literary genres. Students will also study alternative or experimental fiction writing techniques. *Prerequisite(s): ENG 1101*

2257 Freelance Writing 3 Cr. Hrs.

Freelance writing covers magazine, newspaper and Internet article writing. It emphasizes generating, researching and developing nonfiction prose. *Prerequisite(s): ENG 1101*

2259 Novel Writing 3 Cr. Hrs.

Novel writing covers advanced study of traditional novel elements in a workshop setting, including the mechanics of manuscript submission. *Prerequisite(s): ENG 1101*

2262 Writing to Publish 3 Cr. Hrs.

This course introduces students to concepts and procedures related to publishing writing, as well as the business and professional aspects of establishing and maintaining a writing career. Topics covered include submission procedures, self-promotion, working with editors and social media, giving readings, and conducting workshops. The types of publishing houses and presses, as well as professional conduct and correspondence is also covered in this course. By the end of this course, students will have an understanding of how to publish their work and market their writing. *Prerequisite(s): ENG 2255 OR ENG 2256 OR ENG 2257 OR ENG 2259*

Exercise, Wellness & Sports Science (ENS)

1116 Introduction to Exercise Science & Health Promotion 3 Cr. Hrs.

Historical, theoretical, ethical and philosophical foundations of exercise science and health promotion, including an emphasis on role, responsibilities, work settings and future direction of the profession. *Prerequisite(s): DEV 0035*

1118 Lifetime Physical Fitness & Wellness 3 Cr. Hrs.

This course provides an overview of the concepts of physical fitness, conditioning principles and appropriate exercise and health practices with application to lifelong fitness and wellness. Course includes lecture and physical fitness testing. *Prerequisite(s): DEV 0035 AND (MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445)*

1212 Business Management for Exercise Science 3 Cr. Hrs.

Students will learn to apply business and budgeting concepts in the world of exercise science. Students will develop an understanding of budgeting, legal and ethical considerations, financing and marketing and how they are applied within the fitness environment.

1214 Personal & Community Health Behavior 3 Cr. Hrs.

This course enables the student to build a philosophy of health and health behaviors. Basic health principles and theories are applied to both personal and community health issues, including an emphasis on behavioral change and health and wellness education interventions. *Prerequisite(s): DEV 0035*

2314 Sport Promotions 3 Cr. Hrs.

Sport Promotions introduces a wide range of promotional and marketing strategies within the sport environment. Students will gain an understanding of the history of sport marketing and discover how contemporary efforts attract and increase fan base. Legal issues will also be discussed. *Prerequisite(s): DEV 0035 AND (MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445)*

2317 Methods of Teaching Lab 1 Cr. Hr.

This course will look at the practical application of teaching. Best practices for training and teaching in the industry will be explored. The student will have hands-on exposure and experience instructing a variety of modalities. Three lab hours per week. *Corequisite(s): ENS 2417*

2318 Fitness Assessment & Exercise Prescription 3 Cr. Hrs.

Students learn and experience the process of risk stratification, fitness assessment in the five components of fitness and exercise testing for low- to moderate-risk individuals. Integration and analysis of results and norms to design individualized exercise prescription. *Prerequisite(s): ENS 1118 AND BIO 1121 AND (MAT 1130 OR MAT 1445)*

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2417 Methods of Teaching 3 Cr. Hrs.

This course will look at the practical application of teaching. Best practices for training and teaching in the industry will be explored. The student will have hands-on exposure and experience instructing a variety of modalities. *Corequisite(s): ENS 2317*

2418 Exercise Prescription for Special Populations 3 Cr. Hrs.

Integration of risk stratification, fitness assessments, exercise testing, interpretation and exercise prescription skills. Application of knowledge and skills for special populations and medical conditions through case studies and simulations. *Prerequisite(s): ENS 2318*

2419 Health Promotion, Fitness & Sport Programming 3 Cr. Hrs.

This course provides organizational techniques, administrative procedures and principles of managing health promotion, fitness and sport programs, including facility design and operational standards and guidelines. *Prerequisite(s): Restricted to Majors*

2420 Concepts of Lifestyle Coaching 3 Cr. Hrs.

This course provides the student with the principles and practices of coaching psychology. Core coaching skills along with approaches and guidelines for helping clients develop visions, set goals, make plans and track progress for healthy lifestyles. *Prerequisite(s): ENS 1214*

2471 Exercise, Wellness & Sports Science Practicum 2 Cr. Hrs.

This course is the capstone course. It is an on- or off-campus work experience integrated with academic instructions, coordinated by a faculty member. The course is completed in the last semester of the degree program. Fourteen practicum hours per week. *Prerequisite(s): ENS 1212 AND Approval of Department*

Entrepreneurship (ENT)

2140 Small Business Finance 3 Cr. Hrs.

For the student/entrepreneur with no background in finance and accounting. Students will gain a foundation in small business finance: financial and economic concepts; financial terminology; understanding, preparing, analyzing and presenting financial statements; and financial forecasting and budgeting techniques.

2160 Business Plan Development 3 Cr. Hrs.

Upon successfully completing the course, students will understand the business plan development process and will have developed a business plan. Extensive research, writing and oral presentations are required. Students will address: business concept evaluation; business plan development; presentation; evaluation of business plans; identification and evaluation of funding sources for new or existing enterprises. *Prerequisite(s): MAN 1107 AND MRK 2220 AND ENT 2140*

English as a Second Language (ESL)

0120 Reading & Writing Basics 4 Cr. Hrs.

This beginning course focuses on developing basic reading comprehension and basic grammar and writing skills. Students will be able to write simple sentences, questions, and complete personal information forms. Common everyday vocabulary, spelling, and punctuation will be developed. *Prerequisite(s): Accuplacer Listening ESL Placement*

0125 Basic Speaking & Listening 4 Cr. Hrs.

This beginning course focuses on developing basic skills in pronunciation, listening, and speaking. This course will provide practice in pronunciation and comprehension of informal and academic situations. *Prerequisite(s): Accuplacer Listening ESL Placement*

0130 ESL Reading & Writing I 4 Cr. Hrs.

This class focuses on developing reading and writing skills at the sentence and paragraph level. The class also includes vocabulary development and intensive grammar review. *Prerequisite(s): ESL 0120 OR Accuplacer Listening ESL Placement*

0135 ESL Reading & Writing II 4 Cr. Hrs.

This class develops reading skills in both fluency and comprehension. Writing skills at the paragraph level and short essay. Advanced vocabulary development and grammar usage are included. *Prerequisite(s): ESL 0130 OR Accuplacer Listening ESL Placement*

0140 ESL Listening & Speaking I 4 Cr. Hrs.

Through individual and collaborative activities, this course will introduce basic to intermediate conversational skills to promote student development and achievement of listening and speaking skills needed for communication in the English language. *Prerequisite(s): ESL 0125 OR Accuplacer Listening ESL Placement*

0145 ESL Listening & Speaking II 4 Cr. Hrs.

Through individual and collaborative activities, this course will introduce high-intermediate to advanced conversational skills to promote student development and achievement of listening and speaking skills needed for communication in the English language. *Prerequisite(s): ESL 0140 OR Accuplacer Listening ESL Placement*

0150 ESL Basic 4 Cr. Hrs.

This basic integrated skills course will provide opportunities for listening, speaking, reading, and writing. The goal is to build student confidence in using English skills to communicate in everyday life, at work, and in school. *Prerequisite(s): Accuplacer Listening ESL Placement*

0170 ESL Intermediate 4 Cr. Hrs.

This intermediate integrated skills course will provide opportunities for listening, speaking, reading and writing. The goal is to build student confidence in using English skills for academic purposes. *Prerequisite(s): ESL 0150 OR Accuplacer Listening ESL Placement*

0180 ESL Intensive English Lab II R 1 Cr. Hr.

This course is a multi-level skills lab for basic, intermediate, and advanced ESL students. Students will practice the listening and speaking skills presented from the following courses: ESL 0125, ESL 0140, and ESL 0145. Three lab hours per week. *Prerequisite(s): Approval of Department*

0185 ESL Intensive Lab I R 2 Cr. Hrs.

This course is a multi-level skills lab for basic, intermediate, and advanced ESL students. Students will practice reading and writing skills presented from the following courses ESL 0120, ESL 0130, and ESL 0135. Six lab hours per week. *Prerequisite(s): International student office signature*

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0190 ESL Advanced   4 Cr. Hrs.

This advanced integrated skills course will provide opportunities for listening, speaking, reading and writing. The goal is to build student confidence in using English skills for academic purposes. *Prerequisite(s): ESL 0170*

Finance (FIN)

2450 Personal Finance 3 Cr. Hrs.

Overview of the theories, concepts, principles, and processes of personal financial management, with an emphasis on everyday financial decision making.

French (FRE)

1100 Conversational French   3 Cr. Hrs.

A foundation for gaining knowledge about French culture and basic phrases related to simple spoken French and travel situations.

1101 Elementary French I   4 Cr. Hrs.

A foundation for gaining basic knowledge of French grammar, speaking, writing, reading and cultural knowledge.

1102 Elementary French II   4 Cr. Hrs.

Continuing French grammar skills, verbs in the future conditional and subjunctive tenses, speaking, writing, reading and cultural knowledge. *Prerequisite(s): FRE 1101*

2201 Intermediate French I   3 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): FRE 1102*

2202 Intermediate French II   3 Cr. Hrs.

Continue to review and extend basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): FRE 2201*

Fire Science Technology (FST)

1100 Volunteer Firefighter   2 Cr. Hrs.

Basic instruction in fire suppression, fire chemistry and behavior, rescue, firefighting tools, appliances and equipment, and firefighter safety and survival. One classroom, two lab hours per week.

1101 Firefighter I Transition   5 Cr. Hrs.

Intermediate instruction in fire suppression, fire chemistry and behavior, rescue, firefighting tools, appliances and equipment, fire protection systems, and firefighter safety and survival. Two classroom, six lab hours per week. *Prerequisite(s): FST 1100 AND Approval of Fire Coordinator*

1102 Firefighter I   7 Cr. Hrs.

Basic and intermediate instruction in fire suppression, fire chemistry and behavior, rescue, firefighting tools, appliances, equipment, built-in fire suppression systems and firefighting safety and survival. Three classroom, eight lab hours per week. *Prerequisite(s): Approval of Fire Coordinator*

1103 Firefighter II Transition   4 Cr. Hrs.

Advanced instruction in fire-suppression operations, fire chemistry and behavior, rescue, firefighting tools, appliances, equipment, built-in fire suppression systems and firefighting safety and survival. Two classroom, four lab hours per week. *Prerequisite(s): (FST 1101 OR FST 1102) AND Approval of Department*

1104 Firefighter II   11 Cr. Hrs.

Basic, intermediate and advanced instruction in fire-suppression operations, fire chemistry and behavior, rescue, firefighting tools, appliances, equipment, built-in fire protection systems and firefighting safety and survival. Seven classroom, eight lab hours per week. *Prerequisite(s): Approval of Department*

1120 Fire Safety Inspector   4 Cr. Hrs.

This course prepares the student to identify, abate and document fire safety hazards and meets the requirements for those qualified students to take the state certification examination for Fire Safety Inspector. Two classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

1125 Fire Investigation I   3 Cr. Hrs.

The fundamentals and technical knowledge needed for proper fire scene investigations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter and types of fire causes.

1403 Live Fire Instructor   R   2 Cr. Hrs.

The Live Fire Instructor course certifies firefighters to be a live fire instructor. In order for a firefighter to teach in a live fire environment, they must take both Fire Instructor (FST 2209) and Live Fire Instructor (FST 1403). This course will go beyond the NFPA 1403 standards and focus on the how-to aspects of conducting valuable live fire training evolutions in a safe and compliant manner. Four lab hour per week. *Prerequisite(s): FST 1102 AND FST 1103 AND FST 2209 AND Approval of Department*

1442 Emergency Vehicle Operator   1 Cr. Hr.

Sixteen hour course meeting the requirements of the State of Ohio, Division of Emergency Medical Services for emergency vehicle drivers education. *Prerequisite(s): Must have a valid motor vehicle operators license*

1521 Incident Safety Officer   3 Cr. Hrs.

This course meets NFPA 1521, Standard for Fire Department Safety Officer Professional Qualifications, Chapter five Incident Safety Officer. It is designed for fire and Emergency Medical Services (EMS) responders who may be designated by the Incident Commander (IC) as an ISO while working within an Incident Command System (ICS). *Prerequisite(s): Approval of Department*

1555 Hazardous Waste Operations & Emergency Response (HAZWOPER)   3 Cr. Hrs.

Training required to enter or work on a hazardous waste site with emphasis on personnel safety, site hazards, toxicology, personal protective equipment, decontamination, site characterization and site control. Two classroom, two lab hours per week.

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2209 Fire Service Instructor — 4 Cr. Hrs.

This course covers the development and delivery of fire service training materials. Instructional motivations, student learning strategies and evaluation are addressed. This course also meets the requirements of the State of Ohio certification as a State Fire Instructor as well as the objectives in the National Fire Protection Association Standard 1041. Two classroom, four lab hours per week. *Prerequisite(s): FST 1101 AND Approval of Department*

2251 Fire Officer I — 3 Cr. Hrs.

Management, supervision and leadership of the fire company. This course meets the requirements of National Fire Protection Association 1021, Fire Officer I. *Prerequisite(s): FST 1101*

2252 Fire Officer II — 2 Cr. Hrs.

Management, supervision, leadership and command of multi-company operations. This course meets the requirements of National Fire Protection Association 1021, Fire Officer II. *Prerequisite(s): FST 2251*

2253 Fire Officer III — 3 Cr. Hrs.

Administration of fire department operations and the management of programs, facilities and resources to provide a fire protection delivery system. This course meets the requirements of National Fire Protection Association Standard 1021, Fire Officer III. *Prerequisite(s): FST 2252*

2254 Fire Officer IV — 3 Cr. Hrs.

Assessing the public fire protection needs of a community and the strategic planning and development of various components of the fire protection delivery system. This course meets the needs of National Fire Protection Association 1021, Fire Officer IV. *Prerequisite(s): FST 2253*

2270 Fire Science Internship — R 2 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Twenty co-op hours per week. *Prerequisite(s): Approval of Department*

Geography (GEO)

1101 Global Forces, Local Diversity — 3 Cr. Hrs.

In this course, students will be encouraged to think independently, be expected to argue a point logically, and sharpen their critical thinking skills. More particularly, we will explore the geographies implicit in globalization and specifically think about our connections (and disconnections) to distant places, the uneven geographies of globalization (evident in both processes and outcomes), and how people's actions through social, economic, and political processes, produce and transform place. This course has a particular focus on diversity, equity, and inclusion asking how cultures are shaped by the intersections of a variety of factors (i.e. race, ethnicity, nationality, class, and religion among others) and providing a space to demonstrate empathy through considering how to understand and interpret others' worldview. The purpose of this course is to introduce the student to thinking geographically through the understanding of how to use maps and the significance of place on identity.

1102 Earth's Physical Environment — 4 Cr. Hrs.

Analysis of the principle spheres of earth - atmosphere, lithosphere, hydrosphere and biosphere; an explanation of processes involved in shaping the earth's physical environment. Three classroom, two lab hours per week.

1103 Introduction to Geographic Information System I — 2 Cr. Hrs.

This is Part I of the introduction to the basic theoretical as well as practical concepts of Geographic Information Systems (GIS). Students will learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software system. Through computer lab tutorials and homework assignments, students will learn to use ArcGIS. One classroom, two lab hours. *Prerequisite(s): Approval of Department*

1104 Introduction to Geographic Information Systems II — 2 Cr. Hrs.

Part II is an Introduction to the basic theoretical as well as practical concepts of Geographic Information Systems (GIS). Students will continue to learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software system. Through lessons and labs, students will learn to use ArcGIS and work through an independent mapping project. *Prerequisite(s): GEO 1103 AND Approval of Department*

1107 Introduction to Geographic Information Systems (GIS) — 4 Cr. Hrs.

Introduction to the basic theoretical as well as practical concepts of Geographic Information Systems (GIS). Students will learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software system through exercises, labs and a final project. Three classroom, two lab hours per week.

1201 World Regional Geography: People, Places & Globalization — 3 Cr. Hrs.

This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with and understand the use of maps/geo-technologies to explain geographic phenomena and patterns as they relate to world regions and their interrelationships, apply geographic concepts to the study of regions or a specific region, compare and contrast human and physical patterns and their variations over space, develop an appreciation of the complexities of regional and global environmental and socio-economic problems, understand globalization and place local issues in their global and historical context, and to understand human-environment interactions in various regions around the world.

1206 Appalachian Environment — 3 Cr. Hrs.

Overview of the various geographic aspects of the rural and urban Appalachian region, including physiography and geology; migration and settlement patterns; historical development and cultural diffusion; and population characteristics and economy.

1209 Map Design & Visualization — 4 Cr. Hrs.

This course is an introduction to the science and art of map making. From the history and principles of thematic map compilation and design, basics of map projections, data sources and processing, map color, symbolization and topography to common types and styles of thematic maps. Three classroom, two lab hours per week.

1212 Geospatial Data Acquisition & Management — 3 Cr. Hrs.

This course addresses the interpretation and understanding of a variety of data formats available in GIS. Introduces the fundamental concepts of primary GIS data creation and discusses quantitative techniques for collection, classification, and management of geographical data. Two classroom, two lab hours per week. *Prerequisite(s): GEO 1107*

1215 Introduction to Remotely Sensed Imagery 3 Cr. Hrs.

This course is an introduction to remote sensing. Topics include fundamentals of the physical principles on which remote sensing is based, history and future trends, sensors and their characteristics, image data sources, and image classification, interpretation and analysis techniques. Two classroom. two lab hours per week. *Prerequisite(s): GEO 1107*

1300 Introduction to Weather & Climate 4 Cr. Hrs.

An introduction to the characteristics and processes of Earth's atmosphere and how it interacts with the planet's surface, oceans, and human activity. The course focuses on how these interactions work to produce weather events and climate extremes and how they affect people. Three classroom, two lab hours per week.

2210 Advanced Spatial Analysis 4 Cr. Hrs.

This course will focus on GIS extensions to apply more complex functions and tools of ArcGIS. Students will learn how to utilize ArcGIS Network Analyst and Spatial Analyst tools to create, query and analyze data sets. Students will also learn to use GPS technology to collect data, build databases and prepare data for analysis using more advanced geodatabase tools. Three classroom, two lab hours per week. *Prerequisite(s): GEO 1107*

2310 Scripting Language for GIS 3 Cr. Hrs.

The course provides an understanding of how to customize GIS software applications by way of modified service interface elements. Topics include the theory and implementation of the various scripting languages currently in use. Upon completion, students will be able to solve geospatial problems and streamline GIS workflows through the creation and modification of scripts. *Prerequisite(s): GEO 1107*

2600 Geospatial Technology Capstone 3 Cr. Hrs.

The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace geospatial competencies. The capstone experience should occur during the last semester of the student's educational program. Methods of providing a capstone experience include a summative project and compilation of portfolio. *Prerequisite(s): GEO 2210*

2700 Geospatial Technology Internship R 1 - 4 Cr. Hrs.

A structured experience in a supervised setting that provides students with an overview of procedural, professional and ethical issues faced by a geospatial technician on the job. Ten hours per week per credit hour. *Prerequisite(s): GEO 2210*

German (GER)

1100 Conversational German 3 Cr. Hrs.

A foundation for gaining knowledge about Germanic culture and basic phrases related to simple spoken German, including travel situations.

1101 Elementary German I 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing German. Work outside of class and/or in the language laboratory is required.

1102 Elementary German II 4 Cr. Hrs.

Continued understanding, speaking, reading and writing German beyond the discourse level. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): GER 1101*

2201 Intermediate German I 3 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): GER 1102*

2202 Intermediate German II 3 Cr. Hrs.

Intermediate-level composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): GER 2201*

Geology (GLG)

1101 Physical Geology 4 Cr. Hrs.

Surface processes of wind, water and ice in changing Earth's surface, plate tectonics; interior forces that cause earthquakes, volcanoes, mountain building. Introduction to natural resources; impact of natural hazards on human populations; and impact of human activities in the natural world. Laboratory component stresses introduction to and use of basic scientific method and problem solving. Three classroom, two lab hours per week. *Corequisite(s): GLG 1111*

1111 Physical Geology Laboratory 0 Cr. Hrs.

Identification of minerals, sediments and rocks; interpretation of topographic maps and geologic maps. Laboratory must be taken concurrently with Physical Geology. *Corequisite(s): GLG 1101*

1201 Historical Geology 4 Cr. Hrs.

The Earth in space, physical evolution of the oceans, atmosphere and continents, origin of life and its evolution, physical and biological development of the North American continent. Lab component stresses further application of scientific method and problem solving. Three classroom, two lab hours per week. *Prerequisite(s): GLG 1101 AND GLG 1111 Corequisite(s): GLG 1211*

1211 Historical Geology Laboratory 0 Cr. Hrs.

Rates of change, age dating, fossils, depositional environments, stratigraphy, correlation, facies, and interpretation of geologic maps. Laboratory must be taken concurrently with Historical Geology. *Prerequisite(s): GLG 1101 AND GLG 1111 Corequisite(s): GLG 1201*

1301   Geologic Field Trips   4 Cr. Hrs.

Saturdays before spring break, class meets on campus for lecture and lab to build preparatory knowledge and skills. Missing more than two classroom meetings will be cause for withdrawal. Saturdays after break, students participate in day-long, hands-on field experiences throughout Ohio. Students will apply their knowledge and skills to interpret and understand the building of the Appalachian Mountains and the geological development of Ohio. Field activities are meant to mimic the work of professional geologists. Missing more than two trips will be cause for withdrawal. Three classroom, two lab hours per week. Note: Any student choosing to register and take this class may be required to sign one or more liability waivers in favor of the locations where certain learning activities in this course take place. Students who would like additional information about this matter should contact the Physical Sciences Department. *Prerequisite(s): At least 18 years of age*

1311   Ohio Field Geology   1 Cr. Hr.

Hands-on experience during several Saturday, day-long field trips to different locations in Ohio. Field activities are meant to mimic what field geologists do. Use of on-site observations to interpret and understand the building of the Appalachian Mountains and the geological development of Ohio. Two lab hours in the field per week. Course offered during 8-week B-term. Open to undergraduate and graduate students with or pursuing degrees in geology, and K-12 science educators with or working toward Master Science Teaching (MST). GLG 1201/1211 may be taken concurrently to meet prerequisite. *Prerequisite(s): GLG 1101 AND GLG 1201 OR Approval of Department AND Must be at least 18 years of age*

1401   Environmental Geology   4 Cr. Hrs.

Introduction to minerals, rock cycle, Plate Tectonics. Use/misuse of natural resources, waste disposal, pollution. Analysis of natural hazards: floods, volcanism, earthquakes, mass wasting, and others. Consequences of human activities: population growth, sustainability; mitigation and remediation strategies and processes. Laboratory component stresses use of scientific method, critical thinking, and problem solving. Three classroom, two lab hours per week. *Corequisite(s): GLG 1411*

1411   Environmental Geology Laboratory   0 Cr. Hrs.

Identification of minerals and rocks. Analysis of natural hazards, natural resources, pollution and anthropogenic problems. Development/proposal of mitigation/remediation strategies. Laboratory must be taken concurrently with GLG 1401, Environmental Geology. Two lab hours per week. *Corequisite(s): GLG 1401*

Health Information Management (HIM)

1101   Medical Terminology   2 Cr. Hrs.

Basic prefixes, roots and suffixes; terminology including anatomic, diagnostic, symptomatic, procedural, eponymic terms and standard abbreviations required for a working knowledge and understanding of the language of medicine. *Prerequisite(s): DEV 0035*

1110   Health Information Processing   3 Cr. Hrs.

Foundations of health information management, the Health Information Management profession, including health care systems and organization of HIM functions, data quality, access and retention, patient and healthcare data and data collection methodologies. Discussion of classification systems, clinical vocabularies and nomenclatures. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1101*

1150   Survey of Electronic Health Records   1 Cr. Hr.

Students will be introduced to the basic concepts and functions associated with keeping the electronic health records while exploring technology requirements and related options. Through this course, students will gain an understanding of the importance of privacy, confidentiality and security while maintaining patient information within the healthcare environment. *Prerequisite(s): HIM 1110 AND HIM 1101*

1160   Medical Office Coding Concepts   1 Cr. Hr.

Introduction to principles and conventions for assigning ICD-10 and CPT codes to patient encounter for billing physician services. Students should possess proficiency in basic medical terminology. *Prerequisite(s): HIM 1101*

1165   Drug Classification for Coding   1 Cr. Hr.

An overview of the major drug classifications, common drugs in each class, conditions for which drugs are administered and their general effects to assist medical coders in analyzing health care documentation for coding and reimbursement applications. *Prerequisite(s): HIM 1101 AND (BIO 1107 OR BIO 1121 OR BIO 1141)*

1201   Introductory Medical Office Coding   4 Cr. Hrs.

Introduction to principles, guidelines and conventions for assigning ICD-10-CM diagnostic codes and CPT procedure codes to patient encounters for physician services. Additional out-of-class assignments are required. *Prerequisite(s): HIM 1101 AND BIO 1121*

1204   Medicolegal & Ethics in Healthcare Record   2 Cr. Hrs.

Evaluation of health care records as legal documents; special emphasis on policies and procedures concerning release of medical information and protecting patient confidentiality; principles and organization of the judicial system; health care fraud and abuse and Health Insurance Portability and Accountability Act (HIPAA) regulations. Ethical issues in health care settings addressed. One classroom, two lab hours per week. *Prerequisite(s): DEV 0035*

1217   Alternative Health Records & Registries   3 Cr. Hrs.

Organization and operation of a hospital cancer program emphasizing registry case finding, accession, indexing, abstracting and follow-up of cancer data. Purposes, uses and handling of health information, departmental and facility administration, licensing and accreditation requirements and introduction to payment systems in long-term care and home health care. Note: HIM 1201 may be taken concurrently. *Prerequisite(s): HIM 1110 AND HIM 1201*

2110   Ambulatory Coding   4 Cr. Hrs.

Introduction to principles, guidelines and conventions for assigning ICD-10-CM diagnostic codes and CPT procedure codes to patient encounters for outpatient facility services. Students should possess proficiency in basic medical terminology and human anatomy and physiology. Additional out-of-class assignments are required. Three classroom, two lab hours per week. *Prerequisite(s): HIM 1201 AND Restricted to Majors*

SINCLAIR COLLEGE

2144 Quality Improvement, Statistics & Research   3 Cr. Hrs.

Organization and analysis of data in health care quality programs including quality assessment and monitoring, utilization and risk management and medical staff credentialing. Theory and application of health care statistics including data definitions, computation of formulae and research principles. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1110 AND BIS 1221 AND (MAT 1130 OR Any approved OT36 Math) AND Restricted to Majors*

2145 Health Information Resource Management   3 Cr. Hrs.

Planning, organizing, staffing, budgeting and analysis of management systems along with job standards and performance evaluations emphasizing development of supervisory management, leadership and communication skills. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1110 AND BIS 1221*

2165 Healthcare Data in Reimbursement   3 Cr. Hrs.

Organization of health care delivery system including managed care and capitation. Theory and use of reimbursement systems such as Diagnostic Related Groups, Ambulatory Payment Classifications, Resource-based Relative Value Scale. Discussion of data flow from admission to billing and analysis of casemix. In addition, other external forces, such as Health Insurance Portability and Accountability Act and Recovery Audit Contractors, will be discussed. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1110 AND HIM 1201*

2211 Inpatient Coding 4 Cr. Hrs.

Introduction to principles and coding conventions for using ICD-10-CM and ICD-10-PCS for coding inpatient records. Students should possess proficiency in medical terminology and human anatomy and physiology. Additional out-of-class assignments are required. Three classroom, two lab hours per week. *Prerequisite(s): HIM 2110 AND Restricted to Majors*

2233 Healthcare Information Systems   3 Cr. Hrs.

An in-depth look at the use of information systems technology in the health care delivery system. Includes information security, electronic clinical systems and health records. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1110*

2252 Professional Practice Experience   2 Cr. Hrs.

Practical application of health information management processes, including health information retrieval, qualitative and quantitative analysis of health data, record completion by practitioners, release of health information, document scanning, revenue cycle functions, coding, statistical reporting, hospital-wide and HIM department quality improvement and various other registries and department functions utilizing medical data. Ten directed-practice hours per week at an approved off-site location. *Prerequisite(s): Approval of Department*

2262 Advanced Medical Office Coding   3 Cr. Hrs.

ICD-10-CM diagnosis and CPT procedure coding for the physician's office and other ambulatory facilities. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1201 AND BIO 1222*

2275 Home Health Medical Coding   3 Cr. Hrs.

Introduction to principles and medical coding for using ICD-10-CM for coding home health records. Students should possess proficiency in medical terminology and human anatomy and physiology. Additional out-of-class assignments are required. Two classroom, two lab hours per week. *Prerequisite(s): HIM 1201 AND BIO 1222*

2278 Health Information Management Capstone   1 Cr. Hr.

A variety of specially designed projects, student oral presentations, case studies, simulations, interviewing, resumes and two mock accreditation exams. Two lab hours per week. *Prerequisite(s): HIM 2145 AND Restricted to Majors*

History (HIS)

1101 United States History I   3 Cr. Hrs.

Development of the people of the United States in political, social, economic, and cultural areas from pre-Columbian America through Reconstruction.

1102 United States History II   3 Cr. Hrs.

Development of the people of the United States in political, social, economic and cultural areas from Reconstruction to the present.

1105 African-American History   3 Cr. Hrs.

Contributions of African-Americans to the institutions and culture of the United States from 1619 to the present.

1111 Western Civilization I   3 Cr. Hrs.

Major trends in the development of Western culture, emphasizing political, economic, social and cultural achievements, from prehistory to the seventeenth century.

1112 Western Civilization II   3 Cr. Hrs.

Major trends in the development of Western culture, emphasizing political, economic, social and cultural achievements from the seventeenth century to the present.

1122 Global Civilization II   3 Cr. Hrs.

Comparative approach of major civilizations and to major global developments since 1500 AD / CE including social, political, religious, economic, and environmental trends. Provides general knowledge which will lead students to be more astute global citizens.

2215 Survey of African History   3 Cr. Hrs.

Overview of the history of Africa from prehistoric times to the present; special emphasis on modern challenges the continent faces.

2216 Survey of Latin American History   3 Cr. Hrs.

A survey of Latin American history and culture from pre-colonial times to the present, tracing colonial influences, 20th century revolutions, dictatorships and democratic alternatives and the evolution of global economics, U.S. and Organization of American States policies.

2217 Survey of East Asian History   3 Cr. Hrs.

Survey of eastern Asia from earliest times to the present, including economic, political, religious and colonial influences on modern nations of Asia, with special emphasis on twentieth- and twenty-first- century issues and problems.

2218 History of Ohio   3 Cr. Hrs.

A survey of the political, social, economic and cultural development of the peoples of Ohio, from prehistoric times to the present. Ohio's role in the growth of the United States.

2219 Survey of the Middle East 3 Cr. Hrs.

A survey of the Middle East, beginning with an overview of early history and the rise of Islam, and then concentrating on historical developments since the 19th century, tracing the development of Zionism, Arab, Turkish, Kurdish and Iranian nationalisms, the involvement of the superpowers and the U.N. and the resulting crises.

2220 History of the Holocaust 3 Cr. Hrs.

Explores the 20th Century Holocaust as perpetrated by Nazi Germany. The course addresses the background, goals, progress, and historical context of the Nazi Holocaust.

Hospitality Management (HMT)

1101 Basic Culinary Skills 2 Cr. Hrs.

This course is an introduction to food preparation techniques and culinary theory. Basic concepts of kitchen organization and operation, basic terminology, use of standardized recipes, weights and measures, product evaluation, recipe conversion, food composition and introduction to commercial equipment and work methods. American Culinary Federation competency skills included. HMT 1107 must be completed prior to registering for this course or may be taken at the same time. Four lab hours per week. *Prerequisite(s): DEV 0035*

1102 Kitchen Chemistry 3 Cr. Hrs.

An introduction to applied chemistry of food and food preparation. Lecture and demonstrations will be used to illustrate course principles. One classroom, four lab hours per week. *Prerequisite(s): DEV 0035*

1105 Introduction to the Hospitality & Tourism Industry 2 Cr. Hrs.

This course will provide an overview of the Hospitality and Tourism Industry. Topics include in-depth views of the restaurant and culinary industry, lodging industry, meeting and events, tourism, casinos, cruise-lines and more. Hospitality Interactive simulation, My Hospitality Lab, and service scenarios will provide an experience of fun socialistic learning. Successful students of this course will receive a Hospitality Reception and Service Specialist short term certificate. *Prerequisite(s): DEV 0035*

1107 Sanitation & Safety 2 Cr. Hrs.

Sanitation and safety involves key concepts such as harmful micro-organisms, contamination and food-borne illnesses, the nine steps within the flow of food from supplier to service, minimum internal cooking temperatures/times for proteins, food safety management systems, sanitary facilities and pest management control. Students must successfully pass a national sanitation exam to pass the course. Students who are culinary or baking majors may not register for kitchen lab courses without a current servsafe certification. *Prerequisite(s): DEV 0035*

1108 Pastry & Confectionery Basics 4 Cr. Hrs.

Theory and practice of pastry and confectionery for the hotel and restaurant industry, applying the fundamentals of baking science to the preparation of a variety of products. The use and care for the baking equipment normally found in the bakeshop or baking area. One classroom, six lab hours per week. *Prerequisite(s): HMT 1102 AND HMT 1126*

1110 Menu Planning & Table Service Practicum 3 Cr. Hrs.

Menu design and development, standardizing recipes, cost controls and pricing. Practical applications in varieties of table service, catered events and customer service processes. Two classroom hours per week and a total of thirty lab hours to be conducted as part of the Tartan Terrace Dining Room service experience. *Prerequisite(s): DEV 0035*

1112 Food Principles & Basic Preparation 4 Cr. Hrs.

Preparation of culinary cuisine with a wide variety of plate production techniques including soups, sauces, vegetables, fruits, grains, salads, meats, game, poultry, fish and seafood. Apply food pairing, plating, and garnishing techniques to culinary cuisine. Skill training based on American Culinary Federation competencies. Includes recipe conversion, product evaluation and maintenance of a safe, sanitary kitchen. One classroom, six lab hours per week. *Prerequisite(s): HMT 1101 AND HMT 1107 AND HMT 2207 AND HMT 2200 OR HMT 2201 Note: HMT 2201 AND HMT 2207 may be taken concurrently with HMT 1112*

1125 Beverage Management 2 Cr. Hrs.

The history and process of different wines, ales and spirits, including pronunciation and selection of wines with food and identifying the required glassware for all drinks. Mixology, establishing a par stock and reorder point, discussion of Ohio's drinking laws and bartender's legal and social responsibilities, and bar design and layout. *Prerequisite(s): HMT 1105*

1126 Baking I 2 Cr. Hrs.

Practical application of basic baking techniques, ingredients, weights and measures, terminology and formula calculations. Four lab hours per week. Note: HMT 1107 must be completed prior to registering for this course or may be taken at the same time. *Prerequisite(s): DEV 0035 AND HMT 1107*

1128 Baking II & Barista Basics 2 Cr. Hrs.

This course gives students a practical experience of more advanced and complicated techniques required by the baking and pastry industry. It will also provide students with more advanced techniques in preparing designer pastries, foundations of artisan breads, cake decorating, and assembling two tiered cakes. This course will also cover barista training and gourmet coffee pairings. Four lab hours per week. *Prerequisite(s): HMT 1102 AND HMT 1107 AND HMT 1126 Note: HMT 1102 may be taken concurrently with HMT 1128*

1129 Restaurant Desserts 3 Cr. Hrs.

Practical application of basic baking ingredients, weights and measures, terminology and formula calculations. Use of mixes and frozen bakery products to create commercial-grade finished products for restaurant service. One classroom, four lab hours per week.

1136 Front Office Operations 2 Cr. Hrs.

This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, from the reservations process to check-out and account settlement. The course also examines the various elements of effective front office management, paying particular attention to the planning and evaluation of front office operations. *Prerequisite(s): HMT 1105*

1137 Hospitality Industry Computer Systems — 2 Cr. Hrs.

Students will learn about computer-based property management systems, involving both front- and back-of-the-house operations. The course is designed to show the inter-related computer functions of an entire full-service lodging property with departments such as food and beverage service outlets, sales, front office, etc. *Prerequisite(s): HMT 1105 AND BIS 1120*

1138 Managing Lodging Operations — 2 Cr. Hrs.

This course provides an understanding of the General Manager's role in both small and large hotels. Addresses each department, including sales and marketing, maintenance, security, human resources. Features lodging green initiatives, revenue optimization, and a better understanding of the complexity with regard to overseeing an entire property. *Prerequisite(s): HMT 1105 AND HMT 1136*

1139 Housekeeping Management — 2 Cr. Hrs.

This course provides students with the principles of housekeeping management as they apply specifically to the hospitality industry. Housekeeping is critical to the success of today's lodging operations and this course will illustrate what it takes to direct day-to-day operations of this department, from big-picture management issues to technical details for cleaning each area. *Prerequisite(s): HMT 1105*

1140 Dimensions of Air Travel — 3 Cr. Hrs.

Study of airline industry terminology, rules and ethics, aircraft types, location and city codes of major airports worldwide. Thorough study of transportation security, passport regulations and foreign documentation requirements. *Prerequisite(s): HMT 1105 OR Approval of Department*

1141 Destination Geography — 3 Cr. Hrs.

Study of important tourism destinations around the world. The course discusses recreational, cultural, economic and social significance.

1143 Organization of the Travel Product — 3 Cr. Hrs.

Study of travel/tourism industry products and procedures, including cruises, rail, motorcoach, tours, car rentals, resort and hotel features and travel insurance. *Prerequisite(s): HMT 1105*

1146 Airline Travel Technology — 3 Cr. Hrs.

Computer-based training using airline and travel technology to develop knowledge and skills to complete the fundamental elements of a travel reservation. Elements include searching, confirming and pricing for airline, car and hotel reservations in a Passenger Name Record. Two classroom, two lab hour per week. *Prerequisite(s): HMT 1140 AND HMT 1105*

1148 Meeting & Events Contracts & Obligations — 1 Cr. Hr.

An introduction to the Meeting & Events industry where by contracts are a necessary part of doing business. This course will explore four key components which are the offer, consideration, acceptance, as well as the Banquet Event Order (BEO) or sometimes referred to as the Catering Event Order (CEO). Note: HMT 1105 must be completed prior to registering for this course or may be taken at the same time

1149 Meeting & Events Set-up & Breakdown — 2 Cr. Hrs.

This course will focus on the types of meeting set-ups and break-down procedures involved. The student will also focus on the role of using outside contractors for large events requiring massive structural developments. Students will also physically set-up and break-down meeting rooms such as theater style, classroom style, boardroom style, etc. Note: HMT 1105 must be completed prior to registering for this course or may be taken at the same time.

1150 Meeting & Event Planning — 3 Cr. Hrs.

This course teaches students meeting and event basics such as negotiation and contracts, marketing, trade-shows, sponsorships, technology utilization, and post-event activities. *Prerequisite(s): HMT 1105 AND HMT 1148 AND HMT 1149*

1151 Special Events, Expositions & Festivals — 3 Cr. Hrs.

This course specializes in weddings, social events, parties, receptions, grand openings, expositions, and festivals. Students will learn strategies for building floor plans, pricing, and religious/cultural values that could affect the protocol of an event. *Prerequisite(s): HMT 1150*

2110 Pastry & Confectionary — 4 Cr. Hrs.

Pastry and confectionary techniques, including laminated doughs, candy making, plate and platter displays, ice creams, and introduction to chocolate and sugar work. One classroom, six lab hours per week. *Prerequisite(s): HMT 1102 AND HMT 1105 AND HMT 1107 AND HMT 1126 AND HMT 1128*

2118 Artisan Breads — 3 Cr. Hrs.

An in depth study of artisan baking training in proper mixing, kneading, and baking techniques to make a wide variety of crusty breads from around the world. Students will use healthy bread production techniques and whole grains, sour levain starters, poolish's, and sour ryes, to make all classic breads. Six lab hours per week. *Prerequisite(s): HMT 1102 AND HMT 1107 AND HMT 1126*

2126 Cake Production — 2 Cr. Hrs.

Students will gain methods and skill of cake fundamentals and production techniques used in commercial baking operations. This course will only focus on the making/baking/production of several varieties of cakes. Four lab hours per week. *Prerequisite(s): HMT 1102 AND HMT 1107 AND HMT 1126 AND HMT 1128*

2128 Cake Decoration — 2 Cr. Hrs.

Students will design and use proper equipment/utensils to decorate cakes demonstrating a variety of icing techniques on multi-tiered cakes. Students will also, produce and or Work with a variety of products such as marzipan, glaze, gum paste, butter-cream icing, royal icing, cream-cheese icing, etc. to decorate cakes. Four lab hours per class. *Prerequisite(s): HMT 1107 AND HMT 1108 AND HMT 1126 AND HMT 1128 AND HMT 2126*

2200 Baking & Culinary Fundamentals & Commercial Equipment — 2 Cr. Hrs.

This course is designed for students that are transferring from another institution, entering the program with advanced credits such as Tech Prep, and/or for students that need to refresh their skills. All students will be assessed to ensure that appropriate advanced skills match those required of upper level courses in the program. This course will also orient students to kitchen laboratory processes/procedures and commercial equipment for a smooth transition. Four lab hours per week.

2201 Food Service Equipment, Design & Maintenance   2 Cr. Hrs.

This course provides students with skills to perform maintenance, cleaning, and sanitation of commercial kitchen equipment typically found in restaurants for the purposes of avoiding costly repairs and maintaining longevity. Layout of equipment in terms of efficiency and cost is also a part of this course. One classroom, two lab hours per week.

2203 Street Foods & Food Trucks   4 Cr. Hrs.

Students will be able to operate and sustain a successful Food Truck. The course will entail choosing vending locations, opening checklist, closing checklist, and cooking on an actual food truck. Another part of the course will be to develop a sound business plan complete with a reasonable budget, commissary controls, daily operations, and how to stay lean and profitable by avoiding the most common operating mistakes. *Prerequisite(s): HMT 1101 AND HMT 1107 AND HMT 1112*

2206 Garde Manger   3 Cr. Hrs.

Introduction of Garde Manger discipline, including tools and equipment, preparation of pates, terrines, mousse, galantines, hors d'oeuvres and canapes. Demonstrate basic skills in charcuterie, carving of edible and non-edible showpieces, garnishes, ice carvings, chaud-froid and aspics. Includes buffet and plate presentation. One classroom, six lab hours per week. *Prerequisite(s): HMT 1112*

2207 Butchery & Fish Management   1 Cr. Hr.

Students will fabricate primal cuts of meat, poultry, fish, and pork with emphasis given to portion control, purchasing, costing, and utilization of byproducts. The product produced in this course will be used in menu development for the Tartan Terrace Restaurant. Four lab hours per week for eight weeks. *Prerequisite(s): HMT 1101*

2208 Advanced Culinary & Competition Skills   3 Cr. Hrs.

Competitions play a vital role in culinary arts as the industry standard excellence bar continues to raise. There is no better way for a culinarian to hone their craft than by putting their skills and knowledge to the test in a competitive format. This class will utilize the format of the ACF Ohio State Team competition to test the readiness of students entering into the work force. Students will develop a menu, set purchasing specs. and preform cost calculations. Once this is completed, students will then prepare various appetizers, soups, entrees, and desserts from their menus serving guest in the Tartan Terrace Restaurant prior to competition. These efforts will be followed by an opportunity to participate in a state wide competition event. Six lab hours per week. *Prerequisite(s): HMT 1129 AND HMT 2206 AND HMT 2215 AND HMT 2226*

2209 Advanced Culinary Skills   3 Cr. Hrs.

Capstone course in Culinary Arts which students will prepare seven course meals. The course involves preparation of classical and contemporary cuisine, including American Regional cuisine. Students will develop a menu, set purchase specs, and perform cost calculations. Once this is completed, students will then prepare various appetizers, soups, salads, entrees and desserts from the menus they have created and serve the cuisine prepared in a chef's table style at the Tartan Terrace Restaurant. Six lab hours per week. *Prerequisite(s): HMT 1110 AND HMT 1129 AND HMT 2206 AND HMT 1112*

2215 Hospitality Cost Controls   3 Cr. Hrs.

In-depth analysis of financial costs associated with hospitality operations. Although the primary focus will be on restaurants, other operational costs from lodging, meeting and events, etc. will be introduced. Topics include financial statement interpretations, breakeven calculations, butcher test computations, inventory systems and in-depth labor cost control function. *Prerequisite(s): HMT 1105 AND (ACC 1100 OR ACC 1210 OR MAT 1125)*

2218 Advanced Pastry Skills   3 Cr. Hrs.

During this capstone course, students will have 15 weeks to prepare, execute, and arrange the display of an industry standard upscale bakery case. Items will include but not limited to basic, intermediate, and advanced pastry items, confections, laminated doughs, candy making, cakes, pies, plate & platter displays, sugar work, etc. Students will receive a complete list of requirements at the beginning of each class and how much time will be allotted to execute the product instructions. The final bakery case display will be presented to faculty and industry professionals for judging. Six lab hours per week. *Prerequisite(s): HMT 1102 AND HMT 1105 AND HMT 1107 AND HMT 1126 AND HMT 1128*

2225 Hospitality & Tourism Supervision   3 Cr. Hrs.

This course is designed to provide students with the principles of supervision in the hospitality and tourism industry and the associated responsibilities. Topics include managing resources, team building, productivity cost formulas and the unique supervision techniques used in restaurants, lodging, bakeries, kitchens, and meeting and event planning. The course emphasis will be on leadership. *Prerequisite(s): HMT 1105*

2226 Hospitality Purchasing & Negotiations   2 Cr. Hrs.

Food service functions regarding negotiations, laws, buying, science, packaging, distribution, ingredient process, storage, organization, cost controls, security, garden(s) sustainability, and procurement processing experience(s). One classroom, two lab hours per week. *Prerequisite(s): HMT 1105 AND HMT 1110*

2227 Hospitality Marketing   2 Cr. Hrs.

Organization of the marketing concepts in the hospitality and tourism industry, utilizing all aspects necessary to build a marketing plan. *Prerequisite(s): HMT 1105*

2230 Risk & Prevention Management   2 Cr. Hrs.

This course will cover the broad task of protecting guests, non-guests, employees and assets. Topics will include security, property access, perimeter control, alarm systems, communication systems, closed circuit television, computer security, employment screening, terrorism, emergency procedures and general safety procedures. *Prerequisite(s): DEV 0035 AND HMT 1105*

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2291 Hospitality Management & Tourism Cooperative Work Experience 2 Cr. Hrs.

This course is a co-op credit experience which requires students to be employed at a work site that coincides with his/her degree option. The goal of this course is for students to apply concepts learned throughout his/her educational experience to a practical work environment. Students are required to complete a minimum of 20 HMT semester hours in his/her concentration prior to registering for this course. *Prerequisite(s): Approval of Department*

2292 Culinary Arts Option Cooperative Work Experience 2 Cr. Hrs.

This course is a co-op credit experience which requires students to be employed at a work site that coincides with his/her degree option. A minimum of 20 work hours per week is required. The goal of this course is for students to apply concepts learned throughout his/her educational experience to a practical work environment. A minimum of 25 HMT semester hours in his/her concentration is required prior to registering for this course. *Prerequisite(s): Approval of Department*

2293 Baking & Pastry Arts Option Cooperative Work Experience 2 Cr. Hrs.

This course is a co-op credit experience which requires students to be employed at a work site that reflects the Baking and/or Pastry field of his/her degree option. A minimum of 20 work hours per week is required. The goal of this course is for students to apply concepts learned throughout his/her educational experience to a practical work environment. A minimum of 25 HMT semester hours in his/her concentration is required prior to registering for this course. *Prerequisite(s): HMT 2218 AND Approval of Department*

2295 Hospitality Management & Tourism Capstone 3 Cr. Hrs.

Application of previously learned hospitality management and tourism concepts through case study, readings and discussion of contemporary issues. Note: This course may be taken concurrently with HMT 2227, HMT 2230, and HMT 2291 *Prerequisite(s): HMT 2215 AND HMT 2225*

Humanities (HUM)

1125 Introduction to the Humanities 3 Cr. Hrs.

Explores the nature and content of the humanities by examining and analyzing various cultures from the past. In addition, this course provides an introduction to human thought, creativity and human forms of expression by examining the links between historical realities and human culture.

1130 Humanity & the Challenge of Technology 3 Cr. Hrs.

This course examines the role of technology in the modern society. It explores the opportunities and dangers faced by humankind in the evolution of new technologies. It inquires into such questions as whether the human quest for mastery of nature has made us masters or slaves of the machine.

1131 The Search for Utopia 3 Cr. Hrs.

The Search for Utopia is a survey of humanity's search for the ideal society from ancient times to the modern age. It examines various utopian ideas and practices that have changed world communities and compares Western utopian traditions with Eastern perceptions of the perfect society.

1135 Environmental Ethics 3 Cr. Hrs.

Overview of philosophical and ethical dimensions of the environmental crisis, such as environmental politics, animal rights and nonwestern views.

1140 Appalachian Folkways 3 Cr. Hrs.

Overview of the facets of folkways and folklore in the Appalachian region of the United States, including folk customs, language, material culture, performing folk arts and literary themes of selected contemporary writers.

1141 Appalachian History & Culture 3 Cr. Hrs.

An examination of various facets of life in Appalachia, including history, culture, economics, politics, education and religion.

1142 Native American History 3 Cr. Hrs.

Survey of the political, social, economic, and cultural development of Native Americans, from prehistoric times to the present, with specific emphasis on Native Americans of Ohio and the Appalachian region.

1195 Leadership Development 3 Cr. Hrs.

An exploration and study of the concept of leadership in the context of community and global issues. Includes Service Learning and applying leadership skills in the community.

2236 International Studies 1 - 3 Cr. Hrs.

Under the supervision of Sinclair faculty, students visit another country and work on study and/or service learning activities related to specific academic majors or topics.

Heating, Ventilation, Air Conditioning & Refrigeration (HVA)

1201 Basic HVAC Systems with Cooling 3 Cr. Hrs.

Basic concepts and theory of heating, ventilating, air conditioning and refrigeration systems. Foundations in the applications of cooling principles in light commercial equipment. Major components include refrigerant flow through equipment, applications of equipment to the refrigeration cycle, heat transfer fundamentals, customer service, and preparation for the Environmental Protection Agency (EPA) refrigerant handler's certification exam. Two classroom, two lab hours per week. *Prerequisite(s): MAT 0600 OR MAT 1110*

1221 Heating Systems 3 Cr. Hrs.

Introduction to the basic concepts of all heating systems found in light commercial applications for the experienced and inexperienced in HVAC. A comprehensive presentation of HVAC systems, including rooftop packaged systems, heat pumps, packaged low-pressure boiler systems, and packaged unitary heaters. Includes low-pressure hot water and steam generation, including the fundamentals of heat generation in water-based heating systems. Two classroom, two lab hours per week. *Prerequisite(s): DEV 0015*

1241 HVAC Installation Techniques & Practices 3 Cr. Hrs.

Basic practices required for new installation and replacement of HVAC equipment including an introduction to sheet metal skills, and copper and black pipe plumbing. Hands-on skills and code requirements will be stressed along with good safety practices. Includes installation of a complete residential HVACR system. One classroom, six lab hours per week. *Prerequisite(s): HVA 1201*

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1261 HVAC Loads & Distribution for Small Buildings 3 Cr. Hrs.

A discussion and demonstration of the importance of proper air distribution systems and principles of balanced heat distribution, including design considerations for light commercial applications. Loads will be calculated using commercially available software. Testing, Adjusting and Balancing procedures are included. One classroom, six labs hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0100 OR MAT 1110 OR MAT 1130 OR MAT 1445)*

1301 Air & Water Distribution Systems 3 Cr. Hrs.

Theory and practice of fluid flow in HVAC distribution systems, including water systems, sizing and performance, duct system sizing and performance, fan and pump selection, operation, and performance, valve and damper selection and Testing, Adjusting, and Balancing (TAB) procedures. Hand calculations and use of computer-based design and analysis tools; select hands-on laboratory studies reinforce basic principles; proper installation practices are also included. Two classroom, three lab hours per week. *Prerequisite(s): MAT 0200 OR MAT 1110 OR MAT 1445*

1351 Building Psychrometrics & Load Calculations 3 Cr. Hrs.

Theory and practice of performing psychrometric analysis of HVAC systems. Principles and practice performing detailed heating and cooling load calculations for commercial facilities. Students learn both hand calculation and use of computer-based design and analysis tools. Selected hands-on laboratory studies reinforce basic principles. Two classroom, two lab hours per week. *Prerequisite(s): MET 1131 AND HVA 1201 AND MAT 0200*

1352 Psychrometrics, Health & Comfort in HVAC 2 Cr. Hrs.

This course teaches you to perform a psychrometric analysis for purposes of system control and system troubleshooting. It also teaches you to perform ventilation calculations, room air distribution calculations and air terminal selection, filter selection for buildings and building spaces, acoustic issues in HVAC, and ASHRAE energy standard 90.1 as applied to service and maintenance. This course also introduces one to Preventive Maintenance Practices. This is accomplished by concentrating on applicable codes and industry standards to create a healthy environment with an emphasis on the background necessary to properly control an HVAC system. One classroom, three lab hours per week. *Prerequisite(s): MAT 0200 OR MAT 1110 OR MAT 1445*

1401 HVAC Mechanical & Electrical Troubleshooting 3 Cr. Hrs.

Diagnostic methods of mechanical, electrical and control system problems in heating and cooling systems. Other topics include common faults and how to reduce future failures. Two lecture, three lab hours per week. *Prerequisite(s): HVA 1201 AND HVA 1221*

2251 Primary HVAC Equipment Operation & Selection 3 Cr. Hrs.

Student will learn how to do refrigeration cycle analysis, how to select condensers, evaporators, compressors, boilers, chillers and cooling towers from a manufacturer's catalog for a specific application, how to apply manufacturer's literature, including electrical schematics, to the troubleshooting process and proper installation and equipment room piping practices. Two classroom, two lab hours per week. *Prerequisite(s): HVA 1201 AND HVA 1301 AND CAT 1601*

2351 HVAC Systems & Controls 5 Cr. Hrs.

Theory and techniques for the control, troubleshooting, commissioning and operational parameters of a variety of systems used in today's buildings. This course emphasizes control strategies for energy efficiency and indoor environmental quality as directed by current standards for commercial and industrial HVAC systems. The control portions of this course begin with basic control elements and theory and continue with instruction regarding the BACnet, Lonworks, and ModBus protocols. The course prepares the student for a major installation and commissioning project using state-of-the-art equipment. Three classroom, six lab hours per week. *Prerequisite(s): HVA 1301 AND HVA 1352 AND CAT 1601*

2700 HVACR Engineering Technology Internship R 1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

2751 HVAC-R Operations & Best Practices 1 Cr. Hr.

As today's building HVAC systems grow more varied and more sophisticated, the service and operations technician must keep up and be able to determine if a system is operating properly. This course will provide case studies of various building HVAC systems, system operational issues, and changes in applicable standards and codes. The student is then exposed to methods of finding the problem and how to differentiate between a symptom and the underlying cause using the fundamentals learned in previous classes. Two lab hours per week. *Prerequisite(s): Approval of Department*

2780 HVACR Engineering Technology Capstone Project 3 Cr. Hrs.

Assessment of achievement by HVACR Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practices of the major. Teamwork on projects will be emphasized. One classroom, six lab hours per week. *Prerequisite(s): Approval of Department*

Interior Design (IND)

1180 History of Interior Design 3 Cr. Hrs.

Examination of the stylistic development of interior design, domestic furniture and furnishings from classical times to the present. *Prerequisite(s): DEV 0035*

1230 Residential Design 4 Cr. Hrs.

Introduction to Interior Design includes exploring the profession, the principles, elements and design processes; residential space planning, kitchen design and furniture arrangement fundamentals with emphasis on design drawings and professional presentation form. Two classroom, four lab hours per week. *Prerequisite(s): VIS 1100 AND VIS 1110 OR Approval of Department*

1234 Materials & Textiles 3 Cr. Hrs.

Overview of specifications, relative costs, performance properties and installation methods of materials, including textiles used in interior design.

1240 Color Theory 3 Cr. Hrs.

Course will cover Josef Albers color theory, the effect of light on color and color psychology, including forecasting and trends.

2130 Non-Residential Design
4 Cr. Hrs.

Students investigate the design of health care, institutional, hospitality, retail and office environments and identify basic historical exterior styles. Design projects will integrate corporate culture, building codes, Americans with Disabilities Act (ADA) compliance, aesthetic, social and psychological factors. Advanced oral and visual presentation skills. Two classroom, four lab hours per week. *Prerequisite(s): CAT 1101 AND IND 1230 AND IND 1234*

2135 Rendering 3 Cr. Hrs.

Drawing and computer-aided drawing technique development to aid in the visualization of materials, color and lighting of a three-dimensional interior space. *Prerequisite(s): VIS 1110 AND VIS 1140*

2140 Sustainable Design
4 Cr. Hrs.

Course includes discussions of environmental movements, designer responsibility, legislation, LEED certification selection and application of lighting fixtures. Students will integrate sustainable strategies to develop design solutions for a variety of small-scale projects. Two classroom, four lab hours per week. *Prerequisite(s): CAT 1101*

2260 Interior Design Portfolio
4 Cr. Hrs.

Interior design business practices; including cost estimating, contract writing, sales and communication techniques. Development of a portfolio from previous course work, work experience, freelance, etc. Two classroom, four lab hours per week. *Prerequisite(s): IND 2130 AND IND 2135 AND IND 2140*

2280 Kitchen & Bath Design
3 Cr. Hrs.

Design foundations exploring standards for industry professionals specializing in residential kitchen and bath planning, basic fundamentals with emphasis on design layouts, design concept drawings and professional presentation formats. *Prerequisite(s): CAT 1101 AND IND 1230*

2290 Interior Construction Systems 3 Cr. Hrs.

Provides the interior designer (or non-architectural major) a working knowledge of various building systems which impact design decisions when creating functional, aesthetically pleasing interior environments to meet the needs of the building's occupants.

Journalism (JOU)

2101 Introduction to Journalism
3 Cr. Hrs.

The principles and functions of newspapers, including current changes and challenges. Students will learn basic and advanced reporting skills, including how to interview, gather information and write news stories. Computer skills are required. *Prerequisite(s): ENG 1101*

2203 Reporting & Writing for Media 3 Cr. Hrs.

Students will develop and advance journalistic principles to address the challenges today's journalists encounter, gain skills to report and write news stories for print, broadcast and on-line media platforms and develop the basic skills for creating multimedia stories. *Prerequisite(s): ENG 1101*

2270 Journalism Internship R
1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Seven work hours per credit hour each week. *Prerequisite(s): Approval of Department*

Japanese (JPN)

1100 Conversational Japanese I
3 Cr. Hrs.

A foundation for gaining knowledge about Japanese culture and basic phrases related to simple spoken Japanese, including travel situations.

1101 Elementary Japanese I
4 Cr. Hrs.

Foundation for understanding, speaking, reading and writing Japanese. Work outside of class and/or in the language laboratory is required.

1102 Elementary Japanese II
4 Cr. Hrs.

This Elementary Japanese II class aims to promote students to attain a basic level of Japanese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on essential speaking and writing skills while helping students improve contextual reading and listening competencies. *Prerequisite(s): JPN 1101*

1105 Conversational Japanese II
3 Cr. Hrs.

Develops the conversational skills to a greater degree of complexity and covering more situations. Promotes free expression in Japanese within more specific and complex cultural contents. *Prerequisite(s): JPN 1100*

2201 Intermediate Japanese I
4 Cr. Hrs.

This Intermediate Japanese I class aims to promote students to attain a higher level of Japanese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on competency in contextual readings and character writing skills while continuing to enhance listening and speaking skills. *Prerequisite(s): JPN 1102*

2202 Intermediate Japanese II
4 Cr. Hrs.

This Intermediate Japanese II class aims to promote students to attain a higher level of Japanese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on competency in contextual readings and character writing skills while continuing to enhance listening and speaking skills. *Prerequisite(s): JPN 2201*

Law (LAW)

1101 Business Law 3 Cr. Hrs.

The American legal system as it relates to business transactions, including the judicial system and sources of law, legal procedures, torts, business ethics and social responsibility, contracts, property, employment law, agency, partnerships and corporations.

1102 Consumer Law 3 Cr. Hrs.

This course develops student skills in application of state and federal consumer laws and regulations including privacy, warranties, credit and purchasing assets issues.

1103 Domestic Violence
2 Cr. Hrs.

This course covers domestic violence dynamics for those working with victims and perpetrators of family violence, Ohio Civil Protection Order (CPO) law, preparation of CPO court documents and the enforcement of CPOs by law enforcement agencies and courts.

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1104 Employment Law 3 Cr. Hrs.

This course will provide the student with an understanding of current legal issues in the area of employer/employee relations. Emphasis is placed on legal issues that arise in the employment relationship, employment discrimination issues and federal and state regulations applicable to employment law. The use of current events is emphasized to reinforce areas covered in the course materials.

Literature (LIT)

2201 British Literature I 3 Cr. Hrs.

A chronological survey of major writers of English poetry, drama and prose from the beginnings through the eighteenth century (through 1785).

2202 British Literature II 3 Cr. Hrs.

A chronological survey of major writers of English poetry, drama and prose from 1785 to the present.

2211 American Literature I 3 Cr. Hrs.

A chronological survey of major writers of American poetry, drama and prose from the Colonial Period through the Civil War (through 1865).

2212 American Literature II 3 Cr. Hrs.

A chronological survey of major writers of American poetry, drama and prose from the Civil War through the present.

2217 Images of Women in Literature 3 Cr. Hrs.

Major images of women in literature, with emphasis on contemporary literature's role in both reflecting and shaping society's views of women.

2220 Introduction to Literature 3 Cr. Hrs.

Introduction to Literature introduces students to the major literary genres of literature, including narrative fiction, poetry, and drama. Emphasis is placed on literary terminology and interpretation. Upon completion, students should be able to analyze and respond to literature. Students will effectively and ethically argue their interpretations of literary works using textual evidence and Modern Language Association (MLA) documentation. *Prerequisite(s): DEV 0035*

2230 Great Books of the Western World 3 Cr. Hrs.

A chronological survey of the major literary works of periods of Western culture beginning with the Greeks and progressing through the Middle Ages, the Renaissance, Neo-Classicism and Enlightenment, Romanticism, Realism and Modernism.

2234 Literature of Africa, Asia, & Latin America 3 Cr. Hrs.

Selected thematic study of major literary works of Africa, Asia and Latin America, emphasizing universal values and the commonality of experience.

2236 African-American Literature 3 Cr. Hrs.

This course provides an overview of the African-American literary tradition with emphasis on early slave narratives, the Harlem Renaissance, the Black Revolution and Arts Movement and contemporary social expression.

2400 Children's & Adolescent Literature 3 Cr. Hrs.

Children's and Adolescents' Literature focuses on reading, analyzing and evaluating various literary genres for children and adolescents. Students will examine the literary elements and values presented in classic and modern picture books, fiction, fairy tales and poetry. Children's books that have won the Newbery and Caldecott Awards will be studied and discussed.

Management (MAN)

1106 Introduction to Radio Frequency Identification 1 Cr. Hr.

Overview of the technology of Radio Frequency Identification (RFID). Applications, terminology. Introduction of global standards and case studies discussed.

1107 Foundations of Business 3 Cr. Hrs.

The American business system and basic principles of the free market system. Includes introduction of business concepts, entrepreneurship, management, marketing, economics, accounting and other important business principles.

1110 International Business 3 Cr. Hrs.

Global dimensions of business, overview of theories and institutions of trade, investment and management, emphasizing the managerial perspective on issues arising from international business and global operations.

1114 Introduction to Sports Management 3 Cr. Hrs.

Historical, sociological and business foundations of sport, including an emphasis on professional opportunities, application of sports management and organizational concepts.

1157 Management Applications of Radio Frequency Identification Technology 2 Cr. Hrs.

This course will introduce students to the management applications of Radio Frequency Identification (RFID) technology, which enables automated gathering and sending of asset information. Case studies and hands-on activities will allow students the opportunity to experience RFID from a business perspective, linking cost, price, customer satisfaction and product performance measures to business application outcomes. *Prerequisite(s): MAN 1106*

2101 Introduction to Supervision 3 Cr. Hrs.

Strategies and techniques for current, as well as prospective, supervisors emphasizing the assessment of skills required, the analysis of situational factors and the development of creative approaches to effective supervision.

2110 Introduction to Project Management 3 Cr. Hrs.

Introduction to basic project management concepts, including how to scope, plan, launch, monitor, control and close a project. The course includes the Project Management Institute's (PMI) basic knowledge areas: Integration, Scope, Time, Cost, Quality, Human Resources, Communication, Risk and Procurement.

2140 Human Resource Management 3 Cr. Hrs.

Introduction through application of Human Resource Management concepts. Emphasis on Strategic Human Resource Management, Workforce Planning and Employment, Human Resource Development, Total Compensation and Rewards, Employee and Labor Relations and Risk Management. *Prerequisite(s): MAN 2150*

2144 Negotiation Techniques
3 Cr. Hrs.

This course addresses the application of basic principles of negotiation through the introduction and analysis of the negotiation process, case studies and simulations. It focuses on accurately identifying requirements specifications, analyzing proposals and conducting purchasing and contracting negotiations ethically and legally, but is also relevant to compromise and agreement in other business and personal life situations.

2150 Management & Organizational Behavior
3 Cr. Hrs.

Introduction to fundamental concepts necessary for understanding management, motivation and behavior in organizational settings. Emphasis on planning, organizing, influencing and controlling to continually improve effective management skills.

2155 Management Information Systems
3 Cr. Hrs.

The exploration of the use and management of information systems and technology to continually improve organizations by providing efficiencies and effectiveness for operations, customer service, marketing, finance and other critical organizational processes. *Prerequisite(s): MAN 2150*

2159 Supply Chain Management Concepts & Applications
3 Cr. Hrs.

This course provides an in-depth study of Supply Chain Management (SCM) functions and the application of effective SCM strategies and practices to achieve improved operations in manufacturing and service organizations. It focuses on analysis of real-world SCM challenges, strategies and techniques.

2240 Emerging Markets
3 Cr. Hrs.

This course will cover countries considered emerging markets and developing nations. Due to changing economics, the country specific foci of this course will potentially change each semester, while retaining the basic information on developing and developed country economies. The macro and micro environments of developing countries and the implications of changes in these environments will be explored through lecture and hands-on learning assignments.

2270 Management Internship
3 Cr. Hrs.

Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Thirty hours per week in the workplace. *Prerequisite(s): Approval of Department*

2275 Retail Management Capstone
R
3 Cr. Hrs.

Discover the nature and scope of retailing. Topics include strategic and financial planning, supply chain management, impact of laws and regulations, product life cycles, and technology in retail. *Prerequisite(s): Approval of Department*

2279 Business Management Capstone
3 Cr. Hrs.

Assessment of achievement by Business Management degree students in attaining program outcomes by employing reflective learning through demonstration of management-related principles and practices. *Prerequisite(s): Approval of Department*

2280 International Business Certification Prep
1 Cr. Hr.

This course will cover the material and possible test questions needed to pass the National Association of Small Business International Trade Educators (NASBITE) certification exam. *Prerequisite(s): MAN 1110 AND MAN 2240 AND MAN 2290*

2290 International Business Capstone
3 Cr. Hrs.

This course will allow students to demonstrate a collective understanding and mastery of international business terminology and current research concepts important to working within a global economy and in preparation for the National Association of Small Business International Trade Educators (NASBITE) certification exam. Additionally, students will explore themes related to global business concepts and practices important to success within the global business environment. Finally, students will have the opportunity to practice and improve skills related to success in international business through hands on assignments and networking opportunities, which relate directly to employment in multinational firms or Non-Governmental Organizations (NGOs). *Prerequisite(s): MAN 1110 AND MAN 2240*

2414 Foundations of Coaching
3 Cr. Hrs.

This course will cover many aspects of coaching in society. Topics include youth, collegiate and professional sport, coaching models, training, coaching networking, coaching for managers and professional growth. Other discussions will cover sport and business topics.

2415 Foundations of Leadership
3 Cr. Hrs.

This course introduces students to the principles of leadership in sport and organizations. Topics focus on discovering an individual coaching and leadership style, contemporary coaching issues, leadership models and an investigation into the great leaders of the past.

Medical Assistant Technology (MAS)

1102 Clinical Medical Assisting I
3 Cr. Hrs.

Introduction to the theory components of clinical assisting procedures in the medical office, emphasizing patient preparation, medical history interviews, vital signs, positioning and draping, medical asepsis, assisting with physical exams, pediatric assessment, techniques required for patient assessment and treatment during medical office emergencies and the role of the medical assistant in urgent situations with the physician present and also during the physician's absence. Two classroom, three lab hours per week *Corequisite(s): MAS 1192*

1103 Clinical Medical Assisting II
4 Cr. Hrs.

This course will introduce students to intermediate-level clinical procedures in a family practice setting such as medical microbiology, minor office surgery, administering therapeutic modalities, preparing and administering medications, and eye and ear procedures. Two classroom, six lab hours per week. *Prerequisite(s): MAS 1102 AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND Restricted to Majors Corequisite(s): MAS 1193*

1110 Administrative Medical Assisting 4 Cr. Hrs.

The Administrative Medical Assistant course will provide an overview of the role of a medical assistant within the health care industry and different work environments, administrative duties in a physician's office including monitoring patient appointments, outpatient procedures, medical and office equipment maintenance, storing supplies and pharmaceuticals, hiring, evaluating and managing personnel, as well as the fundamentals of medical ethics and law in the medical office setting. Two classroom, six lab hours per week. *Prerequisite(s): ENG 1101*

1130 Reimbursement Specialist Practicum 2 Cr. Hrs.

Student will complete seven hours per week of non-paid directed practice at a medical billing facility in order to obtain practical knowledge with medical reimbursement procedures. Students will, as part of this course, attend a one hour lecture per week in order to prepare to sit for the national credentialing certificate, Certified Medical Reimbursement Specialist. *Prerequisite(s): Approval of Department*

1192 Lab for MAS 1102 0 Cr. Hrs.

This is the laboratory portion of MAS 1102 Clinical Medical Assisting I and will provide "hands-on aspects of the clinical topics taught in MAS 1102 to prepare students to perform clinical assisting procedures in the medical office, emphasizing patient preparation, medical history interviews, vital signs, positioning and draping, medical asepsis, assisting with physical exams, pediatric assessment, techniques required for patient assessment and treatment during medical office emergencies and the role of the medical assistant in urgent situations with the physician present and also during the physician's absence, theory and techniques of Basic Life Support as established by the American Heart Association. *Prerequisite(s): Restricted to Majors Corequisite(s): MAS 1102*

1193 Lab for MAS 1103 0 Cr. Hrs.

This is the laboratory portion of MAS 1103 Clinical Medical Assisting II and will provide "hands-on" aspects of the clinical topics taught in MAS 1103 to prepare students to perform intermediate-level clinical procedures in a family practice setting such as medical microbiology, minor office surgery, administering therapeutic modalities, preparing and administering medications, and eye and ear procedures. *Prerequisite(s): (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND MAS 1102 AND Restricted to Majors Corequisite(s): MAS 1103*

2201 Clinical Medical Assisting III 4 Cr. Hrs.

This course will introduce students to advanced/specialized procedures such as assisting with gastroenterologic procedures, urinary procedures, basic respiratory procedures, OB/GYN procedures and laboratory procedures that are performed in ambulatory care settings. Two classroom, six lab hours per week. *Prerequisite(s): HIM 1101 AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND MAS 1102 AND Restricted to Majors*

2210 Medical Billing Specialist 3 Cr. Hrs.

This course is designed to introduce the student to the practice of medical billing within the medical office, including the use of computerized medical billing software. It is also designed to introduce the student to the principles of bookkeeping, automated and manual patient financial accounting, collection techniques, employee payroll and banking procedures. Two classroom, three lab hours per week. *Prerequisite(s): HIM 1160 OR HIM 1201*

2220 MAS Practicum 3 Cr. Hrs.

Introduction to the ambulatory care clinical setting involving structured observation and unpaid participation in the administrative and clinical aspects of patient care under the supervision of a licensed physician or certified medical assistant, discussion of practicum experience and topics relative to the medical assisting profession, preparation to sit for a national credentialing certificate. Healthcare Professional CPR, health certificate, immunizations, student health insurance, and background check must be completed prior to the start of MAS 2220 - MAS Practicum. One classroom, fourteen practicum hours per week. *Prerequisite(s): MAS 1103 AND MAS 1110 AND MAS 2201 AND ALH 2201 AND Restricted to Majors AND Accumulative GPA of 2.0 or greater*

2291 Lab for MAS 2201 0 Cr. Hrs.

This is the laboratory portion of MAS 2201 Clinical Medical Assisting III and will provide "hands-on" aspects of the clinical topics taught in MAS 2201 to prepare students to perform advanced/specialized procedures such as assisting with gastroenterologic procedures, urinary procedures, basic respiratory procedures, OB/GYN procedures and laboratory procedures performed in the ambulatory care setting. *Prerequisite(s): MAS 1102 AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND Restricted to Majors Corequisite(s): MAS 2201*

Mathematics (MAT)

0050 Arithmetic Refresher 1 Cr. Hr.

This course is a refresher in the arithmetic topics essential for studying algebra. Successful students will demonstrate proficiency in operations with whole numbers, fractions, decimal numbers, and percents. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.

0100 Algebra I 3 Cr. Hrs.

Course provides a brief review of pre-algebra concepts including: operations with rational numbers; translating, evaluating, and simplifying expressions; translating, simplifying, and solving various types of first degree equations, inequalities and applied problems, including geometry, percent proportions, and other formulas; an introduction to coordinate planes, graphing and writing equations of straight lines. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Prerequisite(s): MAT 0050 OR satisfactory score on math placement test*

0200 Algebra II 3 Cr. Hrs.

Factoring; operations with polynomials and rational expressions; solving second-degree equations by factoring; solving equations with rational expressions. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Prerequisite(s): MAT 0100 OR MAT 0600 with a grade of C or better OR satisfactory score on math placement test*

0300 Algebra III 3 Cr. Hrs.

Systems of linear equations in two variables and applied problems; two-variable inequalities and systems of inequalities and applied problems; operations with rational exponents, radical expressions and complex numbers; relations and functions; simplifying radical expressions; solving equations with rational exponents, equations with radical expressions, quadratic equations by factoring, completing the square, and the quadratic formula, equations quadratic in form; quadratic functions. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Prerequisite(s): MAT 0200 with a grade of C or better OR satisfactory score on math placement test*

0445 Quantitative Reasoning Booster 1 Cr. Hr.

This course is taken in conjunction with MAT 1445, Quantitative Reasoning. It reviews prerequisite concepts for the topics in MAT 1445. Each prerequisite concept is covered in this course just prior to being needed in MAT 1445. Topics covered include: numerical reasoning, proportional reasoning, algebraic reasoning and modeling with linear functions. Two lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Corequisite(s): MAT 1445*

0450 Introductory Statistics Booster 1 Cr. Hr.

This course is taken in conjunction with MAT 1450, Introductory Statistics. This course reviews prerequisite concepts for the topics in MAT 1450. Each prerequisite concept is covered in this course just prior to being needed in MAT 1450. Topics covered include: use of summation notation, solving equations and inequalities with square roots, and extracting information from tables and graphs. Two lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Corequisite(s): MAT 1450*

0460 Booster for Mathematics for Business Analysis 1 Cr. Hr.

This course is taken in conjunction with MAT 1460, Mathematics for Business Analysis. This course reviews prerequisite concepts for the topics in MAT 1460. Each prerequisite concept is covered in this course prior to being needed in MAT 1460. Topics covered include: operations on polynomials, radical and rational functions, solving quadratic/rational equations/applications and graphing basic functions. Three lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Corequisite(s): MAT 1460*

0470 College Algebra Booster 1 Cr. Hr.

This course is taken in conjunction with MAT 1470, College Algebra. This course reviews prerequisite concepts for the topics in MAT 1470. Each prerequisite concept is covered in this course just prior to being needed in MAT 1470. Topics covered include: operations on polynomial, radical and rational functions, solving quadratic/rational equations/applications and graphing basic functions. Three lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. *Corequisite(s): MAT 1470*

0600 Bridge to College Math R 3 Cr. Hrs.

The topics contained in MAT 0100, MAT 0200, and MAT 0300 will be delivered in a self-paced format using technology, allowing students to begin at the appropriate level based on course placement and allowing them to move through as many topics, and courses, as they can within the time limits of the semester. Topics include: a brief review of pre-algebra concepts, solving and graphing linear equations and inequalities, factoring, simplifying polynomial and rational expressions, solving and graphing systems of linear equations and inequalities in two variables, solving and graphing quadratic equations, complex numbers, and simplifying exponential and radical expressions. At the end of the semester, based on proficiency of the topics in one or more courses, students will earn a grade of "S" for satisfactory progress and gain permission to enter subsequent courses in their plan of study. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. Six lab hours per week. *Prerequisite(s): MAT 0050 OR satisfactory score on math placement test*

1110 Math for Technologists 3 Cr. Hrs.

Use ratio and proportion to solve applications in technology; convert within and between metric and customary systems of measurement; read and interpret measurement tools and gauges; simplify algebraic expressions; solve linear equations; apply the geometry of lines, angles, and circles to technology applications. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0050 OR satisfactory score on math placement test*

1120 Business Mathematics 3 Cr. Hrs.

Mathematics of finance, mathematics of trade, payroll, taxes, insurance, elementary statistics. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): DEV 0035 OR DEV 0054 OR satisfactory score on English placement test*

1125 Math for the Culinary Arts & Baking & Pastry Arts Professional 3 Cr. Hrs.

This course is specifically for Culinary Arts and Baking & Pastry Arts majors. The math requirement for this course will form the foundations needed for costing of food and beverage, recipe conversion, bakers scaling (of liquid verses dry weights), edible product yield percentages, and menu cost cards. Students will be expected to demonstrate proficiency in converting improper as well as mixed number fractions, (add, subtract, multiply, and divide) decimals, solve complicated word problems and more. *Prerequisite(s): MAT 0050 OR satisfactory score on math placement test AND Restricted to Majors*

1130 Mathematics in Health Sciences 3 Cr. Hrs.

Solve health science applications; convert within and between metric, household and apothecary systems; read and interpret health science labels and graphs; calculate and apply statistical concepts; solve problems involving parenteral, pediatric and/or intravenous administration and dosage calculations. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0050 OR satisfactory score on math placement test*

1200 Technical Mathematics　5 Cr. Hrs.

This is a context-centered course intended for majors in Construction Management Technology, Architectural Technology, and Civil Engineering Technology. It contains collaborative labs which apply the mathematical methods to relevant applications. Students will apply properties of shapes in 2-dimensional and 3-dimensional geometry; use dimensional analysis to convert between systems of units; use scientific notation; apply vector analysis and basic trigonometry to find indirect measurements; use and solve linear and quadratic functions and equations; and use systems of linear equations in applications and find their solutions. Four classroom, two lab hours per week. *Prerequisite(s): MAT 0100 OR MAT 0600 with a grade of C or better*

1445 Quantitative Reasoning　3 Cr. Hrs.

The course will explore various applications of mathematics in the social, finance, health and environmental fields with emphasis on developing informational, technological, logical, and visual reasoning skills. Topics from numeracy, probability and statistics, finance, mathematical modeling with linear, statistical, and exponential functions, and other areas of mathematics will be covered. Note: Students who have not completed the required pre-requisite courses listed, but have successfully completed MAT 0100 with a grade of "C" or better, or MAT 0600 with a grade of "P", can register for MAT 1445 together with the co-requisite course MAT 0445, Quantitative Reasoning Booster. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0200 with a grade of C or better OR satisfactory score on math placement test*

1450 Introductory Statistics　4 Cr. Hrs.

An introduction to the fundamental ideas of statistics, including statistical methods to gather, analyze and present data; fundamentals of probability; statistical distributions, sampling distributions, confidence intervals, hypothesis testing, Chi-square tests, regression and correlation. Three classroom, two lab hours per week. Note: Students who have not completed the required pre-requisite courses listed, but have successfully completed MAT 0100 or MAT 1130 with a grade of "C" or better, or MAT 0600 with a grade of "P", can register for MAT 1450 together with the co-requisite course MAT 0450, Introductory Statistics Booster. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0200 with a grade of C or better OR satisfactory score on math placement test*

1455 Introduction to Data Science　5 Cr. Hrs.

An introductory course in data science for students interested in information technology, computer science, and related fields. Topics include curation of data; enhanced data visualization; statistical models, estimation, and prediction; and applications of data science. *Prerequisite(s): MAT 0300 and with a grade of C or better*

1460 Mathematics for Business Analysis　3 Cr. Hrs.

Applications of mathematics and functions to business analysis. Linear applications, functions, financial mathematics, systems, matrices, inequalities. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Students who have not completed the required prerequisite courses listed, but have successfully completed MAT 0200 with a grade of C or better, can register for MAT 1460 together with the co-requisite course MAT 0460, Booster for Mathematics for Business Analysis. *Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test*

1470 College Algebra　3 Cr. Hrs.

Polynomial, radical, rational, exponential and logarithmic functions and their graphs; roots of polynomial functions, rational and polynomial inequalities; systems of linear and nonlinear equations; matrices; and applications. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Students who have not completed the required pre-requisite courses listed, but have successfully completed MAT 0200 with a grade of "C" or better, can register for MAT 1470 together with the co-requisite course MAT 0470, College Algebra Booster. *Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test*

1520 Geometry & Statistics for Teachers　5 Cr. Hrs.

Introduction to the concepts of probability, statistics and geometry as appropriate for early- and middle-childhood teachers. An inquiry- and activity-based approach is used to explore probability concepts, descriptive statistics and basic inferential statistics, 2- and 3-dimensional geometric concepts, geometric constructions, congruence, similarity, measurement, computing area and volume, symmetry and transformations of two-dimensional figures. *Prerequisite(s): MAT 1510 with a grade of C or better*

1570 Analytic Geometry & Trigonometry　3 Cr. Hrs.

Trigonometric functions of angles, solving right and oblique triangles, identities, trigonometric and inverse trigonometric equations, vectors, radian measure, graphs of trigonometric functions and inverse trigonometric functions, conic sections, sequences, and series. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 1470 with a grade of C or better OR satisfactory score on math placement test*

1580 Precalculus　5 Cr. Hrs.

Polynomial, radical, rational, exponential and logarithmic functions and their graphs, roots of polynomial functions, rational and polynomial inequalities, conic sections, systems of linear equations; sequences and series. Trigonometric functions of angles, solving right and oblique triangles, trigonometric identities and equations, vectors, radian measure, graphs of trigonometric functions, inverse trigonometric functions and applications. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test*

2160 Calculus for Business & Economics　5 Cr. Hrs.

Functions and graphs, limits, continuity, derivatives, techniques of differentiation, applied problems in business and economics, exponential and logarithmic functions, techniques of integration, applications of integration, functions of two variables, partial derivatives and applications. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 1460 with a grade of C or better OR satisfactory score on math placement test*

2170 Business Statistics I　4 Cr. Hrs.

Statistical techniques and methodology. Graphical and tabular presentation of data, probability, parameters, statistical distributions, sampling, confidence intervals, tests of hypotheses, regression, and correlation. Three classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test*

2180 Business Statistics II   3 Cr. Hrs.

Statistical inferences, including estimation, confidence intervals, and tests of hypotheses for means, standard deviations and proportions; analysis of variance; regression analysis; chi-square; business applications. Students will develop a basic competency using a computer spreadsheet to perform statistical calculations. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 2170 with a grade of C or better OR satisfactory score on math placement test*

2215 Mathematics for Machine Learning & Artificial Intelligence   5 Cr. Hrs.

The four pillars of machine learning are regression, dimensionality reduction, density estimation, and classification. This course aims to establish the mathematical foundation upon which to build these pillars by covering carefully selected topics in linear algebra, analytic geometry, vector calculus, probability and distributions, and optimization. *Prerequisite(s): MAT 1570 OR MAT 1580 with a grade of C or better OR satisfactory score on math placement test*

2240 Calculus for the Life Sciences   4 Cr. Hrs.

This course uses calculus as a tool for modeling applications in the life sciences. Limits, derivatives, and integrals are introduced and applied in this context. Emphasis is placed on qualitative analysis and interpretation. *Prerequisite(s): MAT 1470 with a grade of C or better OR satisfactory score on math placement test*

2270 Calculus & Analytic Geometry I   5 Cr. Hrs.

The first course of a three-semester sequence of courses. Topics include limits and continuity, the derivative and its applications including related rates and optimization, L'Hopital's rule, antiderivatives, the Fundamental Theorem of Calculus, integration by substitution. Traditional testing (proctored or in Testing Center) is used in all online sections. *Prerequisite(s): MAT 1570 OR MAT 1580 with a grade of C or better OR satisfactory score on math placement test*

2280 Calculus & Analytic Geometry II   5 Cr. Hrs.

The second course of a three-semester sequence of courses. Techniques of integration, applications of integration, numerical integration, improper integrals, infinite sequences and series, power series, parametric equations, polar coordinates, conic sections. *Prerequisite(s): MAT 2270 with a grade of C or better OR Approval of Department*

2290 Calculus & Analytic Geometry III   5 Cr. Hrs.

Vectors in the plane and space, dot and cross product of two vectors. Lines, planes and surfaces in space, vector-valued functions, arc length and curvature. Functions of several variables, partial derivatives with applications, multiple integrals with applications, line integrals, surface integrals, vector fields, Green's Theorem, the Divergence Theorem and Stokes' Theorem. *Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department*

2310 Elementary Differential Equations   4 Cr. Hrs.

Solutions and applications of ordinary differential equations including separable, exact, homogeneous and non-homogeneous linear equations and others. Numerical approximation methods as well as substitutions, the total differential, separation of variables, integrating factors, undetermined coefficients, variation of parameters, Laplace Transforms and power series methods are covered. *Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department*

2320 Linear Algebra   3 Cr. Hrs.

Systems of linear equations, matrices, determinants, linear transformations, Euclidean n-space, coordinate vectors, abstract vector spaces, dimension and rank, eigenvalues and eigenvectors, orthogonal vectors, least-square problems, diagonalization, quadratic forms, singular-value decomposition. Applications such as Markov chains and computer graphics will be covered. Students will be introduced to the use of MATLAB for Linear Algebra. Two classroom, two lab hours per week. *Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department*

2330 Differential Equations & Linear Algebra   5 Cr. Hrs.

Ordinary differential equations of first and second order including, the Laplace transform, numerical approximation methods and applications. Vectors in Rn, systems of linear equations, systems of differential equations, matrices, linear transformations, subspaces, dimension and rank, coordinate vectors, determinants, eigenvalues, eigenvectors and abstract vector spaces. *Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department*

2415 Mathematics for Elementary Education I   5 Cr. Hrs.

This is the first of two mathematics courses designed for future elementary school teachers. The focus is on understanding numbers, operations, algebraic thinking, and number theory. This is a mathematics content course. Please note that this is not a teaching methods course, but a course focusing on using, justifying and connecting mathematical concepts. This course employs oral and written communication as both a learning tool and as preparation for handling mathematical questions which arise in elementary school classrooms. Discussion focuses on the deep mathematical reasoning underlying the computational procedures that are usually taught in elementary school. The course explores common misconceptions with preservice teachers, enabling the interpretation of children's work which might be incorrect, incomplete, or different from adult ways of thinking. Also this course is activity based, providing opportunities for deep, connected learning. It is essential for all teachers of mathematics to understand the reasoning underlying the mathematics they are teaching. They need to understand why various procedures work, how each idea they will be teaching connects with other important ideas in mathematics, and how these ideas develop and become more sophisticated. Please note that students are expected to pass a mathematics competency exam without the use of a calculator in order to be eligible to take the final exam. *Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test*

2435 Mathematics for Elementary Education II   4 Cr. Hrs.

This is the second of two mathematics courses designed for future elementary school teachers. The focus is on understanding ratios, proportional relationships, functions, measurement, geometry, statistics, and probability. This is a mathematics content course. Please note that this is not a teaching methods course, but a course focusing on using, justifying and connecting mathematical concepts. This course employs oral and written communication as both a learning tool and as preparation for handling mathematical questions which arise in elementary school classrooms. Discussion focuses on the deep mathematical reasoning underlying the computational procedures that are usually taught in elementary school. The course explores common misconceptions with preservice teachers, enabling the interpretation of children's work which might be incorrect, incomplete, or different from adult ways of thinking. Also this course is activity based, providing opportunities for deep, connected learning. It is essential for all teachers of mathematics to understand the reasoning underlying the mathematics they are teaching. They need to understand why various procedures work, how each idea they will be teaching connects with other important ideas in mathematics, and how these ideas develop and become more sophisticated. *Prerequisite(s): MAT 2415 with a grade of C or better*

2570 Discrete Mathematics   4 Cr. Hrs.

A course in Discrete Mathematics for students interested in information technology, computer science, and related fields. Topics include logic, proof techniques, set theory, functions and relations, counting, elementary number theory, graphs and tree theory, base-n arithmetic, and Boolean Algebra. *Prerequisite(s): MAT 1460 OR MAT 1470 OR MAT 1580 with a grade of C or better OR satisfactory score on math placement test*

2600 Applied Statistics   3 Cr. Hrs.

Covers sample spaces and probability laws; discrete and continuous random variables with special emphasis on the binomial, Poisson, hypergeometric, normal and gamma distributions; fundamental sampling distributions and data descriptions; use of computer software packages for simulating, summarizing, and displaying data. Provides a foundation for the further study of statistics. *Prerequisite(s): MAT 2280 OR Approval of Department*

2700 Mathematics Internship   R   1 - 4 Cr. Hrs.

Students work at an approved mathematics related industry site and will earn credits toward degree requirements for their work experiences. Students already working may apply to use that experience to meet internship requirements. Students prepare and submit reports and/or projects describing their industry experience and are evaluated by the course instructor as well as their on-site supervisor. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

Mechanical Engineering (MEE)

2101 Statics for Engineers   3 Cr. Hrs.

Vectorial treatment of forces and moments. Analysis of trusses and frames. Centroids, friction and moment of inertia. Internal shear and moment for beams. Virtual work. This calculus-based course is designed for Engineering University Transfer students. Two classroom, two lab hours per week. *Prerequisite(s): MAT 2270 AND PHY 2201*

2201 Thermodynamics for Engineers   3 Cr. Hrs.

First and second laws of thermodynamics; thermodynamic properties of gases, vapors and gas-vapor mixtures; energy-systems analysis including power cycles, refrigeration cycles and air-conditioning processes. Introduction to thermodynamics of reacting mixtures. Two classroom, two lab hours per week. *Prerequisite(s): MAT 2270*

2301 Strength of Materials for Engineers   3 Cr. Hrs.

Stress and deformations, torsions, shear and moments in beams, stresses in beams, beam deflections, combined stresses and eccentric loading. This course is calculus based. One classroom, four lab hours per week. *Prerequisite(s): MEE 2101*

2401 Dynamics for Engineers   3 Cr. Hrs.

Kinematics of particles and rigid bodies; acceleration, work, energy, impulse and momentum of particles and rigid bodies. Two classroom, two lab hours per week. *Prerequisite(s): MEE 2101*

2700 Mechanical Engineering Internship   R   1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

Mechanical Engineering Technology (MET)

1101 Introduction to Engineering Drafting   2 Cr. Hrs.

Interpretation of engineering drawings. Includes principles of orthographic projection, drafting symbols, surface finish symbols, welding symbols and geometric dimensioning and tolerancing symbols. One classroom, two lab hours.

1111 Preparatory Math for Engineering Technology   3 Cr. Hrs.

Mathematics for engineering technology students to prepare them for critical thinking, analytical reasoning and problem solving. Students will apply math to typical engineering technology problems from a variety of fields. Two classroom, two lab hours per week. *Prerequisite(s): MAT 0200*

1131 Personal Computer Applications for Engineering Technology   1 Cr. Hr.

Applied computer tools to solve engineering technology problems, emphasizing the integration of word processing, spreadsheets, presentation software and engineering research skills using the Internet. Applications of an integrated approach to research papers, engineering technology analysis, technical laboratory reports and technical presentations. One-half classroom, one and one-half lab hours per week. *Prerequisite(s): DEV 0015 AND (MAT 0100 OR MAT 0600 OR MAT 1110)*

1151 Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts   3 Cr. Hrs.

This course looks at the design elements, manufacturing and assembly of solid-body electric guitars. Science, Technology, Engineering & Mathematics (STEM) concepts that relate directly to guitars are used to help students make an applied learning connection. Two classroom, two lab hours per week.

1161 Software Tools for Engineering Technology 1 Cr. Hr.

Introduction to computer-based solution of engineering and engineering technology problems. Includes the fundamentals and applications of computer-based software (MathCAD) and integration with other software for documentation of work, including proper use of units and unit systems. Software solution applications include graphing functions and data, basic statistical calculations, use of matrices, vectors, solution of simultaneous and an introduction to Boolean logic. One-half classroom, one and one-half lab hours per week. *Prerequisite(s): MAT 0300 OR MAT 1280 OR MAT 1470 OR MAT 1580*

1231 Introduction to Engineering Design Using 3D CAD 4 Cr. Hrs.

Application of the process of design and the interpretation of engineering drawings. Includes design development, product development, and problem solution, principles of orthographic projection, drafting symbols, surface finish symbols, and geometric dimensioning and tolerancing symbols. Student is exposed to parametric 3D CAD modeling for the purpose of creating parts and assemblies and to properly dimension and detail drawings to effectively communicate design intent. Three classroom, three lab hours per week.

1241 Principles of Engineering 2 Cr. Hrs.

Development of student understanding of the engineering and engineering technology fields through applied math, science and technology principles. Introductory looks into the applied learning of mechanics, strength of materials, free body diagrams and forces. One classroom, two lab hours per week. *Prerequisite(s): MAT 0300*

1301 SolidWorks Basics 4 Cr. Hrs.

Utilize SolidWorks mechanical design automation software to build parametric models of parts and assemblies and learn how to make drawings of those parts and assemblies. Three classroom, three lab hours per week.

1331 NX (Unigraphics) Basics 3 Cr. Hrs.

An introduction to Unigraphics 3-D Modeling software intended for new Unigraphics users or individuals with basic CAD skills. Emphasis will be placed on the development of basic skills and methods to create solid models. One classroom, six lab hours per week. *Prerequisite(s): MET 1101 OR MET 1231*

1351 Solid Edge Basics 3 Cr. Hrs.

A computer-aided drafting course using Solid Edge software with information for new users on how to get started with the software. Emphasis on the development of basic skills and methods to create solid models. One classroom, six lab hours per week. *Prerequisite(s): MET 1101 OR MET 1231*

1371 CAD Concepts using AutoCAD 3 Cr. Hrs.

Computer-aided drafting using the latest release of AutoCAD. Topics include: drawing and editing tools, two- and three-dimensional drawing, drawing layouts, scaling, dimensioning techniques and plotting. Two classroom, three lab hours per week.

1401 Additive Design & Printing 3 Cr. Hrs.

A course in the design, development and operation of additive manufacturing machines. Types of machines, input types, materials and design considerations will be accomplished as part of the hands-on model making class. Two classroom, two lab hours per week. *Prerequisite(s): MET 1231 OR MET 1301 OR MET 1331 OR MET 1351*

1431 Additive Manufacturing Post Process 3 Cr. Hrs.

A course designed to examine the post process aspects of bonding, securing, finishes and assembly operation of components. Emphasis on metal materials and case studies. Two classroom, two lab hours per week. *Prerequisite(s): MET 1231 OR MET 1301 OR MET 1331 OR MET 1351 OR MET 1401*

2101 Thermodynamics 3 Cr. Hrs.

The laws and application of the principles of thermodynamics as they apply to internal combustion engines, steam cycles and refrigeration. Two classroom, two lab hours per week. *Prerequisite(s): (PHY 1141 OR PHY 2201) AND (MET 2201 OR MEE 2101)*

2151 Material Science 4 Cr. Hrs.

Terminology, designations of metals and the relationship among the properties of metals, the environment and heat treatment processes. Selecting and testing materials. Factors related to the selection of nonmetallic materials and the relationship between the nature of the materials and their properties. Thermoplastics, thermosetting, ceramics, composites and glasses are included. Three classroom, three lab hours per week. *Prerequisite(s): MET 1111 OR MET 1161 OR MAT 1580*

2201 Statics 3 Cr. Hrs.

Analysis of various types of two and three dimensional force systems, analysis of trusses, frames, friction, center of gravity and moment of inertia. Two classroom, three lab hours per week. *Prerequisite(s): MET 1111 AND MET 1161 AND (MAT 1290 OR MAT 1570 OR MAT 1580)*

2251 Strength of Materials 3 Cr. Hrs.

Stress and deformations, torsions, shear and moments in beams, stresses in beams, beam deflections, combined stresses. This course is algebra based. Two classroom, two lab hours per week. *Prerequisite(s): MET 2201 OR MEE 2101*

2281 Engineering Technology Professional Practice 3 Cr. Hrs.

A project-based course utilizing reverse engineering to integrate ABET professional components in preparing students with the knowledge, techniques, skills, and use of modern equipment in mechanical engineering technology. The course strengthens student ability in specifying, installing, building, testing, documenting, operating, selling or maintaining basic mechanical systems. Two classroom, two lab hours per week. *Prerequisite(s): MET 1111*

2301 Fluid Mechanics 3 Cr. Hrs.

Essentials of fluid properties, fluid statics, flow measurements, force of a fluid jet including turbo machinery, open channel flow losses through flow in pipe and duct and pump and fan performance and operation. Two classroom, two lab hours per week. *Prerequisite(s): MET 2201 OR MEE 2101*

2351 Dynamics 3 Cr. Hrs.

Kinematics and kinetics of rectilinear motion, curvilinear motion and rotation; plane motion, work, energy, power, impulse and momentum. Two classroom, two lab hours per week. *Prerequisite(s): MET 2201 OR MEE 2101*

2401 Machine Design 3 Cr. Hrs.

Design and evaluation of machine elements, design for safety, strength, stability and wear. Analysis and design of gears, shafts, drive systems, mechanical fasteners, permanent connections, roller and journal bearings and springs. A design project including an oral presentation and written report is required. Two classroom, three lab hours per week. *Prerequisite(s): MET 2251 AND (PHY 1141 OR PHY 2201)*

2700 Mechanical Engineering Technology Internship R
1 - 4 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour. *Prerequisite(s): Approval of Department*

2711 Ethics for Engineering Technology Professionals
1 Cr. Hr.

Instruction to the core skills of an engineering professional. Technical skills, soft skills and team management techniques. Concepts of lifelong learning, continued personal improvement, engineering ethics, working in a diverse industry and future trends in engineering technology. One-half classroom, one and one-half lab hours per week. *Prerequisite(s): (COM 2206 OR COM 2211 OR COM 2225) AND ENG 1101*

2780 Mechanical Engineering Technology Capstone 3 Cr. Hrs.

Assessment of achievement by Mechanical Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. One classroom, six lab hours per week. *Prerequisite(s): Approval of Department*

2781 Manufacturing Engineering Technology Capstone 5 Cr. Hrs.

Assessment of achievement by Manufacturing Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on manufacturing projects will be emphasized. Two classroom, six lab hours per week. *Prerequisite(s): Approval of Department*

Mental Health and Addiction Services (MHT)

1101 Introduction to Mental Health Services 3 Cr. Hrs.

Introduction to the field of mental health services. Students will identify principles, skills and history and evolution of the mental health field. Analyze motives, values, biases, cultural and social influences for becoming a helper. Examine key terminology and concepts. Describe basic theories, evidenced based practices and interventions of the helping profession. Recognize professional behaviors, documentation practices and ethical standards required to work in the helping profession. *Prerequisite(s): DEV 0035*

1130 Fundamentals of Addiction Counseling CDCA Preliminary 3 Cr. Hrs.

Course provides 40 hours of chemical dependency specific educational content required for application for CDCA Preliminary credential with the Ohio Chemical Dependency Professionals Board. Theories and fundamentals of addictive illness and physical/mental effects of psychoactive drugs. Dynamics of substance related and addictive disorders on persons, families and society. Knowledge of disease concept, stigmas, identification, assessment, trends in treatment and relapse process. Develop insights, challenge biases and identify personal and professional issues. Elements of professional/ethical behaviors. *Prerequisite(s): DEV 0035*

1201 Interviewing Skills 3 Cr. Hrs.

Basic interviewing, active listening skills, elements of the helping relationship, professional ethics and issues. Practice in conducting clinical interviews. Diversity factors in clinical interviewing. Introduction to person centered approach. Health Information Portability and Accountability Act (HIPAA) privacy law. *Prerequisite(s): MHT 1101 AND Restricted to Majors*

1202 Motivational Interviewing 3 Cr. Hrs.

Learning and applying the model of Motivational Interviewing including engaging, focusing, evoking, and planning. Concepts of OARS, stages of change, communication skills, client ambivalence, developing discrepancies, change talk, client goals, and developing a change plan.

1203 Professional Documentation 3 Cr. Hrs.

Functional, legal, and ethical aspects of documentation including behavioral observation, mechanics of writing problem statements, client assessments, and progress notation. Introduction to electronic record keeping. *Prerequisite(s): MHT 1101 AND Restricted to Majors*

1236 Assessment & Diagnosis of Substance Use Disorders 3 Cr. Hrs.

Holistic assessment and diagnosis of substance use disorders. Assessment skill development. Use of and interpretation of assessment instruments. Use of current Diagnostic and Statistical Manual (DSM) criteria related to substance use disorders. *Prerequisite(s): MHT 1130 AND Restricted to Majors*

2105 Mental Health Treatment Methods 3 Cr. Hrs.

Identify and examine mental health treatment methods and evidenced-based practices. Recognize mental and emotional disorders from the current Diagnostic and Statistical Manual (DSM) and their evidenced based treatments. Apply clinical interventions and treatment modalities for various client populations. Identify key concepts, terminology and ethical dilemmas associated with mental health treatment methods. *Prerequisite(s): Restricted to Majors*

2111 Group Dynamics I 3 Cr. Hrs.

Introduction to interpersonal dynamics in therapeutic groups. Awareness of group leadership skills and personal issues affecting participation. Laboratory group promotes personal learning while providing experiential awareness of stages of group development. History of the group work method. Factors in group composition. Professional ethics. Practice in group facilitation. Two classroom, two lab hours per week. *Prerequisite(s): MHT 1201 AND Restricted to Majors Corequisite(s): MHT 2112*

2112 Lab for Group Dynamics I 0 Cr. Hrs.

Prerequisite(s): Restricted to Majors Corequisite(s): MHT 2111

2121   Practicum I   5 Cr. Hrs.

First of two clinical practicum experiences in mental health and addiction services. Professional and ethical work skills with an interdisciplinary team in an agency setting. Components of Electronic Health Record. Ethical decision making. Emerging trends and contemporary topics in the helping profession. Diversity factors to support culturally competent clinical practice. Three and one-half classroom, fourteen clinical hours per week. *Prerequisite(s): MHT 1201 AND Restricted to Majors*

2130   Fundamentals of Addiction Counseling CDCA Renewable   2 Cr. Hrs.

Course provides 30 hours of chemical dependency specific educational content required for application for CDCA Renewable credential with the Ohio Chemical Dependency Professionals Board. Content included: Addiction and treatment knowledge, individual and group counseling, evaluation, service coordination, documentation and professionalism. Persons who currently hold a CDCA Preliminary with the State of Ohio may also take this course. *Prerequisite(s): MHT 1130 Approval of Department*

2137   Treatment Techniques in Substance Use Disorders   3 Cr. Hrs.

Contemporary holistic treatment methods, including motivational interviewing. Models of treatment with individual, group, case management, intervention and families. Levels of care and stages of recovery. Ethical, legal and professional behaviors. *Prerequisite(s): MHT 1236 AND Restricted to Majors*

2138   Ethical Issues in the Helping Professions   2 Cr. Hrs.

Ethical codes and responsibilities in the helping professions. Federal Confidentiality Regulations, case law, scope of practice, expectations of funding bodies and managed care. Principles of professional behavior with clients and self-awareness of their personal boundary and value concerns. Importance of cultural diversity. *Prerequisite(s): Restricted to Majors*

2211   Group Dynamics II   3 Cr. Hrs.

Stages of group development, process planning, and group leadership skills. Advanced practice in group co-facilitation and critical analysis of group processes. Therapeutic factors in groups. Laboratory group promotes personal learning while providing experiential awareness of group dynamics and stages of group development. Two classroom, two lab hours per week. *Prerequisite(s): MHT 2111 AND Restricted to Majors*
Corequisite(s): MHT 2212

2212   Lab for Group Dynamics II   0 Cr. Hrs.

Prerequisite(s): MHT 2111 AND Restricted to Majors
Corequisite(s): MHT 2211

2222   Practicum II   5 Cr. Hrs.

Second of two semesters of clinical practicum in Mental Health and Addiction Services. Demonstrate professional and ethical work skills with an interdisciplinary team in an agency setting. Awareness of diversity factors to support culturally competent practice in helping profession. Ethical decision making. American Psychological Association format to research evidenced based practices and best practice principles. Capstone course. Three and one-half classroom, fourteen clinical hours per week. *Prerequisite(s): MHT 2121 AND Restricted to Majors*

2235   Family Dynamics of Addiction   3 Cr. Hrs.

Impact of substance use disorders on individual family members and overall family functioning. Focuses on the nature of addiction as a disease, its progression, symptoms and treatments. The nature of codependency is discussed. Insight is gained by the students regarding their biases about the disease of addiction. *Prerequisite(s): MHT 1130 AND Restricted to Majors*

2245   Mental Health & the Family   3 Cr. Hrs.

Impact of mental health disorders on individual family members and overall family functioning. Family Systems Theory and assessing family issues. Diversity factors and contemporary issues in modern families. Key concepts and terminology related to family dynamics. *Prerequisite(s): ENG 1101 AND MHT 2105 AND Restricted to Majors*

2250   Child & Adolescent Mental Health   3 Cr. Hrs.

Mental health and mental ill-health issues related to childhood and adolescents. Etiology and treatment approaches.

Marketing (MRK)

2100   Foundations of Marketing   3 Cr. Hrs.

Foundations of Marketing is designed to provide a broad introduction to the field of marketing. Marketing is far more than just selling or advertising within a business setting; it is a major part of our everyday lives. This course will illustrate the importance of marketing and skills that are applicable to all specializations within business.

2101   Principles of Marketing Management   3 Cr. Hrs.

Marketing strategies and decision making in the context of other business functions. Topics include: research and analysis of markets, environments and competition; market segmentation and selection of target markets; consumer and organizational behavior; planning and integration of product, price, promotion and distribution activities for profit and nonprofit, domestic and global settings. *Prerequisite(s): ECO 2180*

2102   Principles of Advertising   3 Cr. Hrs.

This course focuses on integrated marketing communications (IMC). The concepts of IMC enhance the equity of brands and show how advertising, promotion, packaging and branding strategies, point-of-purchase communications, public relations, event and cause-oriented sponsorships can affect the marketing of products, goods, services or ideas.

2135   Digital Marketing   3 Cr. Hrs.

Digital marketing is a broad and growing field encompassing any form of marketing that utilizes technology to deliver a message. Students in this course study some of the most popular tactics used by successful businesses today to promote their brand and reach their customers. This information is applied in hands-on activities that expose students to real-world business situations, including developing a digital marketing campaign for a brand.

2145   Principles of Retailing   3 Cr. Hrs.

Functions and concepts for the retail organization. Development and implementation of policies and procedures in planning, pricing, display, layout, buying and services from a management perspective. A consumer-centered approach to examining problems of various types.

2220 Small Business Marketing 3 Cr. Hrs.

This course explores the marketing strategy and planning process. Special emphasis is given to analyzing marketing techniques used by innovative entrepreneurs. Students will work collaboratively to develop a marketing plan for a start-up or existing business.

2225 Sales Fundamentals 3 Cr. Hrs.

Along with exploring potential career opportunities, this course introduces students to the approaches and philosophies used by successful sales professionals. Topics such as identifying and communicating with prospects, identifying needs, matching presentation styles to the situation, handling objections, closing techniques and long-term relationship building strategies will be explored.

2230 Social Media & Consumer Engagement 3 Cr. Hrs.

The emergence and growth of social media changed the way we communicate and conduct business. Consumers can influence one another and brands now more than ever, and this power shift creates both opportunities and challenges for organizations today. This course includes a brief overview of the popular social media platforms, but primarily focuses on how brands can use social media strategically to connect with customers and achieve their goals. Students apply this information by evaluating and developing social marketing campaigns. *Prerequisite(s): MRK 2135 OR MRK 2100 OR MRK 2101 OR MRK 2220*

2236 Consumer Behavior 3 Cr. Hrs.

This course is designed to enable students to acquire an understanding of the purchasing decision process for individuals, families and organizations. Psychological, societal, and cultural influences on consumer decisions will be studied. Marketing strategy implications of conceptual constructs will be discussed throughout the course. *Prerequisite(s): MRK 2100 OR MRK 2101*

2250 Digital Marketing Analytics 3 Cr. Hrs.

Digital marketing tactics and tools are essential components of a business strategy in today's digital world. However, what differentiates many successful organizations from the rest is a data-driven and customer-centric approach. Marketing professionals with strong data analytics and problem-solving skills now have a competitive advantage above the rest. In this course, students learn about data sources, analytics techniques, using popular industry tools, and generating and reading reports. Students complete a project that provides opportunities to practice testing and optimization techniques for owned and paid media, extract meaningful insights from performance results, and make decisions that add value for both a company and its customers. The course concludes with an exam that enable students to earn an in-demand industry certification. *Prerequisite(s): MRK 2135*

Music (MUS)

1101 Introduction to Music 3 Cr. Hrs.

Fundamentals of music theory including notation of pitches, rhythms, scales, intervals, triads and chords.

1102 Introduction to Aural Skills 3 Cr. Hrs.

Fundamentals of sight singing, dictation, ear training including reading, hearing and notating rhythms, melodies and intervals.

1103 Sight-Singing for Singers 1 Cr. Hr.

Developing and understanding of solfeggio through the practice and drill of singing exercises utilizing the syllables and hand signals of Solmization to recognize the notes, rhythms and intervals important to basic sight-reading skills.

1109 Introduction to Music Education 2 Cr. Hrs.

Aspects of professional music teaching and pedagogy including teaching methodologies and philosophies; elements of learning and teaching; variety of professional organizations and their resources will be introduced. *Prerequisite(s): ENG 1201 AND Approval of Department AND Restricted to Majors*

1110 Music Technology for Music Majors 1 Cr. Hr.

Introduction to technology resources used by music majors and future musicians. Typical music studio set-up. Sinclair systems, music notation software, MIDI and digital audio recording. *Corequisite(s): MUS 1111*

1111 Music Theory I 3 Cr. Hrs.

First in a sequence of four music theory courses. Focus placed on diatonic melodic and harmonic structures, including scales and modes, intervals, tonality and keys, melodic organization, voice leading, instrument and voice ranges, transposition, triads and seventh chords. Activities include musical composition, analysis, listening, discussion and computer work. *Prerequisite(s): MUS 1101 AND Approval of Department Corequisite(s): MUS 1110*

1112 Aural Skills I 1 Cr. Hr.

First in a sequence of four aural skills courses. Focus placed on diatonic melodic and harmonic structures within a more basic rhythmic environment. Practical transcription and singing skills are systematically studied. Activities include dictation of intervals, chords, melodies, harmonic progressions and rhythms, as well as singing of intervals, melodies and rhythms. *Prerequisite(s): Approval of Department*

1113 Music Theory II 3 Cr. Hrs.

Second in a sequence of four music theory courses. Focus placed on diatonic and chromatic melodic and harmonic structures, including voice leading, seventh chords, modulation, secondary dominant-functioning chords and binary and ternary forms. Activities include musical composition, analysis, listening, discussion and computer work. *Prerequisite(s): MUS 1111*

1114 Aural Skills II 1 Cr. Hr.

Second in a sequence of four aural skills courses. Focus placed on diatonic melodic and harmonic structures within a more challenging rhythmic environment. Practical transcription and singing skills systematically studied. Activities include interval, chord, melodic, harmonic progression and rhythm dictation, as well as singing of intervals, melodies and rhythms. *Prerequisite(s): MUS 1101*

1115 Piano for Music Majors I 1 Cr. Hr.

First semester of a four-semester sequence for nonpianist music majors. Instruction in correct piano playing techniques with emphasis on skills needed by future music educators. *Prerequisite(s): MUS 1101*

1116 Piano for Music Majors II   1 Cr. Hr.

Second semester of a four-semester sequence for nonpianist music majors. Continued instruction in correct piano playing techniques with emphasis on early intermediate repertoire. The integration of circle of fifths with the playing of all major and minor scales, chords and arpeggios is also stressed. *Prerequisite(s): MUS 1115*

1117 Vocal Diction I   2 Cr. Hrs.

Italian and German diction, studied with emphasis on correct pronunciation, with regard to clarity, expressiveness, fundamentals of the International Phonetic Alphabet and sound production as applied to singing and reading. *Prerequisite(s): Approval of Instructor*

1118 Vocal Diction II   2 Cr. Hrs.

German and French diction, studied with emphasis on correct pronunciation, with regard to clarity, expressiveness, fundamentals of the International Phonetic Alphabet and sound production as applied to singing and reading. *Prerequisite(s): MUS 1117 AND Approval of Instructor*

1119 Secondary Voice   R   1 Cr. Hr.

Private instruction in Applied Voice is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements vary per term, according to the singing ability of the student. Secondary Voice is the required minor instrument for pianists and organists who are seeking an associate degree in music. Four semesters are required; MUS 1119 is the first of these. *Prerequisite(s): Approval of Department*

1121 Music Appreciation   3 Cr. Hrs.

Basic parameters of music through a survey of styles from Gregorian Chant to jazz and current popular styles focusing on melody, rhythm, harmony, performance media and form.

1122 History of Pop/Rock Music   3 Cr. Hrs.

The musical reasons and social conditions under which pop music and rock music have developed, with particular emphasis on music from 1955 until the present. The personalities, events and music that shaped this music and which continue to evolve today.

1123 World Music   3 Cr. Hrs.

A course that describes and analyzes historical-social elements of western culture, non-western culture, and the global interdependence of groups and individuals as seen in the music(s) of these various cultures.

1131 Chorale   R   1 Cr. Hr.

Large select SATB (soprano-alto-tenor-bass)choral ensemble specializing in the performance of significant choral repertoire representing varied styles, historical periods and languages. School and public performances required. *Prerequisite(s): Approval of Instructor*

1133 Chamber Choir   R   1 Cr. Hr.

Small select SATB (soprano-alto-tenor-bass) choral ensemble specializing in the performance of significant choral repertoire representing varied styles, historical periods and languages. School and public performances required. *Prerequisite(s): Audition required*

1135 Women's Ensemble   R   1 Cr. Hr.

Three-part female choral ensemble specializing in the performance of significant choral repertoire for women's voices, representing varied styles, historical periods and languages. School and public performances required. *Prerequisite(s): Approval of Instructor*

1137 Men's Ensemble   R   1 Cr. Hr.

The performance and presentation of choral literature written for male voices from all musical periods. The ensemble will present at least one public concert per semester. *Prerequisite(s): Audition and/or Approval of Instructor*

1139 Contemporary Gospel Ensemble   R   1 Cr. Hr.

The performance and presentation of mixed-voice choral literature from the African-American, spiritual and contemporary worship and praise music tradition. The ensemble will present at least one public concert per semester. *Prerequisite(s): Audition/Permission of Instructor*

1141 Wind Symphony   R   1 Cr. Hr.

Concentration on instrumental problems and techniques. Development of large and small group wind repertoire. Public performance is a major part of course activities. *Prerequisite(s): Audition required*

1143 Concert Band   R   1 Cr. Hr.

Concentration on instrumental problems and techniques. Development of large concert band repertoire. Public performance is a major part of course activities.

1145 Classical Guitar Ensemble   R   1 Cr. Hr.

The study and performance of selected classical guitar ensemble literature. The size of the ensemble and the respective backgrounds of its players will determine the performance level of the repertoire. End-of-term performance. *Prerequisite(s): Approval of Instructor*

1147 Jazz Ensemble   R   1 Cr. Hr.

Big band jazz ensemble open to college and community musicians. Concerts and appearances are scheduled during academic year. *Prerequisite(s): Audition required*

1149 Jazz Combo   R   1 Cr. Hr.

Small jazz group, limited to ten or fewer players. Development of basic jazz performance skills, including improvisation. Concerts scheduled near end of terms. *Prerequisite(s): Audition*

1151 Concert Handbell Choir   R   1 Cr. Hr.

The study and performance of handbell ensemble repertoire, ranging from classical to novelty, sacred to secular and original to transcription, as well as aspects of the preparation of a program for performance. *Prerequisite(s): Audition required*

1153 Piano Ensemble   R   1 Cr. Hr.

The learning of piano duets and duos for advanced students only. Public performance a primary goal. Familiarization with major composers and repertoire for piano ensemble performance. *Prerequisite(s): Approval of Instructor*

1171 Piano Class   3 Cr. Hrs.

Basic music reading skills and correct piano playing techniques acquired in a group setting. Simple chords and pieces. No piano playing or musical experience required.

1172 Voice Class   3 Cr. Hrs.

Fundamentals of vocal production, song literature, interpretation and performance skills are studied, either as a terminal course or to prepare students for possible private applied study. Combines lecture with group and individual singing.

1173 Guitar Class I R
1 Cr. Hr.

Fundamental study of guitar playing techniques. Students must provide their own acoustic instruments. (Electric guitars are not appropriate.)

1174 Guitar Class II R
1 Cr. Hr.

Continuation of Guitar Class I with additional keys learned and more ensemble playing. Students must provide their own acoustic instruments. (Electric guitars are not appropriate.) *Prerequisite(s): MUS 1173*

1500 Applied Piano for Non-Majors R
1 Cr. Hr.

Private instruction in piano is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1501 Applied Voice for Non-Majors R
1 Cr. Hr.

Private instruction in voice is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1502 Applied Classical Guitar for Non-Majors R
1 Cr. Hr.

Private instruction in classical guitar is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1503 Applied Flute for Non-Majors R
1 Cr. Hr.

Private instruction in flute is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1504 Applied Clarinet for Non-Majors R
1 Cr. Hr.

Private instruction in clarinet is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1505 Applied Saxophone for Non-Majors R
1 Cr. Hr.

Private instruction in saxophone is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1506 Applied Oboe for Non-Majors R
1 Cr. Hr.

Private instruction in oboe is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1507 Applied Bassoon for Non-Majors R
1 Cr. Hr.

Private instruction in bassoon is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1508 Applied Trumpet for Non-Majors R
1 Cr. Hr.

Private instruction in trumpet is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1509 Applied Trombone for Non-Majors R
1 Cr. Hr.

Private instruction in trombone is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1510 Applied French Horn for Non-Majors R
1 Cr. Hr.

Private instruction in French horn is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1511 Applied Baritone Horn for Non-Majors R
1 Cr. Hr.

Private instruction in baritone horn is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1512 Applied Tuba for Non-Majors R
1 Cr. Hr.

Private instruction in tuba is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1513 Applied Violin for Non-Majors R
1 Cr. Hr.

Private instruction in violin is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1514 Applied Viola for Non-Majors R 1 Cr. Hr.

Private instruction in viola is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1515 Applied Cello for Non-Majors R 1 Cr. Hr.

Private instruction in cello is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1516 Applied String Bass for Non-Majors R 1 Cr. Hr.

Private instruction in string bass is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1517 Applied Percussion for Non-Majors R 1 Cr. Hr.

Private instruction in percussion is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1518 Applied Organ for Non-Majors R 1 Cr. Hr.

Private instruction in organ is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1519 Applied Harpsichord for Non-Majors R 1 Cr. Hr.

Private instruction in harpsichord is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1520 Applied Popular Guitar for Non-Majors R 1 Cr. Hr.

Private instruction in popular guitar is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1521 Applied Electric Bass for Non-Majors R 1 Cr. Hr.

Private instruction in electric bass is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1522 Applied Jazz Drumming for Non-Majors R 1 Cr. Hr.

Private instruction in jazz drumming is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

1523 Applied Jazz Piano for Non-Majors R 1 Cr. Hr.

Private instruction in jazz piano is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student. *Prerequisite(s): Approval of Department*

2111 Music Theory III 3 Cr. Hrs.

Third in a sequence of four music theory courses. Focus will be placed on more advanced chromatic melodic and harmonic structures, including borrowed chords, the Neapolitan chord and augmented-sixth chords. Activities include musical composition, analysis, listening, discussion and computer work. *Prerequisite(s): MUS 1113*

2112 Aural Skills III 1 Cr. Hr.

Third in a sequence of four aural skills courses. Focus placed on chromatic melodic and harmonic structures within a challenging rhythmic environment. Practical transcription and singing skills systematically studied. Activities include interval, chord, melodic, harmonic progression and rhythm dictation, as well as singing of intervals, melodies and rhythms. *Prerequisite(s): MUS 1114*

2113 Music Theory IV 3 Cr. Hrs.

Final course in a sequence of four music theory courses. Focus placed on advanced chromatic melodic and harmonic structures, including extended harmony, altered dominant chords, chromatic mediants, sonata and rondo forms, late 19th-century and contemporary techniques. Activities include musical composition, analysis, listening, discussion and computer work. *Prerequisite(s): MUS 2111*

2114 Aural Skills IV 1 Cr. Hr.

Last in a sequence of four aural skills courses. Focus placed on advanced chromatic melodic and harmonic structures within an advanced rhythmic environment. Practical transcription and singing skills systematically studied. Activities include interval, chord, melodic, harmonic progression and rhythm dictation, as well as singing of intervals, melodies and rhythms. *Prerequisite(s): MUS 2112*

2115 Piano for Music Majors III 1 Cr. Hr.

Third semester of a four-semester sequence for nonpianist music majors. Transposition and harmonization are emphasized. *Prerequisite(s): MUS 1116*

2116 Piano for Music Majors IV 1 Cr. Hr.

Fourth semester of a four-semester sequence for nonpianist music majors. Sight reading and vertical four-part reading are emphasized. A comprehensive review of the skills acquired during the four-semester sequence precedes a year-end assessment of all these skills. *Prerequisite(s): MUS 2115*

2117 Survey of Musical Styles I
3 Cr. Hrs.

The historical styles of Western music in chronological sequence through analysis of various musical compositions and musical forms from the Medieval, Renaissance, Baroque and Classical eras. *Prerequisite(s): MUS 1112 AND ENG 1201 AND Approval of Department*

2118 Survey of Musical Styles II
3 Cr. Hrs.

The historical styles of Western music in chronological sequence through analysis of various musical compositions and musical forms from the early 19th century to contemporary times, including the Romantic, Modern and 20th century eras. *Prerequisite(s): MUS 2117 AND Approval of Department*

2210 Conducting Fundamentals
2 Cr. Hrs.

Fundamentals of conducting music ensembles with emphasis on basic baton technique, meters, cueing, addressing different styles, conducting terminology and score reading. *Prerequisite(s): MUS 1113 AND Approval of Department*

2211 Handbell Choir Conducting
1 Cr. Hr.

Major factors associated with direction of handbell ensembles, emphasizing organization of choirs, performance pedagogy, conducting techniques, repertoire selection, performance aspects and care of equipment.

2231 Chorale for Majors R
0 Cr. Hrs.

Large select SATB (soprano-alto-tenor-bass) choral ensemble for music majors specializing in the performance of significant choral repertoire representing varied styles, historical periods and languages. School and public performances required. *Prerequisite(s): Approval of Department*

2240 Music Practicum R
1 Cr. Hr.

Music majors may receive credit for practical performance experiences such as performing in a (non-Sinclair) musical, opera, choral organization, etc. Arrangements must be made through department chairperson; only for those students who, due to scheduling impossibilities, cannot participate in Sinclair ensembles at their regularly scheduled times.

2241 Music Practicum for Majors R
0 Cr. Hrs.

Music majors may fulfill requirements for performance experiences such as performing in a (non-Sinclair) orchestra, musical, opera, choral organization, etc. Arrangements must be made through department chairperson; only for those students who, due to scheduling impossibilities, cannot participate in Sinclair ensembles at their regularly scheduled times. *Prerequisite(s): Approval of Department*

2243 Concert Band for Majors R
0 Cr. Hrs.

Concentration on instrumental problems and techniques for music majors. Development of large concert band repertoire. Public performance is a major part of course activities.

2245 Classical Guitar Ensemble for Majors R
0 Cr. Hrs.

The study and performance of selected classical guitar ensemble literature for music majors. The size of the ensemble and the respective backgrounds of its players will determine the performance level of the repertoire. End-of-term performance. *Prerequisite(s): Approval of Department*

2251 Performance Class R
1 Cr. Hr.

Performance repertoire from intermediate to advanced levels on one's instrument. Designed to anticipate and alleviate public performance problems. Emphasizing all aspects of technique and music. Also addressed: sight reading in public, memorization of scores and nervousness/anxiety caused by stage fright. Section 01 - Pianists; Section 02 - Singers; Section 03 - Guitarist *Prerequisite(s): Instructor Approval*

2261 Applied Music Practicum R
2 Cr. Hr.

Applied music study for early-intermediate or advanced-level instrumentalists or singers. Sixty minute lessons for 15 weeks. No student recital or board examination obligations (although recital performance is optional, according to the desire of student.) Indefinitely repeatable. section 01 - piano section 02 - voice section 03 - guitar Additional sections, representing other instruments, added each term as necessary. *Prerequisite(s): Approval of Department*

2500 Applied Piano for Majors I R
2 Cr. Hrs.

Private instruction in Applied Piano for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2500 is the first and second semesters of four required semesters of applied piano study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2231*

2501 Applied Piano for Majors II R
2 Cr. Hrs.

Private instruction in Applied Piano for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2501 is the third and fourth semesters of four required semesters of applied piano study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2231*

2502 Applied Voice for Majors I R
2 Cr. Hrs.

Private instruction in Applied Voice for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2502 is the first and second semesters of four required semesters of applied voice study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2231*

2503 Applied Voice for Majors II R
2 Cr. Hrs.

Private instruction in Applied Voice for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2503 is the third and fourth semesters of four required semesters of applied voice study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2231*

2504 Applied Classical Guitar for Majors I   R   2 Cr. Hrs.

Private instruction in Applied Classical Guitar for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2504 is the first and second semesters of four required semesters of applied classical guitar study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2231 OR MUS 2245*

2505 Applied Classical Guitar for Majors II   R   2 Cr. Hrs.

Private instruction in Applied Classical Guitar for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2505 is the third and fourth semesters of four required semesters of applied classical guitar study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2231 OR MUS 2245*

2506 Applied Flute for Majors I   R   2 Cr. Hrs.

Private instruction in Applied Flute for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2506 is the first and second semesters of four required semesters of applied flute study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2507 Applied Flute for Majors II   R   2 Cr. Hrs.

Private instruction in Applied Flute for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2507 is the third and fourth semesters of four required semesters of applied flute study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2508 Applied Clarinet for Majors I   R   2 Cr. Hrs.

Private instruction in Applied Clarinet for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2508 is the first and second semesters of four required semesters of applied clarinet study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2509 Applied Clarinet for Majors II   R   2 Cr. Hrs.

Private instruction in Applied Clarinet for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2509 is the third and fourth semesters of four required semesters of applied clarinet study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2510 Applied Saxophone for Majors I   R   2 Cr. Hrs.

Private instruction in Applied Saxophone for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2510 is the first and second semesters of four required semesters of applied saxophone study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2511 Applied Saxophone for Majors II   R   2 Cr. Hrs.

Private instruction in Applied Saxophone for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2511 is the third and fourth semesters of four required semesters of applied saxophone study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2512 Applied Oboe for Majors I   R   2 Cr. Hrs.

Private instruction in Applied Oboe for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2512 is the first and second semesters of four required semesters of applied oboe study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2513 Applied Oboe for Majors II   R   2 Cr. Hrs.

Private instruction in Applied Oboe for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2513 is the third and fourth semesters of four required semesters of applied oboe study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2514 Applied Bassoon for Majors I   R   2 Cr. Hrs.

Private instruction in Applied Bassoon for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2514 is the first and second semesters of four required semesters of applied bassoon study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2515 Applied Bassoon for Majors II   R   2 Cr. Hrs.

Private instruction in Applied Bassoon for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2515 is the third and fourth semesters of four required semesters of applied bassoon study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2516 Applied Trumpet for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Trumpet for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2516 is the first and second semesters of four required semesters of applied trumpet study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2517 Applied Trumpet for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Trumpet for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2517 is the third and fourth semesters of four required semesters of applied trumpet study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2518 Applied French Horn for Majors I
R
2 Cr. Hrs.

Private instruction in Applied French Horn for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2518 is the first and second semesters of four required semesters of applied French horn study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2519 Applied French Horn for Majors II
R
2 Cr. Hrs.

Private instruction in Applied French Horn for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2519 is the third and fourth semesters of four required semesters of applied French horn study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2520 Applied Baritone Horn for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Baritone Horn for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2520 is the first and second semesters of four required semesters of applied baritone horn study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2521 Applied Baritone Horn for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Baritone Horn for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2521 is the third and fourth semesters of four required semesters of applied baritone horn study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2522 Applied Trombone for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Trombone for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2522 is the first and second semesters of four required semesters of applied trombone study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2523 Applied Trombone for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Trombone for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2523 is the third and fourth semesters of four required semesters of applied trombone study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2524 Applied Tuba for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Tuba for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2524 is the first and second semesters of four required semesters of applied tuba study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2525 Applied Tuba for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Tuba for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2525 is the third and fourth semesters of four required semesters of applied tuba study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2243*

2526 Applied Violin for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Violin for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2526 is the first and second semesters of four required semesters of applied violin study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2241*

2527 Applied Violin for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Violin for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2527 is the third and fourth semesters of four required semesters of applied violin study. *Prerequisite(s): Approval of Department AND Restricted to Majors Corequisite(s): MUS 2241*

2528 Applied Viola for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Viola for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2528 is the first and second semesters of four required semesters of applied viola study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2241

2529 Applied Viola for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Viola for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2529 is the third and fourth semesters of four required semesters of applied viola study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2241

2530 Applied Cello for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Cello for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2530 is the first and second semesters of four required semesters of applied cello study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2241

2531 Applied Cello for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Cello for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2531 is the third and fourth semesters of four required semesters of applied cello study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2241

2532 Applied String Bass for Majors I
R
2 Cr. Hrs.

Private instruction in Applied String Bass for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2532 is the first and second semesters of four required semesters of applied string bass study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2241

2533 Applied String Bass for Majors II
R
2 Cr. Hrs.

Private instruction in Applied String Bass for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2533 is the third and fourth semesters of four required semesters of applied string bass study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2241

2534 Applied Percussion for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Percussion for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2534 is the first and second semesters of four required semesters of applied percussion study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2243

2535 Applied Percussion for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Percussion for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2535 is the third and fourth semesters of four required semesters of applied percussion study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2243

2536 Applied Organ for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Organ for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2536 is the first and second semesters of four required semesters of applied organ study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2231

2537 Applied Organ for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Organ for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2537 is the third and fourth semesters of four required semesters of applied organ study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2231

2538 Applied Harpsichord for Majors I
R
2 Cr. Hrs.

Private instruction in Applied Harpsichord for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2538 is the first and second semesters of four required semesters of applied harpsichord study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2231

2539 Applied Harpsichord for Majors II
R
2 Cr. Hrs.

Private instruction in Applied Harpsichord for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2539 is the third and fourth semesters of four required semesters of applied harpsichord study. *Prerequisite(s): Approval of Department AND Restricted to Majors*
Corequisite(s): MUS 2231

2600 General Ensemble   R
                           1 Cr. Hr.

General Ensemble exists in order to allow registrants who desire to participate in an ensemble--and who have utilized all of their previous possible registrations for a particular ensemble--the opportunity to continue participation in the ensemble of their choice. General Ensemble is inclusive of Chorale, Chamber Choir, Women's Ensemble, Men's Ensemble, Wind Symphony, Concert Band, and Jazz Ensemble (150 minutes rehearsal/week) as well as Contemporary Gospel Ensemble, Classical Guitar Ensemble, Jazz Combo, Concert Handbell Choir, and Piano Ensemble (100 minutes rehearsal/week). *Prerequisite(s): Approval of Department OR Approval of Instructor*

Nursing (NSG)

1200 Introduction to Nursing
                           1 Cr. Hr.

Explores nursing as a personal career choice. An overview of practice areas, essential functions, basic ethical and legal responsibilities and professional behaviors expected of registered nurses and nursing students. Topics include history of nursing practice, the art and science of nursing, legal and ethics, professional behaviors, and basic medical terminology. This is a fully online course. *Prerequisite(s): DEV 0035*

1400 Health & Illness I: Foundational Concepts in Nursing   7 Cr. Hrs.

Introduces program and foundational nursing concepts and nursing process. Utilizes knowledge from general education courses to assist students to plan and implement nursing care of individuals across the lifespan. Develops communication, assessment and basic psychomotor skills. Total clock hours for theory: 37.5; Total planned clinical hours: 56.25; total planned lab hours: 93.75; Clinical and lab hours combined: 150 hours. *Prerequisite(s): ALH 1101 AND BIO 1141 AND ENG 1101 AND MAT 1130 AND NSG 1200 AND Restricted to Majors*

1450 Professional Nursing I: Introduction to the Role of the Professional Nurse   2 Cr. Hrs.

Introduces the scope and practice of the nursing profession. Examines the role of the nurse in the health care team including communication and collaboration. Applies basic legal, ethical, and safety principles to the practice of nursing. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements. *Prerequisite(s): ALH 1101 AND BIO 1141 AND ENG 1101 AND NSG 1200 AND (MAT 1130 or higher level MAT course) AND Restricted to Majors*

1500 Transition from Licensed Practical Nurse to Registered Nurse
                           3 Cr. Hrs.

Prepares for advanced placement into the RN program with foundational nursing concepts. Utilizes knowledge from general education courses and previous nursing education to care for individuals and families experiencing prevalent health issues across the lifespan. Focuses on scope of practice, critical thinking and refinement of psychomotor skills. Total clock hours for theory: 18.75; Total planned clinical hours: 30; Total planned lab hours: 26.25; Clinical and lab hours combined: 56.25 hours. *Prerequisite(s): Restricted to Majors*

1600 Health & Illness II: Health & Wellness Concepts   7 Cr. Hrs.

Applies nursing concepts and utilizes the nursing process in health promotion and nursing care of individuals and families experiencing prevalent health issues across the lifespan, including introduction to care of the child-bearing family. Total clock hours for theory: 37.5; Total planned clinical hours: 112.5; Total planned lab hours: 37.5; Clinical and lab hours combined: 150 hours. *Prerequisite(s): NSG 1500 OR NSG 1400 AND NSG 1450 AND Restricted to Majors*

1650 Professional Nursing II: Healthcare System Concepts
                           2 Cr. Hrs.

Explores current federal and state laws, practice standards and organizational regulations that impact healthcare delivery and nursing practice. Identifies the importance of economic resources, ethical principles, and evidence-based practice in improving quality and safety to achieve optimal patient outcomes in a variety of healthcare settings. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements. *Prerequisite(s): NSG 1500 OR (NSG 1400 AND NSG 1450) AND Restricted to Majors*

1700 Health & Illness Concepts I & II   7 Cr. Hrs.

Advanced placement for RN pathway containing first year nursing concepts and exemplars of health and illness across the life span. Uses knowledge from preceding LPN nursing education, or military equivalent training, and general education courses to care for individuals, families, and populations experiencing health issues across the lifespan. Focuses on RN scope of practice, clinical judgement and refinement of psychomotor skills. A current Ohio LPN license or military training transcripts or military rank equivalency required. Total clock hours for theory: 37.5; Total planned clinical hours: 112.5; Total planned lab hours: 37.5; Clinical and lab hours combined: 150 hours. *Prerequisite(s): BIO 1141 AND ALH 2202 AND ENG 1101 AND MAT 1130 AND Restricted to Majors Note: Permission needed from ALH Chair and ALH 2202 faculty for students to take BIO 1141 and ALH 2202 concurrently*

1750 Professional Nursing Practice   2 Cr. Hrs.

Using LPN or military equivalent experience as a base, students learn about the scope and practice of the registered nursing profession. Examines the role of the nurse in the health care team including communication and collaboration. Applies legal, ethical, and safety principles to the practice of nursing. Explores current federal and state laws, practice standards and organizational regulations that impact healthcare delivery and nursing practice. Identifies the importance of economic resources, ethical principles, and evidence-based practice in improving quality and safety to achieve optimal patient outcomes in a variety of healthcare settings. Ohio LPN license or military training transcripts, or military rank equivalency required. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements. *Prerequisite(s): BIO 1141 AND ALH 2202 AND ENG 1101 AND MAT 1130 AND Restricted to Majors. Note: Permission needed from ALH Chair and ALH 2202 faculty for students to take BIO 1141 and ALH 2202 concurrently*

2400 Health & Illness III: Health & Wellness Concepts   7 Cr. Hrs.

Integrates nursing concepts and utilizes the nursing process to plan and provide nursing care to individuals and families experiencing complex physiologic and psychosocial health issues across the lifespan. Develops care competencies to enhance patient outcomes in a variety of settings. Total clock hours for theory: 37.5; Total planned clinical hours: 112.5; total planned lab hours: 37.5; Clinical and lab hours combined: 150 hours. *Prerequisite(s): NSG 1600 AND NSG 1650 AND Restricted to Majors*

2450 Professional Nursing III: Leadership & Management of Care   2 Cr. Hrs.

Facilitates development of leadership and management skills, with an emphasis on prioritization, delegation, supervision, and collaboration with the health care team. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements. *Prerequisite(s): NSG 1600 AND NSG 1650 AND Restricted to Majors*

2600 Concept Synthesis   8 Cr. Hrs.

Synthesizes professional nursing and health and illness concepts to manage and plan collaborative care for individuals and families in a variety of settings. Facilitates the transition from student to beginning associate degree nurse, managing the care of a group of patients with the healthcare team. Total clock hours for theory: 37.5; Total planned clinical hours: 150; Total planned lab hours: 37.5; Clinical and lab hours combined: 187.5. *Prerequisite(s): NSG 2400 AND NSG 2450 AND Restricted to Majors*

Industrial Engineering Technology (OPT)

1100 Tooling & Machining Metrology   2 Cr. Hrs.

Various measurement techniques involving shop measuring instruments; correct use and care of basic inspection instruments; interpretation of blueprints as well as machined products related to engineering needs. Introduction to Coordinate Measuring Machines (CMM). One classroom, three lab hours per week.

1101 Introduction to Industrial & Systems Engineering Technology   3 Cr. Hrs.

Introduction to operations process design, process improvement and the skills, methods and techniques used to accomplish this; the interactions and relationships between people and process change and the interactions between different processes in organizations. Two classroom, two lab hours per week.

1110 Operations Work Measurement & Ergonomics   3 Cr. Hrs.

The application of fundamentals of work measurement techniques including taking time studies, calculating standard times, estimating product costs, performing work sampling and Methods Time Measurement (MTM). Also the understanding of how the human body reacts to loads and stresses and how poor work motions and workplace layouts can contribute to this. Two classroom, two lab hours per week.

1112 World Class Quality Systems & Procedures   3 Cr. Hrs.

Improve customer relations, measure products and processes, analyze current process control and capability and define and audit the quality management system. Two classroom, two lab hours per week.

1113 Coordinate Measurement   3 Cr. Hrs.

Course will prepare students to use and program coordinate measurement machines, apply Geometric Dimensioning and Tolerancing (GD&T) principles, use advanced operating techniques for a servo driven coordinate measuring device. Two classroom, two lab hours per week. *Prerequisite(s): OPT 1100*

1125 World Class Operations   3 Cr. Hrs.

An overview of world-class operations principles, illustrating the many inter-related functions within successful companies, including design, planning, operations, sales and customer support. Additional focus on modern operations processes found in service industries, healthcare, transportation, food service, financial and retail. Special emphasis on resource planning and quality assurance.

1126 Supervision, Team Leadership & Project Management   3 Cr. Hrs.

Introduction to the fundamental techniques of industrial supervision and team leadership and the effective management of projects. Includes the five functions of supervision, team leadership functions, leadership styles and the Project Management Body of Knowledge.

1130 Lean Operations & Continuous Improvement   3 Cr. Hrs.

Lean operations principles including lead time reduction, containerization, module design, standardized work and Takt time, Kanban, 5S's and Office Lean. Two classroom, two lab hours per week. *Prerequisite(s): OPT 1101*

1201 Introduction to Manufacturing Safety   2 Cr. Hrs.

This course introduces the concepts and practices of safety in advanced manufacturing, including good practices, hazards, prevention, and corrective action. Students will have the opportunity to earn the Safety certification through the Manufacturing Skills Standards Council (MSSC) as part of their Certified Production Technician (CPT) program.

1202 Quality Practices & Measurement for Manufacturing   2 Cr. Hrs.

An introduction to controlling and improving quality in a manufacturing setting, including the concepts of measurement, calibration, auditing, inspection, and continuous improvement. Explores ways that manufacturers use data and analysis to improve quality. Students will have the opportunity to earn the Quality Practices and Measurement certification through the Manufacturing Skills Standards Council (MSSC) as part of the Certified Production Technician (CPT) program.

1203 Manufacturing Processes & Production   2 Cr. Hrs.

This course introduces the manufacturing processes and production systems commonly used in modern industry. Additional emphasis on communication, teamwork, planning, documentation, and coordination. Students will have the opportunity to earn the Manufacturing Processes and Production certification through the Manufacturing Skills Standards Council (MSSC) as part of their Certified Production Technician (CPT) program.

SINCLAIR COLLEGE

1204 Maintenance Awareness for Manufacturing 2 Cr. Hrs.

Awareness of basic maintenance requirements of electrical, pneumatic, hydraulic, and mechanical systems utilized in modern manufacturing. Includes the monitoring of key indicators and recognizing potential issues. Students will have the opportunity to earn the Maintenance Awareness certification through the Manufacturing Skills Standards Council (MSSC) as part of their Certified Production Technician (CPT) program.

2201 Statistical Process Control 3 Cr. Hrs.

Emphasis on process capability, control charts, techniques and analysis. This is followed by more advanced study of reliability, quality function deployment, design of experiments, failure mode effects analysis and quality costs. Two classroom, two lab hours per week.

2205 Manufacturing Processes 3 Cr. Hrs.

Students will gain a basic understanding of manufacturing processes within a safe working environment. *Prerequisite(s): OPT 1101*

2207 Operations Systems Analysis 3 Cr. Hrs.

Computer simulation to solve manufacturing and nonmanufacturing problems. Involves actual programming of computer models consisting of labor, material, processing times and resources to predict future outcome of different alternatives. *Prerequisite(s): OPT 1101*

2208 Engineering Technology Economics & Cost Analysis 3 Cr. Hrs.

Basic economic cost concepts, decisions, analysis and evaluations as applied to engineering design, production, maintenance and quality control. *Prerequisite(s): MET 1131 OR (MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1460) OR Approval of Department*

2216 Work Flow Layout & Efficiency 3 Cr. Hrs.

Students will gain a basic understanding of facility planning, layout strategies and material handling techniques within a safe working environment. Two classroom, two lab hours per week.

2240 Six Sigma: Green Belt 3 Cr. Hrs.

An applied introduction to Six Sigma using problem-solving tools, concepts and methodology to improve customer satisfaction. Includes application of Green Belt-based tools to reduce costs and improve business processes. Two classroom, two lab hours per week.

2251 Supply Chain Operations & Logistics 3 Cr. Hrs.

In-depth study of the technical and business functions of operations logistics, materials procurement and management and supply chain development and management in manufacturing, service industries and government in a global economy.

2270 Industrial & Systems Engineering Technology Internship 1 - 4 Cr. Hrs.

Students earn credit toward degree requirements for work co-op or internship work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and /or projects each semester. Ten co-op hours per week per credit hour. *Prerequisite(s): Approval of Department*

2780 Industrial & Systems Engineering Technology Capstone 3 Cr. Hrs.

Assessment of achievement by Industrial & Systems Engineering students in attaining program-related outcomes by completing a project demonstrating principles and practices of the major. *Prerequisite(s): Approval of Department*

Occupational Therapy Assistant (OTA)

1111 Introduction to Occupational Therapy Assistant 2 Cr. Hrs.

History, philosophy, ethics and definitions of occupational therapy; overview of occupational therapy practice areas; differences between occupational therapists and occupational therapy assistants; functions of professional and regulatory agencies; exploration of learning experiences within the occupational therapy assistant program curriculum; basic prefixes, roots and suffixes; terminology and standard abbreviations required for understanding of the language used in medicine. One classroom, two lab hours per week.

1211 Occupational Therapy Assistant Foundations I 3 Cr. Hrs.

Introduction to occupational therapy and people with physical, psychosocial and/or developmental disabilities in a non-traditional community-based setting with supervision provided by a licensed Occupational Therapy Assistant. Focuses on activity implementation, observation skills, professionalism, therapeutic use of self and occupational therapy practice framework language. Two classroom, three clinical hours per week. *Prerequisite(s): OTA 1111 AND Restricted to Majors*

1212 Functional Anatomy 2 Cr. Hrs.

Functional Anatomy of neurological and musculoskeletal systems. Analysis of nervous systems, major joint and muscle groups involved in daily living tasks such as bathing, dressing, grooming, eating, cooking, and housekeeping. *Prerequisite(s): OTA 1111 AND Restricted to Majors*

1213 Occupational Therapy & Adults with Physical Dysfunction 2 Cr. Hrs.

Effect of the features of major diseases, injuries, and disorders on adult occupational performance. Physical dysfunction theories, models of practice, frames of reference that provide the foundation of occupational therapy. Screening and evaluation of occupational performance affected by physical dysfunction. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers. *Prerequisite(s): OTA 1111 AND Restricted to Majors Corequisite(s): OTA 1214*

1214 Occupational Therapy & Adults with Physical Dysfunction Lab 2 Cr. Hrs.

Focus on physical dysfunction intervention to increase independence in areas of occupation. Screening and evaluation of occupational performance affected by physical dysfunction. Includes use of occupations for purpose of physical dysfunction assessments and interventions. Six lab hours per week. *Prerequisite(s): OTA 1111 AND Restricted to Majors Corequisite(s): OTA 1213*

1311 Occupational Therapy Assistant Foundations II
3 Cr. Hrs.

Continue refining definition of occupational therapy and experience with people with physical, psychosocial and/or developmental disabilities in a non-traditional community-based setting under the supervision of a licensed Occupational Therapy Assistant. Focuses on occupational therapy documentation, observation skills, professionalism and activity analysis. Two classroom, three clinical hours per week. *Prerequisite(s): OTA 1211 AND Restricted to Majors*

1312 Occupational Therapy & Human Development 2 Cr. Hrs.

Exploration of human development from conception to death including developmental stages, theories supporting human development, occupational engagement throughout the lifespan and cultural impact on human development. *Prerequisite(s): OTA 1211 AND Restricted to Majors*

1313 Occupational Therapy & Adults with Neurological Dysfunction 2 Cr. Hrs.

Effect of the features of major neurological diseases, injuries and disorders on adult occupational performance. Neurological Dysfunction theories, models of practice, frames of reference that provide the foundation of Occupational Therapy. Screening and evaluation of occupational performance affected by neurological dysfunction. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers. *Prerequisite(s): OTA 1213 AND Restricted to Majors*

1314 Occupational Therapy & Neurological Dysfunction Lab 2 Cr. Hrs.

Focus on neurological dysfunction intervention to increase independence in areas of occupation. Screening and evaluation of occupational performance affected by neurological dysfunction. Includes use of occupations for purpose of neurological dysfunction assessments and interventions. Six lab hours per week. *Prerequisite(s): OTA 1214 AND Restricted to Majors*
Corequisite(s): OTA 1313

1315 Therapeutic Use of Self 2 Cr. Hrs.

Personal development, including development of the self as an effective therapeutic tool, exploration of values, personal and cultural attitudes, sensitivity to cultural differences, group process and ethical decision making. One classroom, two lab hours per week. *Prerequisite(s): OTA 1111 AND Restricted to Majors*

2412 Occupational Therapy Assistant & Pediatrics 1 Cr. Hr.

Effect of the features of major diseases, injuries, and disorders that affect pediatric population's occupational performance. Pediatric Function and Dysfunction theories, models of practice, frames of reference that provide the foundation of Occupational Therapy. Screening and evaluation of occupational performance affected by dysfunction in the pediatric population. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers. Pediatric medical and educational practice settings. *Prerequisite(s): OTA 1313 AND Restricted to Majors*
Corequisite(s): OTA 2413

2413 Occupational Therapy Assistant & Pediatrics Lab 2 Cr. Hrs.

Focus on intervention to increase independence in areas of occupation with pediatric population. Screening and evaluation of occupational performance affected by dysfunction. Includes use of occupations for purpose of assessments and interventions with infants, children and adolescents. Six lab hours per week. *Prerequisite(s): OTA 1314 AND Restricted to Majors*
Corequisite(s): OTA 2412

2414 Occupational Therapy Assistant & Psychosocial Dysfunction 1 Cr. Hr.

Effect of the features of major psychosocial diseases and disorders on occupational performance. Psychosocial dysfunction theories, models of practice, frames of reference that provide the foundation of occupational therapy. Screening and evaluation of occupational performance affected by psychosocial dysfunction. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers. *Prerequisite(s): OTA 1213 AND Restricted to Majors*
Corequisite(s): OTA 2415

2415 Occupational Therapy Assistant & Psychosocial Dysfunction Lab 2 Cr. Hrs.

Focus on psychosocial dysfunction intervention to increase independence in areas of occupation. Screening and evaluation of occupational performance affected by psychosocial dysfunction. Includes use of occupations for purpose of psychosocial dysfunction assessments and interventions. Role of the Occupational Therapy Assistant in a variety of mental health settings and in the therapeutic group process. Six lab hours per week. *Prerequisite(s): OTA 1214 AND Restricted to Majors*
Corequisite(s): OTA 2414

2416 Occupational Therapy Assistant Level 1 Fieldwork
3 Cr. Hrs.

Level 1 Fieldwork integrates the academic classroom instruction and clinical experiences in an Occupational Therapy setting(s) under the direct supervision of an Occupational Therapy practitioner and coordinated by the Academic Fieldwork Educator. Two classroom, seven clinical hours per week. *Prerequisite(s): OTA 1311 AND Restricted to Majors*

2511 Occupational Therapy Assistant Level 2 Fieldwork A
2 Cr. Hrs.

First of two full-time 8-week assignments of advanced clinical experience under the supervision of a licensed Occupational Therapy Practitioner which must be completed before the student is eligible for national certification examination. Fourteen clinical hours per week. *Prerequisite(s): OTA 2416 AND Restricted to Majors*
Corequisite(s): OTA 2523

2512 Occupational Therapy Assistant Level 2 Fieldwork B
2 Cr. Hrs.

Second of two 8-week full-time assignments of advanced clinical experience under the supervision of a licensed Occupational Therapy Practitioner which must be successfully completed before the student is eligible for national certification examination. Fourteen clinical hours per week. *Prerequisite(s): OTA 2511 AND Restricted to Majors*
Corequisite(s): OTA 2524

2523 Occupational Therapy Assistant Clinical Issues A 1 Cr. Hr.

Facilitation of increased practical knowledge and problem-solving skills to address professional, ethical, legal and social issues within clinical practice. *Prerequisite(s): OTA 2416 AND Restricted to Majors Corequisite(s): OTA 2511*

2524 Occupational Therapy Assistant Clinical Issues B 1 Cr. Hr.

Facilitation of discussion on issues related to the transition from student to entry-level Occupational Therapy Assistant. Advanced exploration of legal and ethical issues related to occupational therapy practice. *Prerequisite(s): OTA 2523 AND Restricted to Majors Corequisite(s): OTA 2512*

Legal Studies (PAR)

1101 Introduction to Legal Studies 3 Cr. Hrs.

The paralegal's role in the legal system is introduced. The function of case law, statutes, administrative regulations, constitutions and court rules are explored. *Prerequisite(s): DEV 0035 AND Restricted to Majors Corequisite(s): PAR 1102 AND PAR 1103*

1102 Legal Technology 1 Cr. Hr.

This course develops students' skills in introduction to the technology used in law firm environments. *Prerequisite(s): Restricted to Majors Corequisite(s): PAR 1101 AND PAR 1103*

1103 Litigation 3 Cr. Hrs.

Introduction to the civil system, courts, torts and civil pleadings. The student will develop skills in drafting basic pleadings. Note: This course must be taken concurrently with PAR 1101 and PAR 1102. *Prerequisite(s): Restricted to Majors Corequisite(s): PAR 1101 AND PAR 1102*

1201 Legal Research & Writing 3 Cr. Hrs.

This course develops student skills in researching Ohio's legal resources, writing legal memos and letters and using the Ohio Manual of Citations. Note: This may be taken concurrently with PAR 1103. *Prerequisite(s): PAR 1101 AND PAR 1102 AND Restricted to Majors*

1202 Advanced Legal Technology 1 Cr. Hr.

This course develops students' skills in use of software in a legal environment, including spreadsheets, databases, data backup media, group calendaring and research on the Internet. *Prerequisite(s): PAR 1102 AND Restricted to Majors*

1203 Advanced Litigation 3 Cr. Hrs.

The paralegal's role in the litigation process, from pleadings through discovery and trial. This course develops student paralegal skills in drafting pleadings, use of discovery tools and litigation software. *Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors*

2301 Advanced Legal Research & Writing 3 Cr. Hrs.

Develops skills introduced in Legal Research & Writing. This course covers research in federal and national legal resources, writing trial briefs, writing research memoranda and letters and using a citations manual. *Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1201 AND Restricted to Majors*

2302 Family Law 3 Cr. Hrs.

This course develops student paralegal skills in preparation of documents in a domestic relations practice, including pleadings and forms. *Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors*

2303 Probate Law 3 Cr. Hrs.

Summary and full administration of probate estates, adoptions, guardianships, name changes and minor settlements. *Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors*

2401 Legal Studies Internship 2 Cr. Hrs.

Application of skills in a legal environment. Professionalism, resumes and interviewing skills. One classroom, seven practicum hours per week. *Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors AND Approval of Department*

2507 Legal Interviewing Skills 1 Cr. Hr.

This course develops student paralegal skills in client and witness interviews, including using interpersonal skills and identifying ethical concerns. *Prerequisite(s): PAR 1103 AND Restricted to Majors*

2510 Criminal Law 3 Cr. Hrs.

This course develops students paralegal skills in analyzing Ohio criminal law, Ohio criminal procedure, and Ohio juvenile law and preparing documents utilized in both criminal and juvenile trial proceedings. *Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 with a grade of C or better AND Restricted to Majors*

2511 Online Legal Research 1 Cr. Hr.

Advanced use of computer-assisted research to find federal and state statutory and case law. Analysis of law. Students use LEXIS-NEXIS, and free legal resources. *Prerequisite(s): PAR 1201 AND Restricted to Majors*

Physical Education (PED)

1101 Introduction to Swimming 1 Cr. Hr.

Introduction to Swimming introduces elementary aquatic skills, basic swimming strokes and personal water safety for the entry-level student. This course includes active participation and academics. Two lab hours per week.

1102 Fitness Swimming 1 Cr. Hr.

Fitness Swimming provides exercise for the intermediate and advanced swimmer. The course emphasizes stroke refinement, distance swimming and training techniques while improving cardiorespiratory endurance. This course includes both active participation and academics. Two lab hours per week. *Prerequisite(s): PED 1101*

1103 Beginning Scuba Diving 1 Cr. Hr.

Beginning Scuba Diving requires the students to develop physical skills and an understanding of diving physics and physiology, safe use of diving equipment, communications, safety rules and problem management. Open-water certification is available at additional cost. This course includes both active participation and academics. Two lab hours per week.

1104 Advanced Scuba Diving 1 Cr. Hr.

Advanced Scuba Diving requires the students to further develop their diving skills. Fundamental skills will be reviewed. Additional specialty skills will be included. Advanced Open-Water certification is available at additional cost. This course includes both active participation and academics. Two lab hours per week. *Prerequisite(s): PED 1103 OR Approval of Department*

SINCLAIR C O L L E G E

1105 Lifeguard Training 3 Cr. Hrs.

Successful completion of this course results in the following certifications: Lifeguard Training/First Aid, CPR/AED for the Professional Rescuer and Bloodborne Pathogens: Preventing Disease Transmission. Two classroom, two lab hours per week. *Prerequisite(s): PED 1102*

1106 Water Safety Instructor 3 Cr. Hrs.

Course covers methods and techniques of teaching swimming. Students who successfully fulfill course requirements are eligible for the American Red Cross Water Safety Instructor and Basic Water Rescue certifications. Two classroom, two lab hours per week. *Prerequisite(s): PED 1101*

1107 Golf 1 Cr. Hr.

Golf introduces students to the following topics: history, rules and regulations of the game, etiquette, club selection, techniques, swing analysis and playing strategies. This course includes both active participation and academics. Two lab hours per week.

1109 Bowling 1 Cr. Hr.

Bowling introduces students to the following topics: history, rules and regulations of the game, etiquette, ball selection, techniques and game strategies. This course includes both active participation and academics. Two lab hours per week.

1111 Volleyball 1 Cr. Hr.

Volleyball introduces students to the following topics: history, rules and regulations of the game, etiquette, skills and team strategies. This course includes both active participation and academics. Two lab hours per week.

1113 Basketball 1 Cr. Hr.

Basketball introduces the students to the following topics: history, rules and regulations of the game, etiquette, skills and team strategies. This course includes both active participation and academics. Two lab hours per week.

1115 Tennis I 1 Cr. Hr.

Tennis I is designed to offer the fundamentals of tennis. Basic rules and regulations of singles and doubles, stroke technique, parts of the court along with singles and doubles playing strategies will be the focus. This course includes both active participation and academics. Two lab hours per week.

1116 Tennis II 1 Cr. Hr.

Tennis II is designed for students who already have the fundamentals of tennis. Strategies and training techniques are emphasized to take the player to the next level of competition. This course includes both active participation and academics. Two lab hours per week. *Prerequisite(s): PED 1115 OR Approval of Department*

1117 Social Dance 1 Cr. Hr.

Social Dance introduces the fundamentals of popular social dances that include ballroom, country western and line. Basic skills, styles, techniques and movement patterns will be emphasized. This course includes both active participation and academics. Two lab hours per week.

1119 Martial Arts 1 Cr. Hr.

Martial Arts include Judo, Karate and other forms. The philosophy and skills related to these arts will be introduced. Mental and physical fundamentals, skills and techniques will be emphasized. This course includes both active participation and academics. Two lab hours per week.

1121 Fencing 1 Cr. Hr.

Fencing introduces the students to the following topics: history, rules and regulations of the sport, etiquette, skills, maneuvers and strategies. This course includes both active participation and academics. Two lab hours per week.

1201 Physical Fitness 1 Cr. Hr.

Physical Fitness is designed to offer a variety of fitness components; cardiorespiratory endurance, muscular strength and endurance and flexibility. Sections will focus on selected fitness programming; Nia Technique, Boot Camp, TRX Training, Functional Fitness and other programs. This course includes both active participation and academics. Two lab hours per week.

1203 Strength Training 1 Cr. Hr.

Strength Training introduces basic and intermediate strategies to develop an appropriate individual strength training program. Emphasis will be placed on understanding basic program design, implementing and execution of basic strength exercises. This course will include both active participation and academics. Two lab hours per week.

1205 Flexibility Fitness 1 Cr. Hr.

Flexibility Fitness introduces basic concepts for a safe and effective flexibility program. Proper stretching techniques along with exercises that improve flexibility, strength, balance and relaxation will be incorporated. This course includes both active participation and academics. Two lab hours per week.

1207 Yoga 1 Cr. Hr.

Yoga introduces the student to the philosophy and principles of yoga including coordination, strength, flexibility and meditation/relaxation. This course includes both active participation and academics. Two lab hours per week.

1209 Pilates 1 Cr. Hr.

Pilates is a specific body conditioning method. Pilates strengthens muscles, improves posture, balance and flexibility, and concentrates on training the mind and body to work together toward the goal of overall health and fitness. This course includes both active participation and academics. Two lab hours per week.

1211 Aquatic Exercise 1 Cr. Hr.

Aquatic Exercise provides cardiorespiratory endurance, muscular strength, endurance and flexibility workouts in the water. A variety of equipment and programming will be introduced to enhance the workout. Both swimmers and nonswimmers can participate in this course. This course includes both active participation and academics. Two lab hours per week.

1213 Aerobic Conditioning 1 Cr. Hr.

Aerobic conditioning is an energetic class composed of fitness techniques for cardiorespiratory endurance, muscular strength and endurance, coordination and agility. The class provides a workout for all fitness levels. This course includes both active participation and academics. Two lab hours per week.

1215 Group Strength Training 1 Cr. Hr.

Group Strength Training incorporates both strength and endurance exercises using various types of equipment. Choreographed routines that incorporate different types of lifting techniques are performed. Emphasis is placed on correct body placement and proper technique. This course includes both active participation and academics. Two lab hours per week.

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1217 Fitness Walking & Conditioning 1 Cr. Hr.

Fitness Walking and Conditioning is designed to introduce the proper walking techniques used for fitness. Programming will incorporate interval training, strengthening and stretching exercises along with monitoring of intensity. Various types of equipment will be introduced to enhance the workout experience. This course includes both active participation and academics. Two lab hours per week.

1219 Tai Chi 1 Cr. Hr.

Tai Chi is an ancient art that promotes serenity through gentle movements that connect the mind and body. The exercises are performed in a series of postures or movements in a slow graceful manner. This course includes both active participation and academics. Two lab hours per week.

1221 Core Conditioning 1 Cr. Hr.

Core Conditioning provides fitness techniques with an emphasis on the deepest muscles of the trunk, improving posture and coordination through stabilization and strength with a cardiorespiratory endurance component. This course includes both active participation and academics. Two lab hours per week.

1223 Indoor Group Cycling 1 Cr. Hr.

Indoor Group Cycling provides a group cardiorespiratory endurance workout. Proper seat setup, cycling techniques and body positioning will be emphasized. This course includes both active participation and academics. Two lab hours per week.

Philosophy (PHI)

2204 Great Books: Philosophy 3 Cr. Hrs.

Introduction to selected great books in the history of Western Philosophy. Three eras will be introduced (ancient/medieval, modern and contemporary) and studied within their respective historical contexts.

2205 Introduction to Philosophy 3 Cr. Hrs.

Basic nature of philosophy, its relationship to physical and social sciences and theology and its value to the individual.

2206 Introduction to Ethics 3 Cr. Hrs.

Historical inquiry into the major concepts and attitudes of moral and ethical theory in Western society, emphasizing the role of human responsibility and the conditions for making ethical judgments.

2207 Logic 3 Cr. Hrs.

Principle elements in deductive and inductive logic. Analysis of three acts of the intellect and the laws of reasoning. Application of principles to specific cases.

2208 Symbolic Logic 3 Cr. Hrs.

This course explores techniques in logical analysis using both philosophical and mathematical processes. Students will focus on constructing and evaluating deductive arguments, engage in symbolic translation, recognize formal argument forms, use truth-tables to analyze statements and arguments, conduct proofs, and learn and apply the rules of sentential and predicate logic. *Prerequisite(s): DEV 0035*

Physics (PHY)

1100 Introduction to Physics 4 Cr. Hrs.

A survey of motion, forces, energy, thermodynamics, properties of matter, electricity and magnetism for nonscience majors. Three classroom, three lab hours per week. *Prerequisite(s): MAT 0100 or MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445 Corequisite(s): PHY 1110*

1106 Physics for Technology 3 Cr. Hrs.

Survey of conceptual physics for technology majors. Topics include motion, forces, energy, electricity, magnetism, waves, sound, light, atomic structure and emission and absorption of radiation. Two classroom, two lab hours per week. *Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445 Corequisite(s): PHY 1107*

1107 Lab for Physics for Technology 0 Cr. Hrs.

Corequisite(s): PHY 1106

1110 Lab for Introduction to Physics 0 Cr. Hrs.

Corequisite(s): PHY 1100

1141 College Physics I 4 Cr. Hrs.

Algebra-based university-parallel sequence in mechanics, including vectors, statics, work and energy, momentum, rotational motion, elasticity, fluids and thermodynamics. Three classroom, three lab hours per week. *Prerequisite(s): MAT 1290 OR MAT 1470 OR MAT 1570 OR MAT 1580*

1142 College Physics II 4 Cr. Hrs.

Algebra-based university-parallel course in oscillations, waves, sound, optics, electricity, magnetism and electromagnetism. Three classroom, three lab hours per week. *Prerequisite(s): PHY 1141*

2201 General Physics I 5 Cr. Hrs.

Fundamentals of mechanics including kinematics, dynamics, work and energy, momentum, oscillations, gravity, fluids, waves and sound, thermodynamics and kinetic theory, using calculus as appropriate. Four classroom, three lab hours per week. *Prerequisite(s): MAT 2270 Corequisite(s): PHY 2207*

2202 General Physics II 5 Cr. Hrs.

Electrostatics, DC conduction and circuits, magnetism, electromagnetic induction, quantum mechanics, optics and special relativity. Calculus used extensively. Four classroom, three lab hours per week. *Prerequisite(s): PHY 2201 AND MAT 2280 Corequisite(s): PHY 2208*

2203 Introduction to Modern Physics 3 Cr. Hrs.

Introduction to the experimental and theoretical basis of 20th century ideas in physics including relativity, quantum mechanics, atomic, molecular and solid state physics, nuclear structure, particle physics and cosmology. Calculus used extensively. *Prerequisite(s): PHY 2202 AND MAT 2280*

2207 Lab for General Physics I 0 Cr. Hrs.

Corequisite(s): PHY 2201

2208 Lab for General Physics II 0 Cr. Hrs.

Corequisite(s): PHY 2202

2210 MATLAB for Scientists & Engineers 3 Cr. Hrs.

Introduction to problem solving and programming using MATLAB. Topics include the MATLAB desktop, arrays, graphics, basic programming concepts and structures such as logical and relational operators, control flow statements, M files, functions and object oriented programming. Applications will be chosen from the sciences and engineering. *Prerequisite(s): MAT 1470*

2780 Scientific Thought & Method 3 Cr. Hrs.

Exploration of methods employed in the natural sciences primarily through an undergraduate research project designed to illustrate scientific thinking and related mathematical skills especially as they apply to physics. Intended for physics majors. Two classroom, two lab hours per week. *Prerequisite(s): PHY 2201 AND Restricted to Majors*

Political Science (PLS)

1120 American Federal Government 3 Cr. Hrs.

American political system at the national level, including process of government; democratic theory and development of the U. S. Constitution; citizen participation through voting; interest groups and political parties; structure, functions and powers of legislative, executive and judicial branches; issues of civil liberties and equal rights.

1232 State & Local Government 3 Cr. Hrs.

The study of state and local governments (with emphasis on Ohio), organizational structures of state and local governments, state constitutions, county and city charters, state and local government powers and programs, financing, and taxation, and trends in government programs are all documented and analyzed.

2200 Political Life, Systems & Issues 3 Cr. Hrs.

Basic political and government concepts and systems, including ideologies and comparative political systems; current political issues in Asia, Africa, Europe, Latin America, along with United States interests and policy options.

2220 International Relations 3 Cr. Hrs.

Principles and techniques of international politics, including theories, organizations and different world perspectives.

2860 Model UN/International Issues 3 Cr. Hrs.

History and structure of the United Nations with an in-depth look at selected current world issues; participation in Model UN simulations and opportunity to attend the Dayton Model United Nations Conference and/or other Model UN conferences.

Prior Learning Assessment (PRL)

1130 ATS/AIS Degree Development 1 Cr. Hr.

Development of the individual degree plan of study to be followed for successful completion of the ATS or AIS degree. *Prerequisite(s): Approval of Prior Learning Assessment Coordinator*

2700 Prior Learning Internship R 1 - 6 Cr. Hrs.

Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. *Prerequisite(s): Approval of Department*

2780 Study Abroad Experience R 1 Cr. Hr.

Provides a structured cross-cultural experience, including pre-departure cultural orientation, in-country immersion experience and culminating project. Exposes students to the culture of a specific country or region outside of the U.S. which may include geography, history, religion, philosophy, literature, fine arts, anthropology, food, language and other relevant topics. Includes a short-term study abroad experience with additional fees for travel. *Prerequisite(s): Approval of International Education Office AND Approval of a study abroad application, including references and a GPA of at least 2.0. Must have a passport or must show evidence of having made an application for a passport.*

Psychology (PSY)

1100 General Psychology 3 Cr. Hrs.

University-parallel course covering history and systems of psychology, behavioral research methods, physiology of behavior, sensation, perception, learning, memory, consciousness, cognition, personality, lifespan development, gender, social psychology, motivation, emotion, stress, mental disorders and therapies. *Prerequisite(s): DEV 0035*

1160 Black Psychology 3 Cr. Hrs.

Multidisciplinary study of theories, cultural themes and psychological constructs used to further promote understanding of thoughts, feelings and behaviors of Black Americans.

2126 Stress Management 3 Cr. Hrs.

Application of diverse stress management techniques. Topics covered include assertiveness, stress-related personality factors, holistic health, relaxation techniques, communication patterns, cognitive restructuring, and time management. *Prerequisite(s): PSY 1100*

2180 Psychology of Gender 3 Cr. Hrs.

An introduction to the basic theories and principles of the psychology of gender in a multicultural context with emphasis on application of social psychology principles to professional and personal awareness. Gender perspectives are considered in a multicultural context. Topics include gender stereotypes and social constructions, theories of gender development, biological and cognitive differences, and implications of gender for work, family, and mental and physical health. *Prerequisite(s): PSY 1100*

2200 Lifespan Human Development 3 Cr. Hrs.

Research and theory concerning the physical, cognitive and social development of a person from conception to death, including prenatal and child development, adolescence, adult life crises, marriage, family, work, leisure and senescence. *Prerequisite(s): PSY 1100*

2205 Child Development 3 Cr. Hrs.

Research and theory concerning the physical, cognitive and psychosocial development of children from conception to puberty. Covers the impact of genetic, prenatal and environmental factors and challenges appropriate to this age range. *Prerequisite(s): PSY 1100*

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2206 Adolescent & Adult Development
3 Cr. Hrs.

Research and theory concerning physical, cognitive, social and psychological development from adolescence through old age. Focus is on developmental issues such as identity development, cognitive growth and developmental tasks such as education, marriage, family, work, leisure, aging and facing death. *Prerequisite(s): PSY 1100*

2214 Drugs & Behavior 3 Cr. Hrs.

An introduction to behavioral pharmacology examining the major classes of psychoactive substances. Topics include basic principles of neuropharmacology, pharmacodynamics (drug absorption, distribution and elimination) and physiology of tolerance and dependence for each class of drugs. *Prerequisite(s): PSY 1100*

2217 Abnormal Psychology
3 Cr. Hrs.

A study of the diagnostic criteria, symptoms, causes and treatments of disorders listed in the Diagnostic and Statistical Manual of Mental Disorders, with an emphasis on current clinical research. *Prerequisite(s): PSY 1100*

2218 Principles of Counseling
3 Cr. Hrs.

An introduction to professional issues in counseling with emphasis on the development of basic interviewing and counseling skills, a survey of classic and contemporary theories and techniques of the counseling process, and a comparison of various theoretical approaches. *Prerequisite(s): PSY 1100*

2220 Personality Psychology
3 Cr. Hrs.

An introduction to personality with emphasis on principles, research and theories, including psychodynamic, ego-psychology, object relations, trait/biological, phenomenology, behavior-environmental and cognitive/self-regulation. *Prerequisite(s): PSY 1100*

2225 Social Psychology
3 Cr. Hrs.

A study of the interaction between individual and social environment within a multicultural context. Topics include: self-concept formation, attitudes, persuasion, attributions, group structure and processes, prejudice, aggression and violence. *Prerequisite(s): PSY 1100*

2228 Industrial Organizational Psychology **3 Cr. Hrs.**

Introduction to the theories and practices of psychology in the workplace, including human resource management, organizational science, and human factors engineering. Specific topics include motivation and satisfaction, group decision making and development, leadership, workplace politics, employee selection and training, work-related stress, performance appraisal systems, and organizational improvement. *Prerequisite(s): PSY 1100*

2235 Behavioral Science Research Methods **3 Cr. Hrs.**

Basic research methods for the behavioral sciences covering: correlational/descriptive and laboratory/experimental design methodology, dependent and independent variables, principles of measurement, and reading and writing scientific research reports. *Prerequisite(s): PSY 1100*

2236 Behavioral Science Statistics **3 Cr. Hrs.**

Basic statistical techniques used in behavioral sciences, including descriptive and inferential statistics, frequency distributions, measures of central tendency and distribution, non-parametric statistics, hypothesis testing, tests of significance, analysis of variance and post-hoc tests. *Prerequisite(s): PSY 1100 AND PSY 2235*

2242 Educational Psychology
3 Cr. Hrs.

Principles of learning and development applied to educational settings emphasizing research-supported development of effective learning in varied educational environments. *Prerequisite(s): PSY 1100*

2250 Behavior Modification
3 Cr. Hrs.

This course will provide students with knowledge of learning principles and skills required to implement basic behavioral interventions in school, home, industry, clinical, and other social settings. Operant, respondent, and cognitive-behavior modification methods are reviewed in terms of treatment interventions, self-control strategies, and improving productivity in industry. *Prerequisite(s): PSY 1100*

2270 Psychology Service Learning **R** **1 - 3 Cr. Hrs.**

This course will allow students to become involved in a field-related experience. This experience will deepen students' understanding of psychological topics and assist students in applying psychological principles to clinical settings. The specific learning outcomes and forms of evaluation will be determined by the supervising instructor and may vary with the nature of the field experience. Seven practicum hours per week per credit hour. *Prerequisite(s): PSY 1100*

Physical Therapist Assistant (PTA)

1000 Introduction to Physical Therapy **2 Cr. Hrs.**

Purpose, philosophy, history and development of the physical therapy (PT) profession; physical therapist assistant (PTA) duties; PT/PTA relationship; essential functions; legal and ethical responsibilities and professional behaviors; function of regulatory agencies, licensing bodies and professional associations; PTA program expectations; physical therapy practice; communication basics; medical terminology.

1100 Professional Issues 1 Cr. Hr.

The American Physical Therapy Association and it's role in supporting physical therapists (PTs), physical therapist assistants (PTAs), and the profession; Professionalism and professional behaviors in the health care setting; Communication and interpersonal skills to build rapport and foster effective teamwork; Introduction to documentation and physical therapy specific medical terminology; Legal and ethical considerations for the practicing PTA; Scope of practice, including the roles and responsibilities of PTs versus PTAs; Introduction to interprofessional collaboration; Critical thinking and problem-solving for evidence-based practice. *Prerequisite(s): PTA 1000 AND Restricted to Majors*

1155 Functional Anatomy
4 Cr. Hrs.

The study and application of human anatomy and clinical kinesiology with emphasis on integration of neuromusculoskeletal anatomy, physiology, physics principles and biomechanics in relationship to human movement. Two classroom, four lab hours per week. *Prerequisite(s): BIO 1141 AND Restricted to Majors*

1165 Manual Therapy 2 Cr. Hrs.

Theory of the physiological effects, indications, and contraindications of therapeutic touch and manual therapy and the therapeutic application of palpation, patient draping, and manual techniques, including massage, soft tissue mobilization, myofascial release, and joint mobilization as a portion of therapeutic treatment interventions. Four lab hours per week. *Prerequisite(s): PTA 1000 AND Restricted to Majors*

1215 Functional Mobility 3 Cr. Hrs.

Theory, clinical rationale and application of therapeutic interventions utilized in the practice of physical therapy, with emphasis on demonstration of knowledge, skillful performance and patient education related to functional mobility and gait training. Six lab hours per week. *Prerequisite(s): PTA 1000 AND Restricted to Majors*

1300 Pathophysiology for the PTA 2 Cr. Hrs.

Recognition of pathology and clinical rationale for the appropriate therapeutic management of physiological responses in body systems associated with commonly treated pathological conditions. One classroom, three lab hours per week. *Prerequisite(s): Restricted to Majors*

1325 Neuropathophysiology 2 Cr. Hrs.

Structure and function of the nervous system; recognition of pathology and clinical rationale for the appropriate therapeutic management of commonly treated neurological diseases/conditions. One classroom, two lab hours per week. *Prerequisite(s): Restricted to Majors*

1350 Therapeutic Exercise 4 Cr. Hrs.

Theory, clinical rationale and performance of the use of basic therapeutic exercises and functional activities. Application and performance of common tests, measures and data collection procedures. One classroom, nine lab hours per week. *Prerequisite(s): Restricted to Majors*

1375 Professional Issues II 1 Cr. Hr.

Professional responsibilities in the health care setting including, but not limited to: communication, ethics & values, documentation/billing, career development, business management, and cultural diversity; Exploration of specialty and niche areas of physical therapy practice; Preparation for clinical practicum. *Prerequisite(s): Restricted to Majors*

2305 Neuromuscular Rehabilitation 2 Cr. Hrs.

Use of therapeutic interventions for neurological and pediatric pathologies. Six lab hours per week. *Prerequisite(s): PTA 1220 AND Restricted to Majors*

2315 The Medically Complex Patient 1 Cr. Hr.

Theory and application of physical therapy treatment techniques for more complex and specialized diagnoses across the lifespan including, but not limited to, cardiovascular, pulmonary, and multisystem disorders; recognition of psychosocial concerns associated with aging and end-of-life. Two lab hours per week. *Prerequisite(s): PTA 1200 AND Restricted to Majors*

2325 Modalities 2 Cr. Hrs.

Application of commonly used passive and mechanical physical agents, with emphasis on safe application of the treatment intervention. Four lab hours per week. *Prerequisite(s): PTA 1200 AND Restricted to Majors*

2330 Seminar for Clinical Practicum I 1 Cr. Hr.

Integration of didactic and clinical skills and their application of principles in the clinical setting including, but not limited to, concepts related to billing, insurance, and quality assurance. *Prerequisite(s): PTA 1230 AND PTA 1235 AND Restricted to Majors Corequisite(s): PTA 2335*

2335 Clinical Practicum I 2 Cr. Hrs.

Introductory experience in the clinical setting under the supervision of a clinical instructor who is a physical therapist or physical therapist/physical therapist assistant team. Application of theories and techniques for patient interventions, and interprofessional collaboration. Fourteen practicum hours per week. *Prerequisite(s): PTA 2315 AND Restricted to Majors*

2400 Advanced Topics 3 Cr. Hrs.

Exploration of specialty and niche areas of physical therapy practice and ethical situations; resume writing; utilization of current evidence to educate others. Physiology and rational for use and application of emerging and re-emerging biophysical agents. Two classroom, two lab hours per week. *Prerequisite(s): PTA 2315 AND Restricted to Majors*

2430 Seminar for Clinical Practicum II 1 Cr. Hr.

Integration of didactic and clinical skills and their application of principles in the clinical setting including, but not limited to, career development and lifelong learning, risk management, and defensible documentation; preparation for national licensure. *Prerequisite(s): PTA 2330 AND PTA 2335 AND Restricted to Majors Corequisite(s): PTA 2435*

2435 Clinical Practicum II 2 Cr. Hrs.

Advanced experience in the clinical setting under the supervision of a clinical instructor who is a physical therapist or physical therapist/physical therapist assistant team. Application of theories and techniques for patient interventions, documentation, and interprofessional collaboration. Fourteen practicum hours per week. *Prerequisite(s): PTA 2330 AND PTA 2335 AND Restricted to Majors*

Radiologic Technology (RAT)

1101 Introduction to Radiologic Technology 2 Cr. Hrs.

Introduction to the field of radiologic technology, including history, basic radiation production and safety concepts, patient communication, clinical education, ethical, legal and professional issues.

1111 Clinical Practicum I 1 Cr. Hr.

Orientation to clinical facility and radiology department, introduction to competency performance of radiographic procedures, image analysis, radiation protection, patient care and team work. Seven practicum hours per week. *Prerequisite(s): Restricted to Majors*

1121 Radiographic Procedures I 5 Cr. Hrs.

Radiographic anatomy, equipment manipulation, positioning and image analysis of the thorax, abdomen and appendicular skeleton. Four classroom, three lab hours per week. *Prerequisite(s): Restricted to Majors Corequisite(s): RAT 1127*

1127 Lab for Radiographic Procedures I 0 Cr. Hrs.

Prerequisite(s): Restricted to Majors Corequisite(s): RAT 1121

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1131 Patient Care in Radiologic Technology 3 Cr. Hrs.

Safety and assessment techniques related to care of the patient in a radiography department, including legal and professional aspects, elements of ethical behavior and practical dilemmas, and current infection control practices. Two classroom, three lab hours per week. *Prerequisite(s): Restricted to Majors*
Corequisite(s): RAT 1137

1137 Lab for Patient Care in Radiologic Technology 0 Cr. Hrs.

Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 1131

1212 Clinical Practicum II 2 Cr. Hrs.

Continuation of clinical competency development to include spine, skull, contrast media procedures, mobile and surgical radiography, trauma radiography, exposure factors, radiation protection and image analysis/evaluations. Fourteen practicum hours per week. *Prerequisite(s): RAT 1111 AND Restricted to Majors*

1222 Radiographic Procedures II 5 Cr. Hrs.

Radiographic anatomy, positioning and image analysis of the spine, skull, gastrointestinal and genitourinary systems, as well as general pharmacological principles as they pertain to radiology. Alternative positioning for trauma and mobile radiography as well as pediatric and geriatric procedures will be covered. Four classroom, three lab hours per week. *Prerequisite(s): RAT 1121 AND Restricted to Majors*
Corequisite(s): RAT 1228

1228 Lab for Radiographic Procedures II 0 Cr. Hrs.

Corequisite(s): RAT 1222

1241 Radiologic Sciences I 3 Cr. Hrs.

This course is designed to help the student understand the concepts of electromagnetic energy, electricity, x-ray equipment, production of x-radiation and its interaction with matter. Special radiographic equipment including digital radiography and the concepts of radiation safety and protection will also be presented. *Prerequisite(s): Restricted to Majors*

2413 Clinical Practicum III 3 Cr. Hrs.

Continuation of clinical competency development to include diagnostic radiography, mobile radiography, contrast studies, pediatric, geriatric, advanced imaging, alternative shifts, radiation protection and image analysis. Twenty-one practicum hours per week. *Prerequisite(s): RAT 1212 AND Restricted to Majors*

2415 Radiographic Pathology 3 Cr. Hrs.

Introductory concepts of disease processes and etiologies with emphasis on radiographic appearances and exposure factor compensation. *Prerequisite(s): Restricted to Majors*

2423 Radiographic Procedures III 3 Cr. Hrs.

Radiographic considerations related to pharmacology, advanced imaging procedures and modalities. Includes analysis of human anatomical structures using various anatomical planes. Two classroom, two lab hours per week. *Prerequisite(s): RAT 1222 AND Restricted to Majors*
Corequisite(s): RAT 2429

2429 Lab for Radiographic Procedures III 0 Cr. Hrs.

Imaging modalities, sectional anatomy and image analysis. *Prerequisite(s): RAT 1222 AND Restricted to Majors*
Corequisite(s): RAT 2423

2442 Radiologic Sciences II 4 Cr. Hrs.

Principles of digital imaging technology to include applications in exposure formulation, image quality factors and variables, and image management processes. Three classroom, two lab hours per week. *Prerequisite(s): RAT 1241 AND Restricted to Majors*
Corequisite(s): RAT 2448

2448 Lab for Radiologic Sciences II 0 Cr. Hrs.

Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 2442

2514 Clinical Practicum IV 3 Cr. Hrs.

Final clinical competency experience, including total exposure to the health care system and entry-level radiographer skills, completion of all program requirements (including final competency evaluations). Twenty-one practicum hours per week. *Prerequisite(s): RAT 2413 AND Restricted to Majors*

2526 Capstone in Radiologic Technology 4 Cr. Hrs.

Synthesis of current knowledge of radiologic technology concepts, professional development including certification and licensure requirements , ethical/legal responsibilities and transition from student to radiographer. *Prerequisite(s): Restricted to Majors*
Corequisite(s): RAT 2514

2543 Radiologic Sciences III 2 Cr. Hrs.

Fundamental principles of molecular and cellular effects of x-ray interaction, along with a comprehensive study of health physics and radiation protection to include quality management and quality assurance testing of the radiographic system. Includes basic principles and applications of computed tomography. *Prerequisite(s): RAT 2442 AND Restricted to Majors*

2640 Computed Tomography Practicum R 1 Cr. Hr.

A clinical education course that provides hands-on experience performing computed tomography procedures at an affiliate hospital and/or imaging center. Seven practicum hours per week. *Prerequisite(s): Approval of Department*

2641 Principles of Computed Tomography 3 Cr. Hrs.

Basic instrumentation and application concepts, including computer and x-ray unit components and their application to protocols for acquiring sectional images of various body systems. *Prerequisite(s): Approval of Department*

2643 Principles of Magnetic Resonance Imaging 3 Cr. Hrs.

Basic physics concepts involving the generation and construction of human planar images using magnetic resonance imaging technology. *Prerequisite(s): Approval of Department*

2645 Magnetic Resonance Imaging Practicum R 1 Cr. Hr.

A clinical education course that provides hands-on experience performing magnetic resonance imaging procedures at an affiliate hospital and/or imaging center. Seven practicum hours per week. *Prerequisite(s): Approval of Department*

SINCLAIR COLLEGE

2647 Principles of Mammography
2 Cr. Hrs.

Comprehensive overview of mammographic concepts and equipment, including patient care/education, communication, anatomy and physiology, epidemiology, pathology, positioning techniques, interventional procedures, image analysis, imaging media and processing, quality assurance testing and principles of exposure. *Prerequisite(s): Approval of Department*

2649 Mammography Practicum R
1 - 4 Cr. Hrs.

A variable credit clinical education course that provides hands-on experience performing mammographic procedures and quality assurance testing at an affiliate hospital and/ or imaging center. Seven practicum hours per week for each semester credit hour. *Prerequisite(s): Approval of Department*

Religion (REL)

1111 Eastern Religions
3 Cr. Hrs.

Introduction to Far Eastern religions and cultural traditions, including beliefs, practices, stories and rituals, and historical context.

1112 Western Religions
3 Cr. Hrs.

Introduction to Western religions and cultural traditions, including beliefs, practices, stories, rituals and historical context.

1135 American Religious Movements
3 Cr. Hrs.

Examination of the history of unique American religious movements and their impact on our culture and thought.

2204 Great Books: The Bible & Western Culture
3 Cr. Hrs.

An exploration of how and why the Bible is viewed as a great book. Both the Old and New Testaments will be explored in their respective historical contexts.

2255 People & Religion
3 Cr. Hrs.

Overview of the rich diversity of human religiosity and the key beliefs, practices, stories and rituals that serve to connect humans to the sacred. Special attention to unique individuals within each religious tradition. A comparative look at religion in our society.

Real Estate (RES)

1101 Real Estate Principles
3 Cr. Hrs.

This course develops skills in areas encompassed in the real estate industry, including the market, investment, brokerage, contractual and property rights, as they affect both the investor and the purchaser. Agency law, fair housing and environmental issues as they concern the field will also be explored. This course is part of Sinclair's Ohio Real Estate Sales Associate pre-licensure program. Successful completion of the courses in Sinclair's Ohio Real Estate Sales Associate pre-licensure program meets the educational requirement for you to sit for the Ohio Real Estate Salesperson Examination only (further state requirements must also be satisfied). Sinclair's pre-licensure program is not intended to meet requirements for license examination in any other state.

1102 Real Estate Abstracting
3 Cr. Hrs.

Examine how recorded documents affect real estate, terms used in abstracting, and the function of public offices in the process. Additionally, demonstrate procedures in real estate abstracting for title search examination from public records indexes to determine ownership, outstanding interests and rights in interest.

1201 Real Estate Law   3 Cr. Hrs.

Explanation of the legal phases of a realty transaction. Examination of types of estates in land, co-ownership, mortgages, Ohio license law, landlord/ tenant law and legal factors in financing. This course is part of Sinclair's Ohio Real Estate Sales Associate pre-licensure program. Successful completion of the courses in Sinclair's Ohio Real Estate Sales Associate pre-licensure program meets the educational requirement for you to sit for the Ohio Real Estate Salesperson Examination only (further state requirements must also be satisfied). Sinclair's pre-licensure program is not intended to meet requirements for license examination in any other state.

1301 Real Estate Finance
1.5 Cr. Hrs.

Exploration of the institutions, methods, instruments and procedures involved in the financing of real estate, mortgage market and effects of government monetary/ fiscal policy, the requirements for loan application, loan closing process, and defaults and foreclosures. This course is part of Sinclair's Ohio Real Estate Sales Associate pre-licensure program. Successful completion of the courses in Sinclair's Ohio Real Estate Sales Associate pre-licensure program meets the educational requirement for you to sit for the Ohio Real Estate Salesperson Examination only (further state requirements must also be satisfied). Sinclair's pre-licensure program is not intended to meet requirements for license examination in any other state.

1302 Real Estate Investment: Analysis & Financing   3 Cr. Hrs.

An analytical approach to investment in real estate. Analysis and financing is emphasized. The use of leverage, tax considerations, appraisal, internal rate of return, acquisitions and exchanges. Case studies are used to provide examples of investment analysis techniques. Completion of MAT 1120 is strongly encouraged prior to attempting this course.

1401 Real Estate Appraisal
1.5 Cr. Hrs.

Methodology of neighborhood, sites and building analysis, three basic techniques of appraising and the theory underlying these techniques. This course is part of Sinclair's Ohio Real Estate Sales Associate pre-licensure program. Successful completion of the courses in Sinclair's Ohio Real Estate Sales Associate pre-licensure program meets the educational requirement for you to sit for the Ohio Real Estate Salesperson Examination only (further state requirements must also be satisfied). Sinclair's pre-licensure program is not intended to meet requirements for license examination in any other state.

1402 Property Management
3 Cr. Hrs.

Management of residential, business, and commercial properties. Topics presented are real estate taxes, public relations, utilities, sustainability, taxes, leasing, accounting and insurance.

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2170 Real Estate Internship   R
2 Cr. Hrs.

Students will earn credits towards a degree requirement for work learning experience. Students establish learning outcomes and prepare related reports and/or projects each term. *Prerequisite(s): RES 1101 AND RES 1201 AND RES 1301 AND RES 1401 AND RES 1402 AND RES 1302 AND RES 1102 AND Approval of Department*

2401 Real Estate Capstone
2 Cr. Hrs.

Apply knowledge and practice skills acquired in real estate courses concerning principles, law, finance, appraisal, investing and property management through the use of case studies, simulations and role playing. *Prerequisite(s): RES 1101 AND RES 1102 AND RES 1201 AND RES 2301 AND RES 2302*

Respiratory Care (RET)

1100 Introduction to Respiratory Care   **1 Cr. Hr.**

Respiratory Care as a profession to include standards of practice, regulating agencies, ethics and legal issues, education and program requirements, communication in health care and areas of clinical focus and employment outlook for a respiratory therapist. *Prerequisite(s): DEV 0035*

1101 Respiratory Care Fundamentals I   **5 Cr. Hrs.**

Respiratory care theory, physical assessment, equipment and skill development of procedures required for clinical practice, including vital signs, isolation precautions, body mechanics, respiratory vitals, airway management, oxygen therapy, humidity and aerosol therapy, medicinal therapy, bronchoscopy and charting. Four classroom, three lab hours per week. *Prerequisite(s): RET 1100 AND Restricted to Majors*
Corequisite(s): RET 1102

1102 Lab for Respiratory Care Fundamentals I   **0 Cr. Hrs.**

Corequisite(s): RET 1101

1124 Cardiopulmonary Pharmacology I   **1 Cr. Hr.**

Actions, effects, dosages and indications for drug classes commonly used to treat pulmonary and cardiovascular diseases. *Prerequisite(s): CHE 1111 AND Restricted to Majors*

1125 Respiratory Care Sciences   **4 Cr. Hrs.**

Advanced study of adult lung, heart and renal anatomy and physiology, including: ventilation, pulmonary mechanics, diffusion, gas transport, cardiac function and pulmonary perfusion, acid-base balance and interpretation, control mechanisms and physiological stressors; microbiology and infection control methods; emphasis on application/integration of respiratory sciences to patient scenarios. *Prerequisite(s): BIO 1107*

1201 Respiratory Care Fundamentals II   **5 Cr. Hrs.**

Respiratory care theory, equipment and skill development of procedures required for clinical practice, including fluidics, hyperinflation therapy, Non-Invasive Ventilation (NIV), bronchopulmonary hygiene therapy, arterial blood gas puncture and analysis, pulse oximetry, electrocardiographs (ECGs), capnography, home care, cardiopulmonary rehabilitation and smoking cessation techniques. Four classroom, three lab hours per week. *Prerequisite(s): RET 1101 AND Restricted to Majors*
Corequisite(s): RET 1202

1202 Lab for Respiratory Care Fundamentals II   **0 Cr. Hrs.**

Prerequisite(s): Restricted to Majors
Corequisite(s): RET 1201

1203 Respiratory Care Clinic I   **3 Cr. Hrs.**

Acquire and evaluate clinical data, initiate prescribed respiratory care treatments, manage life support activities, evaluate and monitor patient responses to therapy and modify the prescribed therapy to achieve the desired therapeutic objectives. Fifteen directed practice hours per week. *Prerequisite(s): RET 1101 AND Restricted to Majors*

1205 Cardiopulmonary Disease Processes   **3 Cr. Hrs.**

Diseases and disorders affecting the cardiopulmonary systems emphasizing diagnosis, selection and implementation of therapeutic modalities and the role of the respiratory care practitioner in treatment. *Prerequisite(s): RET 1101 AND Restricted to Majors*

1301 Respiratory Care Fundamentals III   **2 Cr. Hrs.**

Diseases and disorders affecting the cardiopulmonary systems emphasizing diagnosis, selection and implementation of therapeutic modalities and the role of the respiratory care practitioner in treatment. *Prerequisite(s): RET 1201 AND Restricted to Majors*

1303 Respiratory Care Clinic II   **1 Cr. Hr.**

Enhance clinical skills by performing prescribed therapy, evaluating clinical data, assessing patient status and observing/performing diagnostic studies, rehabilitation, hyperbaric oxygen therapy and patient education in multiple health care settings. Seven practicum hours per week. *Prerequisite(s): RET 1201 AND Restricted to Majors*

2101 Critical Care I   **5 Cr. Hrs.**

Assessment and treatment of patients in respiratory failure to include the following categories: airway management and emergencies, physiology and treatment of oxygenation/ventilation failure, physiology of lung mechanics, ventilator classification and management, positive pressure ventilation including volume and pressure control ventilation modes, ventilator troubleshooting, weaning from mechanical ventilation, and the application of ventilator graphic interpretation in the management of the mechanically ventilated patient. Four classroom, three lab hours per week. *Prerequisite(s): RET 2250 AND Restricted to Majors*
Corequisite(s): RET 2102

2102 Lab for Critical Care I   **0 Cr. Hrs.**

Lab to accompany RET 2101
Prerequisite(s): Restricted to Majors
Corequisite(s): RET 2101

2103 Respiratory Care Clinic III   **3 Cr. Hrs.**

Enhance clinical skills by performing prescribed mechanical ventilation within the critical care environment, diagnostic studies and evaluating clinical data on the adult and pediatric patient. Fifteen directed practice hours per week. *Prerequisite(s): RET 1303 AND Restricted to Majors*

2124 Cardiopulmonary Pharmacology II   **1 Cr. Hr.**

Actions, effects, dosages and indications for drug classes commonly used to treat pulmonary and cardiovascular disease. *Prerequisite(s): RET 1124 AND Restricted to Majors*

2201 Critical Care II   4 Cr. Hrs.

Assessment, management, and treatment of critically-ill patients to include the following categories: Management of neonatal/pediatric mechanical ventilation, advanced modes of ventilation, non-conventional oxygenation and ventilation strategies, diagnostics, special procedures for the respiratory therapist in the critical care setting, critical conditions, nutritional considerations, transport, and home care ventilation/disease management. Three classroom, three lab hours per week. *Prerequisite(s): RET 2101 AND Restricted to Majors*
Corequisite(s): RET 2202

2202 Lab for Critical Care II   0 Cr. Hrs.

Lab to accompany RET 2201
Corequisite(s): RET 2201

2203 Respiratory Care Clinic IV   2 Cr. Hrs.

Apply adult, pediatric and neonatal clinical skills, including respiratory care procedures, diagnostics and mechanical ventilation within the critical care environment. Ten directed practice hours per week. *Prerequisite(s): RET 2101 AND Restricted to Majors*

2204 Respiratory Care Clinic V   1 Cr. Hr.

Summative skills performance to include initiating prescribed respiratory care treatments, managing life-support activities, evaluating patient responses to such therapy and modifying therapy, performing diagnostic studies, rehabilitation, hyperbaric oxygen therapy, providing education for in-patient and home care environment, performing mechanical ventilation on adults, pediatrics and neonates and completing a communication skills assessment. Seven practicum hours per week. *Prerequisite(s): RET 2101 AND Restricted to Majors*

2220 Respiratory Care Emergency Preparedness   2 Cr. Hrs.

Advanced resuscitation techniques for the adult and pediatric patient with additional focus on disaster and epidemic preparedness/treatment and transport of the critically ill patient. One classroom, three lab hours per week. *Prerequisite(s): RET 2101 AND RET 2250 AND Restricted to Majors*
Corequisite(s): RET 2222

2222 Lab for Respiratory Care Emergency Preparedness   0 Cr. Hrs.

Corequisite(s): RET 2220

2250 Pediatrics & Neonatology   2 Cr. Hrs.

Development of the fetus, anticipation of high-risk pregnancies and care of the newborn infant, emphasizing neonatal and pediatric physiology and diseases, and pertinent diagnostics. *Prerequisite(s): RET 1201 AND Restricted to Majors*

2301 Respiratory Care of the Newborn I   1 Cr. Hr.

Orientation to neonatal respiratory care including history, fetal development and preparation for delivery for the practicing Respiratory Therapist. *Prerequisite(s): Approval of Department*

2302 Respiratory Care of the Newborn II   1 Cr. Hr.

Orientation to initial steps of resuscitation, respiratory support devices in the delivery room and strategies with special conditions in the delivery room. Course is designed for the practicing Respiratory Therapist. Note: RET 2301 is encouraged, but not required for RET 2302. *Prerequisite(s): Approval of Department*

2303 Respiratory Care of the Newborn III   2 Cr. Hrs.

Advanced strategies for the Respiratory Therapist in support of complex neonatal conditions in the NICU. Note: RET 2301 and RET 2302 are encouraged, but not required for RET 2303.*Prerequisite(s): Approval of Department*

2501 Respiratory Care of the Newborn   3 Cr. Hrs.

Orientation to neonatal respiratory care including history, fetal development, stabilization, evidence-based practices, and multi-disciplinary approaches. Includes respiratory devices employed for ongoing support of term and preterm infant. *Prerequisite(s): Approval of Department*

Sinclair Student Success Experience (SCC)

1101 First Year Experience   1 Cr. Hr.

This course is designed to help new students make a successful transition to Sinclair Community College. Topics include college resources; academic, career and personal services available through Sinclair; learning styles; the learning process; financial responsibility; stress and wellness; and computer literacy through eLearn and library resources.

Sociology (SOC)

1101 Introduction to Sociology   3 Cr. Hrs.

A critical analysis of contemporary American society with review of major sociological theories, research methods, culture, socialization, groups, social structure, social institutions, deviance, social inequalities, social processes and social change. *Prerequisite(s): DEV 0015*

1108 Appalachian Families   3 Cr. Hrs.

A critical and analytical examination of the Appalachian experience from the 1700s through the present day with emphasis on the Appalachian family (both rural and urban) as a varied and complex social system, including an examination of the diverse populations within the Appalachian region.

1115 Sociology of Marriage & Family   3 Cr. Hrs.

This course is a sociological examination of theoretical perspectives on the institution of family. Topics include the historical context of the family, the role of marriage and family in society, family formation, socialization, divorce, parenting, family issues, family throughout the life course and social policy. Variations in family types and lifestyles among diverse groups worldwide are examined. *Prerequisite(s): SOC 1101*

1117 Popular Culture   3 Cr. Hrs.

Exploration of contemporary popular culture and popular culture in a historical context: examination of influence of popular culture on the development of a unique American society and culture through media, music, sports, entertainment and/or food.

1145 Introduction to Cultural Anthropology   3 Cr. Hrs.

An examination of what is meant by culture and a review of the various theories and methods in Cultural Anthropology. Includes a comparison of the similarities and differences among world cultures as well as comparative analysis of family organization, religious beliefs, educational systems, economics and governmental systems.

1160 Sociology of Aging   3 Cr. Hrs.

Orientation to the sociological, biological and psychological dimensions of the aging process and society's response to its older members and social concerns. Examination of social forces that impact the aging process. *Prerequisite(s): SOC 1101*

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2130 Sociology of Family Violence 3 Cr. Hrs.

Sociological explanation of the nature and scope of family violence: child abuse, spousal abuse, elder abuse, sexual abuse, neglect and emotional abuse. Analysis of social and legal implications; intervention and prevention will be explored. *Prerequisite(s): SOC 1101*

2205 Social Problems 3 Cr. Hrs.

An introduction to social problems facing large, complex societies using sociological theories and methodology to examine causes, treatments and solutions. Among the topics discussed are: mental illness, health care, alcohol and drug abuse, violence, crime, delinquency, inequality, poverty, immigration, family, global and environmental issues. *Prerequisite(s): SOC 1101*

2210 Cultural Humility for Working with Youth 3 Cr. Hrs.

Examines historical and current racial, ethnic, gender, sexual orientation, linguistic, and social class stereotypes and biases as related to youth in the United States and globally. Students identify personal preconceptions and learn ways of becoming culturally responsive working with youths.

2215 Race & Ethnicity 3 Cr. Hrs.

Sociological exploration of American racial and ethnic diversity. Emphasis given to the social construction of race and ethnicity, patterns of intergroup contact and global migration. Historical comparative analysis of selected groups with emphasis given to economic, political and structural inequalities. *Prerequisite(s): SOC 1101 OR OTA 1111*

2226 Criminology 3 Cr. Hrs.

This course presents a framework for studying the nature and the causes of crime and criminal behavior. Focus is provided through criminal typologies and the myriad of theories using multi-disciplinary perspectives. *Prerequisite(s): SOC 1101*

Spanish (SPA)

1100 Conversational Spanish I 3 Cr. Hrs.

A foundation for gaining knowledge about Hispanic culture and basic phrases related to simple spoken Spanish, including travel situations.

1101 Elementary Spanish I 4 Cr. Hrs.

Foundation for understanding, speaking, reading and writing Spanish. Work outside of class and/or in the language laboratory is required.

1102 Elementary Spanish II 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing Spanish. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): SPA 1101*

2201 Intermediate Spanish I 3 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): SPA 1102*

2202 Intermediate Spanish II 3 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required. *Prerequisite(s): SPA 2201*

Surgical Technology (SUT)

1100 Sterile Processing I 4 Cr. Hrs.

An introduction to the principles, techniques and issues in the surgical and sterile processing environment. Topics include, sterile technique, packaging and wrapping techniques, sterilization methods, basic surgical instruments, basic microbiology, and hospital equipment identification. Three classroom, three lab hours per week.

1101 Tissue Banking I 2 Cr. Hrs.

Provides the framework and environment for the practice of Tissue Banking. Focuses on history and organizational systems, ethics, rules and regulations, basic sciences, procurement, processing, distribution, and quality systems set by the American Association of Tissue Banking (AATB), the U.S. Food and Drug Administration (FDA) and related regulatory agencies. *Corequisite(s): SUT 1107*

1107 Lab for Tissue Banking I 1 Cr. Hr.

Provides the framework and environment for the practice of sterile technique, laboratory and machining skills, and sterile processing in Tissue Banking. Introduces the use of sterile technique, surgical hand preparation, gowning and gloving procedures, clean room procedures and protocols, and post processing protocols. Introduces basic tissue processing skills to include setting up sterile tables and use of surgical instrumentation and machining tools and equipment. Introduces sterile processing skills to include decontamination, wrapping and sterilization, and storage procedures. Taught in a 8-week term. Five lab hours per week. *Corequisite(s): SUT 1101*

1110 Theory & Fundamentals 5 Cr. Hrs.

Discusses the framework and environment for the practice of Surgical Technology. Focuses on safety through the impact of sterile technique and sterilization practices, patient care, anesthesia, 'all hazards', and introduces the use of therapeutic communication, professionalism, group process, and critical thinking. *Prerequisite(s): ALH 1101 AND BIO 1121 AND ENG 1101 AND HIM 1101 AND MAT 1130 AND Restricted to Majors Corequisite(s): SUT 1117*

1117 Laboratory for Theory & Fundamentals 1 Cr. Hr.

Beginning competencies in aseptic technique, surgical hand preparation, gowning and gloving techniques, patient positioning, patient skin preparation, patient draping, preoperative patient care techniques to include chart review, vital signs, and intraoperative surgical case management. Three lab hours per week. *Prerequisite(s): ALH 1101 AND BIO 1121 AND ENG 1101 AND HIM 1101 AND MAT 1130 AND Restricted to Majors Corequisite(s): SUT 1110*

1120 The Surgical Process 2 Cr. Hrs.

Advances the framework and environment for the practice of Surgical Technology. Focuses on wound healing and management, surgical approaches, and advanced specialty equipment and supplies. *Prerequisite(s): BIO 1222 AND BIO 2205 AND SUT 1110 AND SUT 1117 AND Restricted to Majors Corequisite(s): SUT 1127*

1127 Lab for the Surgical Process 2 Cr. Hrs.

Advances the techniques for preparing the patient, operating room, instruments, supplies, and the equipment to be used during a surgical procedure. Applies these techniques to basic abdominal surgeries. Thirteen lab hours per week. *Prerequisite(s): BIO 1222 AND BIO 2205 AND SUT 1110 AND SUT 1117 AND Restricted to Majors*

1200 Sterile Processing II 3 Cr. Hrs.

Offers advanced principles of inventory control, materials management, information technology, and quality control systems integral to the Sterile Processing department in health-care facilities. Introduces specialty surgical instrumentation and patient care equipment. Prepares the student to take the CRCST exam upon graduation and completion of 400 work related hours. *Prerequisite(s): ALH 1101 AND SUT 1100 AND Restricted to Majors*

1207 Practicum for Sterile Processing II 2 Cr. Hrs.

Provides 'hands on' experience in a clinical environment to assist in integration of all concepts basic to the field of Sterile Processing. Students will participate in all areas of the Sterile Processing department to include decontamination, instrument set preparation, sterilization, case cart preparation, business technologies for storage and distribution, and quality control and monitoring processes. Twenty-one practicum hours per week. *Prerequisite(s): ALH 1101 AND SUT 1100 AND Restricted to Majors*

2101 Tissue Banking II 2 Cr. Hrs.

This course is designed to help prepare the graduate for the Certified Tissue Banking Specialist (CTBS) Certification exam review. Topics include the CTBS exam content outline: Quality Assurance, Distribution, Donor Screening & Testing, Recovery, and Processing. *Prerequisite(s): BIO 1107 AND SUT 1101 AND SUT 1107*
Corequisite(s): SUT 2107

2107 Practicum for Tissue Banking II 1 Cr. Hr.

Role transition to beginning Tissue Banking Technology practitioner. Emphasizes a common systematic approach to tissue processing and sterile processing procedures. Introduces Tissue Banking Technologist's role on recovery and processing teams in all related environments. 14 Practicum Hours per week. Taught in an 8-week term. *Prerequisite(s): BIO 1107 AND SUT 1101 AND SUT 1107*
Corequisite(s): SUT 2101

2110 Surgical Procedures I 2 Cr. Hrs.

Discusses specific surgical procedures of the gastrointestinal and biliary systems. *Prerequisite(s): SUT 1120 AND SUT 1127 AND Restricted to Majors*
Corequisite(s): SUT 2117

2117 Directed Practice for Surgical Procedures I 1 Cr. Hr.

Implements the surgical process in the operating room for general surgery procedures. Thirteen clinical hours per week. *Prerequisite(s): SUT 1120 AND SUT 1127 AND Restricted to Majors*

2120 Surgical Procedures II 5 Cr. Hrs.

Discusses OB-GYN, genitourinary, ophthalmic, ear/nose/throat, head and neck, oral, plastic, vascular and neuro surgical procedures. Explains the role of the scrub technologist when intraoperative emergencies occur. *Prerequisite(s): SUT 2110 AND SUT 2117 AND ALH 2201 AND Restricted to Majors*
Corequisite(s): SUT 2127

2127 Directed Practice for Surgical Procedures II 4 Cr. Hrs.

Implements the surgical process in the operating room for OB-GYN, Genitourinary, Eye-Ear-Nose-Throat, Ophthalmology, Plastics, Vascular and Neuro surgical procedures. 18 clinical hours per week. *Prerequisite(s): SUT 2110 AND SUT 2117 AND ALH 2201 AND Restricted to Majors*
Corequisite(s): SUT 2120

2200 Surgical Procedures III 5 Cr. Hrs.

Emphasizes a common systematic approach to all surgeries and focuses on role transition to beginning Surgical Technologist. Discusses specific orthopedic, cardiothoracic, trauma and pediatric procedures. Examines immediate postanesthesia care. Discusses the Surgical Technologist's role on specialty teams, as a second circulator, in ambulatory surgery centers, and in pediatrics. 18 clinical hours per week. *Prerequisite(s): SUT 2120 AND SUT 2127 AND PSY 1100 AND Restricted to Majors*
Corequisite(s): SUT 2207

2207 Directed Practice for Surgical Procedures III 4 Cr. Hrs.

Implements the surgical process in the operating room for orthopedic, thoracic, open heart, trauma, pediatrics. Implements the role transition to beginning Surgical Technology practitioner. *Prerequisite(s): SUT 2120 AND SUT 2127 AND PSY 1100 AND Restricted to Majors Corequisite(s): SUT 2200*

2300 Surgical Technology Review 1 Cr. Hr.

This course will offer the Surgical Technology major the opportunity to review all program content in preparation for the national certification exam. Provides systematic review of all course material with related exams similar in design to the Certified Surgical Technologist (CST) Exam. *Prerequisite(s): SUT 2120 AND SUT 2127 AND Restricted to Majors*

2500 RN Scrub 1 Cr. Hr.

The RN Scrub course is designed specifically for Perioperative Nurses to increase their skills and knowledge in the role of the surgical Scrub. It will give the Perioperative Nurse the opportunity to learn the technical skills required to perform in the role of the Scrub during surgical intervention of the intraoperative period. Must be a Registered Nurse (RN) trained in Perioperative Nursing to take this course. Five lab hours per week. Course taught in an 8-week term. *Prerequisite(s): Approval of Department*

2600 Fundamentals of Perioperative Nursing 4 Cr. Hrs.

This course is designed to give the RN, RN new graduate, or RN student, who has no previous experience in the operating room, an opportunity to become specialized in the field of Perioperative Nursing. The course will include all fundamental technical skills and theory required to provide care to patients having surgical intervention during the preoperative, intraoperative, and postoperative periods. Upon completion, students will be prepared for an entry-level operating room staff nurse position. Three classroom, three lab hours per week. *Prerequisite(s): Approval of Department*

Social Work (SWK)

1206 Introduction to Social Work 3 Cr. Hrs.

Explore how historical events have shaped the social work profession. Recognize personal values in the context of one's practice as social worker and identify roles and knowledge base required. Recognize social, cultural and economic justice issues related to vulnerable groups and the impact of inequality. Describe social work settings and various fields of practice. Service Learning opportunities available. *Prerequisite(s): DEV 0035*

1213 Introduction to Social Welfare 3 Cr. Hrs.

Explore history, values, ideologies and ethics in development of social welfare in the United States and identify the role of government in the delivery of social services. Learn how institutional structures, including forms of oppression and discrimination, and human diversity issues influence the delivery of social services. Forty-eight hour agency observation required. *Prerequisite(s): ENG 1101 AND SWK 1206*

2207 Anti-Oppressive Social Work 3 Cr. Hrs.

Learn skills to be effective with multicultural clients. Develop an understanding of theories, which will enhance competence in terms of behaviors, attitudes and policies that come together to assist professionals to work effectively in cross-cultural situations. Strong emphasis on self-awareness of personal cultural values and beliefs to increase appreciation of multicultural identities. *Prerequisite(s): DEV 0015*

Theatre (THE)

1101 Theatre Appreciation 3 Cr. Hrs.

Theatre as an art form presented from the historical, literary and production points of view. Includes an exploration into the creative processes associated with the production of plays and the collaborative contributions of the actor, director, designers, playwright, critic and audience.

1103 Principles of Acting 3 Cr. Hrs.

Introduction to the art of acting, focusing on building an effective performance ensemble, while introducing the vocal, physical and creative communicate process used by the actor. Two classroom, two lab hours per week.

1105 Introduction to Theatre 3 Cr. Hrs.

An exploration of the artists, innovators and techniques that have influenced theatrical practices in historical and contemporary productions through research, script analysis and viewing theatre productions. *Prerequisite(s): Approval of Department*

1106 Stagecraft 2 Cr. Hrs.

A study of techniques for building and handling theatrical scenery. Covers tools, materials and hardware used, along with standard safety practices and the artistic and practical considerations of scenery construction. *Prerequisite(s): MAT 0050 AND Approval of Department Corequisite(s): THE 1107*

1107 Lab for Stagecraft 1 Cr. Hr.

A study of techniques for building and handling theatrical scenery. Covers tools, materials and hardware used, along with standard safety practices and the artistic and practical considerations of scenery construction. Three lab hours per week. *Corequisite(s): THE 1106*

1111 Acting I 3 Cr. Hrs.

Basic training and practice in vocal, physical and creative processes used by the actor. One classroom, four lab hours per week. *Prerequisite(s): Approval of Department*

1116 Stage Lighting Fundamentals 2 Cr. Hrs.

Study of theatrical lighting equipment, materials, methods and techniques. Emphasis on technical aspects of stage lighting, with an introduction to the principles of lighting design. *Corequisite(s): THE 1117*

1117 Lab for Stage Lighting Fundamentals 1 Cr. Hr.

Study of theatrical lighting equipment, materials, methods and techniques. Emphasis on technical aspects of stage lighting, with and introduction to the principles of lighting design. Three lab hours per week. *Corequisite(s): THE 1116*

1118 Costume Fundamentals 2 Cr. Hrs.

Basic training in fundamental concepts and practices of costume design and construction. *Corequisite(s): THE 1119*

1119 Lab for Costume Fundamentals 1 Cr. Hr.

Three lab hours per week. *Corequisite(s): THE 1118*

1194 Applied Theatre Technology I R 1 Cr. Hr.

Lab experience in theatre technology; positions can include production assistant, front of house, run crew and construction crews for theatre department productions. Assignments are made through department faculty and staff. *Prerequisite(s): Approval of Department*

1196 Applied Theatre Technology II R 1 Cr. Hr.

Continued lab experience in theatre technology; positions can include production assistant, front of house, run crew and construction crews for theatre department productions. Assignments are made through department faculty and staff. *Prerequisite(s): Approval of Department*

1199 Applied Theatre Performance R 1 Cr. Hr.

Applied Theatre Performance provides the student the opportunity to receive credit for practical experience. *Prerequisite(s): Approval of Department*

1212 Voice For The Actor 3 Cr. Hrs.

Introduces the techniques of training the voice for the stage. Designed to develop an awareness of the physical instrument through vocal production. One classroom, four lab hours per week. *Prerequisite(s): THE 1111 with a grade of C or better AND Approval of Department*

2115 Movement For The Actor 3 Cr. Hrs.

Introduces the techniques of training the body for the stage. Designed to develop an awareness of the physical instrument through movement. One classroom, four lab hours per week. *Prerequisite(s): THE 1212 with a grade of C or better AND Approval of Department*

2201 History of Theatre I 3 Cr. Hrs.

Theatre in its purest form is storytelling. Discover how it has evolved throughout the ages from tribal rituals to producing the high-tech blockbusters of today. Explore a wealth of world cultures that influence theatrical traditions. Who are the authors, actors, directors, and designers creating these stories? Read the scripts and explore the spaces that share these stories. This course will explore theatre from tribal origins through the 1700s.

2202 History of Theatre II 3 Cr. Hrs.

Theatre in its purest form is storytelling. Discover how it has evolved throughout the ages from tribal rituals to producing the high-tech blockbusters of today. Explore a wealth of world cultures that influence theatrical traditions. Who are the authors, actors, directors, and designers creating these stories? Read the scripts and explore the spaces that share these stories. This course will explore theatre from the 1700s to present day.

2206 Script Analysis 3 Cr. Hrs.

Focus on discovering creative, in-depth techniques of script analysis and realizing different methods for researching the script. Techniques can be applied to understanding the script as an actor, director, designer, dramaturg or playwright. One classroom, four lab hours per week. *Prerequisite(s): THE 1105 with a grade of C or better AND Approval of Department*

2216 Acting II 3 Cr. Hrs.

Intermediate training and practice in vocal, physical and creative processes used by the actor. One classroom, four lab hours per week. *Prerequisite(s): THE 2115 with a grade of C or better AND Approval of Department*

2220 Theatre Portfolio 2 Cr. Hrs.

Process for creating a theatre resume and portfolio: development of presentation and interview skills. *Prerequisite(s): Approval of Department*

2240 Stage Management 3 Cr. Hrs.

An introduction to the creative and administrative work of the stage manager, including hands-on activities in learning the principles and practices of stage management. Attendance at department production rehearsals and performance required. Two classroom, two lab hours per week. *Prerequisite(s): THE 1105 with a grade of C or better AND Approval of Department*

2255 Theatre Workshop R 1 - 3 Cr. Hrs.

Focused on a specialized area in theatre. This course is designed to bring together performance, direction and design/technology. *Prerequisite(s): Approval of Department*

2270 Theatre Internship R 1 - 4 Cr. Hrs.

Students earn credit toward certificate requirements for work learning experience related to the discipline of theatre. Students establish learning outcomes related to theatre and prepare reports and/or projects each term, detailing how the experience allowed for the application of theatre theory and/or skills. One (1) credit hour will be earned for a minimum of seven (7) practicum hours per week. *Prerequisite(s): Approval of Department*

2296 Applied Theatre Technology IV R 1 - 3 Cr. Hrs.

Advanced practical experience in theatre design and technology. Participation in department production required. Assignments made through department faculty and staff. *Prerequisite(s): Approval of Department*

2298 Applied Theatre Technology V R 1 - 3 Cr. Hrs.

Further advanced practical experience in theatre design and technology. Participation in department production required. Assignments made through department faculty and staff. *Prerequisite(s): Approval of Department*

Veterinary Technology (VET)

1102 Introduction to Veterinary Technology I 2 Cr. Hrs.

This course will introduce the student to veterinary medicine: the history, marketing systems, economic impact, and legal and current interests. Students will learn to identify a variety of species of animals and breeds within those species. Students will discuss reproductive practices, nutritional impact of feedstuffs, animal husbandry, animal behavior, preventive care and common diseases seen with a wide variety of animal species. Finally, students will be introduced to the human-animal bond and the impact of geriatric medicine and euthanasia on the veterinary technician.

1202 Introduction to Veterinary Technology II 2 Cr. Hrs.

This course will continue the education of the veterinary technical student in the subjects of: Clinical Sciences, Medical Nursing, Emergency and Critical Care, Pain Management, and the basics of Surgical Nursing. *Prerequisite(s): VET 1102*

1205 Clinical Practice I: Hospital Practices & Professionalism 1 Cr. Hr.

An introduction to veterinary laws, record-keeping, hospital management, communication, and professionalism. The course will cover such topics as OSHA, state and nationwide veterinary laws, record keeping, and effective communication between coworkers and clients. *Prerequisite(s): VET 1102*

2005 Clinical Practice II: Medical Terminology & Ethics 1 Cr. Hr.

An introduction to veterinary medical terminology, veterinary ethics, ethical situations, and a continued focus on professionalism. *Prerequisite(s): Restricted to Majors*

2101 Comparative Anatomy & Physiology, Animal Husbandry and Disease 6 Cr. Hrs.

Discussion of anatomy and physiology of multiple species. Proper use of medical and common terminology when discussing animal anatomy. Development and understanding of different physiologies on disease development, diagnoses, and treatment of animals Discusses the care and keeping of companion animals, farm animals, equines, exotic animals, and laboratory animals. Three classroom, six lab hours per week. Blended course in which much of the material is presented in an online format for home-review prior to in-class discussion/laboratory work. *Prerequisite(s): VET 2107 OR Approval of Department*

2105 Veterinary Anesthesia, Surgery, Diagnostic Laboratory & Radiology 5 Cr. Hrs.

Develops an understanding for the role diagnostic testing plays in the treatment of animals. Discusses the techniques employed to retrieve, handle, and evaluate laboratory samples. Develops the student's understanding of sterile technique, surgical technique and assistance, and anesthesia application and monitoring. Identifies and discusses the use of radiology, pharmacology, and records management in veterinary medicine. This is a lecture course with some hands-on applications. Three classroom, four lab hours per week. Blended course in which some of the material is presented in an online format for home-review prior to class discussion. *Prerequisite(s): VET 2107 OR Approval of Department*

2107 Technical Practicum I 2 Cr. Hrs.

Practicum course in which the student is paired with a screened veterinary practice in order to develop beginning practical skills within a hospital setting. Fourteen practicum hours per week in a Veterinary Practice. *Prerequisite(s): VET 1205 AND Restricted to Majors*

2108 Veterinary Assistant Technical Practicum R 2 Cr. Hrs.

The student will successfully and confidently complete NAVTA-accredited clinical skills for safe animal handling and basic clinical tasks. Fourteen practicum hours per week. *Prerequisite(s): VET 1102 and Approval of Department*

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

2111 Large Animal Husbandry & Veterinary Techniques   2 Cr. Hrs.

This course will cover the basics of the care and husbandry of large animal species, as well as specific techniques that the students are required to learn in the care of these animals. The class will be conducted both in lecture as well as lab format, with multiple field trips off-campus for live-animal simulations. All students will be required to develop the essential psychomotor skills required for passage of the course as well as the program. This is an 8-week, limited enrollment course. Four hours of classroom and/or laboratory time per week. *Prerequisite(s): VET 2107 AND VET 1202*

2205 Veterinary Dentistry, Advanced Radiology & Diagnostic Laboratory   4 Cr. Hrs.

This course will offer a brief review of venipuncture and the collection of different samples (blood, urine, feces, skin). It will also review surgical assisting procedures such as gowning, gloving, and passing instruments. This course will provide continuous hands on practice of laboratory tests like manual blood counts, differentials, and centrifugation fecal floatation. Several labs which will include radiology, surgical suturing, and intravenous and urinary catheter placement will be held. Dental care of companion animals will be introduced and practiced within laboratory and clinical settings. This is a 4 credit-hour course that will be offered in A-Term of the Spring semester and is limited to Veterinary Technology Cohort students. Two classroom, four lab hours per week. Blended course in which some of the material is presented in an online format for home-review prior to class discussion. *Prerequisite(s): VET 2207 OR Approval of Department*

2207 Technical Practicum II   2 Cr. Hrs.

Practicum course in which the student is paired with a screened veterinary practice in order to advance practical skills within a hospital setting. Included are observational experiences to large, laboratory, and exotic animal facilities to advance experience with a wide variety of animals. Fourteen practicum hours per week in a veterinary practice. *Prerequisite(s): VET 2107 AND Restricted to Majors*

2211 Veterinary Case Studies   1 Cr. Hr.

Using examples of real-life veterinary cases, the student will formulate technical assessments, calculate appropriate doses of medications, develop treatment plans, and integrate previously learned knowledge from different courses into cases of animals with systemic and/or multiple diagnoses. *Prerequisite(s): VET 1202 AND VET 2207*

2250 Veterinary Pharmacology   4 Cr. Hrs.

Veterinary Pharmacology, the development, uses, and administration of specific classes of drugs used within veterinary medicine. This will include (but not be limited to) discussions on antibiotics, antiseptics, anti-inflammatories, analgesics, and medications used for the treatment of systemic diseases. *Prerequisite(s): VET 2101*

2300 Preceptorship   2 Cr. Hrs.

During this 8-week period, each student will be partnered with an affiliate veterinary hospital. Within each practice, students will uphold proper professional attire and attitude and perform duties as set to them by the practice. This will be an unpaid preceptorship with twenty-five hours expected per week within the hospitals, the additional three hours a week to be used for research and preparation in order to present a senior capstone project. The student will meet weekly with the instructor to discuss progress and concerns. *Prerequisite(s): VET 2207 AND Restricted to Majors AND only VET cohort student that have completed or are enrolled in VET 2207*

Visual Communication (VIS)

1100 Design Foundations   4 Cr. Hrs.

Introduction to the fundamentals of two-dimensional and three-dimensional design. Students will apply critical and creative thinking techniques to applied projects that will explore the use of conceptualization, color, typography, image, modeling and applying the fundamentals of design. Two classroom, four lab hours per week.

1110 Design Drawing   4 Cr. Hrs.

Introduction to design drawing techniques as applied to visual communications, including stylization, perspective, shading and rendering. Two classroom, four lab hours per week.

1140 Design Processes   4 Cr. Hrs.

Introduction to the design development process including hand sketching, creation of thumbnails, computer illustration, imaging, photo manipulation, page layout and composition techniques using industry-based software.

1180 History of Design 3 Cr. Hrs.

History of graphic design covering major designers and their work, as well as design movements. From the origins of graphic art including printing and typography through the rise of the Internet, this course will explore the connection between culture and technology in the evolution of graphic design. *Prerequisite(s): DEV 0035*

1208 Typography   4 Cr. Hrs.

Introduction to typography as an element and tool of visual communication. The concept of type as image is emphasized. Two classroom, four lab hours per week. *Prerequisite(s): VIS 1100 AND VIS 1140*

1218 Web Design   4 Cr. Hrs.

Introduction to media design, including web-based software applications for the development of online interactive media. Design basics and a hands-on approach emphasized. *Prerequisite(s): VIS 1140*

1250 Print Production 4 Cr. Hrs.

This course will provide the fundamentals of the various printing processes. It will include digital prepress techniques used to prepare layouts for the different processes used in the industry. *Prerequisite(s): VIS 1140*

1310 History & Theory of Web Design   3 Cr. Hrs.

This course introduces students to the planning and development of interactive media, with a special emphasis web design.

1320 User Experience/User Interface   3 Cr. Hrs.

The course will explore fundamental concepts in human-computer interaction (HCI) theory and usability and learn about various cutting-edge technologies to measure digital media environment design effectiveness. The coursework will allow students to learn to pay specific attention to user expectations and how they drive user behavior. The course's primary outcome is the design and management of usability study, then reporting that study's results. *Prerequisite(s): VIS 1140*

1330 Web Design   4 Cr. Hrs.

This course is an introduction to web design. Students will learn how to evaluate and develop quality websites by applying various web concepts. Students will learn how to use software to design and develop websites. *Prerequisite(s): VIS 1140 AND VIS 1310 AND CIS 1350*

1410 History & Theory of Video Production   3 Cr. Hrs.

This course introduces and explores types of video production and the process of creating a video, including pre-production (budgeting, storytelling, scripting and storyboarding), production and post-production concepts. The course will explore essential video equipment, terminology related to video production, and an historical background in the field of video production.

1420 Video Production   4 Cr. Hrs.

This course introduces professional production of digital video, from concept to completion, including planning, storyboarding, recording, editing, and publishing for broadcast and online use.

1430 Lighting & Cinematography   4 Cr. Hrs.

This course serves to introduce students to the technical aspects of filming video and lighting. Students will record and edit an interview style video with multiple cameras, complex lighting and sound. *Prerequisite(s): VIS 1410 AND VIS 1420*

1440 Audio Production   3 Cr. Hrs.

This course will introduce students to the technical aspect of recording and editing audio. Students will learn about best practices in capturing audio, industry standard hardware, and editing professional audio for output. *Prerequisite(s): VIS 1410 AND VIS 1420*

2110 Design Principles   4 Cr. Hrs.

Development of an identity system, visual language, stationery system and identity manual. Exploration of advanced elements and principles of design; introduction to symbology. Two classroom, four lab hours per week. *Prerequisite(s): VIS 1110 AND VIS 1208 AND VIS 1250 AND VIS 1218*

2120 Design Applications I   4 Cr. Hrs.

Design Applications I will cover the development of a pictogram and wayfinding system that will be used as a component to an overall Identity Manual developed in Design Principles. Two classroom, four lab hours per week. *Prerequisite(s): VIS 1110 AND VIS 1208 AND VIS 1250 AND VIS 1218*

2130 Motion Design   3 Cr. Hrs.

This course introduces basic principles of animation (squash and stretch, anticipation, easing, etc.); the motion design process, including scripting, storyboarding, animatics, and final animation; and, industry-standard motion design software. *Prerequisite(s): VIS 1440*

2140 Web Principles   4 Cr. Hrs.

This course will cover advanced techniques, practical guidelines, and best practices for building web applications. Student will have strong knowledge of design principles and elements in relation to designing user interface (UI) for the web. *Prerequisite(s): VIS 1208 AND VIS 1320 AND VIS 1330 AND CIS 1350*

2150 Web Applications   4 Cr. Hrs.

This course incorporates elements from each of the core program courses to allow students to talk through the entire web design process, including design/project documentation, wireframing, creating mock-ups, revisions, pages and final deliverables. Upon completion, students will have a professional website that can serve as part of their professional portfolio. *Prerequisite(s): VIS 1208 AND VIS 1320 AND VIS 1330 AND CIS 1350*

2160 Design Applications II   4 Cr. Hrs.

Advanced application of design principles. Emphasis will be placed on information design to include creating print and fully developed digital media. Two classroom, four lab hours per week. *Prerequisite(s): VIS 2110 AND VIS 2120 OR Approval of Department*

2170 Web Content Management   4 Cr. Hrs.

This course focuses on web design utilizing industry-standard, database-driven, content management systems. *Prerequisite(s): VIS 2140 AND VIS 2150*

2180 Video Principles   4 Cr. Hrs.

This course serves to introduce students to the planning, execution and revision from concept to completion of video components for the professional productions of projects, including news spots, motion graphics, interviews, testimonials and podcasts. *Prerequisite(s): VIS 1208 AND VIS 1430 AND VIS 1440*

2190 Video Applications I   4 Cr. Hrs.

The planning, execution, and revision from concept to completion of video components for the professional productions of projects including branding campaigns, explainer videos, mini documentaries or vlogs, data-driven videos, and step-by-step videos. *Prerequisite(s): VIS 1208 AND VIS 1430 AND VIS 1440*

2200 Video Applications II   4 Cr. Hrs.

This course focuses on academic research and data driven video content. Students will learn about target audience and consider the best way for a brand to advertise to that audience. Students will also learn about academic research and create a data driven video or documentary. *Prerequisite(s): VIS 2180 AND VIS 2190*

2260 Design Portfolio   4 Cr. Hrs.

Graphic design business practices including individualized portfolio development, work experience and development of professional practice skills; including cost estimating, contract writing, sales and communication techniques. Two classroom, four lab hours per week. *Prerequisite(s): VIS 2110 AND VIS 2120*

2270 Design Internship   R   1 - 3 Cr. Hrs.

Students earn elective credits toward Visual Communications or Interior Design degree requirements for work-learning experience. Students establish learning outcomes and prepare related reports and/or projects in consultation with the employer and faculty. Twelve field experience hours per credit hour each week. *Prerequisite(s): Approval of Department*

The purpose of these policies and procedures is to help students succeed at Sinclair. Please carefully review and address any questions to instructors or the contacts provided.

This catalog is meant to serve as a guide and contains information for the academic year 2022-2023.

The college reserves the right to appeal, change or amend rules, regulations, tuition and fees and may withdraw, add to or modify the policies, courses and programs listed herein.

For current information:

- (937) 512-3000
- (800) 315-3000
- catalog.sinclair.edu

Academic Petition Process

If you experienced an emergency situation which affected your ability to withdraw before the deadline date or your ability to finish course requirements, you may ask the Academic Petitions Committee to consider your circumstances. You must file a petition through the Office of the Assistant Provost as soon as possible, but no later than two years following the term when the grade was recorded. Please note that this process can only be used to change a grade of F or Z to a grade of W.

Examples of emergency situations which might support your petition are:

- Death of a close family member
- Unanticipated out-of-town assignment by employer
- Incarceration
- Other emergencies*

With your petition, you must submit documentation of your circumstances that prevented you from withdrawing before the deadline and/or impacted your ability to attend class and complete coursework. Documentation from your physician, employer, agency, etc. must be on letterhead and contain the dates pertaining to your situation to verify your inability to withdraw or attend class.

Once a petition is submitted, it is logged in and placed on the agenda for the next Academic Petition Committee meeting. This cycle can take up to three months to complete. Additionally, the committee does not meet during the summer months.

The results of the Committee's petition decision, whether granted or denied, will be communicated to you by a letter sent to the address on the petition you submit.

The online Academic Petition form can be accessed at ***www.sinclair.edu/medical-health-withdrawal***

If you are interested in filing a Tuition Refund Appeal, a separate process must be initiated through the Bursar's office. You may contact the Bursar's office directly at 937-512-2568.

For any issues that may fall under the Sexual Harassment and Sexual Misconduct policy resulting in students requiring resources, contact the Title IX office at (937) 512-2961 or at TitleIX@sinclair.edu

***For other medical or mental health emergencies see the Mental/Medical Health Withdrawal policy prior to contacting academic petitions.**

Adding/Dropping Courses

Before adding or withdrawing from one or more classes, students should consult an academic advisor and the Welcome Center if using financial aid. The financial aid status of any student may be affected by withdrawing from one or more classes. Current or returning students must have a 2.0 cumulative grade point average to add or drop a course online.

A student who registers for 12 or more credit hours is considered full-time. A student who registers for 11 credit hours or less is considered part-time. Students may withdraw online, in person or by phone.

- To withdraw from a full term course:
  - Withdraw during the first eight (8) calendar days of the term for 100% tuition refund and no record of the class on the transcript.
  - Withdrawal later than the first eight (8) calendar days, but prior to the Friday of the thirteenth week of the fall and spring term; and prior to the Friday of the tenth week of the summer term, results in no refund and a grade of "W" on the permanent record.
  - Courses that are not full term in length have special deadlines. Students should check their term statement or the Registration Calendar at: www.sinclair.edu/registration-calendar

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

- In order to complete the Add/Drop/Withdrawal in-person visit the Welcome Center, Dayton Campus, or any regional center.

  - Withdraw online through my.sinclair.edu or regportal.sinclair.edu

  - To drop or withdraw from all classes for the term, students may also contact the Welcome Center, (937) 512-3000, 1-800-315-3000.

  - A copy of the processed Withdrawal will be mailed to the student. This is proof of withdrawal and should be kept for the student's records. Failure to follow one of these processes means the student will receive a grade, usually an F/Z, in the class.

  Note to Veterans:

- Veteran education benefits will be affected by withdrawal from one or more classes.

- Veterans should first contact the Military Family Education Center (formerly Veteran Services) in person at the Dayton Campus, Building 10, Room 10444 or via email at: mfec@sinclair.edu

For information on Financial Aid Add/ Drop Census Date Policy, see Financial Aid on page 19.

Administrative Withdrawal

Students may be administratively withdrawn from a class by their faculty member for nonattendance. Faculty must advise students in writing at the first class meeting what attendance record would constitute cause for administrative withdrawal. If a student does not attend the first class, it is the student's responsibility to obtain a copy of all materials distributed at the first class meeting.

Students may also be administratively withdrawn from classes as a result of a student conduct hearing with either a hearing officer or the Student Conduct Hearing Panel. Administrative withdrawals may be made when it has been determined that the student's presence on campus is potentially detrimental to the college, faculty, staff, students or themselves.

Associate Degree

To be an associate degree candidate, a student must:

- Fulfill requirements of the degree program and the institution.*

- Complete a minimum of 60 semester hours.**

- Maintain a cumulative grade point average of at least 2.0 either overall or within their program of study.

Generally, a student meeting all associate degree requirements in effect at the time they begin their coursework for a degree program will qualify for graduation. However, if the course of study is prolonged beyond six years after beginning, a student is required to consult academic advising to work with the appropriate department chairperson to determine graduation requirements. If a student has been enrolled continuously at Sinclair College for more than six years, and the degree program has not significantly changed, the student may request approval to graduate under their initial catalog requirements.

**Generally, the requisite 60 semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by the Higher Learning Commission (HLC). Additionally, unless a higher number of semester hours are specified by individual academic programs, students earning an associate degree from Sinclair College must earn a minimum of 15 semester hours of their academic program from Sinclair College. Programs requiring additional hours of residency (for accreditation, licensure, etc.) will provide an explanation or justification for any variations of the minimum credit hour requirements in their program literature and college catalog.*

To earn more than one associate degree at Sinclair College, a student must take a minimum of 12 credit hours in one associate degree program that are different from another associate degree program, and a minimum of 24 credit hours in one bachelor degree program that are different from another bachelor degree program. If a student qualifies for more than one degree during the same semester using the same curriculum and does not take the minimum hours difference, the student may choose the degree to be awarded.

For more information about degree related policies mandated by the Higher Learning Commission (HLC), see ***https://www.hlcommission.org/Policies/assumed-practices.html***

Attendance

Students are expected to be present at all class sessions. It is the students' responsibility to read and understand the class attendance policy or the Sinclair Online course participation policy that will be defined in the syllabus for each course. It is the faculty member's responsibility to define attendance or participation requirements and to monitor and record the students' fulfillment of these requirements. It is a program's prerogative to have specific policies across multiple sections due to the unique requirements of that program. Attendance for traditional classes or participation for Sinclair Online classes may affect final grades, financial aid eligibility, and VA Education Benefits. This policy differs from the "Financial Aid Student Attendance Policy" which may be found on page 16.

Auditing a Course

To audit a course means:

- Students may attend class
- Students are not required to take exams
- Students do not receive a grade or credit

To register for a class to be audited:

- Registration in audit status will be accepted only during designated late registration periods and before the first meeting of a class. Registration can only be done in person at the Dayton Campus Welcome Center (First Floor, Building 10) or at any of the regional centers. Check **www.sinclair.edu/registration-calendar** for deadlines.
- Audit status must be indicated on the registration form by marking a "Y" in the audit column.
- The fee for auditing is the same as that for enrolling for credit. VA Educational Benefits may not be used to audit a course. In addition, financial aid may not be used to pay for courses that are audited.

Note: Audit status cannot be changed to credit status, nor can credit status be changed to audit status once registration has been completed.

Assessment Policy

Prior to initial registration, students designating themselves as degree or certificate-seeking must be assessed for writing ability and numerical skills. Transfer students who are degree or certificate-seeking and who do not have transferable equivalent math or English courses must be assessed. Students may be exempt from assessment by providing proof of a qualifying college entrance exam score or a qualifying high school transcript. No degree or certificate seeking students can register for credit-bearing courses until they have test scores or other qualifying measures on file.

All students taking a mathematics or English course must be assessed through Sinclair College prior to enrollment.

Exceptions include:

- Qualifying entrance exam scores.
- Qualifying high school transcripts.
- Qualifying ACT/SAT scores.
- Prior Learning Assessment.
- Transferring credits for appropriate level math and English courses.

For more information on specifics related to the above assessment, contact an academic advisor.

Students must begin mathematics and/or English course sequences no higher than the level indicated by their assessment results.

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Students taking classes with prerequisites must meet them, either by assessment, transfer credit, or a qualified prior learning assessment option. Students requiring testing accommodations should make arrangements with the department of Accessibility Services. English as a second language (ESL) students should meet with the ESL coordinator prior to assessment to determine the appropriate assessment steps. International students must meet with the International Education department prior to assessment to determine eligibility and appropriate assessment steps.

Students taking non-prerequisite courses for personal interest or career development, but not pursuing a degree or certificate are exempt from assessment.

Baccalaureate Degree

To be a baccalaureate degree candidate, a student must:

- Fulfill requirements of the degree program and the institution.*

- Complete a minimum of 120 semester hours.**

- Maintain a cumulative grade point average of at least 2.0 either overall or within their program of study.

Generally, a student meeting all baccalaureate degree requirements in effect at the time they begin their coursework for a degree program will qualify for graduation. However, if the course of study is prolonged beyond eight years after beginning, a student is required to consult academic advising to work with the appropriate department chairperson to determine graduation requirements. If a student has been enrolled continuously at Sinclair College for more than eight years, and the degree program has not significantly changed, the student may request approval to graduate under their initial catalog requirements.

**Generally, the requisite 120 semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by the Higher Learning Commission (HLC). Additionally, unless a higher number of semester hours are specified by individual academic programs, students earning a baccalaureate degree from Sinclair College must earn a minimum of 30 semester hours of their academic program from Sinclair College. Programs requiring additional hours of residency (for accreditation, licensure, etc.) will provide an explanation or justification for any variations of the minimum credit hour requirements in their program literature and college catalog.*

To earn more than one baccalaureate degree at Sinclair College, a student must take a minimum of 24 credit hours in the second program that are different than the first. If a student qualifies for more than one degree during the same semester using the same curriculum and does not take the minimum credit hour difference, the student may choose the degree to be awarded.

For more information about degree related policies mandated by the Higher Learning Commission (HLC), see ***https://www.hlcommission.org/Policies/assumed-practices.html***

Certificate Programs

To qualify as a certificate candidate (30-37 credit hours), a student must:

- Fulfill requirements of the certificate program and the institution.*

- Complete a minimum of 30 semester hours.**

- Maintain a cumulative grade point average (GPA) requirements by either:

- Maintaining a cumulative GPA of at least 2.0
   or Maintaining a GPA of at least 2.0 within their program of study.

Generally, a student meeting all certificate requirements in effect at the time they began their coursework for an academic program will qualify for a credential.

**Generally, the requisite semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by the Higher Learning Commission (HLC). To qualify for a certificate of completion, students must complete at least 9 credit hours of Sinclair coursework within the area of study to fulfill the institution's requirements.*

For more information about degree related policies mandated by the Ohio Department of Higher Education (ODHE), visit: **https://www.ohiohighered.org/certificates-and-credentials**

Changing an Academic Program

A student is permitted to select only one active program of study. To change from one academic program to another, a student should meet with an academic advisor, academic coach, or faculty advisor. The advisor will make the change, end other programs that are no longer being pursued, and ensure the student fully understands any implications or consequences that may occur as a result of such changes. Students may also initiate this process online by emailing **academicadvising@sinclair.edu.**

Any change in academic program will be indicated on the student record and will not affect the cumulative grade point average.

Changing Sections of a Course

Students may request to change to any open section of the same course until the last day to drop the course with a "W." Acceptable reasons for changing sections may include class conflict with work schedule, childcare, transportation, or health issues.

To change to a different course section, the student must:

- First, discuss their situation with the instructor teaching the course section in which the student is currently enrolled to determine if accommodations can be made.

- Speak with the appropriate department chair for assistance with changing course sections, if the instructor does not believe a reasonable accommodation can be made.

- Present a letter from their employer verifying a work schedule change, or other official documentation regarding qualifying reasons, to the appropriate academic department chair for approval.

If the change is approved, the student will forward the approval form, with the department chair's signature, to the office of registration.

Children in Classes

Children (and others who are not officially enrolled) are not permitted in classrooms or laboratories when classes are in session. Additionally, children cannot be left unattended on campus at any time.

Degree Audit

The degree audit is a tool that indicates students' progress toward the completion of their active program of study. Students request a degree audit from an academic advisor/coach to determine how many classes they have completed for a specific academic program. If they change academic programs, students will have a different degree audit for the new program. Students can run a degree audit for their declared major, or any other Sinclair major, by going to the Sinclair portal (my.sinclair.edu), clicking on WebAdvisor, and selecting Program Evaluation

Equal Opportunity/Non-Discrimination Policy

Policy Statement: Sinclair Community College is strongly committed to a policy of equal opportunity in its employment practices, educational programs and activities, and the many services it offers to the community. The college does not discriminate against applicants, employees, or students on the basis of race, color, creed, religion, age, sex, sexual orientation, gender identity, marital status, veteran status, national origin, ancestry, citizenship or disability.

Scope: This policy applies to all employees, students, contractors and other designated affiliates of Sinclair Community College. Notice of this policy shall be posted and provided as required by law.

Provisions: This policy statement shall be used as the official statement on non-discrimination whenever such a non-discrimination policy statement is required. Additionally, employment advertising for Sinclair Community College shall include the phrase: "an equal opportunity employer."

Responsibility: Inquiries and complaints concerning this policy should be referred to the Equal Opportunity Officer who coordinates Title VI (discrimination on the basis of race, color or national origin); Title IX (discrimination on the basis of sex); ADA (as amended) and Section 504 (discrimination on the basis of disability) and ADEA (discrimination on the basis of age).

Equal Opportunity Officer - Human Resources Office, Room 7340
Sinclair Community College • 444 West Third Street • Dayton, OH 45402-1460
Phone: (937) 512-2514

All employees shall be knowledgeable of the provisions of this policy and act accordingly.

This policy replaces all previous policies related to non-discrimination.

*Revised and approved by Sinclair Board of Trustees: September 15, 2009.

Fresh Start Policy

Fresh Start allows a student, who has returned to the college after an absence of at least two years (6 semesters), and has completed specific requirements, a "one time only" option of having his or her grade point average recalculated from the point of re-enrollment without losing credit for previous course work for which a grade of *S, P, C* or better was earned. Financial Aid & Scholarships policies do not recognize the Fresh Start Policy or any changes it may have on a student's record.

The academic Fresh Start Policy and its conditions are as follows:

1. To be eligible for Fresh Start, a student must:

   • Re-enroll in the college after an absence of at least 6 consecutive semesters (including summers).

   • Successfully complete any required Developmental (DEV) courses based on an assessment of language usage, writing, and mathematical skills.

   • Successful completion of a minimum of six credit hours after re-enrollment with grades of S, P, C or better. DEV courses do not count toward the 6 credit hours.

   • Complete a Fresh Start form requesting to apply the policy.

2. The policy can be applied only once and only to classes taken before re-enrollment. Once approved, the application of this policy to the student's record is irrevocable.

3. After a student elects Fresh Start and eligibility is verified, a notation will be added to the student's transcript indicating that all Sinclair credit hours earned prior to policy enactment will be subject to the following conditions:

   • Previous cumulative GPA is recalculated based upon the elimination of D, F, and Z grades.

   • Credit earned at Sinclair with a grade of at least S, P, C or higher is carried over.

   • Credit earned at Sinclair with a grade of "D" is forfeited.

   • Grades from all course work taken at Sinclair will be shown on the transcript.

4. Fresh Start may not be applied to any course previously used by the student to complete a degree or certificate.

The academic transcript will show:
The Fresh Start Policy has been applied for academic work taken at Sinclair prior to Term/Year.

Grades

The grade point average is computed by dividing the total points earned by the total credit hours attempted. Courses in which a student earns grades of X, I, W, P, N, S, IP, U, Y are not computed in the total credit hours attempted.

The Financial Aid & Scholarships office may evaluate grades differently when determining Satisfactory Academic Progress. For additional information, review the Financial Aid & Scholarships policy on pages 20-23.

Students may be given an "I" grade if their work has not been completed. The students must contact their instructor and request an I grade. If the instructor agrees, the students and instructor must sign the "Incomplete Grade Contract." When the required work is completed within 30 calendar days after the beginning of the next term, a grade will be submitted for the "I" grade. If this is not removed within this time, the "I" becomes an "F". This time limit may be extended by special permission of the instructor.

If the student fails to contact the instructor to arrange an incomplete grade, the instructor is required to assign an "F" instead of an "I" for the term's work. For cases in which hardships are involved, the student may make up the work which could change the "F" to the grade otherwise deserved. The instructor's permission is required and must be done before term ends.

Grade	Quality Points		
A	Excellent	4	90 - 100%
B	Good	3	80 - 89%
C	Average	2	70 - 79%
D	Passing	1	60 - 69
F	Failure	0	0 - 59
Z	Non-Attendance	0	
U	Unsatisfactory	0	
I	Incomplete	0	
Y	Proficiency Credit	0	
W	Withdrawal	0	
P	Pass	0	
N	Progress	0	
IP	In Progress	0	
X	Audit	0	

Grades not used in calculation of grade point averages

AA	Articulation Agreement
AC	Articulated Credit
AP	Advanced Placement
CE	Continuing Education
CL	College Level Examination Program (CLEP)
DS	DANTES (DSST) (Standardized Subject Test)
I	Incomplete
IP	In Progress
N	Progress
P	Pass
S	Satisfactory Completion
U	Unsatisfactory
WC	WEBCAPE
W	Withdrawal
X	Audit
Y	Proficiency Credit
-	No grade was assigned

Symbols

✱	Course has been completed previously
#	Grade was earned by proficiency examination
//	Course has been repeated; this grade is not included in current GPA
=	Course equates to and replaces previous course
:	Grade not incuded in the Fresh Start Policy Calculation

Prior to Fall 1982 grades fir courses not applicable to a new major were not considered in computing the student's cumulative grade point average. Effective Fall 1982 all courses on thge student's record are included in the cumulative grade point average.

Exception:

Flight Lab Completion Requirements/Registration in subsequent labs

You have two consecutive semesters to complete all flight lab courses. If you have not completed all course requirements at the end of the second semester you will be removed from the flight lab and issued a grade of "F".

At the end the initial semester, if you are not complete, your flight instructor and you will fill out an incomplete grade request form so an "I" grade can be issued. You must also schedule your new flight training time slots for the next semester. If the form is not filled out and you do not schedule flight training time slots for the next semester, you will be issued a grade of "F "and you will be removed from the flight lab.

If you do not complete the course in the allotted semester time limit, you will need to reenroll in the course in its entirety. If the program is full at the time you seek to reenroll, you will be put on the waitlist. Extensions to the semester time limit will be considered on a case-by-case basis.

Based on the above guidance the requirement to maintain an Incomplete (I) grade is as follows: One additional semester plus 30 days for AVT 1124, 1126, 1224, 1226, 2263, 2264, 2265, 2266, 2269, 2271, 2277, AND 2278.

Dean's List

To be eligible for the Dean's List in any term, students must have:

- Six or more credit hours of college level course work

- A grade point average of 3.4 with no grade below a C for that term

- Good academic standing

Courses for which students earn grades of X, IP, I, W, P, N, S, or Y are not computed into total credit hours attempted. Their placement on the Dean's List will be noted on their academic transcript.

Academic Intervention, Probation, Dismissal

1. All students must maintain a minimum academic performance of at least a 2.0 GPA cumulatively (2.0 or greater).

2. Students will be placed on the following academic standards:

   • First semester below 2.0 GPA—Academic Intervention

   • Second consecutive semester below 2.0 GPA—Academic Probation

   • Third consecutive semester below 2.0 GPA—Academic Dismissal
     If the term GPA is 2.0 or above, the student will remain on Academic Probation.

3. Students will be returned to good academic standing when a cumulative GPA of 2.0 or greater is earned.

4. Students who are on academic intervention or academic probation will receive correspondence that refers students to academic/faculty advisors/coaches, and Student Affairs for advising, academic assistance, and information on the impact on financial aid.

5. Students who are on academic probation must be seen by an academic/faculty advisors/coaches to:

   a. register or add classes.

   b. receive additional support information or assistance.

Students whose semester GPA is 2.0 or greater, but whose cumulative GPA would cause them to be dismissed, will be granted an additional probationary period for each semester in which the semester GPA is 2.0 or greater.

NOTE: Financial aid considers all assigned grades when calculating cumulative grade point average for satisfactory academic progress evaluation.

Graduation

The Registration & Student Records office is responsible for identifying students who have met all of the requirements for their programs. Once those students have been identified, they will be graduated.

Students will receive an email from the Registration & Student Records office during the term in which they are enrolled in the final courses needed to complete their degrees, certificates or short term certificates. This email will simply confirm that the student has indeed registered for the necessary courses and, pending successful completion of those courses, can expect to receive their diplomas or certificates at the end of the term. Once those courses have been completed successfully, students will be graduated. They will receive their diplomas or certificates through the U.S. Postal Service in six to eight weeks after the end of the term.

Important points for graduating students to do during their last term:

   • Check with an academic advisor to ensure their academic programs are correctly recorded.

   • Check their Sinclair emails.

   • Be sure the Registration & Student Records office has their correct mailing addresses.

Student must earn a minimum of 15 semester credit hours of their academic program from Sinclair or must earn the last 15 semester credit hours of their academic program at Sinclair.

Graduation honors are also noted on the transcript. Sinclair awards "graduation honors" for a cumulative grade point average of 3.4 to 3.899. The college awards "high honors" for a cumulative grade point average of 3.900 and above.

Participation in Commencement

Students earning their associate or bachelor degrees will be offered the opportunity to participate in Sinclair's annual commencement ceremony. This ceremony takes place in May. Participation in the commencement ceremony is limited to those students earning associate or bachelor degrees.

Guarantees

Sinclair Guarantee—What happens after graduation? The Sinclair Guarantee of Graduate Quality gives graduates two guarantees they can count on:

- A guarantee of transfer credit for graduates receiving Associate of Arts and Associate of Science degrees at Sinclair Community College, for entering a university parallel/transfer program with confidence.

- A guarantee of job competency for those who have obtained an Associate of Applied Science degree at the college and wish to enter a technical career program.

This tuition-free education as described below constitutes the sole and exclusive remedy under the Sinclair Guarantee of Graduate Quality.

Guarantee of Transfer Credit (AA and AS Degrees)

For students thinking about pursuing a four-year degree, Sinclair Community College guarantees to its Associate of Arts and Associate of Science graduates the transfer of course credits to those Ohio colleges or universities that have articulation agreements with Sinclair Community College.

The guarantee applies only to courses included in a written transfer/articulation plan that must be on file in the Provost office.

Limitations on the total number of credits accepted in transfer, grades required, relevant grade point average, and duration of transferability apply as stated in the catalog of the receiving institution. Cost of books, insurance, laboratory and activity fees, and other course related expenses are the responsibility of the graduates. For details about the guarantee, see an academic advisor.

Guarantee for Job Competency (AAS Degrees)

Graduates looking for a technical job should be sure to tell potential employers that they are Sinclair graduates. Many of them know that Sinclair Community College guarantees appropriate technical job skills identified in the program outcomes for a specific degree to its Associate of Applied Science graduates. And, if the employer feels the graduates are lacking in technical job skills identified by the program outcomes for the specific degree program, the college will provide the graduates with up to nine (9) tuition free credit hours of additional training by Sinclair Community College, under the conditions of the guarantee policy.

The guarantee applies only to graduates employed on a full-time basis directly related to the area of program concentration as certified by the Provost. Employment must commence within 12 months of graduation.

Cost of books, insurance, uniforms, laboratory and activity fees, and other course related expenses are the responsibility of the graduates and/or the employers.

Special Conditions for the Job Competency Guarantee

The employer must:

- Certify in writing the employee is lacking job skills related directly to the degree's program outcomes.

- Specify areas of deficiency within six months of the initial employment.

- Develop a written educational plan for retraining the graduate in cooperation with the appropriate academic department at the college.

- Retraining will be limited to nine (9) semester hours of credit related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan, and must be completed within a calendar year from the time the educational plan is agreed upon.

- The guarantee does not imply the graduate will pass any licensing or qualifying examination for a particular career.

Harassment Policy

Sinclair Community College is committed to maintaining an environment free from harassment. The college's Student Harassment Policy-pertaining to student on student harassment, and Employee Harassment Policy and Procedure-pertaining to harassment by employees against either students or other employees, can both be found on the College's intranet website, my.sinclair.edu, and on the Human Resources webpage. These policies both pertain to harassment other than sexual harassment. (The college has a separate Sexual Harassment and Sexual Misconduct Policy, described on page 307.)

Inquiries concerning the Student Harassment Policy should be referred to the Vice President for Student Development. A complaint of harassment by a student against another student should be reported to any of the following persons: Vice President for Student Development, Director of Student Affairs, Dean, or Department Chairperson.

Inquiries concerning the Employee Harassment Policy should be referred to the Equal Opportunity Officer/Director of Human Resources. A complaint of harassment on the part of a College employee against a student or another employee should be reported to the Equal Opportunity Officer/Director of Human Resources, the complaining employee's supervisor or supervisor's superior, Department Chairperson, Dean, or Vice President for Student Development.

www.sinclair.edu/services/conduct-safety/student-judicial-affairs/student-code-of-conduct-handbook/

Honors Program

Academic Honors offers many rewards:

- Availability of Sinclair Academic Excellence Scholarships
- Opportunity to participate in Service Learning
- Academic challenge and personal enrichment
- Honors designation on transcript
- Special commendation as an Honors Scholar after completing required courses
- Attendance at regional meetings of Honors students and faculty from other colleges and universities
- Better preparation for entering baccalaureate and advanced programs
- Increased opportunities for financial aid and membership in honor organizations like Phi Theta Kappa
- Scholarships and/or transfer articulations with Miami University, University of Dayton and Wright State University.

Students can participate in Honors in two ways:

Individual Honors Courses

Students with a 2.8 GPA may enroll in individual Honors courses whether or not they plan to become Honors Scholars. To receive Honors credit, a student must earn a minimum of "B" in the course. What honors courses will be offered next term? Ask your instructor! Any course on campus or online beyond the Developmental level may be taken with an Honors option, with the approval of the instructor and the department chair. To find courses, students can search the online course schedule planner by keyword. Enter "honors" in the search box under keyword and a list of courses offering honors options will come up.

Honors Scholars Program

Students may apply to become Honors Scholars. Interviews take place each term. Upon acceptance, scholars undertake to complete four honors experiences while maintaining an overall 3.25 GPA. Two of the four honors courses must be in different disciplines and one course must be Interdisciplinary. The interdisciplinary requirement may be waived if courses are taken from four different disciplines.

In addition to other financial aid and scholarships, Honors Scholars may apply for up to six Academic Excellence Scholarships on a per-term basis during their time in the program.

Honors Scholars are required to fulfill a Service Learning requirement before completing the program. Students will perform unpaid community service as part of a selected Honors course or just on their own. Students seeking help in choosing a service project are encouraged to contact Sinclair's Service Learning office at: **www.sinclair.edu/service-learning**

Find the application and other Honors Program forms at: **www.sinclair.edu/academics/honors-program/honors-forms/**

More details about Service Learning visit: **www.sinclair.edu/service-learning**

Late Registration

Students may register for open classes during Sinclair's official late registration period after first payment due and before first day of the semester.

- Late registration period is the week before each term begins. See the online class schedule for exact dates for each term.
- To audit a class, students register during late registration; there is no late fee charge. Register in person only.

NOTE: Sinclair classes are considered to have met as of midnight on the second day of the term.

Medical or Mental Health Withdrawal

A medical or mental health withdrawal is defined as withdrawal from classes due to a severe medical condition, either physical or emotional. It is intended for use only in extraordinary circumstances in which unanticipated serious illness or injury prevents a student from continuing to attend or participate in one or more classes.

Request Process:

- Withdrawals requests based on physical or emotional issues should be completed as soon as possible by the student or the student's legal guardian and submitted to the office of student affairs Building 10, Room 202.
- Medical statement must be completed by physician and/or therapist (Link to medical statement). All application materials will be confidentially maintained.
- If you receive financial aid or veterans benefits, discuss the impact of your withdrawal on your eligibility for the assistance received.
- Students receiving financial aid or military-related funding should speak with departmental staff members in the Military Family Education Center or with an enrollment specialist in the Welcome Center to have an understanding how it may impact their current financial aid, or future financial aid.
- Students requesting to be withdrawn from classes may be required to return their financial aid refund amount for that semester.

If the withdrawal is approved, the student will receive a W on the transcript for all courses approved.

The online Medical or Mental Health Withdrawal form can be accessed at **www.sinclair.edu/medical-health-withdrawal**

If you are interested in filing a Tuition Refund Appeal, a separate process must be initiated through the Bursar's office. You may contact the Bursar's office directly at 937-512-2568.

For any issues that may fall under the Sexual Harassment and Sexual Misconduct policy resulting in students requiring resources, contact the Title IX office at (937) 512-2961 or at TitleIX@sinclair.edu

*For medical or mental health emergencies see the Mental/Medical Health Withdrawal policy prior to contacting academic petitions.

Military Training

Sinclair evaluates military training according to the American Council on Education (ACE) recommendations. Please refer to the Transfer of Credit to Sinclair policy for complete instructions on how to submit transcript.

National Change of Address

In accordance with the United States Postal Service regulations effective January 4, 2010 all addresses are required to go through a Post Office approved validation process. A process is run every 90 days to verify a student's address matches with the United States Postal Office. If there is a discrepancy, a student's address will be updated and could affect your residency/tuition.

One Year Time Limit on Math Prerequisites

The following policy applies to all math courses with a MAT course designation except for MAT 1110, MAT 1120, and MAT 1130.

Students registering for a MAT course are required to have completed the prerequisite course not more than one calendar year prior to the semester in which they are taking the given MAT class. This means the prerequisite course must have been taken in one of the three consecutive semesters (including summer) immediately prior to the semester in which they want to take the given MAT class. For example, in order to register for MAT 1570 in the fall of 2022, a student must have taken the prerequisite course MAT 1470 no earlier than the fall 2021 semester.

Students whose prerequisites for MAT courses were completed more than one calendar year ago should see an academic advisor for assistance in registering for a MAT course.

NOTE: This policy does not apply to courses offered by other departments that have a MAT course as a prerequisite.

Personal Data

To change a name or address:

- Apply online at: **my.sinclair.edu**, or
- Complete the online Change of Information Form at **https://www.sinclair.edu/services/welcome-center/rsr/forms/name-address-phone-changes/change-of-information-form/**

To change a social security number, students can log into my.sinclair.edu, select Registration and Student Records in the Secure Document Upload tile, and upload a copy of the social security card. Military-affiliated students must report any change to the Military Family Education Center (MFEC) in person or online at Dayton Campus, Building 10, Room 10444 or via email at: *mfec@sinclair.edu.*

A change of address does not automatically change residency for fee purposes. For that, students must file a separate application for a change of residency and show proof of eligibility at Registration & Student Records. For deadline dates, see Registration at: **www.sinclair.edu/registration-calendar**; call (937) 512-3000 or (800) 315-3000.

To change a name, proper court documentation for Name Change can be submitted in-person or through my.sinclair.edu through the Secure Documents Upload tile.

Prerequisites

Some courses have prerequisites which are other courses that must be successfully completed prior to taking these courses. Many beginning classes require the placement testing or completion of developmental or remedial courses before students may enroll in them.

Transfer and transient (visiting) students who have completed prerequisite courses at another institution may bring an unofficial transcript or a grade card to an academic advisor for review. If the students wish to receive credit for those courses at Sinclair, they must have their official transcript sent from their former institution to the Sinclair Registration & Student Records office.

Prior Learning Assessment Programs

Prior Learning Assessment (PLA) gives students the opportunity to demonstrate learning done outside of the college classroom to potentially earn college credit. Evaluation of all PLA options is done by content experts and department chairs in accordance with established Sinclair policies, equivalencies, and course outcomes. All interested students are encouraged to contact their academic advisor in the Academic Advising Center to determine which PLA option can help them complete their academic goals. PLA options are broken into two categories: credit by exam and evaluation of a credential, transcripts, or portfolio. Students interested in PLA opportunities should visit **www.sinclair.edu/pla** for policies, forms, and contact information.

General Policies:

- Students must have an active record with Sinclair.

- Credit earned through any PLA option does not count toward institutional residency requirements.

- A maximum of 30 hours of PLA credit can be used to complete associate degree requirements.

- Students should contact their Academic Advisor with questions on how to initiate any process as some PLA options require department approval.

- Students are charged for the cost of assessment, e.g. proficiency exams. These costs vary by option and are non-refundable. Sinclair is not responsible for the pricing of standardized tests or associated sitting fees.

- Courses awarded via PLA will be recorded on students' transcripts.

- The state encourages institutions to accept PLA credits in transfer; however, students are encouraged to confirm with their destination institution how credit earned through PLA can apply.

Advanced Placement (AP) Program

The College Board's AP Program (**http://apcentral.collegeboard.com**) offers high school students the opportunity to earn college course credit by providing examinations in 34 introductory courses in 20 fields. To have AP scores reported to Sinclair Community College, use school code 1720. For AP exams taken previously, contact the College Board at (888) 225-5427 or via the College Board website (**https://apstudents.collegeboard.org**) to request that an official score report be sent to Sinclair. Students with an AP exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam(s) successfully completed.

American Council on Education (ACE)

ACE provides credit recommendations for a variety of industry training, examinations, and coursework. Students are encouraged to send their official ACE transcripts to Sinclair for evaluation. Information on ordering transcripts, organizations served, courses and exams can be found at National Guide resource (**http://www2.acenet.edu**).

Articulated Credit

Articulated credit is earned via industry licensures, credentials and certifications. Students are encouraged to present any credentials they've earned to their academic advisor. Most credentials must be current or active and require department chair evaluation. If determined eligible, credit will be awarded to the student's Sinclair transcript. This evaluation process is completely free.

College Level Examination Program (CLEP)

CLEP exams are nationally standardized exams that can equate to specific Sinclair courses with a minimum qualifying score. There are no prerequisites for these exams and with qualifying minimum scores student may send official transcripts for credit at Sinclair via the College Board website (**https://clep.collegeboard.org/**). The tests cost approximately $85 plus a variable sitting fee by location. Students are encouraged to register, pay, schedule the test and send transcripts via the College Board website using Sinclair school code: 1720.

DANTES Subject Specific Test (DSST)

DANTES Standardized Subject Tests are nationally standardized exams that can equate to specific Sinclair courses with a minimum qualifying score. DSST exams can be taken at a variety of locations both locally and nationally. The tests cost approximately $80 plus a variable sitting fee by location. Students are encouraged to register, pay, schedule the test and send transcripts via the Get College Credit website (**http://getcollegecredit. com/**) using Sinclair school code: 9309. If you have already taken a DSST exam and did not have your scores sent to Sinclair, download the DSST Transcript Order form to get your scores.

Portfolio Based Evaluations

To demonstrate learning done out of the classroom, students also have the option of creating a portfolio targeting the specific course outcomes of a needed class. This option is typically pursued for upper level classes, capstones or internships. The portfolio will include a background of the student's professional and educational experiences and aspirations, specific references to the outcomes of the class with examples, documentation and explanations of how this learning has been earned and mastered. Interested students are encouraged to talk about this option with their academic advisor.

Proficiency Exams

Sinclair offers over 150 different proficiency exams developed by content experts in a variety of academic departments. Eligible students are able to take a proficiency test and if earning a grade of "C" or higher, earn credit for the equivalent class. Interested students are encouraged to talk about eligibility and options with their academic advisor.

Readmission Policy for Dismissed Students

If you have been dismissed from Sinclair for academic reasons and would like to be readmitted, you must petition for readmission. The petition must be submitted to an academic advisor at least three weeks before the first day of classes for the term you would like to attend.

If you are dismissed for the first time, you must remain out of school for a minimum of one term, including summer. For example, if the dismissal was at the end of fall term, you cannot attend spring term but may petition for readmission to summer term. If you are dismissed a second time, you must remain out of school for an academic year (three terms).

If you are dismissed for the third time, you will not be readmitted to Sinclair unless there are documented, extenuating circumstances.

To be considered for readmission, you must:

- Meet with an Academic Advisor a minimum of two times
- Complete a readmission petition
- Meet with a representative from Counseling Services as referred by your advisor
- Take any required placement tests

Call 937-512-3700 to schedule an appointment with an academic advisor on the Dayton campus to begin the readmission process or meet with an academic advisor at one of our regional centers.

Petitions for readmission are available from the student's academic advisor.

Veterans Note: To re-establish VA educational benefits, a student must submit a copy of the readmission paperwork to the Military Family Education Center (formerly Veteran Services) in person, Dayton Campus, Building 10, Room 10444, or via email to mfec@sinclair.edu, after readmission to the college.

Refund of Fees

- To receive a refund of fees, students must file the appropriate Drop/Add/Withdraw form online through the Student Self-Service Portal within the specified refund period, which is published online at through the registration calendar.

- If students withdraw by the eighth calendar day from a full-term course (including Saturday and Sunday) of fall, spring and summer terms, a 100 percent refund will be issued (see refund information at the end of this section). After that date, students will receive no refund for dropped courses. Different refund schedules apply for courses that have beginning and ending dates that do not correspond to the full-length term dates. It is the student's responsibility to be aware of this information and other matters related to his or her registration. For more information, contact the Dayton Campus Welcome Center (First Floor, Building 10), any of the regional centers, or visit the registration calendar at **www.sinclair.edu.**

- If students withdraw after the eighth day of the full term, they will not receive a refund of tuition or fees unless the withdrawal was due to exceptional circumstances such as a medical emergency, family death, military deployment, etc. For consideration of the specific situation, students must submit a tuition refund appeal request with support documentation to the Bursar's Office, lower level of Building 10, Room 016 or submit the appeal online. Students may access the Tuition Refund Appeal form and policy at: www.sinclair.edu/ bursar-refund-policy, select the Tuition Refund Appeal Form link, and follow the steps accordingly. Financial aid or third-party funding may be adjusted due to course drops or withdraws and could be impacted with an approved tuition refund appeal. Refer to the Financial Aid Add/Drop Census Date Policy beginning on page 19, the Withdrawal & Return of Title IV funds beginning on page 29, and Veterans & Military Benefits beginning on page 31 for additional information.

- If Sinclair Community College cancels the student's class, the student will receive a 100 percent refund.

- Sinclair utilizes BankMobile Disbursements, a technology solution, powered by BMTX, Inc. to deliver student refunds. For more information about BankMobile Disbursements, please visit: **http://bankmobiledisbursements.com/refundchoicessso/** The first refund disbursement of each term begins approximately 30 to 45 days after the start of the term. Refunds are processed weekly after the first refund of each term. All students are required to select a refund delivery preference through BankMobile Disbursements. All refunds will disburse from BankMobile Disbursements and is dependent upon the refund delivery preference selected by the student.

Repeating a Course

A student may repeat a course for any reason. When a course is repeated, the most recent grade will be used in calculating the cumulative grade point average (GPA) in place of the original grade. All grades will remain on the transcript even if they are not counted in the cumulative GPA.

There are some courses which will be counted in the cumulative GPA each time they are taken; the original grade is not replaced by the second one. Such courses are designated in the course descriptions with an R. If a student wants to have the previous grade in such a course replaced by a later grade, special arrangements must be made with the department chairperson.

Financial aid will only pay for one repetition of a passed course. For financial aid purposes, a "D" grade is considered passing. Review the Financial Aid policy section for additional information.

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Residency Rules

Residency status of each student is determined during the admissions process. Tuition surcharges to the student and college's subsidy payments are based upon that decision. The definitions and rules used by all Ohio educational institutions are contained within the document entitled Ohio Board of Regents 3333-1-10, generically known as Rule 10.

A student who is a non-resident of Ohio must pay a tuition surcharge in addition to other fees. The following rules determine who can be considered an Ohio resident:

- To be considered a resident of Ohio a person must maintain residence in Ohio for 12 months, be qualified to vote in Ohio and to receive state welfare benefits, and be subject to tax liability under Section 5747.02 of the Ohio Revised Code. A person is not permitted to remain a resident of any other state or nation for any purpose within the time prescribed.

- A person who has established a place of residence in Ohio for the purpose of attending a college or university will be considered a non-resident for fee purposes.

- A person admitted to this country as a resident alien may establish Ohio residency in the same manner as any other non-resident.

- An alien admitted to this country on a student visa or other visas, which do not qualify the person to remain in this country on a permanent basis, will be considered a non-resident for fee purposes.

Within the above stated general rules, a student will be considered a resident for fee purposes if the student:

- Has resided in Ohio for at least 12 consecutive months immediately preceding enrollment and is not receiving, and has not received in that time period, financial support from persons or entities who are not residents of Ohio.

- Is a dependent student and at least one of his or her parents or legal guardians has been a resident for at least 12 consecutive months immediately preceding enrollment.

- Is living in Ohio and employed on a self-sustaining basis in Ohio, and is attending college on a part-time basis. The student's spouse who is a full-time homemaker will also be considered gainfully employed.

- Has a parent or spouse who has accepted full-time employment and has established a place of residence in the state of Ohio as of the first day of the term the student enrolls.

Specific Exceptions

The student, his or her dependents, and spouse are considered residents of Ohio if the person:

- Is on active duty in the armed forces of the United States and is stationed and resides in Ohio.

- Forever Buckeye extends the in-state resident tuition rate to any public or private Ohio high school graduate who leaves the state but returns to enroll in an undergraduate or graduate program at an Ohio college and also establishes residency in Ohio. The Forever Buckeyes provision of law removes the 12-month period of establishing domicile in Ohio before becoming eligible for in-state tuition rates.

- Is on active duty in the armed forces of the United States, and Ohio is the state of residence for legal purposes.

- Is transferred by his or her employer beyond the territorial limits of the 50 states of the United States and the District of Columbia, and Ohio is the state of residence for legal purposes.

- Has been employed as a migrant worker in Ohio and has worked in the state at least four months during each of the three years preceding the date of enrollment.

SINCLAIR COLLEGE

Montgomery County

A student who qualifies as a resident of Ohio, but does not qualify for Montgomery County residency, must pay an instructional surcharge in addition to other fees.

- The student must qualify as a resident of the state of Ohio in order to qualify as a resident of Montgomery County.
- A person who has established a place of residence in Montgomery County for the purpose of attending Sinclair will be considered a non-resident for fee purposes.
- A student who has been classified as a Montgomery County resident shall be considered to have lost his or her residency after he or she (or in the case of a minor), his or her parents or legal guardian move out of the county.

Within the above stated general rules, a student will be classified as a resident of Montgomery County for fee purposes if the student:

- Has resided in Montgomery County for at least 12 consecutive months immediately preceding enrollment at Sinclair and is not receiving, and has not directly or indirectly received during that time, financial support from persons or entities who are not residents of Montgomery County.
- Is a dependent student and at least one of his or her parents or legal guardians has been a resident of Montgomery County for at least 12 consecutive months preceding enrollment.
- Is gainfully employed on a self-sustaining basis and resides in Montgomery County and is enrolled on a part-time basis (less than 12 credit hours). The spouse who is a full-time homemaker will also be considered gainfully employed.
- Has a parent or spouse who has accepted full-time employment and has established a place of residence in Montgomery County as of the first day of the term the student enrolls.

Specific Exceptions

The student, his or her dependents, and spouse will be considered residents of Montgomery County if the person:

- Is on active duty in the armed forces of the United States and is assigned to Wright-Patterson Air Force Base.
- Entered active duty in the armed forces of the United States as a resident of Montgomery County and can provide proof of eligibility to vote in the county and intends to maintain Montgomery County as the legal residence.
- Has been employed as a migrant worker in Montgomery County and has worked in the county at least four months during each of the three years preceding the date he or she enrolled.

If a student has been classified as a non-resident of the State of Ohio or Montgomery County, he or she must apply for reclassification when the student meets the qualifications for residency. A change of address does not automatically change residency.

The student must present evidence to support the request for reclassification, including proof of place of residence, place of employment, and sources of financial support. If the student is reclassified from non-resident to resident of Ohio or Montgomery County, he or she will be eligible to pay the resident fees from the date of reclassification; the reclassification will not be retroactive to any previous term.

Information concerning residency and residency forms are available at **https://www.sinclair.edu/services/welcome-center/rsr/forms/change-of-residency**/. Requests for reclassification and supporting documents must be submitted prior to the deadline listed on the residency application.

Residency information obtained from the application for admission (more than the current address) will be used to determine residency for tuition purposes. If students feel they qualify as a State of Ohio or Montgomery County resident, contact the Registration & Student Records office, (937) 512-3000, for specific policies, procedures, time frames, and required documentation.

This catalog is meant to serve as a guide; official and current information is available at: **www.sinclair.edu**

Selective Service Fees

Ohio law requires that all males who are not in compliance with the federal Selective Service laws pay out-of-state fees. All males who are 18 through 25 years of age must be registered with Selective Service. Men who are on active duty in the U.S. military service are exempt. Students who are not in compliance will be assessed out-of-state fees and, if the fees are not paid within the specified period, the students may be withdrawn from all classes. Students may register at any U.S. post office or at: **www.sss.gov**

For information concerning status, call (708) 688-2576, Monday-Friday, 8:30 a.m.-6:45 p.m.

Sexual Harassment and Sex Discrimination Policy & Procedure

Notice of Non-Discrimination

"No individual in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." – Title IX of the Education Amendments of 1972, and its implementing regulation at 34 C.F.R. Part 106 (Title IX)

Sinclair Community College is committed to providing an academic, work, and study environment free of inappropriate and disrespectful sexual conduct and communication in any form. Sinclair will conduct its programs, services, and activities in accordance with applicable federal laws, including Title IX of the Education Amendments of 1972, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination (SaVE) Act, as well as state and local laws, and Sinclair policies.

New Title IX Sexual Harassment and Sex Discrimination Policy and Procedures Adopted

On May 6, 2020 the U.S. Department of Education issued new Title IX regulations that make significant changes to the former Title IX policy and procedures used by Sinclair College. These new regulations, effective August 14, 2020, limit the scope and jurisdiction under which an individual may file a complaint, narrows the definitions of prohibited conduct, and uses a different approach to due process requiring that new grievance procedures be adopted and published by the College. They are a significant shift from the former Title IX processes.

As always, Sinclair's Title IX Office works to support a safe, respectful and healthy learning and working environment for all students, employees, and other College community members. With those principles in mind, Sinclair has aligned the College's new Title IX policy and procedures with the mandates in the new regulations. Sinclair's President has established new Title IX Sexual Harassment and Sex Discrimination Procedures to comply with applicable statutes, regulations, and official guidance. Sinclair's Board of Trustees adopted a new Sexual Harassment and Sex Discrimination Policy on September 15, 2020 to carry out Sinclair's obligations under Title IX and the new regulations.

Sinclair's responsibilities and programs for preventing sexual harassment and sex discrimination and addressing it when it occurs are coordinated by the Sinclair Title IX Coordinator. Resources are available for students and employees to address concerns pertaining to sex discrimination, including sexual harassment.

If you require information, support, or would like to file a complaint, contact the Sinclair Title IX Coordinator or the Deputy Title IX Coordinator:

Title IX Coordinator OR
Deputy Title IX Coordinator
444 West Third Street
Dayton, Ohio 45402
Office Phone: 937-512-2961
Office Fax: 937-512-2777
Campus Location: Building 7, Room 343
Email: TitleIX@sinclair.edu

Sinclair strongly encourages individuals who believe that they or someone else has been the victim of sexual assault, domestic violence, dating violence, stalking, and/or other forms of sexual misconduct off-campus to contact Dayton Police and to notify Sinclair Police immediately. Anyone who believes that he or she or someone else has experienced these acts on campus should contact Dayton Campus Police at (937) 512-2700 or dial 911 from any location.

To review the most current version of the Sinclair Sexual Harassment and Sex Discrimination Policy and Procedure go to: *https://www.sinclair.edu/about/consumer-info/sinclair-community-college-title-ix-sexual-harassment-and-sex-discrimination/.*

The Sinclair Sexual Harassment and Sex Discrimination Policy states the following:

Approved by Sinclair Board of Trustees, Resolution #2020-23, September 15, 2020 (Supersedes and replaces: Sexual Harassment and Sexual Misconduct Policy, Approved by Board of Trustees, Resolution # 2015-50, December 3, 2015)

Sinclair Community College Sexual Harassment and Sex Discrimination Policy

1. Sinclair fully complies with Title IX of the Education Amendments of 1972, and its implementing regulation, 34 C.F.R. Part 106. Title IX provides: "No individual in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any [Sinclair] education program or activity receiving Federal financial assistance."

2. Sex discrimination is conduct or procedure which has the purpose or effect of restricting or denying access to opportunities, programs, or resources on the basis of sex, and is prohibited at Sinclair.

3. All at Sinclair shall work and study in an environment free of discrimination on the basis of sex, including sexual harassment. All Sinclair students and employees are protected under and subject to the guidelines of Sinclair's Title IX policy and related procedures.

4. There are six types of "Title IX Sexual Harassment" prohibited at Sinclair: (1) quid pro quo sexual harassment, (2) unwelcome conduct sexual harassment, (3) sexual assault, (4) dating violence, (5) domestic violence, and (6) stalking on the basis of sex.

5. Sinclair shall have a full U.S. Department of Education-compliant set of procedures to duly and fairly process and adjudicate accusations, questions, complaints, false accusations, retaliation, and the proactive training needed related to Title IX-prohibited behavior.

6. Sanctions and corrective actions for non-compliance with Sinclair's policies and procedures will be applied and based on the severity of the offending actions in each case.

7. The President shall establish procedures to administer this Policy in compliance with applicable statutes, regulations, and official guidance. The procedures shall include the designation of a Title IX Coordinator and periodic training of employees and students. 8. The President of Sinclair shall periodically report to the Sinclair Board of Trustees the aggregate results of processing Title IX cases at Sinclair.

Table of Contents for the Sinclair Sexual Harassment and Sex Discrimination Procedure

For more details on the Sinclair Sexual Harassment and Sex Discrimination Procedure, please review the Sinclair Title IX website page at ***https://www.sinclair.edu/about/consumer-info/sinclair-community-college-title-ix-sexual-harassment-and-sex-discrimination/***. This Procedure covers the following information:

V. INVESTIGATION OF FORMAL COMPLAINTS

A. Complaints of Sex Discrimination or Retaliation

B. Investigation Process for Formal Complaints of Title IX Sexual Harassment

    1. Starting the Investigation

    2. Notice to Parties

    3. Timing of Notice

C. Dismissal of Formal Complaint

D. Advisors

E. Timeframes

F. Consolidation of Formal Complaints

G. Interviews and Evidence Gathering

H. Investigative Report

    1. Interim

    2. Standard of Evidence and Burden of Proof

VI. MISCELLANEOUS PROVISIONS

A. Privacy and Confidentiality

    1. Privacy

    2. Confidentiality

B. Supportive Measures

    1. Generally

    2. Types of Supportive Measures

    3. Failure to abide by Restrictions imposed by Interim Supportive Measures

C. Emergency Removal

D. Equitable Treatment

E. Bias/Conflicts of Interest

F. Presumptions

G. Recordkeeping

VII. HEARING

A. General

B. Pre-Hearing Conference

C. Advisors at Hearings

D. Relevance

E. Weighing Credibility

F. Decision

G. Sanctions and Remedies

H. Appeals

VIII. INFORMAL RESOLUTION PROCESS

IX. PREVENTION, EDUCATION, AND TRAINING

Short-Term Certificate Programs

To qualify as a short-term certificate (1-29 credit hours) candidate, a student must:

- Fulfill requirements of the short-term certificate program and the institution. *

- Complete the minimum program hours. **

- Maintain a cumulative grade point average of at least 2.0 either overall

or

- Maintaining a GPA of at least 2.0 within their program of study.

Generally, a student meeting all short-term certificate (STC) requirements in effect at the time they began their coursework for an academic program will qualify for a credential.

**Generally, the requisite semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by industry partners and educational entities. To qualify for a short-term certificate of completion consisting of 18 credit hours or less, students must complete at least 50% of Sinclair course work at Sinclair Community College within the area of study to fulfill the institution's requirements.*

Due to the specialized structure of short-term certificates consisting of 19-29 credit hours, students may be required to take a minimum of 9 semester hours of Sinclair coursework within the area of study to fulfill institutional requirements.

If the short-term certificate is a lecture/lab combination or only 1 course is required, 100% of the coursework must be completed at Sinclair.

Disclaimer: If the short-term certificate is regulated by an agency outside of Sinclair, then the student must complete the minimum curricular requirements as defined by that agency.

For more information about degree related policies mandated by the Ohio Department of Higher Education (ODHE), visit: https://www.ohiohighered.org/content/short_term_certificate_program

Standards of Academic Progress: Academic Intervention, Probation, Dismissal

Students who earn/maintain a GPA of 2.0 or higher are defined, by college policy, to be in good standing.

Cumulative GPA is calculated each term a student is enrolled in courses for credit. The grade point average is computed by dividing the total points earned by the total credit hours attempted.

Semester GPA is calculated each term a student is enrolled in courses for credit. The grade point average is computed by dividing the points earned for the term by the credit hours attempted for the term.

- All students must maintain a minimum academic performance of at least a 2.0 cumulative GPA (2.0 or greater).

- Students who do not meet the 2.0 requirement will be placed on the following academic standards:

  First semester cumulative GPA below 2.0 GPA - academic intervention

  Second consecutive semester cumulative GPA below a 2.0 GPA - academic probation

  Third consecutive semester cumulative GPA and semester GPA below a 2.0 GPA - academic dismissal

Note: Students whose semester GPA is 2.0 or greater, but whose cumulative GPA would cause them to be dismissed, will be granted an additional probationary period for each semester in which the semester GPA is 2.0 or greater.

- Students will be returned to good academic standing when a cumulative GPA of 2.0 or greater is earned.

- Students who are on academic intervention or probation will receive correspondence that refers them to academic advisors for course permissions and the Welcome Center for academic assistance and information on the impact to financial aid.

- Students who are on academic intervention or probation must consult with an academic advisor to register or add classes.

The Tartan Card (Student I.D.)

The Tartan Card, proof of student status, is required to use college services or participate in college sponsored activities. The card electronically stores information about the students' enrollment status. Card readers located on Sinclair campuses scan the information and provide access for such transactions as checking out materials in the Library and using the Physical Activity Center (PAC).

There is a $5 replacement fee for damaged, lost or stolen cards.

Transcripts

For official transcripts of academic work completed at Sinclair, choose from these methods:

- Online—For the quickest way to order transcripts, visit **www.sinclair.edu/transcripts** Transcripts ordered online will be produced and sent in one to two (1-2) business days

- Mail—Mail the transcript request found on the Sinclair web page to the Registration & Student Records office. Include the student I.D. number, birth date, the term last attended at Sinclair, legal signature, daytime telephone number, and payment. Cost is $5.00 per mailed transcript. Transcripts ordered by mail will be produced and mailed in five business days.

- Payment for transcripts can also be made at the Bursar Office or at any of the regional centers.

- A financial hold on your student account will prevent you from receiving transcripts.

Tobacco and Tobacco-Related Products Restrictions Policy

Policy Statement

Smoking and the use of any smokeless tobacco products, electronic cigarettes or products intended to mimic tobacco products are prohibited on any property owned, leased or controlled by Sinclair Community College.

This policy does not prohibit the use of nicotine patches, pills, gum or other products specifically designed to assist individuals with the cessation of smoking or tobacco use.

Scope

This policy applies to all Sinclair employees, Sinclair students, and visitors to Sinclair facilities.

Enforcement

This policy will be enforced by Sinclair police officers and security officers.

Employees or students who violate this policy may be subject to discipline under applicable college policies or procedures.

Visitors who violate this policy may be required to leave the property and/or be issued a notice of trespass.

Responsibility

Employees, students and visitors shall be knowledgeable of this policy and adhere to its provisions.

References

Ohio Revised Code 3794.01 - 3794.09

History

Policy originally approved by Board of Trustees – December 12, 1995
Revised: December 2008; November 2013
Revised by Board of Trustees – June 24, 2016; revisions effective January 1, 2017

Tuition Payment Plan

Sinclair offers a payment plan to help students budget tuition costs for a current term. To help meet your educational expenses, Sinclair offers this tuition payment plan for a $25.00 per term nonrefundable enrollment fee. This is not a loan program - no interest or finance charges will be assessed by Sinclair, and there is no credit check to enroll. You must enroll in the plan every term you wish to participate. The Enrollment Fee is automatically deducted immediately from your account. If this fee is not able to be collected, your agreement may not be activated or you may be unenrolled from the payment plan. Students are responsible to the college for all tuition and fees incurred as a result of registration. The payment plan is a convenient budget plan to assist students in managing their costs.

A deposit (down payment) may be required. Payment plan enrollment and payment dates for the current term are available at: ***http://paymentplan.sinclair.edu under the "Payment Calendar" link.***

If students enroll in classes during on-time registration and wish to participate in the payment plan, enrollment in the Payment Plan must be done by Sinclair's specified final payment deadline date.

Prior to the college's published refund date, if a tuition payment cannot be withdrawn from the students' bank or credit card, the course registration will be in an "unpaid" status and <u>may</u> be subject to deregistration from classes. If a payment is not available from the students' financial institution after the refund date, the college may proceed with collection activity without further notice.

Enrollment is made online. For more information, please visit: **http://paymentplan.sinclair.edu.**

Waitlisting

An upgrade to registration allows students to electronically "wait in line" for the next available seat. As a vacancy becomes available, the next students on the waiting list will be automatically registered for the section. The students will then be notified via their **my.sinclair.edu** email address that they have been registered for the course section.

By placing his or her name on the waiting list a student is agreeing that he or she is financially obligated to pay for the courses. Tuition must be paid and follow the tuition payment schedule at: **my.sinclair**

Students will be able to add themselves to the waitlists up through 5:00 p.m. on the Monday of late registration. For the current term's drop and withdraw dates, visit: **www.sinclair.edu/services/registration/dates**

For more information visit: **www.sinclair.edu/services/registration**

SINCLAIR COLLEGE

![Sinclair College logo] SINCLAIR COLLEGE

Parking   Student and visitor parking is available in Lot A on Fifth Street

Walkways   The student Parking Garage (Lot A) and Buildings 1-7 and 9-14 are connected on the third floor by a series of covered walkways. Buildings 1-8 and the Library are also connected at the basement or lower level.
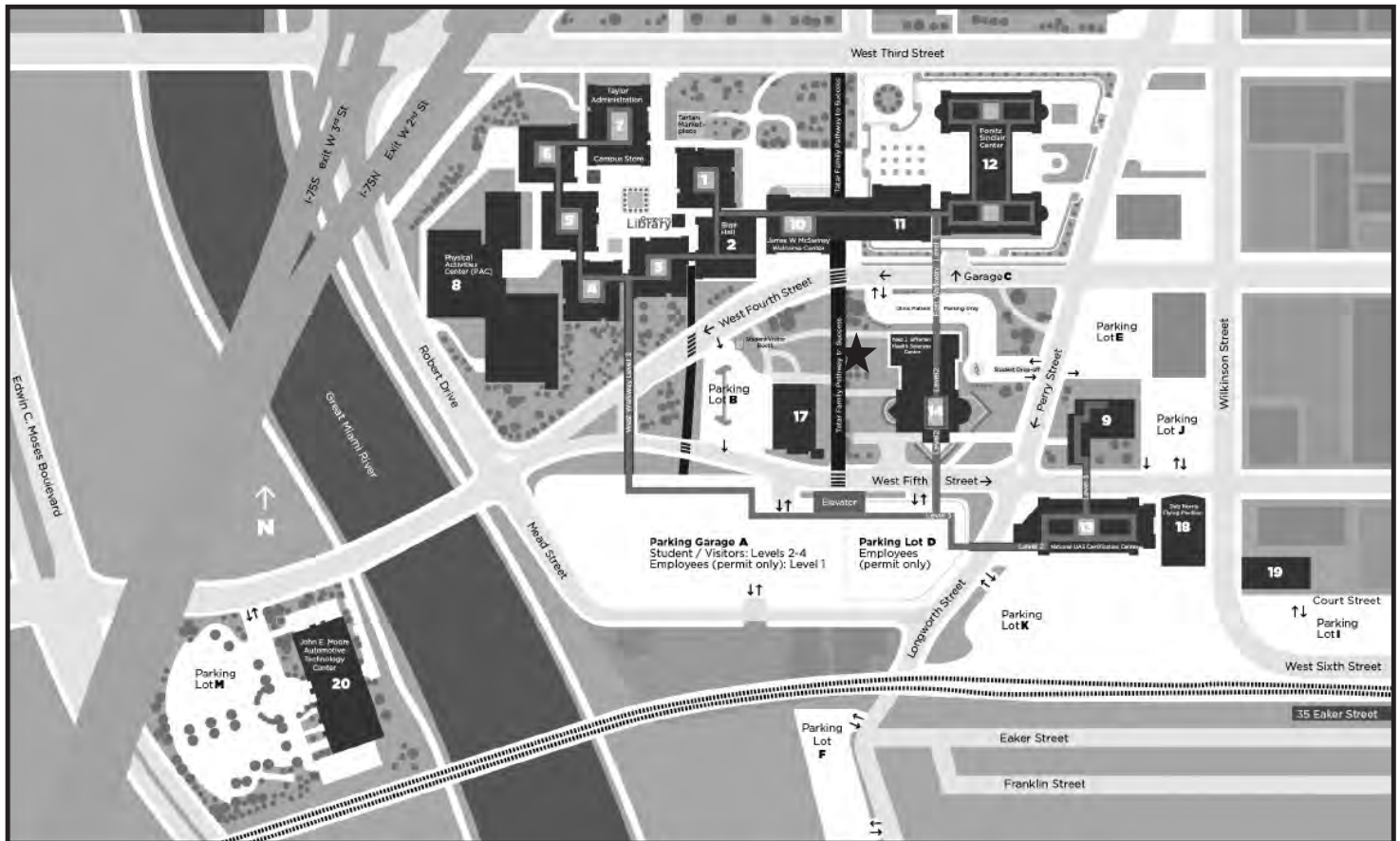
Reading Room Numbers

Room 5111	is	Building 5	Floor 1	Room 111
Room 8025	is	Building 8	Basement	Room 025
Room 11346	is	Building 11	Floor 3	Room 346

★ **Welcome Center Check-In**

BUILDING 10, FIRST FLOOR

To get started or obtain help with Academic Advising, Admissions, Academic Testing, Cashier/Bursar, Financial Aid, Placement Testing, or Registration & Student Records.