



SINCLAIR

2010-2011

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Semesters



sinclair.edu/semesters



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Welcome to Sinclair

Vision

Your Bridge to the Future

Before us lie uncharted worlds of opportunity.

Sinclair will be the bridge into that future, giving open access to opportunity, intellectual challenge, and self-discovery for students with diverse needs.

Mission

We help individuals turn dreams into achievable goals through accessible, high quality, affordable learning opportunities.

Diversity Vision & Mission

Sinclair Community College strives to create an inclusive environment in which all people are valued and supported. The goal within this environment is to recognize and acknowledge our similarities; to understand and respect our differences; and to prepare ourselves and our students to live, learn, and work together in a global community.



By choosing Sinclair Community College, you have chosen to pursue higher education provided by caring, award-winning faculty and staff in a state-of-the-art environment at the lowest cost available in Ohio.

Make the best of your time at Sinclair. Immerse yourself, not only in your studies, but also in all the student activities and cultural amenities that make Sinclair a great place to begin or continue your education.

And thanks for choosing Sinclair Community College!

Steven Lee Johnson
President

Board of Trustees

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President
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Children's Medical Center

Katherine B. Hollingsworth

President
Innovative Interchange Associates

Paula MacIlwaine

Community Volunteer

Bernard H. Wright, Jr.

Senior Executive Vice President & Trust Officer
LCNB National Bank

Governance

In 1966, when Sinclair moved from private to public status, Montgomery County Commissioners and Ohio's Governor appointed an 11-member Board of Trustees to conduct the college's affairs. As the policy making body for the college, the board approves plans and internal policy decisions made by the president, administrative officers and faculty.

Financial Resources

Operated by the Montgomery County Community College District, Sinclair was established by the voters of the county. Revenues are derived from tax levies approved by the voters of Montgomery County, the State of Ohio, and fees paid by students. Capital funds are received from state and federal grants and appropriations. The Sinclair Foundation raises funds from individuals, organizations and corporations to support scholarships and special educational projects.

Sinclair Foundation

(937) 512-2510

The **Sinclair Foundation** was established in 1969 to keep higher education accessible to Miami Valley residents and to help Sinclair remain among the nation's leading community colleges. The Sinclair Foundation provides over \$2 million each year in support of scholarships and college programs and is a significant source of support for innovative concepts and educational enrichment opportunities.

A volunteer board of trustees composed of representatives of business and industry, community leaders, alumni and employees governs the foundation.

See www.sinclair.edu/donors for further information about the Sinclair Foundation.

One of the leading two-year institutions of higher learning in the entire nation

—*New York Times*, 2009

Sinclair Community College, widely acclaimed as one of the best such colleges in the nation, is at the vanguard of such efforts. The college is retraining thousands of laid-off G.M., Delphi and other workers. It is also working closely with city, county and business leaders to identify and nurture growth industries and to train the workers those industries will need. In turn, many of its goals are being achieved with the help of generous local funding from taxpayers.

Strong Roots and Positive Growth

College founder, David A. Sinclair, firmly believed that everyone deserves to further their education, and the Dayton community supported that belief. Through such strong faith and support, Sinclair Community College has grown from humble beginnings to earn a place as one of the finest colleges of its kind in the country.

Sinclair's roots go back to 1887, the year our Dayton YMCA began offering arithmetic, free hand and mechanical drawing classes in a one-room evening school. By the 1930s, offerings included a school of Liberal Arts, the Dayton YMCA Office Training School, Dayton Technical School and the Dayton Law School.

In 1948, the YMCA College became Sinclair College, re-named in honor of David A. Sinclair, general secretary of the Dayton YMCA (1874-1902) and founder of its educational program. By 1959, the college was independently operated and separately incorporated as a non-profit institution of higher learning under the laws of the State of Ohio.

Sinclair's impressive growth was once again recognized when the Montgomery County Commissioners created the Montgomery County Community College district in 1965. A month later, they appointed a nine-member board of trustees. Downtown land, 20 acres in all, was acquired for the new campus.

The new Sinclair campus, opened its doors to students in September 1972. In 1989, Sinclair was selected for membership in the prestigious League for Innovation in the Community College.

A major addition to the campus occurred in 1989 with the opening of the 200,000 square foot David H. Ponitz Sinclair Center. It houses the Workforce Development and Corporate & Community Services division of the college.

During 1998, both the Center for Interactive Learning (Building 14) and the Automotive Technology/Environmental Technologies facility, Building 20, opened. In 2000, Sinclair was chosen as one of only 12 Vanguard Learning Colleges in North America.

In 2006, Sinclair opened Learning Centers at YMCA's in Englewood and Huber Heights. In 2007, Sinclair opened the Courseview Campus Center in Mason, Ohio. In fall 2009 the Preble County Learning Center was opened.

In March 2008, the voters of Montgomery County once again affirmed their support for Sinclair Community College by passing a 10-year levy which assures the future of the college.

To Students

This catalog contains official information for the academic year 2010-2011. The college reserves the right to appeal, change, or amend rules, regulations, tuition and fees, and may withdraw, add to, or modify the courses and programs listed herein. For current information:

- (937) 512-3000
- 1-800-315-3000 (Indiana and Ohio)
- www.sinclair.edu

Accreditation

Sinclair is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504, (800) 621-7440, (312) 263-0456, FAX (312) 263-7462. Sinclair is also a member of the Ohio Association of Community Colleges. Programs of study are approved by the Ohio Board of Regents. Sinclair is authorized to grant associate degrees in arts, sciences, applied science, and individualized and technical study.

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/about/information/accreditation.

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.

Non-Discriminatory Practices

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, marital status, veteran status, national origin, ancestry, citizenship, sexual orientation, gender identity, or non-disqualifying mental or physical disability.

Students: Inquiries and complaints concerning Title VI (race, color, and national origin), Title IX (sex/gender), or Section 504 (disability) should be referred to the designated coordinator: Senior Director, Room 10332, Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460, (937) 512-2291.

Faculty and Staff: Inquiries and complaints concerning Title VI (race, color, and national origin), Title IX (sex/gender), or Section 504 (disability) should be referred to the designated coordinator, Human Resources office, Building 7, Room 7340, Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460, (937) 512-2514.

Right to Know

The U.S. Department of Education requires that all colleges and universities report graduation rates to all prospective and current students.

As of fall 2009, of the 1,237 first-time, full-time, degree seeking students who entered Sinclair in fall 2006, 68.0% had graduated, were still enrolled at Sinclair, had transferred to another college or university, or left Sinclair in good standing.

Outcome

106	graduated within 3 years*	8.6%
197	transferred by fall 2009	15.9%
262	enrolled at Sinclair fall 2009	21.2%
276	left Sinclair in good standing**	22.3%

* This includes those who earned an associate degree within three years or a certificate within 150% of "normal" time to completion (time varies depending on credit hours required).

**Includes only those who had not graduated or transferred by fall 2009, and who were not enrolled here as of fall 2008.

Campus Security Report

(Campus Security Act of 1990)

The federal Jeanne Clery Disclosure of the Campus Security Policy and Crime Statistics Act requires Sinclair Community College 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.

Student Records Policy and the 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 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/services/registration/policies. Problems or questions concerning the Sinclair Student Records Policy may be brought to the FERPA coordinator, director of Registration & Student Records.

Sinclair at a Glance

Accomplishments

Named one of 12 Vanguard Learning Colleges in the nation; An active board member college in the League for Innovation in the Community College and recognized as having the lowest tuition of any two- or four-year college/ university in the state of Ohio. Fourteen Sinclair students named to the All-USA Academic Team for community and junior colleges.

Academic Year

Quarter system: Fall, Winter, Spring and Summer.

Enrollment (Fall 2009)

25,345 headcount with full-time equivalent enrollment at 14,910

- 42.2% men
- 57.8% women
- 38.0% full-time students
- 62.0% part-time students
- 20.4% new students
- 63.2% continuing students
- 19.0% returning/former students
- 5.0% transfer students
- 2.0% transient students

56% retention rate — of fall 2008 certificate or degree seeking, first time in college, full-time students were retained/enrolled in fall 2009.

Residency Status (Fall 2009)

Montgomery County	64.2%
Other Ohio County	30.2%
Out-of-State & International	5.6%

Ethnicity (Fall 2009)

Caucasian	68%
African-American/Black	17%
Hispanic	1%
Asian/Pacific Island	2%
International	1%
Native American/AK	1%
Other Minority	4%
Unknown	11%

Enrollment Patterns (Fall 2009)

Day students	58%
Evening students	23%
Weekend students	2%
Average class size	17.8

Age Distribution (Fall 2009)

Under 17	1.2%
17-19 years	18.9%
20-29 years	39.6%
30-39 years	16.2%
40-49 years	10.0%
50-64 years	6.8%
Over 65	7.3%
*Average age 31	

Financial Assistance (2009)

\$29 million was awarded to approximately 37% of the students registered and eligible to receive various types of financial assistance (grants, loans, work study, scholarships, loans). As of fall 2008, 40% of certificate or degree seeking, first time in college, full-time students received a Federal Pell Grant during 2008-2009.

Degrees Granted

Associate degrees in arts, sciences, applied science and individualized and technical study.

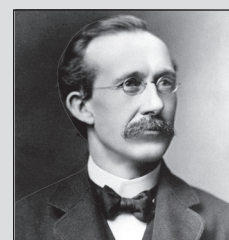
- A.A. Associate of Arts
- A.A.S. Associate of Applied Science
- A.S. Associate of Science
- A.T.S. Associate of Technical Study
- A.I.S. Associate of Individualized Study

Campus Safety

The Sinclair department of Public Safety has 23 sworn police officers, 85 part-time security officers and 10 student security officers. This provides visible police presence to prevent crime.

Organizations & Clubs

The college encourages participation in the co-curricular life of Sinclair as another way of learning. If students are interested in joining one or more of the clubs or organizations listed in the college catalog, they should stop by the office of Student Leadership Development, Building 8, Room 8025.



"Find the need and endeavor to meet it," was David A. Sinclair's goal when building the basis for the Sinclair of today.

Founded

1887 as part of the "Dayton YMCA;" became "Sinclair College" in 1948 and "Sinclair Community College" in 1966; relocated to current Dayton campus in 1972.

Locations

Dayton, Ohio, western edge of downtown Dayton, adjacent to Interstate 75. Englewood, Huber Heights, Preble County/Eaton and Courseview/Mason are additional campus locations. Also, 42 off-campus locations throughout Montgomery and surrounding counties.

Dayton Campus

62+ acres of land with 20 buildings sitting amidst a blend of modern architecture and green space.

Accreditation

The Higher Learning Commission of the North Central Association of Colleges and Schools (and a member of the Ohio Association of Community Colleges).

Governance

Eleven-member Board of Trustees; six appointed by Montgomery County Commissioners, four appointed by Ohio's Governor, one by Warren County Commissioners.

Financial Resources

Revenues derived from a 3.2 mill, 10-year tax levy approved in 2008 by Montgomery County voters and fees paid by students. Operating and capital funds are received from state subsidy and federal grants and appropriations.



Visit www.sinclair.edu/calendar for up-to-date listing of academic deadlines and upcoming events.

Fall Term

2010-2011

Fall Conference
 Faculty Learning Day
 Labor Day holiday; all campuses closed.
 Full session and first five weeks (A-Term) classes begin
 First five weeks (A-Term) session ends
 Second five weeks (B-Term) session begins
 Veterans Day holiday; all campuses closed.
 Full session and Fall B-Term classes end
 (any classes beginning after 4:00 p.m. will not meet)
 Thanksgiving holiday; all campuses closed.
 Employee Learning Day: campuses close 11:30 a.m.
 Winter holiday; all campuses closed.
 New Year's Day holiday; all campuses closed.

September 1 (Wed.)
 September 2 (Thurs.)
 September 6 (Mon.)
 September 9 (Thurs.)
 October 10 (Sun.)
 October 20 (Wed.)
 November 11 (Thurs.)
 November 24 (Wed.)
 November 25-28 (Thurs.-Sun.)
 December 21 (Tues.)
 December 22-28 (Wed.-Tues.)
 Dec. 31-Jan. 1, 2011 (Fri.-Sat.)

Winter Mini Term

Classes begin
 Classes end

November 29 (Mon.)
 December 17 (Fri.)

Winter Term

Full session and first five weeks (A-Term) classes begin
 First five weeks (A-Term) session ends
 Second five weeks (B-Term) session begins
 Martin Luther King, Jr. holiday; all campuses closed.
 Full session and second five weeks (B-Term) classes end

January 3 (Mon.)
 February 6 (Sun.)
 February 16 (Wed.)
 January 17 (Mon.)
 March 20 (Sun.)

Spring Term

Full session and first five weeks (A-Term) classes begin
 First five weeks (A-Term) session ends
 Second five weeks (B-Term) session begins
 Memorial Day holiday; all campuses closed.
 Commencement
 Classes end

March 28 (Mon.)
 May 1 (Sun.)
 May 9 (Mon.)
 May 30 (Mon.)
 June 10 (Fri. 6:45 p.m.)
 June 12 (Sun.)

Summer Term

Classes Begin
 First Five-Week term
 Seven-Week term
 Ten-Week term
 Second Five-Week term
 Independence Day holiday; all campuses closed.
 Classes End
 First Five-Week term
 Seven-Week term
 Ten-Week term
 Second Five-Week term

June 15 (Wed.)
 June 15 (Wed.)
 June 15 (Wed.)
 July 20 (Wed.)
 July 4 (Mon.)
 July 19 (Tues.)
 August 2 (Tues.)
 August 23 (Tues.)
 August 23 (Tues.)

Note: The college reserves the right to make changes to the published schedule.

2012

Semesters

sinclair.edu/semesters

In fall 2012, Sinclair Community College will switch from a quarter-based academic calendar to a semester-based academic calendar. The progress and success of our students is the highest priority in the planning and the implementation of the semester conversion.

To this end, the faculty, staff, and administration of Sinclair Community College will work with each student to ensure that he or she is able to maintain his or her academic progress before, during, and after the conversion to semesters.

The guiding principle of our commitment to students is that the transition to semesters will not adversely affect the time to graduation or increase the cost of an academic credential.

Our Pledge to Students

Sinclair commits to providing an extraordinary level of support to students, both those who wish to graduate prior to the conversion to semesters and those whose programs will span the quarter to semester transition. We will provide timely curricular transition information, online scheduling support, and academic advising for each student.

We pledge that for a student who meets with an academic advisor, jointly creates a plan that leads to graduation, and successfully completes the academic requirements in the time line specified in the plan, there will be:

- **Consistent application of credit:** Credits that apply to your program before the semester conversion will continue to apply after the conversion.
- **On-time graduation:** You will graduate in the same time frame as you would have had Sinclair remained on the quarter system.
- **No increased costs:** Your annual tuition and fees under the semester system will not be greater than they would have been if Sinclair continued on the quarter system.

For students with the option to graduate before semester conversion, the institution will publish a multi-year course planning schedule, and will provide advising to assist students in developing a program of study that will satisfy their degree requirements prior to fall 2012.

For transition students, students who begin their degree programs prior to fall 2012 and will graduate after the conversion to semesters, Sinclair will provide an advising program so that each student can develop an individual transition plan that includes both quarter and semester courses and defines a specific path that leads to graduation in the semester corresponding to the quarter in which the student would have graduated had Sinclair remained on the quarter system. The individual transition plan will be agreed upon by both the student and the student's academic advisor.

Your Responsibility

A successful partnership places responsibilities on both parties. You must meet with an academic advisor, jointly create an individual transition plan that leads to graduation, and then successfully complete the academic requirements following the time line specified in the plan.

The Institution will not be responsible for the preceding commitments if you do not have an approved individual transition plan or you do not complete the requirements of the individual transition plan in the agreed upon time line.

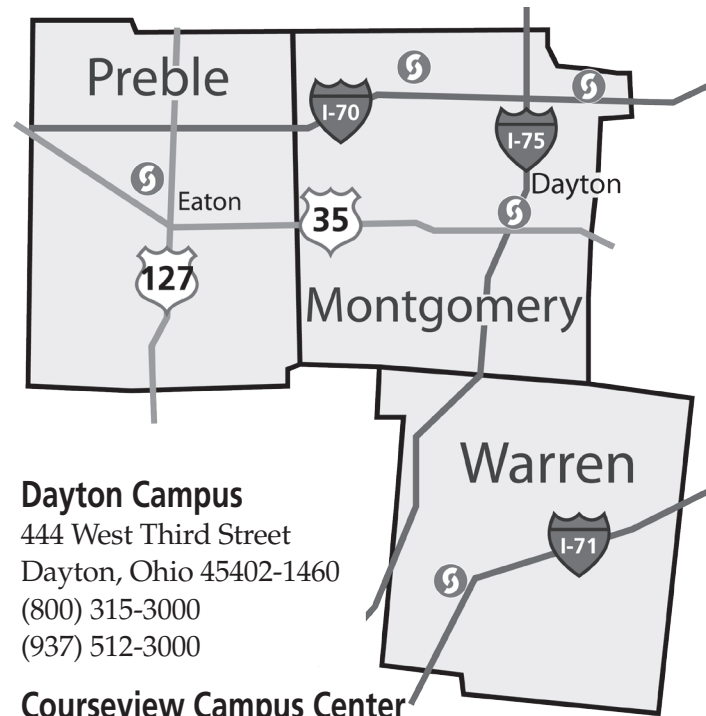
It's never too early to prepare. Meet with an academic advisor today to begin creating your plan for transition!

For further information

Semester Conversion
www.sinclair.edu/semesters
Semester Transition Director
(937) 512-4515

Academic Advising, (937) 512-3700
Building 11, Third Floor, Room 11346
www.sinclair.edu

For more information on Sinclair locations, visit www.sinclair.edu/about/locations



Dayton Campus
444 West Third Street
Dayton, Ohio 45402-1460
(800) 315-3000
(937) 512-3000

Courseview Campus Center
5386 Courseview Drive
Mason, Ohio 45040
(800) 315-3000
(513) 339-1212
e-mail: courseview@sinclair.edu

Englewood Learning Center
1150 West National Road
Englewood, Ohio 45377
Corner of Hoke Road and State Route 40 in Englewood
Next to the Kleptz YMCA
(937) 836-8750

Huber Heights Learning Center
7301 Shull Road
Huber Heights, Ohio 45424
Next to the Huber Heights YMCA
(937) 233-5550

Preble County Learning Center
450 Washington-Jackson Road
Eaton, Ohio 45320
Next to the Preble County YMCA
(937) 456-5252

Neighborhood Learning Centers
Centerville High School
Eaton High School
Kettering - Barnes Community &
Continuing Education Center
Kettering Fairmont High School
Miamisburg High School
Wright-Patterson Air Force Base



How to Begin

Open Admission

Admission is open to all applicants, with the exception of international students on an F-1 visa. Some academic programs have additional requirements that must be completed prior to actually beginning the program. These include the Life & Health Sciences programs, Paralegal, Police Academy, Early Childhood Education, ASEP, CAP, Honda PACT, and the A.I.S. and A.T.S. degrees.

Applicants to Sinclair may apply online at www.sinclair.edu/applynow or in person at the Dayton Campus, Enrollment Center, Building 10, Fourth Floor Lobby, or the Learning Centers. A one-time, non-refundable \$20 application fee will be assessed at the time of the student's initial registration for classes.

Those who would like information about Sinclair Community College, the academic programs or would like to schedule a tour of the campus, contact **Admissions**, (937) 512-3000.

Monday-Thursday	8:00 a.m.-6:00 p.m.
Friday	8:00 a.m.-7:00 p.m.
Saturday	9:00 a.m.-12:00 noon
	(Closed in the summer)

Enrollment Center

Building 10, Fourth Floor Lobby, (937) 512-3000, Dayton Campus
www.sinclair.edu/services/enroll

The Enrollment Center is the starting place for all **new students** ready to begin at Sinclair. Students who are new to college, transferring from another institution, or just coming to pick up a couple classes will find helpful staff ready to assist them.

Services include:

- Assistance with Sinclair's Admission Application
- Preparation for placement testing and registration
- Making an appointment for New Student Orientation
- Referral to Academic Advising
- Other needed services and referrals

Placement testing is done on a drop-in basis—no appointment needed. Picture I.D. is required.

There is no charge for the first test. Students are permitted to take the test only twice in a calendar year, and there is a \$15.00 fee for the second test.

Testing Hours:

Monday-Thursday, 8:00 a.m.-8:00 p.m.

Friday, 8:00 a.m.-5:00 p.m.

Saturday, 8:00 a.m.-12:00 p.m. (no Saturday hours during summer term and winter break)

Please allow approximately two hours to complete the tests. Holiday office hours vary.

Find your new student type and follow the steps in the order listed:

Degree & Certification Seeking Student

First Time College

• Apply to Sinclair

There are three ways to apply:

- **Online** – at www.sinclair.edu/applynow
- **Mail** – send the application to the address provided on the application
- **In Person** – drop off the application at the office of Admissions, Building 10, First Floor, Dayton Campus or at the main desk at any Learning Center.

You will receive an acceptance letter within one week.

• Apply for Financial Aid

Apply for financial aid by completing the FAFSA application online at www.fafsa.ed.gov (Sinclair's school code: 003119) and Sinclair's Financial Aid & Scholarships application. For more information about financial aid or to attend an on campus FAFSA workshop (Dayton Campus), call (937) 512-3000.

• Take Placement Test

You must take the placement test unless you fit the exemption criteria below. Take the placement test at the Enrollment Center, Building 10, Fourth Floor Lobby, Dayton Campus and other locations. Math, reading, and writing assessment scores are used for course placement only. You must bring a photo I.D. to take the test.

The placement test requirement will be waived if you:

- **Submit transcripts.** To transfer college credit to Sinclair, have your previous college(s) send your official transcript(s) to Sinclair Community College, Registration & Student Records, 444 West Third Street, Dayton, Ohio 45402-1460.
- **Submit ACT scores.** You are exempt from the Placement Test if your scores are at or above a certain level (Math 22, Reading 21, Writing 18).

Enrollment

• Attend New Student Orientation

Staff at the Enrollment Center will schedule you for this mandatory information session.

• Meet with an Academic Advisor

An advisor will help you select appropriate courses based on educational goals and placement test results.

• Develop a Class Schedule

View Sinclair's online course schedule at www.sinclair.edu/schedule. Staff at Sinclair Central (Building 10, Second Floor, Dayton Campus) or Learning Centers and Courseview Campus will help you select days, times, and sections of courses, and show you how to register online.

• Register for Classes

There are two ways to register:

- **Online** – log on to my.sinclair.edu, click on **Web Advisor**, select **Student**, and **Register**
- **In person** – go to Registration & Student Records, Building 10, Second Floor, Dayton Campus.

• Get a Tartan Card (Student I.D.)

Pick up your Tartan Card (Student I.D.) from Registration & Student Records, Building 10, Second Floor, Dayton Campus, after you register for the first time.

• Pay for Classes

There are four ways to pay:

- **Online** – log on to my.sinclair.edu (click on **Web Advisor**, select **current student**, verify address, and then “make payment” under financial information. Follow steps from there.)
- **In person** – go to the Bursar's office, Building 10, Second Floor, Dayton Campus or front counter at Learning Centers and Courseview Campus
- **Mail** – send a check made out to Sinclair Community College to: Bursar's office, Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460
- **FACTS Tuition Payment Plan** – <http://facts.sinclair.edu>

• Purchase Books and Course Materials

Non-Degree Seeking Student

• Apply to Sinclair

There are three ways to apply:

- **Online** – at www.sinclair.edu/applynow
- **Mail** – send the application to the address provided on the application
- **In Person** – drop off the application at the office of Admissions, Building 10, First Floor, Dayton Campus or at the main desk at any Learning Center.

You will receive an acceptance letter within one week.

Visiting Students: Submit Unofficial Transcripts

Send or bring in a copy of your unofficial transcript or grade report for academic advising purposes (i.e. waiving prerequisites).

For more information: enrollmentcenter@sinclair.edu, (937) 512-3000, or 1-800-315-3000 (toll free in Ohio and Indiana)

Develop a Class Schedule

View Sinclair's course schedule online at www.sinclair.edu/schedule. Staff at Sinclair Central (Building 10, Second Floor, Dayton Campus) will help you select days, times, and sections of courses, and show you how to register online.

• Register for Classes

There are two ways to register:

- **Online** – log on to my.sinclair.edu, click on **Web Advisor**, select **Student**, and **Register**
- **In person** – go to Registration & Student Records, Building 10, Second Floor, Dayton Campus

• Get a Tartan Card (Student I.D.)

Pick up your Tartan Card (Student I.D.) from Registration & Student Records, Building 10, Second Floor, Dayton Campus after you register for the first time.

• Pay for Classes

There are four ways to pay:

- **Online** – log on to my.sinclair.edu (click on **Financial Information**, select **Make Payment**, then **Finances**, and **Pay Now**)
- **In person** – go to the Bursar's office, Building 10, Second Floor, Dayton Campus or front counter at Learning Centers and Courseview Campus
- **Mail** – send a check made out to Sinclair Community College to: Bursar's office, Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460
- **FACTS Tuition Payment Plan** – facts.sinclair.edu

• Purchase Books and Course Materials

Additional Enrollment Categories

- **Not seeking a degree or certificate at Sinclair Community College** Taking classes for personal interest or job/career development and not seeking a degree or certificate at Sinclair. **Declare Personal Interest (PI) or Career Development (CD) as the major** on the Sinclair Community College admissions application.
- **Not seeking a degree or certificate at Sinclair Community College** Currently enrolled in another college or university and is taking Sinclair courses to transfer back to the home institution. **Declare Personal Interest (PI) as the major** on the Sinclair Community College admissions application.
- **Post Secondary Enrollment Options (PSEO) program** for high school students in grades nine through twelve who are seeking to enroll in the PSEO Program must obtain a PSEO Application for Admission and instructions from their high school guidance counselor.
- **International Students** attempting to obtain an F-1 Student Visa or to enroll using other types of visa must obtain all admission materials from Registration & Student Records, Building 10, Second Floor, Dayton campus, or online www.sinclair.edu/admissions/intladm.
- **English as a Second Language (ESL)** students seeking to enroll at Sinclair must first meet with the ESL coordinator who will assist with application and the enrollment steps. ESL students are required to take ESL classes based on placement test results. The ESL coordinator is located in the Enrollment Center, Dayton campus, Building 10, Fourth Floor, Room 10444, (937) 512-3099.
- **Golden Age** senior citizens who are 60 years or better who want to take classes free of charge must complete a Golden Age application/registration form, www.sinclair.edu/lifelong, available from Registration & Student Records or College for Lifelong Learning in Building 10, Room 10112, Dayton campus. Enroll on an audit, space available basis during the Late Registration period. (937) 512-2372.

Associate Degree

To be degree candidates, the students must:

- Fulfill requirements of the degree program and the institution.
 - Complete a **minimum of 90 credit hours** (accredited programs must meet accreditation association requirements). Additionally, students must earn a minimum of 50 credit hours of their academic program from Sinclair, or must earn the last 30 credit hours of their academic program from Sinclair.
 - Maintain a cumulative **grade point average of at least 2.0**.
- Students have to meet degree requirements listed in the Sinclair catalog in effect at the time they begin study.** However, if the course of study is prolonged beyond six years after beginning, consult with the department chairperson to determine graduation requirements. Sinclair will consider granting permission to graduate under a catalog more than six years old if they have been enrolled continuously and the degree program has not changed appreciably. Requests for this exception should be directed to the program chairperson and be approved by the division dean.

Placement Testing Preparation

- **Academic Resource Center (ARC)**
Need a refresher to increase math, reading and/or writing skills before taking the college placement test or enrolling in a developmental studies course? Try the ARC first—it is free and it is easy to do! Students’ skill levels are initially assessed and then they are guided through self-paced, computerized tutorials. The ARC at Sinclair is located on Dayton Campus, Building 7, Room 7L00.
- **ACCUPLACER Practice Placement Test**
To better prepare to take Sinclair’s ACCUPLACER placement test and raise overall test scores, students may find it helpful to first take some free practice tests. Visit the study guide Web site: www.testprepreview.com/accuplacer_practice.htm
- **Online/Distance Learning Students**
Living beyond 60 miles from Sinclair’s Dayton Campus, students needing placement and/or academic testing may require that a test proctor be obtained. Information regarding proctored testing, can be found at www.sinclair.edu/online. For additional information call (937) 512-2990 or toll free 1-888-226-2457.

Purchase Books and Course Materials

Obtain the fee bill at <http://my.sinclair.edu> (click on Web Advisor) and students must take it with them to purchase their books and required course materials at the Bookstore in Building 7, First Floor, Dayton campus or purchase them online at <http://bookstore.sinclair.edu>. For additional information, call (937) 512-2506.

Auditing Classes

Enroll on an audit, space available basis during the late registration period. Pay all laboratory fees and purchase required books and materials. Refer to the quarterly schedule for late registration dates, or call (937) 512-3000, or toll free at 1-800-315-3000 for Ohio and Indiana residents.

Disability Services Applicants with disabilities who would like assistance can contact the office of Disability Services, Dayton Campus, Building 10, Fourth Floor, Room 10421, (937) 512-5113, TDD (937) 512-2395.

Career Services has free services including an extensive career library, computerized career guidance system, career/life development workshops, and career counseling. Call (937) 512-2772.

Residency Information obtained from the application for admission (more than the current address) will be used to determine residency for tuition purposes. Refer to the Sinclair catalog for a comprehensive description of residency related to the fees that are assessed. If students feel they qualify as a State of Ohio or Montgomery County resident, contact the office of Registration & Student Records, (937) 512-3000, for specific policies, procedures, time frames, and required documentation.

Academic Advising Center

www.sinclair.edu/services/advising
Building 11, Third Floor, Room 11346, (937) 512-3700, Dayton Campus

All students are encouraged to meet with an academic advisor before and during their academic career at Sinclair. Academic advisors are available to assist with:

- understanding requirements for degree, certificate and short term certificate programs, and placement test results
- selecting courses
- interpreting college policies and procedures
- transferring to other institutions
- academic probation
- dismissal and readmission
- prior learning options

Other Counseling

Counseling Services
Building 10, Room 10424
(937) 512-2752
www.sinclair.edu/support/counseling

Career Services
Building 10, Room 10312
(937) 512-2772
www.sinclair.edu/services/career



Admissions

www.sinclair.edu/admissions, TDD 512-2187
Building 10, Room 10112, Dayton Campus
(937) 512-3000, or 1-800-315-3000 (Ohio and Indiana)

Hours:
Monday-Thursday 8:00 a.m.-6:00 p.m.
Friday 8:00 a.m.-6:00 p.m.

Choosing a college is one of the most important decisions that students will make. And the best way to make that decision is to schedule a time to visit the campus. The staff in Admissions is available to meet with students to discuss educational and career goals, the variety of academic programs at Sinclair, an overview of financial aid and scholarships, and the enrollment process. Campus tours are also available.

Scheduling an appointment can be done in two ways:

- By telephone by calling (937) 51ADMIT
- In person by stopping by Room 10112

Students say they like Sinclair because it is convenient, offers a high quality education and is very affordable. The tuition is \$46.55 a credit hour for Montgomery County residents, \$76.05 for other Ohio residents, and \$150.55 for those who live outside of Ohio or United States. That means a **Montgomery County student** who enrolls in 15 credit hours each quarter would only pay about \$2,094.75 in tuition per academic year.

Admissions serves as the Welcome Center for prospective students. It is the place to start! Staff is there to assist in the enrollment process, and can provide general information about academic programs and services to students, college publications such as catalogs, and enrollment information.

Post Secondary Enrollment Options Program (PSEO) – Grades 9 - 12

Building 12, Room 12331, (937) 512-5188, Dayton Campus

PSEO permits high school students to take college classes while still enrolled in high school.

- **Option A** allows students to take college classes for college credit, and students pay for those classes.
- **Option B** allows students to take college classes for both high school and college credit, and the school district assumes the costs as long as the students comply with the program guidelines. Those costs include tuition, fees and books.

Interested students must obtain Sinclair PSEO information and application from their high school guidance counselor.

- Students **must** be counseled at the high school about the risks and the advantages of the program before they may apply for PSEO.
- Students must sign an “intent to participate in PSEO form” prior to March 30 of each year in order to be eligible for the program during the following academic year. If this deadline is not met, written permission must be obtained from the district superintendent of the school district.
- Students must submit the completed PSEO application to Sinclair’s Pre-College Programs office by June 1 to be eligible for the next academic year.
- Signatures of the student, the parent or guardian, and the high school counselor are required on the application.

PSEO Class Policy

Sinclair Community College will review the final selection of college classes approved by the high school and may limit participation in any class based on such circumstances as extraordinary lab or technical fees, age, safety issues, excessive course load or academic probation.

College for Lifelong Learning Senior Citizen Applicants

Building 10, First Floor, Room 10112, Dayton Campus
(937) 512-5184 or (937) 512-2372

Auditing a class at Sinclair can be an exciting and rewarding experience.

Those who are age 60 or better may enroll in Sinclair’s classes tuition free by doing the following:

- Complete a Golden Age Application/Registration Form. This form is available at the Registration counter, Building 10, Second Floor, or from the College for Lifelong Learning office, Dayton Campus, Building 10, First Floor, Room 10112.
- Enroll on an audit, space available basis during the late registration period for each quarter. This is usually a one-week period, with the exception of registration for the summer term.
- Pay all laboratory fees, and purchase the required books and materials.
- Follow the guidelines for “Auditing a Course,” as described in the catalog on page 21.

For any questions or more information about specific classes and how to enroll, contact the College for Lifelong Learning office at either (937) 512-5184 or (937) 512-2372. Visitors may go to Building 10, First Floor, Room 10112, Dayton campus. www.sinclair.edu/lifelong.

International Students

Registration & Student Records

Building 10, Second Floor, Dayton Campus

To obtain an F-1 student visa:

- Complete the **International Student Application for Admission and submit it to Registration & Student Records, Dayton Campus, Second Floor, Building 10.** At the time of registration, students will be assessed a one-time, non-refundable application fee.
- Score 190 or above with no section score below 18 on the computer TOEFL (Test of English as a Foreign Language) or score 520 on the written version.
- **Submit official transcript of high school completion or its equivalent with certified English translation.**
- **Complete the Sinclair Declaration and Certification of Finances form.** Submit all documents at least two months prior to the first day of classes, and for applicants already in high school, submit documents one month prior to the first day of classes.
- **Deposit with the college a tuition deposit** of \$3,075, which will cover most of the first two **quarters'** and the last **quarter's** tuition and fees.
- Any unused portion of the deposit will be refunded upon termination of studies and when appropriately requested.
- Complete the **placement test** upon arrival and enroll in those courses indicated.

All materials concerning international students must be obtained from Registration & Student Records, Second Floor, Building 10, or visit www.sinclair.edu/admissions/intladm.

Basic Skills Assessment Policy

Entry level assessment is crucial to providing students the opportunity to succeed in their educational pursuits. Educational research shows that students who are assessed and who then enroll in courses appropriate to their skill levels are four times more likely to succeed academically as those students who are not assessed or who ignore placement requirements. Because Sinclair Community College is committed to providing accessible, high quality education, the following assessment policy was implemented fall 1990.

Prior to initial registration, students who designate themselves as degree or certificate seeking must be assessed for reading, language usage and writing, 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. No degree or certificate seeking students can register for any credit courses until they have test scores on file. Special needs and English as a Second Language students should make appropriate assessment arrangements with Educational Support Services.

Students who are not degree or certificate seeking, but who are taking courses for personal interest or career development, do not have to be assessed. However, with the exception of transfer students who have math or English credits accepted for equivalent courses, ALL students who take a mathematics or English class must be assessed prior to enrolling in those classes.

Students must begin mathematics and/or English course sequences at the level indicated by their assessment results. Students who possess less than a tenth grade level of mastery in reading must see an advisor before enrolling in any college level courses, except those specifically identified as exempt from this requirement.

Readmission Policy for Dismissed Students

Students who have been dismissed from Sinclair for academic reasons and want to be readmitted, must petition for readmission. The **petition must be submitted** to the academic advisor at least **three weeks before the first day of classes** for the quarter students want to enter. Only the division dean and division advisor can make exceptions to this requirement.

- A student who is **dismissed for the first time:** must remain out of school for a minimum of one quarter, including summer. (For example, if dismissal was at the end of fall quarter, the student cannot attend winter quarter, but may petition for readmission to spring quarter.)
- A student **dismissed for a second time** must remain out of school for one academic year (three quarters).
- A student **dismissed for the third time will not be readmitted to Sinclair unless there are documented, extenuating circumstances.**
- **Petitions for readmission are available from the student's academic advisor.**

Veterans note:

To re-establish veterans benefits, a student must bring a copy of the readmission petition to the Veterans Officer, Dayton Campus, Room 10324, after readmission to the college.

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.

Ohio Residency

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.**
- 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.

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, types of documents required, and residency forms are available at the Registration & Student Records office, Second Floor, Building 10. **Requests for reclassification and supporting documents must be submitted prior to the deadline listed on the residency application.**

Apply for Financial Aid & Scholarships

All degree and certificate seeking students can apply for financial aid by completing the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.ed.gov. Sinclair's code is 003119. Allow 4-8 weeks for processing and actual awarding of aid. Students must also complete the internal office application available from the Financial Aid & Scholarships office in Building 10, Third Floor, Room 10324, Dayton campus or online at www.sinclair.edu/services/finaid.

Submit this form to the Financial Aid & Scholarships office by the deadlines noted below. For additional information call (937) 512-3000, toll free for Ohio and Indiana residents, 1-800-315-3000.

- Priority date for the academic year: May 1
- Priority date for fall quarter: August 1
- Priority date for winter quarter: November 15
- Priority date for spring quarter: February 15

NOTE: The priority dates are the dates that all forms must be submitted to Financial Aid including the results of the students' FAFSA application. It is recommended that students begin the process 3-4 weeks prior to the priority date.

All communication from the Financial Aid & Scholarships office will be sent to the students' Sinclair e-mail account. Please check it regularly.

Payment of Fees

Students may pay their account balance online on WebAdvisor via <http://my.sinclair.edu>

Payment of fees is due at the Bursar's office by the payment deadline date published in each quarterly schedule.

- Make checks payable to **Sinclair Community College**. **The check owner's driver's license or state I.D. number should be written on the face of the check.** Write the student's I.D. number in the memo section of the check to ensure proper credit.
- **Make VISA and MasterCard** payments at the cashier's window, Dayton Campus, or the front counter at Englewood, Huber Heights, Preble County and Courseview campuses, through WebAdvisor (login to <http://my.sinclair.edu>, click WebAdvisor "Current Student," verify address, and then "Make Payment" under Financial Information).
- Visit <http://www.sinclair.edu/services/bursar> for other methods of payment and payment deadlines.

Check account balance:

- **Use Web Advisor to print the "Statement for Term."**
 1. Log onto <http://my.sinclair.edu>
 2. Select **Web Advisor**
 3. Click on **Current Student**
 4. Verify your address
 5. Select **Statement for Term Web Advisor**
 6. Through the drop down box select **Term**
 7. Click on **Submit**
- **Go to Registration & Student Records, Dayton Campus, Second Floor, Building 10, and request a fee bill.**

If a check is returned for any reason, the student must pay a processing fee plus any collection costs. Cancellation of registration may result from any unsettled bad checks, and the student will remain liable for all charges, even though no longer registered.

A student may not register, receive a transcript, or graduate if the college records are not clear of all charges and assessments.

Information for students sponsored by their employer or local agency.

There are currently 150 local employers sponsoring students at the college. Among them are General Motors, Delphi, Wright-Patterson Air Force Base, and area hospitals.

Sponsoring agencies include BVR, WIA, DVA, and TAA/TRA and other government programs.

It is the responsibility of the student to ensure that their employer, or sponsoring agency, is registered with the Bursar's office and that funding documentation for the current term is received by the Bursar's office no later than the final payment date.

Tuition Fees (per credit hour)*

Lowest Fees in the State

The college reserves the right to change without notice statements concerning rules, policies, fees, curricula, courses, or other matters. For current tuition and fees information: (937) 512-3000, www.sinclair.edu.

Fees current as of Fall 2010. For the latest information see www.sinclair.edu/services/bursar or call (937) 512-3000.

	Montgomery County Residents	Other Ohio Residents	Out-of-state Residents & International Residents
Total Fees (Per Credit Hour)	\$ 48.20	\$ 78.70	\$ 156.20*
Approximate One-Year Tuition	\$2,313.60	\$3,777.60	\$7,497.60

Other Fees		
Application for Admission		\$ 20.00
Late Registration Fee (nonrefundable)		\$ 30.00
Certificate		\$ 5.00
Online Classes (extra fee beyond tuition)		\$ 5.00
Returned Check		\$ 25.00
Tartan Card deposits (cash/credit/check)		\$ 10.00 minimum
Transcripts (each)		\$ 5.00
Transcripts (same day service)		\$ 10.00

Laboratory fees determined for individual classes.

Any additional costs for programs can be found in the Online Course Schedule Planner for each individual class that requires payment of additional fees.

The Online Course Schedule Planner can be found at <http://www.sinclair.edu/schedule/>

* NOTE: New incoming international (F-1) students are required to make a deposit with the college in the amount of \$3,075, which will cover most of their first two quarters and the last quarter's tuition and fees.

Refund of Fees

To receive a refund of fees, students must file the appropriate drop/add/withdraw form in the office of Registration & Student Records within the refund period, which is published in each quarterly class schedule.

If students withdraw by the **eighth calendar day from a full-term course** (including Saturday and Sunday) of fall, winter, or spring quarter, a 100% refund check will be issued without further action by students (see refund check information at the end of this section). After that date, students will receive no refund for dropped classes. Different refund schedules apply for summer quarter, and for courses that have beginning and ending dates that do not correspond to the full-length term quarter dates. For information, contact **Registration & Student Records, Dayton Campus, Second Floor, Building 10, (937) 512-3000.**

If students withdraw **after the eighth day of the quarter**, they will not receive a refund of tuition or fees unless the withdrawal was due to exceptional circumstances such as a medical emergency. For consideration of the specific situation, students must submit a tuition refund appeal request to the Bursar's office, Second Floor, Building 10. Students may access this form through <http://www.sinclair.edu/services/bursar/refunds/tcr>. Follow the steps accordingly.

If Sinclair Community College cancels the students' class, they will receive a 100% refund. Refunds are issued by check one week after the close of the refund period. Checks will be mailed to the students' home address currently on file with the Registration & Student Records office.

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 will be withdrawn from all classes. **Students may register at any U.S. post office or at www.sss.gov.** For information concerning status, call 1-708-688-2576, Monday-Friday, 8:30 a.m. - 6:45 p.m.

Payment Plan

FACTS Tuition Payment Plan (available from FACTS Management Company), <http://facts.sinclair.edu>

FACTS is a payment plan offered to help students budget tuition costs. It automatically withdraws a **non-refundable** \$15 per quarter plan FACTS service fee, and the college tuition, from a credit card, checking account or savings account. This is not a loan program. There are no interest or finance charges. There is a maximum amount to qualify for the plan. Students are responsible to the college for all tuition and fees incurred as a result of registration. FACTS is only a convenient budget plan to assist students in managing their costs.

A deposit may be required. FACTS enrollment/payment dates for the current term are available at the Sinclair Web site.

If the \$15 service fee is not available for withdrawal, by FACTS, from the students' banks or credit card, students cannot participate in the FACTS payment plan. Students not participating in the plan, must pay fees that are due on the collegewide payment dates printed in the current quarter's schedule. FACTS will charge a \$25 "returned payment fee" for each unsuccessful attempt to withdraw funds from the students' financial institution.

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 subject to deregistration of 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 at <http://facts.sinclair.edu>. Students need the following information:

- The last seven digits located on the Tartan Card I.D. This is the student identification number.
- Name, address and e-mail address of the person responsible for making the payments.
- A FACTS Access Code that students will create.
- If paying from a checking or savings account, students will need the bank name, telephone number, account number and routing number (located on their checks).
- If paying from a credit or debit card, students will need the card number and expiration date.

Frequently Asked Questions About FACTS

1. When and what time will the funds be withdrawn from my bank account?

FACTS specifies the date each payment will occur but it is your financial institution that determines the time of day the payment is debited. FACTS recommends you check with your financial institution to determine how far in advance funds should be deposited into your account to ensure the automatic payment clears. If a payment date falls on a weekend or holiday, the payment will be attempted the following business day.

2. How will I be notified of my payment information?

Once your agreement is posted to the FACTS system, you will receive a confirmation notification of your payment amount by e-mail or letter. Payments will be processed until the total balance is paid in full. The notification has important information you must have to log on to My FACTS Account. The notification also serves as a reminder that a \$15.00 per quarter non-refundable FACTS enrollment fee will be processed from the account indicated on the agreement.

3. What if I'm adding or dropping classes, do I need to fill out a new agreement?

No, Sinclair Community College will adjust your balance with FACTS if financial aid is received or adjusted or if a class is dropped or added. The change in your account must be reflected within the time period allowed, for each payment due date. If the adjustment to your account is too close to your payment due date, the adjustment will be made for the following month.

4. What if I don't have sufficient funds to make payments on time?

Failure to pay fees or tuition payments on the agreed upon dates may result in termination of the agreement and you will not be allowed to register for the next quarter. The college is required to report any unpaid balances to the State of Ohio, Attorney General's office for collection.

5. What if this is my first term at Sinclair or I am returning after a one-year absence?

You will need to fill out and submit a new or returning Student Application to activate an account within 24 hours so you can access the FACTS payment plan. Consequently you cannot apply for FACTS until the day following your college registration. This may prevent you from successfully submitting a FACTS application on the last day to submit online or on the college's final payment deadline published in the quarterly schedule.

6. What is the FACTS Access Code?

To help protect your privacy, FACTS asks the person responsible for the payments to create an access code. If you should call into FACTS inquiring about your FACTS agreement or inquire online through My FACTS account, you will be required to verify your FACTS Access Code. If you do not create an access code on your FACTS agreement, one will be randomly assigned to you. Your FACTS Access Code will be identified on your FACTS Confirmation Letter. Please remember to keep a copy of your confirmation letter.



Registration & Student Records

www.sinclair.edu/services/registration
**Building 10, Second Floor,
Dayton Campus**
(937) 512-3000, TDD (937) 512-3096

Hours

Monday - Thursday, 8:00 a.m. - 7:00 p.m.

Friday, 8:00 a.m. - 5:00 p.m.

Saturday, 9:00 a.m. - 12:00 noon, before and after the first day of classes each term

Summer Term

Friday, 8:00 a.m. - 5:00 p.m.

Services

- Handles student records, registration for classes, transcripts, diplomas, Tartan I.D. cards
- Reviews student eligibility for awards such as scholarships, graduation honors, Dean's List and degrees
- Processes student personal information changes, such as change of address, residency, and name

How to Register

There are three steps to registration for classes.

1. **See an academic advisor to discuss program and schedule needs.**
2. **Access the *Class Schedule* to view available courses.**
 - **Online - www.sinclair.edu/schedule**
One week before registration begins, the schedule of classes is available online by accessing Web Advisor at <http://my.sinclair.edu>. This is the most up-to-date schedule or class schedule planner.
3. **Register for Classes**
Sinclair students have two ways to actually register. Students should check the Sinclair Web site, www.sinclair.edu for the date registration will open each term and then register by any one of two methods below:

1. **Web Advisor** – <http://my.sinclair.edu> is Sinclair's online registration and student record system. Adding courses, dropping courses and payment all can be done from Web Advisor. Register from home or anywhere else with computer access.
 - Online registration begins at 12:01 a.m. on the first day of the registration period each quarter. For dates, check the calendar in the catalog, online calendar, or call (937) 512-3000.
 - Log on to <http://my.sinclair.edu> and click Web Advisor.
 - Search for classes and build a schedule.
 - Register!
2. **In Person** – Building 10, Second Floor Lobby, Dayton Campus or the Learning Centers and Courseview Campus
 - In-person registration begins at 8:00 a.m. on the first day of the registration period each quarter.
 - Registration forms and drop/add/withdrawal forms are available and may be processed at Sinclair Central, Dayton Campus, Building 10, Fourth Floor or in Registration & Student Records, Building 10, Second Floor Lobby, or the Learning Centers, and Courseview Campus.

NOTE: Registration is final when the bill is paid in full by the scheduled deadline. Payment options are shown under the section "Payment of Fees."

NOTE: Courses in the 100 series usually are recommended for first-year students and courses in the 200 series for second-year students. *Those numbered below 100 are developmental courses, do not count toward a degree and may not be accepted by other colleges and universities as transfer credits.*

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, Room 10231, Dayton Campus. Check www.sinclair.edu 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. A veteran may not use educational benefits to audit a course. In addition, financial aid may not be used to pay for courses that are audited.
- Audit status cannot be changed to credit status, nor can credit status be changed to audit status once registration has been completed.
- Students may register to audit a course during the week before classes begin. Students may not change from audit to credit status, or credit to audit status at any time of the registration process. Students will not receive credit for classes they audit, nor can they qualify for veterans benefits for classes they audit.

Changing Sections of a Course

After the drop/add period and through the last day for withdrawal with a "W" grade, students can ask permission to change to any open section of the same course. Acceptable reasons for changing sections may include class conflict with work schedule, child care, transportation or health issues.

To make this change students must do the following:

- See their academic advisor if classes have begun
- Bring a drop/add form with the advisor's signature to Registration & Student Records, Room 10231, Dayton Campus.

Dropping Courses

Before withdrawing from one or more classes, students should consult an academic advisor and meet with the Financial Aid & Scholarships office if using financial aid to pay tuition. Students may withdraw online or in person.

- Process the drop/add/withdrawal form in the office of Registration & Student Records, Dayton Campus, Building 10, Second Floor
- Online through the **my.sinclair**
- To drop or withdraw from all classes for the term, students may use the Call Center, (937) 512-3000.

A copy of the processed withdrawal form will be mailed to the students. This is proof of withdrawal and should be kept for the students' records. Failure to follow one of these processes means the students will receive a grade, usually an "F," in the class.

NOTE:

- Veterans' benefits will be affected by withdrawal from one or more classes. Veterans should first contact the Veterans Assistance office, Dayton Campus, Building 10, Room 10324.
- Financial aid status of any students may be affected by withdrawing from one or more classes.

Deadlines are important.

To withdraw from a standard term course:

- Withdraw during the first 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 during the first eight (8) weeks of the term, means no refund and a grade of "W" on the permanent record.
- Withdrawal after the first 8 weeks of the term results in a grade of "F" and no refund.

Short term courses of less than a term in length have special deadlines. Students should check the online calendar at <http://www.sinclair.edu>.

Summer term has multiple terms and varying deadlines. Check the summer class schedule online.

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 students do not attend the first class, it is the students' 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 students' presence on campus is potentially detrimental to the college, faculty, staff, students or themselves.

Grades

Grades will be available the first Wednesday after the end of each term. Students have two ways to get their grades and should choose one of these ways:

1. **E-mail** - A grade report will be e-mailed to all students by way of their <http://my.sinclair.edu> e-mail address as soon as all grades for the term are received.
2. **Web Advisor** - If an official grade report is needed, students should access grades by way of their Web Advisor account, accessed through the my.sinclair portal. Click on the "Grades by Term" link within Web Advisor. The "Grades by Term" screen will contain the students' name and should be considered an official grade report. Grades are available as instructors post them.

Graduation

Traditionally, Sinclair has required that students who believe they have met the requirements to graduate should self-identify by filling out an **Application to Graduate**. This application and a fee were required for students who have completed a degree, certificate or short term certificate. Students are no longer required to submit an application or pay a fee. **The office of Registration & Student Records will be 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 e-mail from the office of Registration & Student Records during the term in which they are enrolled in the final courses needed to complete their degrees, certificates or short term certificates. This e-mail 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 three to four 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 e-mails.
- Be sure the office of Registration & Student Records has their correct mailing addresses.

Participation in Commencement

Students earning their associate degrees will be offered the opportunity to participate in Sinclair's annual commencement ceremony. This ceremony takes place June. Participation in the commencement ceremony is limited to those students earning associate degrees.

Late Registration

Students may register for open classes during Sinclair's official late registration period.

Students may not register for any course that already has met once.

- Late registration period is the week before each term begins but only the two days preceding summer term. See the online class schedule for exact dates for each term.
- A non-refundable late fee of \$30.00 is charged for all late registrations except when adding a class when the students already have registered for the term.
- To audit a class, students register during late registration; there is no late fee charge.

Note: Online/Distance learning classes are considered to have met as of midnight on the second day of the term.

Personal Data

- To change a name or address:
 - Apply online at Web Advisor at <http://my.sinclair.edu>, or
 - Complete a change of information form at the office of Registration & Student Records.
- To change a social security number, students must bring a copy of their card to Registration & Student Records.
- Veterans must report any change to the Veterans office, Room 10324.

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/services/registration; call (937) 512-3000.

Prerequisites

Some beginning or advanced courses have prerequisites which are other courses that must be successfully completed first. All prerequisites are listed in the course descriptions located in the back of this catalog. Many beginning classes require the placement test or completion of developmental courses before students may enroll in them.

Transfer and transient students who want to substitute courses completed at another institution for Sinclair prerequisites 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 transcript sent from their former institution to the Sinclair office of Registration & Student Records.

Repeating a Course

A student may repeat a course for any reason. When a course is repeated, the second grade will be used in calculating the cumulative grade point average (GPA) in place of the original grade. If the same course is taken again, the third grade and credit hours and any subsequent grades and credit hours will be averaged in the cumulative GPA. 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.

Sinclair Central

Building 10, Room 10242, (937) 512-2201, Dayton Campus

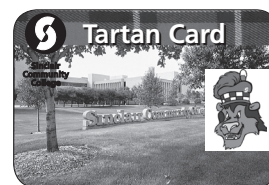
Located near the Registrar's office, Sinclair Central is there to assist with enrollment and registration. Students also may call Sinclair Central at (937) 512-2201. Computers located there and also in the Registration lobby are available for students to access current information about open classes or to register online using **Web Advisor**. Sinclair Central services include:

- Registration and scheduling assistance
- Financial aid information
- General campus information (directions, campus policies, etc.)
- Referral to specialized services on campus

The Tartan Card

Student I.D. Card

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, using the PAC, and parking facilities. Money put on the student account via the Tartan Card can also pay for various campus services such as books, food, parking and copier use—so the students don't have to carry cash. **On campus, money can be put on cards at transfer stations (the Dayton Campus, Buildings 3, 4, 7, 8, 11, 13), or online (www.sinclair.edu/tartancard).**

The Bursar office has a \$10 minimum deposit requirement at the Cashier's window. Students wanting to deposit less than \$10 must use the VTS machines or the Online Card office. Money cannot be withdrawn from a Tartan Card after the deposit is made. Money may only be taken off the card upon termination of the card and by filling out a Tartan Closure form at the Bursar's office, or online under the refund information on the Bursar's office pages. The Tartan Closures are processed at the end of each quarter. A check minus \$10 closing fee will be mailed to the students.

To avoid possible lines, the preferred method to put money on the Tartan Card is via the Web site at **www.sinclair.edu/tartancard**.

To get the **first Tartan Card at no charge**, present a fee bill and another photo I.D. to Registration & Student Records, Dayton Campus, Second Floor, Building 10. The Tartan Card does not expire, but **if the card is lost or stolen**, there is a fee for replacement. Through the card, enrollment information is automatically downloaded within 24 hours after registering for classes.

Tartan Card Advantages

Discounts apply to currently registered students.

- Discount on parking fee with the Tartan Card
- 5% discount on all food purchases
- 10% discount on selected gifts at Bookstore
- 50% discount on photocopies in Library

Transcripts

For official transcripts of academic work completed at Sinclair, choose from these methods:

- **Online** – For the quickest way to order transcripts, visit <http://www.sinclair.edu/services/registration>. 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 office of Registration & Student Records. Include the student I.D. number, birth date, the term last attended at Sinclair, legal signature, day time telephone number, and payment. Cost is \$5.00 per mailed transcript. Transcripts ordered by mail will be produced and mailed in five business days.

Waitlisting

Let Sinclair do the waiting for students!

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 <http://my.sinclair.edu> e-mail 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 <http://www.sinclair.edu/services/registration>.

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 quarter’s drop and withdraw dates, check <http://www.sinclair.edu/services/registration/dates>.



Financial Aid & Scholarships

FINANCIAL AID

www.sinclair.edu/services/finaid
Building 10, Room 10324,
Dayton Campus
(937) 512-3000, TDD (937) 512-3096

Hours

Monday - Thursday, 8:00 a.m. - 7:00 p.m.
Friday, 8:00 a.m. - 5:00 p.m.
Saturday hours are irregular

Counseling Hours

Monday - Thursday, 10:00 a.m. - 7:00 p.m.

Services

- Provides financial aid applications and advising
- Awards financial aid packages including federal, state, and institutional grants, loans, and scholarships

Overview

What is Financial Aid?

Financial aid is money given to students to help pay for college. Financial aid can be one of four types:

- grants
- scholarships
- work-study
- loans

Grants and scholarships are more favorable than loans because they do not have to be repaid—they're free money. In a **work-study program**, students work for a certain number of hours per week on or off campus to earn money for college expenses. An ideal financial aid package will contain more grants and scholarships than loans. Students are encouraged to apply for as many different sources of financial aid as possible in order to pay for their college education.

To receive any kind of financial assistance with college expenses, students will need to complete the **federal application known as the FAFSA**, which stands for Free Application for Federal Student Aid.

Students will receive two replies after submitting the application. From FAFSA, students will receive a Student Aid Report (SAR) telling them the **expected family contribution (EFC)** they are to make toward college expenses. As long as students enter the Sinclair school code 003119 on their FAFSA application, **Sinclair will send a separate e-mail** to them regarding their application status.

Always apply early. The process will progress from application to verification of information, to notification of financial aid awarded, to accepting awards, to crediting the student's aid toward college expenses. It could take as little as four to six weeks from start to finish or as long as ten to twelve, depending upon individual circumstances.

Financial Need

The majority of financial aid is need-based aid. The cost of college attendance minus the student's expected family contribution determines need; in other words:

Cost of attendance - Expected Family Contribution = Financial Need

The cost of attendance is more than direct costs of tuition, fees and books. It also includes indirect college expenses such as supplies, transportation, day care and program related expenses and personal expenses.

Federal and state regulations determine the amounts of Federal Pell Grant and Ohio Grant.

The U.S. Department of Education provides guidelines to the Financial Aid & Scholarships office in determining eligibility for financial assistance based on the student's financial need.

Cost of Attendance or Budget - 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, room and board, and personal expenses. Please keep in mind that a student attending Sinclair is only required to pay the direct expenses on his or her student accounts. The cost of attendance will vary depending on the student's dependency status.

Dependency Status: Dependent vs. Independent

The independent student can answer yes to one of the following questions:

1. Were you born before January 1, 1987
2. As of today, are you married? (Also answer "Yes" if you are separated but not divorced)
3. At the beginning of the 2010-2011 school year, will you be working on a master's or doctorate program (such as an M.A., M.B.A., M.D., J.D., Ph.D., Ed.D., graduate certificate, etc.)?
4. Are you currently serving on active duty in the U.S. Armed Forces for purposes other than training?
5. Are you a veteran of the U.S. Armed Forces?
6. Do you have children who will receive more than half of their support from you between July 1, 2010 and June 30, 2011?
7. Do you have dependents (other than your children or spouse) who live with you and who receive more than half of their support from you, now and through June 30, 2011?
8. At any time since you turned age 13, were both your parents deceased, were you in foster care, or were you a dependent or ward of the court?
9. Are you, or were you, an emancipated minor as determined by a court in your state of legal residence?
10. At any time on or after July 1, 2009, did your high school or school district homeless liaison determine that you were an unaccompanied youth who was homeless?
11. At any time on or after July 1, 2009, did the director of an emergency shelter or transitional housing program funded by the U.S. Department of Housing and Urban Development determine that you were an unaccompanied youth who was homeless?

—continued

12. At any time on or after July 1, 2009, did the director of a runaway or homeless youth basic center or transitional living program determine that you were an unaccompanied youth who was homeless or were self-supporting and at risk of being homeless? The dependent student will answer no to all of these questions.

The cost of attendance will also vary depending on the student's residency status, whether the student is residing in Montgomery County, out of county or out of state.

Expected Family Contribution - the amount a student and family are expected to contribute toward the cost of attendance. This amount is determined through a need analysis calculation that the federal government created. The calculation uses information reported on the FAFSA application.

Here are two examples of budgets at Sinclair Community College (these may change annually):

BUDGET A	<i>Dependent</i>	In-County 9 months
Tuition, Fees and Lab Fees		\$ 1,626
Books and Supplies		1,122
Transportation		675
Room and Board		2,685
Personal and Other		<u>1,320</u>
TOTAL		\$7,478

BUDGET B	<i>Independent</i>	In-County 9 months
Tuition, Fees and Lab Fees		\$ 1,676
Books and Supplies		1,122
Transportation		675
Room and Board		5,385
Personal and Other		<u>1,320</u>
TOTAL		\$10,138

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 awards are made on a non-discriminatory basis.

1. **Questions** – For information, call, write, or personally visit the office:
 - Call (937) 512-3000, Sinclair's Call Center
 - E-mail finaid@sinclair.edu or send a letter; address: Financial Aid & Scholarships Office
Sinclair Community College
444 West Third Street
Dayton, Ohio 45402-1460.
 - Visit the Dayton Campus office, Building 10, Room 10324 to speak with a financial aid representative.
2. **Results of communication** – The Financial Aid office will communicate with students about the status of their application first by letter, but thereafter through their Sinclair e-mail account. When the students' financial aid award package has been determined, an award notification will be sent via e-mail. **Students should check their college e-mail account regularly.**

Note: No information regarding students' financial aid records will be provided to anyone but the students without the students' written permission. See a financial aid representative in Room 10324 to authorize anyone else.

Sources & Types of Financial Aid

The four primary sources of aid for students are **the federal government, the state of Ohio**, the college, and private organizations. The main provider is the federal government.

There are four general types of aid available.

Type of Aid	Provider	Basis of Award	Repayment needed?
Grants	Federal	Financial need	No
Scholarships	State, College, and Private Organizations	Financial need and/or merit	No
Work	Federal & College	Need	No
Loans	Federal & Private	Financial need	Yes

See specific sections of Federal, State, and Institutional Financial Aid for more details.

Priority Dates

- Priority dates are critical when applying for financial aid. **Apply as early as possible.**
- **May 1** is the annual priority date established by Sinclair. Apply by May 1 each year for the best chance of receiving a financial aid award for the next academic year.
- Sinclair also has established **priority dates**. See the online *Course Schedule* for dates at www.sinclair.edu/schedule.
- After priority dates, there may be less state and institutional aid available. Students still may submit applications, but they may be required to pay their tuition and books themselves before receiving a reimbursement credit. See a financial aid representative for possible reimbursements.
- Students who have difficulty paying 100% of tuition and fees at the time payment is due should see the Bursar about the **FACTS payment plan**. This plan allows students to spread tuition over two or three payments. Students also may apply online at <http://facts.sinclair.edu>.

How to Get Started

Talk with a financial aid representative for information and assistance. A financial aid officer is available on a walk-in basis, Monday - Thursday, 10:00 a.m. - 7:00 p.m.

Application Process

There are three critical first steps to qualify for financial aid of any kind:

1. First complete the Free Application for Federal Student Aid (FAFSA) each year. The need for any financial aid will be determined by the information provided in the FAFSA application
 - Available beginning in January for the following academic year (summer through spring)
 - Available online at www.fafsa.ed.gov. Students will need a PIN (Personal Identification Number) to complete the application online. To request a PIN, go to www.pin.ed.gov. Parents can also request a PIN for themselves at the same site.
 - Be sure to use Sinclair's code **003119** on the application so the college can receive the results.
 - Be sure to sign the FAFSA application, certifying that all federal financial aid money will be used only for expenses related to study at Sinclair Community College.
 - Submit the application online. Apply as early as possible; processing can take four to six weeks and perhaps longer if students are selected for verification of their information.
2. If students are selected for verification, they will receive an e-mail asking them to provide verification documents, **Sinclair will not be able to award any federal aid until all the requested documentation has been verified.**
 - See Verification Process section for more details.
3. Some scholarships will require additional applications, available online or from the financial aid office. See Additional Information about Federal Loans and also Private/Alternative Loans for more details.

Results of Financial Aid Application

Notification: If students are eligible for financial aid, they will receive a letter via e-mail from Sinclair's Financial Aid & Scholarships office. Students will need to go through Web Advisor to retrieve their awards. Students will need to accept or reject the award before funds will be available for tuition, fees, and/or books.

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 their fee bill after they have registered for classes each term. See Receipt/Payment of Award section for more details.

Federal Financial Aid: Grants, Work-Study, Loans

General requirements for any federal financial aid:

1. Maintain satisfactory academic progress. See the Standards of Satisfactory Progress section for details.
2. Declare a major in a degree or certificate program.
3. Be a U.S. citizen or eligible non-citizen.
4. Not be in default on a student loan or owe money back to the U.S. Department of Education for an overpayment.
5. Demonstrate financial need as determined by the students' FAFSA application.
6. Comply with current selective service registration regulations (males between the ages of 18 and 25).
7. Have a G.E.D. or a high school diploma.
Students without a G.E.D. or diploma must be 18 years or older and must successfully complete Sinclair's **Accuplacer Test** of writing, reading and math skills to determine their readiness for college level course work (Ability to Benefit). The Accuplacer Test can be taken on a walk-in basis in the Enrollment Center, Building 10, Fourth Floor Lobby, Dayton Campus. Students must pass all three sections of the test at the same time to meet the requirements of the Ability to Benefit Exam.
8. Be registered and attending classes. Students are not required to attend full time, but aid is prorated for students enrolled in fewer than 12 credit hours per quarter. Those who plan to enroll for fewer than 12 credit hours should contact the Financial Aid & Scholarships office to determine the effect it will have on a grant or loan.

Students

Remember to first complete both the FAFSA and Sinclair Financial Aid applications. Applicants must meet all general federal aid eligibility requirements listed above. All federal aid is need based.

	Type of Aid	College Expenses Covered	Special Requirements
Pell Grant	Grant	<ul style="list-style-type: none"> • Tuition, fees, books, living expenses 	<ul style="list-style-type: none"> • Not have a bachelor's or advanced degree
Supplemental Educational Opportunities Grant (SEOG)	Grant	<ul style="list-style-type: none"> • Tuition, fees, books, living expenses 	<ul style="list-style-type: none"> • Not have a bachelor's or advanced degree • Register for at least six hours • Have exceptional need • Does not cover summer
Academic Competitiveness Grant (ACG)	Grant	<ul style="list-style-type: none"> • Tuition, fees, books, living expenses 	<ul style="list-style-type: none"> • U.S. Citizen • Federal Pell Grant Recipient • Full-time enrollment in a degree program • First or second year student in a program at two or four year degree granting school
College Work Study (CWS)	Work	<ul style="list-style-type: none"> • Living expenses 	Register for at least six hours
Stafford Student Loan <i>See Additional Loan Information section</i>	Loan	<ul style="list-style-type: none"> • Tuition, fees, books, living expenses 	<ul style="list-style-type: none"> • Register for at least six hours • Complete online counseling session • Complete promissory note
Parent PLUS Loan <i>See Additional Loan Information section</i>	Loan	<ul style="list-style-type: none"> • Tuition, fees, books, living expenses 	<ul style="list-style-type: none"> • Register for at least six hours • Complete parent loan application • Complete promissory note

Verification Process for FAFSA

The federal government may ask Sinclair to verify the accuracy of the students' FAFSA application. If students are selected for verification, they will receive an e-mail from the college, asking for documentation to support the information reported on the FAFSA application. Follow these steps:

1. Gather all paperwork or documents that the verification e-mail requests. It may include:
 - Student Federal Tax Return and/or W2
 - Parent Federal Tax Return and/or W2
 - Verification of untaxed income such as child support or disability
 - Proof of the number of family members in the household
 - Additional documentation as requested
2. Submit all requested information to the Financial Aid & Scholarships office, Dayton Campus, Building 10, Room 10324.
3. Sometimes students will be asked for additional documentation after submitting preliminary documents. Students should submit any additional documents as quickly as possible.

NOTE: Sinclair will not be able to award any federal financial aid until all requested information has been submitted to the college and verified by the Financial Aid office. This also applies to some state aid and institutional scholarships.

Standards of Satisfactory Progress

Standards of Satisfactory Progress are the minimum requirements the federal government feels that students should be able to meet and still be progressing toward a degree or certificate. The Financial Aid & Scholarships office is required by the U.S. Department of Education to enforce the Standards of Satisfactory Progress for all students who receive federal financial aid.

Sinclair's Standards of Satisfactory Progress policy includes:

- **Credit hour requirement:** Successfully complete 75% or more of hours attempted since first term at Sinclair.
- **Grade point average requirement:** Maintain a 2.0 cumulative average.
- **Maximum time frame requirement:** Complete a program of study within a limited number of credit hours (77 cr. hrs. certificate, 153 cr. hrs. degree).
 - Students may repeat a course for any reason and still receive financial aid. In all cases, when a course is repeated, credit hours and grades will count each time the course is taken in determining whether or not students are making satisfactory progress while receiving financial aid.
- See a financial aid representative for details of probation and appeal processes if standards are not met.

Students who fail to maintain satisfactory academic progress may appeal the removal of federal financial aid if they feel they have extenuating circumstances. These circumstances must be documented and submitted with the appeal which will be reviewed along with academic transcripts by the Financial Aid Appeals committee.

- **Regaining eligibility:** Students may regain their eligibility and have their federal financial aid reinstated after one of the following:
 - Approval of an appeal or
 - Successfully completing the requirements originally requested under the probation status. Students must notify the Financial Aid & Scholarships office when they believe they have met the requirements necessary for reinstatement of aid.

Note: Sinclair's Fresh Start Policy has no bearing on Standards of Satisfactory Progress.

Additional Information About Federal Loans

Students will be offered federal loans based on eligibility and need.

- Review awards on Web Advisor and accept or reject the loan(s) offered.
- First time borrowers at Sinclair must complete a required online entrance counseling session. The counseling session includes information on the rights and responsibilities of the student borrower, repayment options and terms and conditions of the student loan. The online entrance counseling session can be found at the following Web site: www.studentloans.gov.
- If the loan is accepted, a notification letter will be e-mailed to the students, usually within 13 to 15 days after accepting the loan(s).
- The students must complete promissory notes at the following Web site www.studentloans.gov.
- An exit counseling session is a federal requirement of graduating students and of students who stop attending at least six credit hours of classes.

Federal Direct Stafford Loan – available to students to help meet educational expenses

- Fixed interest rate of no more than 8.25%
- Amounts will range from \$200 to \$10,500, depending on eligibility, need, and annual loan limits set by the federal government.
- A loan may be subsidized or unsubsidized, depending upon financial need.
 - Subsidized loan: Federal government pays interest while students attend school.
 - Unsubsidized loan: Students pay interest either by adding interest to the loan balance or paying it directly while attending school.

- Repayment of Stafford loans will begin six months after students are no longer enrolled for at least six credit hours, graduates, or completely withdraw from school. A temporary deferment to postpone repayment can be arranged under certain qualifying conditions, including continuing education and economic hardship. Students may contact a financial aid representative for more information; but to apply for deferment, they must contact the Direct Loan Servicing Center directly at 1-800-848-0979.

Federal Direct Parent PLUS Loan – available to parents of dependent students to help meet educational expenses:

- Fixed interest rate of no more than 9.0%
- Repayment begins at end of loan period
- Parent is required to go through a credit check by the federal government for loan approval.

If the parent fails the credit check and the loan is denied students will be offered an additional Federal Direct Stafford Loan. Students will need to accept or reject these additional loans as well.

Return of Federal Financial Aid

In some cases, students may have to return federal funds to the federal government.

- **Dropping all classes:** Students who withdraw from all classes after the 100% refund period and prior to completing 60% of the term will be subject to a return of federal financial aid to the government according to this calculation:
 1. Outstanding balances on Federal Direct Loans
 2. Federal Pell Grant awards
 3. Federal SEOG awards
 4. Federal Work Study programs
- **Non-attendance of classes:** For students who stop attending all classes without officially withdrawing, return of federal financial aid will be calculated according to the same guidelines. If students fail to attend one or more of their classes, their financial aid may be reduced or removed.

See a financial aid officer for more information.

State Financial Aid: Grants & Scholarships

Eligibility requirements for state financial aid differ slightly from those for federal aid.

General requirements for state financial aid:

1. Be residents of Ohio, if independent students
2. Students and their parents must be residents of Ohio, if students are dependents
3. Be enrolled in an associate degree program (**Certificate program students are ineligible for state grants.**)
4. Not have bachelor's or more advanced degrees
5. Comply with current selective service registration requirements
6. Be U.S. citizens or eligible non-citizens
7. Be registered and attending classes

State Financial Aid Available to Students

	Type of Aid	College Expenses Covered	Special Requirements
Ohio War Orphans Scholarship	Scholarship	Percentage of tuition as determined by Ohio Board of Regents	<ul style="list-style-type: none"> • Be the children of a disabled or deceased war veteran • Register for at least 12 credit hours • Maintain a 2.0 GPA • Contact the Ohio Board of Regents at 1 (614) 752-9528 or complete the scholarship application online at www.regents.state.oh.us/sgs/sgsstudent.html • July 1 application deadline
Ohio National Guard Scholarship	Scholarship	Tuition only	<ul style="list-style-type: none"> • Be a National Guard member • Register for at least six credit hours • Complete scholarship application online at www.ongsp.org or contact the regional National Guard Armory

Institutional (College) Financial Aid

Sinclair Community College offers aid which is not need-based through scholarships.

There are three categories of scholarships:

1. **Foundation Scholarships** – Sinclair uses funds donated to the college to offer college scholarships each year to Sinclair students. Approximately 200 Sinclair Foundation scholarships are available for students who demonstrate financial need or who meet other eligibility criteria. Students may earn scholarships for many reasons including academic achievement, group affiliation or participation, ethnicity and more. The Sinclair Foundation also offers scholarships for students enrolled in a particular field of study. Students can apply for Sinclair Foundation scholarships through the online Scholarship Tracking and Review System (STARS) online system. STARS will identify the most likely scholarship matches. The STARS system can be accessed from the scholarship page of the Financial Aid Web site at www.sinclair.edu/services/finaid/.
2. **Institutional Scholarships** – Sinclair offers many college funded scholarships which are awarded on a first-come, first-served fund available basis, provided the students' financial aid file is complete.
3. **High School Scholarships** – Sinclair offers a variety of scholarships to new students based on high school academic performance. Sinclair is proud to award a generous amount of scholarships to incoming students each year. Students should see the high school counselor or the Financial Aid & Scholarships office at Sinclair for details.

Information and applications for scholarships can be found on the Financial Aid Web site at www.sinclair.edu/services/finaid

Additional Financial Support

Private/Alternative Loans

Sinclair is a partner with several lenders to offer loans to students who do not qualify for federal loan programs or who need additional financial assistance to meet educational expenses.

- Review the Sinclair Financial Aid Web site, www.sinclair.edu/services/financial, for a list of lenders. Students can choose to apply through other lenders if applicable.
- Contact a Financial Aid officer for more information.

Regular Student Employment

Sinclair offers students regular part-time employment opportunities on campus. Unlike federal College Work Study, students do not have to demonstrate financial need. All regular non-Work-Study employment is handled in the Career Services office, Building 10, Room 10312, Dayton campus.

- Look for job postings and get more information about available opportunities at Career Services, Building 10, Room 10312.
- All students who meet the requirements of the position offered may apply.
- Job assignments can be in a variety of areas such as clerical, media services, student leadership, tutoring, or community outreach.
- Hours per week vary with each position.
- Student employees earn minimum wage per hour.
- Apply in the Career Services office, Building 10, Room 10312.

Tips on Competing for Scholarships

1. **Go after them.** You will never know until you try. Watch the scholarship bulletin board, read *The Clarion*, check the library for information and sources.
2. **Apply for as many scholarships as possible.** For the most part you can have as many scholarships as you can earn. But remember you are not going to receive everything for which you apply.
3. **Apply for the scholarship that matches your achievements and goals.** Remember, there are different types of scholarships. Concentrate your efforts first toward those which suit your qualifications.
4. **Identify what you have done that sets you apart from the other applicants.** Remember, the application is your chance to set yourself apart. What have you done that is unusual, interesting, outstanding or different? Have you won contests, or held leadership positions? Tell about them. Spend time on your essay.
5. **Be honest.** Be prepared to live up to your claims. With most scholarships receiving the award is only the first step. You usually must maintain a certain enrollment, GPA, etc., to keep the scholarship.
6. **Appear professional.** Don't wait until the last minute. Read and follow all the directions. Type your application. Remember this is your opportunity to make a positive impression on the selection committee.

Receipt/Payment of Financial Aid

Students may receive awarded aid in the following ways:

1. **Paying fees:** First, aid will be credited to the students' account after registration for classes.
 - Caution: if the award will not pay the total amount due, the students must pay the balance or registration will be canceled.
 - Financial aid will not pay for audited classes.
2. **Buying books:** After tuition and fees, if students have financial aid money left over for the term, a book allowance of up to \$600 will appear on the fee bill.
 - Students should take their valid Tartan Card to the Sinclair Bookstore to charge books and supplies.
 - Check the fee bill for the dates during which book charges can be made each term. Dates also will be posted online.
 - If the required book is not in stock during the period that book charges can be made, Bookstore staff can give students a credit slip so they may charge the book and pick it up later when it is available.
3. **Receiving any remaining balance:** If there is federal financial aid money left over after payment of tuition, fees, and books, students will receive a refund check at their home address after the 14th day of the term. Be sure to maintain a current address with the Registration & Student Records office.

Exception for first-time Federal Stafford Loan borrowers: Any refund will be disbursed after 31 days following the beginning of the loan period. Loans solely for one term will come in two disbursements: the first half after the 14th day of classes (except for new borrowers) and the second half midway through the term.
4. Students may be eligible to use federal financial aid for a **study abroad program**. See a financial aid officer for more information.

Important

- Financial aid cannot be used to pay for audited classes.
- Financial aid can pay for developmental (pre-college level) classes.
 - Federal aid will only pay up to 45 credit hours in developmental classes.
 - After students have attempted over 32 credit hours in developmental classes, they will receive a letter regarding the limits of their federal aid.
- Adding or dropping a class may affect students' financial aid. Talk with a financial aid representative first.
- For financial aid purposes, repeated courses count every time they are taken for credit. This differs from the college policy regarding repeated courses on transcripts.
- Students are encouraged to contact Project READ at (937) 461-READ (7323) for G.E.D. information.

Summer Term

- Federal Pell Grant, Institutional Scholarships and Loans can be used for summer term expenses.
- Students will need to accept any grants offered for summer before funds will be available to pay tuition, fees, and/or for books.

Veterans Assistance

Building 10, Room 10324, (937) 512-2586, Dayton Campus

Veterans Assistance provides assistance regarding V.A. educational benefits for service members, veterans, reservists, National Guard and dependents of veterans.

Hours

Monday, Tuesday, Wednesday, and Friday, 8:00 a.m. - 5:00 p.m.

Thursday, 8:00 a.m. - 7:00 p.m.

Summer hours may vary.

Educational Benefits

Students, who meet the V.A. eligibility criteria may be certified to receive educational benefits by registering with Sinclair's V.A. coordinator. The following chapters currently exist for educational benefits:

- Montgomery GI Bill - Active Duty (Chapter 30)
- Montgomery GI Bill - Selected Reserve/National Guard (Chapter 1606)
- Veterans Educational Assistance Program (VEAP) (Chapter 32)
- Post/911 GI Bill - Educational benefits for eligible individuals, veterans and service members who served on active duty after September 11, 2001 (Chapter 33).
- Survivors' and Dependents' Educational assistance Program (Chapter 35)
- Vocational Rehabilitation Program (Chapter 31)

Benefits are paid based on chapter and number of credit hours enrolled per term:

- Full-time: 12 or more credit hours
- Three-quarter time: 9 to 11 credit hours
- Half-time: 6 to 8 credit hours
- *Less than half-time: 5 credit hours or less (tuition and fees only)

*Chapter 31 Does Not Apply

Students may be certified before classes begin in order to receive an early check to assist in paying registration expenses.

For specific benefit and payment information, contact the Veterans Assistance office.

Repayment of Benefits

Under certain circumstances, withdrawing from courses could mean repayment of V.A. benefits, so veterans should contact the V.A. coordinator before withdrawing. **Non-attendance of classes** could also result in repayment. To eliminate any problems with benefits, each veteran must verify courses with a paid receipt for each term of enrollment. If the benefit recipient receives an "N" grade, a "Z" grade or all "F" grades in one term, benefits will be affected that term or in the future.

*The regulations vary for Chapter 31 veterans.

Courses and Courses of Study

Students with prior credits who attended previous college(s) or served in the military must request official transcripts. Transcripts will be evaluated by the office of Registration & Student Records, and once the credits have been evaluated the school will send the students a letter informing them of the number of credits accepted. Next, make an appointment with the academic advisor and request a degree audit to be sent to the Veterans Assistance office. The degree audit must be completed by the end of the second term or benefits will be suspended or delayed.

Sinclair's Developmental Studies courses are approved for all chapters as long as students have tested into the courses through placement testing.

Two-year associate degree programs qualify for educational benefits. One-year certificate programs do not qualify.

The following is a listing of courses that are **not** approved for V.A. benefits.

1. All certificate (one year) programs
2. **Any course that cannot be credited toward graduation in the degree program**
3. A third attempt at a failed ("F") course.
4. Real estate courses through Dayton Board of Realtors for students not enrolled in Real Estate & Property Management degree program.

Remember: Assistance may be received in course selection, but the **final course selection is the students' responsibility**. Students should follow the course outline as contained in the college catalog and see the academic advisor.

Reserve Educational Assistance Program (REAP), Chapter 1607

This educational program is designed to provide educational assistance to reservists who were activated after September 11, 2001, for 90 continuous days or more.



Academic & College Policies

Sinclair Community College Policies, Procedures & Services for Students

The purpose of these policies, procedures, and services is to help students succeed at Sinclair. Please carefully review and address any questions to instructors or the contacts provided.

Important College Dates

Check the listing of important college dates by visiting www.sinclair.edu/calendar.

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 students do not attend the first class, it is the students' 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 students' presence on campus is potentially detrimental to the college, faculty, staff, students or themselves.

Associate Degree

To be degree candidates, the students must:

- Fulfill requirements of the degree program and the institution.
- Complete a **minimum of 90 credit hours** (accredited programs must meet accreditation association requirements). Additionally, students must earn a minimum of 50 credit hours of their academic program from Sinclair, or must earn the last 30 credit hours of their academic program from Sinclair.
- Maintain a cumulative **grade point average of at least 2.0**.

Students have to meet degree requirements listed in the Sinclair catalog in effect at the time they begin study. However, if the course of study is prolonged beyond six years after beginning, consult with the department chairperson to determine graduation requirements. Sinclair will consider granting permission to graduate under a catalog more than six years old if they have been enrolled continuously and the degree program has not changed appreciably. Requests for this exception should be directed to the program chairperson and be approved by the division dean.

Begin a Four-Year Degree

Begin a four-year degree by taking advantage of Sinclair's small class sizes, 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 Transfer Module, or approved TAG courses before transferring to a four-year institution.

Proficiency Examinations

To earn credit for certain courses without enrolling in them, students may take an examination and/or perform special assignments through the appropriate department. Credit by examination requires departmental approval. This process is coordinated by the Academic Credit Assessment Information Center. For each proficiency examination, students have to pay a non-refundable fee.

Policies:

- Students have to obtain departmental approval before taking a proficiency examination.
- Students cannot take a **proficiency examination** until they have completed a Sinclair Community College application and paid the appropriate fee.
- Students must have successfully completed course prerequisites before taking the **proficiency challenge examination**. Exceptions to this requirement are made at the discretion of the department chairperson.
- Students can take a proficiency examination only once for any course. If they have taken a course and received a failing grade, with departmental approval they can take a proficiency examination one time in order to improve the grade. The grade for the proficiency exam replaces the previous grade, if they have taken the course only once.
- A proficiency examination cannot be taken nor credit awarded during any term in which they were previously registered for that course.
- Students will be **awarded** an "A," "B," "C," or "F" for a proficiency examination; however, only an "A," "B," or "C" grade will be **recorded** on their transcript.
- Students can apply no more than 45 credit hours earned through proficiency examinations toward degree requirements.
- Proficiency credits do not apply toward the college residency requirements.
- Proficiency fees are non-refundable.
- Proficiency examination grades are recorded on the transcript with a notation (#) that indicates which grades are the result of taking a proficiency examination.

Credit at Other Colleges

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.
- **Outgoing agreements** with other colleges and universities indicate how Sinclair Community College programs and courses will transfer to those institutions.

For a list of articulation agreements with other colleges see page 44.

The Academic Credit Assessment Information Center serves as an information source, as well as a clearinghouse to ensure that the credits for the incoming articulation agreements are recorded on the students' permanent records.

Policies:

- Students must have applied for admission, been accepted, and paid the appropriate fee before any credits earned through articulation agreements can be recorded on their record.
- Students must pay an administrative fee for each articulation agreement they processed.
- Students must provide documentation of successful completion of requirements per the agreement. Each department is responsible for determining appropriate documentation.
- The course(s) will be recorded on their transcript with a "Y" grade.
- Students can apply no more than 45 credit hours earned through articulation agreements toward their degree requirements.
- Credits earned via an articulation agreement do not apply toward the college residency requirements.

Since the development of articulation agreements with Ohio colleges and universities is an ongoing process, students should check with their academic/faculty advisors for the most current listing of agreements. A complete list of all agreements is available in the Academic Credit Assessment Information Center.

Changing an Academic Program

In order to change from one academic program (major) to another, students have to meet with an academic advisor in Room 11346 or a faculty advisor (from the division housing their new academic program), who will implement the change. Students may also complete this process online at www.sinclair.edu/services/advising. This change will be indicated on their record and will not affect the cumulative grade point average.

Certificate Programs

Certificate programs recognized by the Ohio Board of Regents **require completion of a minimum of 45 credit hours** of a specific curriculum with an overall grade point average of at least 2.0. To qualify for a Certificate of Completion, students must complete at least 13 credit hours of Sinclair course work within the area of study and fulfill the institution's requirements.

Student Judicial Affairs & Disciplinary Policy

Student Leadership Development, Building 8, Room 8025, (937) 512-2509, Dayton Campus

Student Judicial Affairs Code of Conduct Handbook is available in the Student Leadership Development office, or at www.sinclair.edu/student/leader

The mission of Sinclair Student Judicial Affairs is to provide an atmosphere which is conducive to study and educational growth and one that enables students to develop in a positive manner. By virtue of enrollment at Sinclair Community College, students consent to follow the policies and procedures of Sinclair.

In order to assure this type of environment, the Board of Trustees has adopted standards of conduct for the students, faculty, staff and visitors to the campus. College officials including, but not limited to, the manager of Student Leadership Development, who has been designated to handle student grievances/judicial affairs, shall have the responsibility and authority for the discipline of all students in accordance with college policy as well as the authority to impose formal sanctions as described in this document.

Disciplinary action as described in the *Student Judicial Affairs Code of Conduct Handbook* may be taken against a person who has been admitted to Sinclair, as well as against student organizations.

Student Judicial Affairs has been established to provide guidance for enforcing this policy at Sinclair Community College. Procedures for student judicial affairs/policy are listed in the *Student Judicial Affairs Code of Conduct Handbook*, Building 8, Room 8025 or www.sinclair.edu/student/leader.

Credit for Prior Learning College Level Equivalency Examinations

Advanced Placement Examinations

Sinclair participates in the Advanced Placement Program (APP) for secondary schools. The Academic Credit Assessment Information Center and the academic departments determine the amount of credit awarded.

Policies:

- Students must have applied for admission, been accepted at Sinclair and paid the appropriate fees.
- Students must receive a score of three or better on the Advanced Placement Program examinations.
- The course(s) will be recorded on the students' transcripts with a "Y" grade.
- Students can apply no more than 45 credit hours earned through APP toward degree requirements.
- Credits earned via APP examinations do not apply toward the college residency requirements.

College Level Examination Program (CLEP)

www.collegeboard.com

Sinclair awards credit for the College Level Examination Program based on the scores they earn. The Academic Credit Assessment Information Center and the academic department determine the amount of credit awarded.

Policies:

- Students must have applied for admission, been accepted at Sinclair, and paid the appropriate fees.
- Course(s) will be recorded on the students' transcripts with a "Y" grade.
- Students can apply no more than 45 credit hours earned through CLEP toward degree requirements.
- Credits earned via CLEP examinations do not apply toward the college residency requirements.

Defense Activity for Non-Traditional Education Support (DANTES)

www.getcollegecredit.com

Sinclair awards credit for the DANTES Examinations based on the scores earned. The Academic Credit Assessment Information Center and the academic department determine the amount of credit awarded.

Policies:

- Students must have completed a Sinclair Community College application and paid the appropriate fees.
- The course(s) will be recorded on the students' transcripts with a "Y" grade.
- Students can apply no more than 45 credit hours earned through DANTES toward degree requirements.
- Credits earned via DANTES examinations do not apply toward the college residency requirements.

Dean's List & Academic Honors

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 in the total credit hours attempted. Their placement on the Dean's List will be noted on their academic transcript.

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. For further information concerning Honors programs, see page 70.

Degree Audit How Am I Doing?

Degree audit is a process that indicates the students' progress toward the completion of a degree program. Students request a degree audit from an academic advisor to determine how many classes they have completed for a specific academic program. If they change academic programs, a different degree audit must be done. Degree audits may also be done online (<http://my.sinclair.edu>, click on "Web Advisor"), or at the information kiosk.

Dropping a Course

Students who drop a course during the fall, winter and spring terms within the first eight calendar days (including Saturday and Sunday), will receive a 100 percent refund and no record of a grade for that course. Deadlines for summer courses and short term, non-standard courses have different drop deadlines. Consult the *Course Schedule* or **Online Calendar** for these deadlines. If students drop a course after the first eight calendar days, but before the last day to withdraw, they will receive a "W." Students may not drop a course after the last day to withdraw. Consult the *Course Schedule* or electronic **Online Calendar** for specific deadline dates.

Students may also drop courses by calling the office of Registration & Student Records, (937) 512-3000 or 1-800-315-3000, online using "Web Advisor" at <http://my.sinclair.edu>. If students call the office of Registration & Student Records, they must make sure to ask that a copy of the drop form be mailed to them.

Fresh Start Policy

Fresh Start allows students, who have returned to the college after an absence of at least three years and have completed specific requirements, a **one-time-only** option of having their grade point average recalculated from the point of re-enrollment without losing credit for previous course work for which a grade of "S," "P," or "C" or better was earned.

The academic Fresh Start Policy and its conditions are as follows:

1. To be eligible for Fresh Start, students must:
 - be re-enrolled in the college after an absence of at least three calendar years
 - have successfully completed any required Developmental Studies (DEV) courses any time during their college experience based on an assessment of reading, language usage, writing and numerical skills **NOTE: Although students may have taken placement tests and completed DEV courses prior to their return, re-testing may be appropriate for course placement based on students' current skills. Students should meet with an academic advisor to discuss testing and course selection.**
 - Successful completion of a minimum of six credit hours after re-enrollment with grades of "S," "P" or "C" or better. The following are examples of completion of the minimum first six credit hours. DEV courses do not count toward the 6 credit hours.
 - **Example #1** - First term: 6 hours
 - **Example #2** - First term: 3 hours;
Second term: 3 hours
 - **Example #3** - First term: 12 hours
 - **Example #4** - First term: 2 hours;
Second term: 3 hours;
Third term: 8 hours
 - request in writing that the policy be applied and the cumulative GPA be recalculated.
2. The policy can be **applied only once** and only to classes taken before re-enrollment. Once approved, the application of this policy against the students' record is irrevocable.
3. After students elect Fresh Start and eligibility is verified, **a notation will be added to the students' transcript** indicating that all Sinclair credit hours earned prior to policy enactment will be subject to the following conditions:
 - the 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 completed **prior** to the award by the college of an Ohio Board of Regents authorized certificate or associate degree.

The academic transcript will show:

The Fresh Start Policy has been applied for academic work taken at Sinclair prior to _____.

Term/Year

Grades & Grade Point Average

Grades are issued at the end of each term. Letter grades earn a number of quality points per credit hour. The most commonly used model is listed below as an example for how grade point averages are computed.

Grade	Quality Points	Grade	Quality Points
A Excellent	4 90 - 100%	S Satisfactory	0
B Good	3 80 - 89	U Unsatisfactory	0
C Average	2 70 - 79	I Incomplete	0
D Passing	1 60 - 69	W Withdrawal	0
F Failure	0 0 - 59	P Pass	0
Z Non-Attendance	0 0 - 59	N Progress	0
		Y Proficiency Credit	0
		IP In Progress	0
		X Audit	0

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," or "Y" are not computed in the total credit hours attempted.

For example:

Course	Credit hours	Grade	Points
English Composition I	3	B	9
College Algebra	5	C	10
General Psychology I	3	A	12
Western Civilization I	3	B	9
Physical Education	1	A	4
TOTALS	15		44

$44 \div 15 = 2.933$ Grade Point Average

Students may be given an "I" if their work has been passing but a specific course assignment 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 students fail 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 students may make up the work which could change the "F" to the grade otherwise deserved. The instructor's permission is required.

An "N" grade indicates the students attended classes and made satisfactory progress but didn't complete all course requirements.

A "Z" grade indicates the students were registered for class but never attended.

To challenge a grade the students believe is incorrect, they must contact the instructor as soon as possible. Under no circumstances will a grade be changed after two years have elapsed from the end of the term in which the grade was recorded. Within the two-year limitation, a petition may be filed with the office of the senior vice president for Instruction asking consideration for change of "F" grade to "W," ONLY if emergency circumstances supported by documentation prevented either withdrawal by deadline date or completion of class requirements after that date.

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

(A.A. and A.S. 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.

And, if the articulation agreement contains courses that are not accepted by the college or university, students can take alternate courses at Sinclair, acceptable to the receiving college or university, (up to nine hours) **tuition free!**

The guarantee applies only to courses included in a written transfer/articulation plan that must be on file in the Academic Credit Assessment Information Center. Transfer must take place within 12 months of graduation.

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

(A.A.S. 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 senior vice president and provost. Employment must commence within twelve (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) quarter 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.

Late Registration & Change of Schedule

Late and audit registration will be the week before classes begin. During this period, students may register for, or add, any class that is open. A non-refundable late fee of \$30 will be assessed if they register after the on-time registration ends. This late fee does not apply to audit courses. **After the beginning of the term, students will not be permitted to register for any course that has already met for the first time.**

Note: Online/Distance learning classes are considered to have met as of midnight on the second day of the term.

Students may register to audit a course during the week before classes begin. **Students may not change from audit to credit, nor credit to audit status any time in the registration process.** Students will not receive credit for classes they audit, nor can they qualify for veterans benefits for classes they audit.

Military Training

www.acenet.com

Sinclair evaluates military training according to the American Council on Education recommendations. Contact the Registration & Student Records office for a list of official documentation that is acceptable for evaluation.

Policies:

- Students must have applied for admission, been accepted at Sinclair, and paid fees.
- Students will receive credit only if Sinclair offers an equivalent course.
- Students who have received or transferred credit for a comparable college course, Sinclair will not award credit.
- Credit awarded is treated as transfer credit at Sinclair.
- Credits awarded as a result of military training do not apply toward the college residency requirements.

Miscellaneous College Policies

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 online/video 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 online/video classes may affect final grades, financial aid eligibility, and V.A. benefits.

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.

Sexual Harassment Policy

It is the policy of Sinclair Community College to maintain an environment free from discrimination. Sexual harassment is a form of discrimination and may be a violation of Title IX of the Civil Rights Act of 1964. Accordingly, sexual harassment is hereby prohibited.

Unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature constitute sexual harassment under certain conditions.

See *Student Judicial Affairs Code of Conduct Handbook* for a list of prohibitive behaviors.

Smoking Policy

In 1988 the Sinclair Board of Trustees, upon the recommendation of a campuswide committee, adopted a smoking policy that prohibits smoking in designated locations on the Dayton Campus. Because of the continued concerns about the health and comfort of the Sinclair community, the committee, faculty, staff and student groups recommended in 1993 that Sinclair's Dayton Campus is smoke free.

The state released detailed directives regarding the non-smoking law. Sinclair has designated smoking areas as listed below. Designated smoking area signs and outside ashtrays can be found at these locations. Note: smoking is restricted to the area immediately adjacent (within 10 feet) of the ashtray. The following areas are designated smoking areas and have specially marked signage:

- Building 2, southwest steps under the overhang
- Building 5, west side between Buildings 5 and 8
- Building 7, in the north terrace area in the Tartan Marketplace
- Building 7, south entrance on either side of the building
- In the center of the main plaza
- Building 8, entrance south side of plaza
- Building 10, north steps on east end
- Building 12, west plaza facing the main campus
- Building 12, southeast plaza facing Perry Street
- Building 13, west under the pedestrian bridge
- Building 14, east plaza facing Perry Street

- Building 16, near the air unit fencing
 - Building 19, on Wilkinson Street north at the alley
 - Building 20, near the art display
 - Building 20, southeast plaza facing the Great Miami River
 - Parking Lot A, first floor, behind the PMI office
- Anyone smoking may also use any public sidewalk adjacent to Sinclair property.

Safety & Security

Department of Public Safety

(937) 512-2534, 512-2700

Students may access the Sinclair department of Public Safety Web site at www.sinclair.edu/police for information on safety, crime reports/statistics, the department's annual report, and other services. For more information, contact the Sinclair department of Public Safety on Dayton Campus, Building 7, Room 7112 or call (937) 512-2534.

Standards of Academic Progress

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 term below 2.0 GPA - Academic Intervention
 - Second consecutive term below 2.0 GPA - Academic Probation
 - Third consecutive term below 2.0 GPA - Academic Dismissal
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 will receive correspondence that refers students to academic/faculty advisors, and Student Services 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 advisor to:
 - register or add classes
 - receive additional support information or assistance.
6. Students whose term 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 term in which the term GPA is 2.0 or greater.

Student Behavior Guidelines

Students should treat their classes as they would a desirable job. The instructor is a team leader and their fellow students are co-workers. Everyone must work together to complete learning objectives. These behaviors are expected of students:

1. Attend all classes on time.
2. Respect the rights of others to contribute by listening attentively. Show consideration for students, instructors and other college employees.
3. Participate appropriately and actively on topics presented in class.
4. Complete assignments on time.

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Student Records

5. Ask for feedback from instructors and peers to insure progress toward learning objectives.
6. Resolve problems by immediately discussing issues with instructors and/or peers.

Student rights and responsibilities are detailed in the **Sinclair Community College Student Judicial Affairs Code of Conduct Handbook** available in Student Leadership Development, Room 8025 or online at www.sinclair.edu/student/leader

Student Records Policy

Students have the right to inspect and review their education records. To do so, they should submit a written request to the office of Registration & Student Records, specifying the records desired and their location. The request will be granted as soon as practicable, but in no more than 45 days.

Students' right to inspect and review records does not extend to personal notes of faculty or staff, law enforcement records maintained by the Sinclair Police, medical treatment records, their parents' financial records, and certain confidential letters and recommendations.

If upon inspection and review of the students' records, they wish to challenge (correct or delete) inaccurate or misleading data or any records which they believe violate their right to privacy or other rights, they may request a correction or deletion in writing. If the record custodian denies the request, the students will be given a copy of the record(s) in question, and they have the right to request a hearing in writing.

Submit the request to the senior vice president, (937) 512-2975, specifying the portion of the record to be challenged, the reason(s) and the desired change(s). The record challenge hearing will be held within a reasonable time of the request; a written decision will be issued. If the students are not satisfied, they may submit written comment(s) which will be maintained with the challenged record(s).

The Family Educational Rights & Privacy Act (FERPA) affords students certain rights with respect to educational records. **Copies of educational records or personally identifiable information concerning students will not be released to anyone outside the college, except as required or allowed by law, without the students' written consent.** However, directory information may be released without their written consent.

Directory information includes: the student's name, address, e-mail address, I.D., photo, telephone number, date and place of birth, major field of study, participation in Sinclair activities and sports, weight and height of members of athletic teams, dates of attendance at Sinclair, degrees, certificates and awards received, and the most recent previous educational institution attended. If the students do not want their directory information released, they must complete a form requesting it not be released and file the form with the director of Registration & Student Records.

The Sinclair Student Records Policy is available for review and inspection at the office of Registration & Student Records. A copy is available upon request and also online. Problems or questions concerning the Sinclair Records Policy may be brought to the FERPA coordinator, director of Registration & Student Records. Students also have the right to file complaints with the U.S. Department of Education FERPA office.

Testing Center

www.sinclair.edu/services/enroll/testing

Building 10, Fourth Floor, (937) 512-3076, Dayton Campus

The Testing Center, in addition to placement testing, provides academic testing for students collegewide. The Tartan Card or an Ohio driver's license is required for academic testing.

Students may call the Testing Center at (937) 512-3076 to verify that their exam is on file and ready to be administered. Children are not permitted in the center and may not be left unattended in the lobby.

One Year Time Limit on Math Prerequisites

Effective Fall 2010

The following policy with regard to a time limit on math prerequisites applies to all courses taught in the Math (MAT) department **and** to DEV 108, which is taught in the Academic Foundations department (ACA).

Students registering for a Math (MAT) course are required to have completed the prerequisite course not more than one calendar year (four consecutive quarters or three consecutive semesters) prior to the term for which they are registering. For example, if a student wants to take MAT 101, fall term 2010, the student must have completed the prerequisite course, DEV 108, no earlier than fall term 2009.

Students whose prerequisites for math courses were completed more than one calendar year ago (four consecutive quarters or three consecutive semesters) should see an academic advisor to register for a math course.

Note: the time limit on math prerequisites policy does NOT apply to MAT 105, 106, or 109. Further, the time limit does NOT apply to mathematics prerequisites for courses offered by other departments.



Transfer

Begin a Four-Year Degree

Begin a four-year degree by taking advantage of Sinclair's small class sizes, 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 Transfer Module, before transferring to a four-year institution.

How to Begin

See page 11 for Incoming and Transient students.

Transfer to and from Sinclair follows 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 directly to:

Sinclair Community College
Registration & Student Records
444 West Third Street
Dayton, Ohio 45402

Upon receipt of a student's transcript, the Sinclair Student Records department will notify the student via U.S. mail. Within 15 business days of receipt the Student Records department will equate the transferred courses to Sinclair courses. When this is complete, a full report of these equivalencies will be sent to the student in the mail.

2. Meet With An Academic Advisor

Students then meet with an academic advisor, Third Floor, Building 11, Room 11346, Dayton Campus, or call (937) 512-3700 to schedule an appointment for an explanation of how credits transfer. Advisors will work with students to determine which courses to take for the 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 previously attended college(s).

3. Register For Classes

See page 21 for process steps.

Transfer of Credit 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.

Remember:

- **Speak with an academic/faculty advisor** early in the academic career. It is the students' responsibility to keep them aware of the intended academic program and/or transfer institution.
- **Contact the transfer institution** as soon as possible. Ask for specific course recommendations from them 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 of the North Central Association of Colleges and Schools and is a member of the association as well as the Ohio Board of Regents, most credits will transfer to other colleges and universities. University Parallel courses usually transfer more easily than technical courses.

Credit at Other Colleges 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. Detailed information regarding incoming agreements is available from Academic Credit Assessment Information Center, (937) 512-2800.
- **Outgoing agreements** with other colleges and universities indicate how Sinclair Community College programs and courses will transfer to those institutions.

The following list represents some of the outgoing articulation agreements that are in place.

If students complete this Sinclair Community College Program:	Students may transfer to this four-year institution:	In this program:
Associate of Arts - Liberal Arts	Wright State University	African-American Studies Anthropology Business Education: Integrated Classical Humanities Criminal Justice Economics Education English/Integrated Arts/ English Education Geography History International Studies Liberal Studies Modern Language Modern Language Education Motion Picture History Nursing Philosophy Political Science Psychology Rehabilitation Services Religion Social Science Education Social Work Sociology Theory & Criticism Women's Studies
Associate of Science	Wright State University	Biology/Biology Education/Bioinformatics Business Chemistry/Chemistry Education Clinical Laboratory Science Computer Science with Bioinformatics Concentration Environmental Health Sciences Exercise Biology Integrated Sciences Education Math/Math Education Physics/Physics Education Psychology Urban Affairs
Any A.A. or A.S.	Antioch University McGregor Capella University Heidelberg University Ohio Dominican University Wilberforce University Wittenberg University	Bachelor of Arts Completion Program Bachelor Degree Program Bachelor Degree Program Bachelor Degree Program Junior Standing in Bachelor Program Bachelor Degree Program

Any A.A.S. from Life and Health Sciences Division	Kettering College of Medical Arts	Bachelor of Science in Health Profession Completion Program
Any A.A.S. or A.T.S.	Ohio University	Bachelor of Technical and Applied Studies
Any Associate Degree	Antioch University McGregor Bellevue University Franklin University (Online) Kaplan University Purdue University - Richmond Campus Strayer University Western Governors University (Online) Wright State University	Bachelor Completion Program Bachelor Completion Program Bachelor Completion Programs in: Accounting Applied Management Business Administration Business Forensics Computer Science eMarketing Financial Management Forensic Accounting Health Care Management Human Resource Management Information Technology Management Management Information Sciences Marketing Public Safety Management Web Development Advanced Start Bachelor Program Organizational Leadership and Supervision Any related Bachelor Program Bachelor Completion Program Organizational Leadership
American Sign Language	Wright State University	Sign Language Interpreting
Architectural Technology	University of Cincinnati - College of Applied Science Miami University - Hamilton & Middletown Northern Kentucky University	Architectural Engineering Technology Mechanical Engineering Technology Electro-Mechanical Engineering Technology Construction Management
Art	Wright State University	Fine Arts
Automation & Control Technology with Robotics	Miami University - Hamilton & Middletown	Electro-Mechanical Engineering Technology
Aviation Technology • Maintenance Option • Professional Pilot and Airway Science Option	Embry-Riddle Aeronautical University	Professional Aeronautics
Business Administration University Parallel	Central State University Morehead State University University of Cincinnati University of Dayton School of Business Administration Wright State University Raj Song College of Business Wright State University College of Engineering/ Computer Science Wright State University College Education/Human Science Urbana University Wilberforce University Xavier University	College of Business Business Administration College of Business Administration General Business and Management Information Systems Accountancy; Business; Economics; Finance; Financial Services; Human Resource Management; International Business; Management; Marketing; Information Systems; Operations Management Computer Science with Business Emphasis Integrated Business Education Business Administration Computer Information Systems College of Business Administration Business Administration Technical Management
Business Management	Embry Riddle Aeronautical University	Supply Chain Concentration
Civil Engineering Technology	University of Cincinnati - College of Applied Science Miami University - Hamilton & Middletown Northern Kentucky University	Construction Management Mechanical Engineering Technology Electro-Mechanical Engineering Technology Construction Management
Communication Arts	University of Dayton Wright State University	Communication Communication
Computer Information Systems • Network Engineer • Network Manager • Software Development • User Support • Web Development	Wright State University	Computer Science with Business Option

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If students complete this Sinclair Community College Program:	Students may transfer to this four-year institution:	In this program:	If students complete this Sinclair Community College Program:	Students may transfer to this four-year institution:	In this program:
Criminal Justice Science Corrections Option Law Enforcement Option	Central State University Ohio University University of Cincinnati	Criminal Justice Criminal Justice Criminal Justice		University of Dayton	Science Concentration Pre-Physical Therapist Bachelor of Science
Dietetics Technician Program	The Ohio State University University of Cincinnati – College of Allied Health Sciences University of Dayton	Didactic Program in Dietetics Dietetics Coordinated Program Food & Nutrition - Business Minor Food & Nutrition - Exercise Concentration Food & Nutrition/Didactic Program in Dietetics	Radiologic Technology	University of Cincinnati/ Raymond Walters College	Radiation Science Technology
Early Childhood Education University Parallel	Central State University University of Cincinnati Wright State University	Early Childhood Education Education Program: Birth-to-5-Early Childhood Education Early Childhood Education	Visual Communication	Wright State University	Fine Arts
Electronics Engineering Technology	Miami University – Hamilton & Middletown University of Cincinnati – College of Applied Science University of Dayton	Electro-Mechanical Engineering Technology Computer Engineering Technology Electronics Engineering Technology Computer Engineering Technology Electronics Engineering Technology			
Engineering Science University Parallel	Central State University University of Cincinnati – College of Engineering University of Dayton Wright State University	Manufacturing Engineering & Environmental Engineering Chemical Engineering Civil Engineering Computer Engineering Computer Science Electrical Engineering Mechanical Engineering Chemical Engineering Civil Engineering Computer Engineering Electrical Engineering Mechanical Engineering Mechanical Engineering with Aerospace Concentration Biomedical Engineering Computer Engineering Computer Science Electrical Engineering Engineering Physics Industrial and Systems Engineering Material Science and Engineering Mechanical Engineering			
Environmental Engineering Technology	University of Cincinnati – College of Applied Science	Chemical Technology			
Fire Science	University of Cincinnati – College of Applied Science	Fire & Safety Engineering Technology			
Honors Program	Heidelberg University	Honors Program			
Industrial Engineering Technology	University of Dayton	Industrial Engineering Technology			
Industrial Engineering Technology – Manufacturing Option	University of Dayton	Manufacturing Engineering Technology			
Interior Design	Wright State University	Fine Arts			
Mechanical Engineering Technology – University Transfer	Miami University – Hamilton & Middletown Morehead State University Northern Kentucky University University of Cincinnati – College of Applied Science University of Dayton	Mechanical Engineering Technology Technology Management Mechanical & Manufacturing Engineering Technology Mechanical Engineering Technology Mechanical Engineering Technology			
Middle Childhood Education University Parallel	Wright State University	Middle Childhood Education			
Music	University of Dayton Wright State University	Music Music			
Nursing	Morehead State University Wright State University	Nursing Nursing			
Operations Technology	Central State University	Industrial Technologies			
Paralegal	Ohio University University of Cincinnati	Bachelor of Criminal Justice Paralegal Studies			
Physical Education	Wright State University	Health and Physical Education			
Physical Therapist Assistant	University of Cincinnati	Sports & Biomechanics or Exercise			

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Articulation & Transfer Policy

Institutional Transfer

The Ohio Board of Regents in 1990, following a directive of the 119th 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. While all state assisted 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 Board of Regents will establish a transfer clearinghouse to receive, annotate, and convey transcripts among state assisted 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.

Transfer Module

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a subset or entire set of a college or university's general education curriculum in A.A., A.S. and baccalaureate degree programs. Students in applied associate degree programs may complete some individual transfer module courses within their degree program or continue beyond the degree program to complete the entire transfer module. The Transfer Module contains 54-60 quarter hours or 36-40 semester hours of course credit in English composition (minimum 5-6 quarter hours or 3 semester hours); mathematics, statistics and formal/symbolic logic (minimum of 3 quarter hours or 3 semester hours); arts/humanities (minimum 9 quarter hours or 6 semester hours); social and behavioral sciences (minimum of 9 quarter hours or 6 semester hours); and natural sciences (minimum 9 quarter hours or 6 semester hours). Oral communication and interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Transfer Module. Courses for the Transfer Module should be 100- and 200-level general education courses commonly completed in the first two years of a student's course of study. Each state assisted university, technical and community college is required to establish and maintain an approved Transfer Module.

Transfer Module course(s) or the full module completed at one college or university will automatically meet the requirements of individual Transfer Module course(s) or the full Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education require-

ments at the institution to which they transfer. For example, a student who completes the Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Transfer Module portion of Institution R's general education program. Institution R, however, may have general education courses that go beyond its Transfer Module. State policy initially required that all courses in the Transfer Module be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Transfer Module courses on a course-by-course basis.

Transfer Assurance Guidelines (TAGS)

Transfer Assurance Guides (TAGs) comprise Transfer Module courses and additional courses required for an academic major. A TAG is an advising tool to assist Ohio university and community and technical college students planning specific majors to make course selections that will ensure comparable, compatible, and equivalent learning experiences across the state's higher education system. A number of area specific TAG pathways in the arts, humanities, business, communication, education, health, mathematics, science, engineering, engineering technologies, and the social sciences have been developed by faculty teams.

TAGs empower students to make informed course selection decisions and plans for their future transfer. Advisors at the institution to which a student wishes to transfer should also be consulted during the transfer process. 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.

Conditions for Transfer Admission

1. Ohio residents with associate degrees from state assisted institutions and a completed, approved Transfer Module shall be admitted to a state institution of higher education in Ohio, provided their cumulative grade point average is at least 2.0 for all previous college level courses. Further, these students shall have admission priority over out-of-state associate degree graduates and transfer students.
2. When students have earned associate degrees but have not completed a Transfer Module, they will be eligible for preferential consideration for admission as transfer students if they have grade point averages of at least a 2.0 for all previous college level courses.
3. In order to encourage completion of the baccalaureate degree, students who are not enrolled in an A.A. or A.S. degree program but have earned 60 semester or 90 quarter hours or more of credit toward a baccalaureate degree with a 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.
4. Students who have not earned an A.A. or A.S. degree or who have not earned 60 semester hours or 90 quarter hours of credit with a grade point average of at least a 2.0 for all previous college level courses are 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.

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Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at 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.

Acceptance of Transfer 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 and after fall 2005 from Ohio state assisted institutions of higher education. Students who successfully completed A.A. or A.S. degrees prior to fall 2005 with a 2.0 or better overall grade point average would also receive credit for all college level course they have passed. (See Ohio Articulation and Transfer Policy, Definition of Passing Grade and Appendix D) While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting.

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

Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Students should use the Transfer Module, Transfer Assurance Guides, and Course Applicability System for guidance in planning the transfer process. 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 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 articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

Appeals Process

Following the evaluation of a student transcript from another institution, the receiving institution shall provide the student with a statement of transfer credit applicability. At the same time, the institution must inform the student of the institution's appeals process. The process should be multi-level and responses should be issued within 30 days of the receipt of the appeal.

Ohio Transfer Tools

Transfer Assurance Guides (TAGs)

Transfer Assurance Guides (TAGs) comprise Transfer Module courses and additional courses required for an academic major. A TAG is an advising tool to assist Ohio university and community and technical college students planning specific majors to make course selections that will ensure comparable, compatible, and equivalent learning experiences across the state's higher education system. A number of area specific TAG pathways in the arts, humanities, business, communication, education, health, mathematics, science, engineering, engineering technologies, and the social sciences have been developed by faculty teams. TAGs empower students to make informed course selection decisions and plans for their future transfer. Advisors at the institution to which a student wishes to transfer should also be consulted during the transfer process. 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. The following is a list of Sinclair approved TAG courses:

ACC 121	Introduction to Financial Accounting
ACC 122	Introduction to Managerial Accounting
ALH 220	Pathophysiology
ART 108	Design Basics: Color
ART 111	Art Drawing I
ART 112	Art Drawing II
ART 121	Painting I
ART 131	Sculpture I
ART 141	Ceramic Art I
ART 146	Video Production
ART 161	Photography I
ART 216	Life Drawing & Anatomy I
ART 231	Art of the Ancient World
ART 232	Art of the Medieval & Renaissance Worlds
ART 233	Art of the Modern World
ART 269	Printmaking
BIO 171	Principles of Biology I
BIO 172	Principles of Biology II
BIO 173	Principles of Biology III
BIS 105	Computer Concepts
CAT 102	Architectural Detail Drafting
CAT 105	Residential Construction Methods & Materials
CAT 245	Soil Mechanics
CHE 151/157	General Chemistry I
CHE 152/158	General Chemistry II
CHE 153/159	General Chemistry III
CHE 201/207	Organic Chemistry I
CHE 202/208	Organic Chemistry II
CHE 203/209	Organic Chemistry III
COM 201	Introduction to Mass Communication
COM 206	Interpersonal Communication
COM 211	Effective Public Speaking
COM 220	Introduction to Communication Theory
COM 225	Small Group Communication
DIT 129	Human Nutrition
DIT 216	Food Preparation & Dietary Service
DIT 219	Laboratory for DIT 216
DIT 236	Dietary Organization & Management
ECO 216	Principles of Macroeconomics
ECO 218	Principles of Microeconomics
EDU 100	Foundations of Education
EDU 103	Educational Technology

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Transfer

EDU 105	Introduction to Exceptionalities
EET 202	Electronics II
EET 207	Linear Integrated Circuits
EET 261	Microprocessor/Microcontroller Systems
EET 262	Microprocessor Applications
ENG 131	Business Communications I
ENG 132	Business Communications II
ETD 213	Statics
ETD 222	Strength of Materials
GEO 101	Physical Geography
GEO 102	Human Geography
GLG 141	General Geology I
GLG 142	General Geology II
HIM 121	Basic Medical Terminology
HIS 101	United States History (1607-1815)
HIS 102	United States History (1815-1919)
HIS 103	United States History (1919-Present)
HIS 111	Western Civilization (0-1300)
HIS 112	Western Civilization (1300-1815)
HIS 113	Western Civilization (1815-present)
HMT 112/113	Food Principles & Basic Preparation
HVA 286	Fluid Mechanics
INT 109	Fundamentals of Tooling & Manufacturing Processes
LAW 101	Business Law I
MAT 201	Calculus & Analytic Geometry I
MAT 202	Calculus & Analytic Geometry II
MAT 203	Calculus & Analytic Geometry I
MAT 215	Differential Equations
MAT 216	Elements of Linear Algebra
MRK 201	Marketing I
MRK 202	Marketing II
MRK 215	Advertising
MUS 111	Music Theory I
MUS 112	Music Theory II
MUS 113	Music Theory III
MUS 116	Music Major Piano Class I
MUS 117	Music Major Piano Class II
MUS 118	Music Major Piano Class III
MUS 141	Singing & Dictation I
MUS 142	Singing & Dictation II
MUS 143	Singing & Dictation III
MUS 166	Chorale
MUS 167	Applied Music - Jazz Piano
MUS 169	Applied Music - Organ
MUS 170	Applied Music - Piano
MUS 171	Applied Music - Voice
MUS 172	Applied Music - Percussion
MUS 173	Applied Music - Violin
MUS 174	Applied Music - Viola
MUS 175	Applied Music - Cello
MUS 177	Applied Music - Flute
MUS 178	Applied Music - Clarinet
MUS 179	Applied Music - Saxophone
MUS 180	Applied Music - Oboe
MUS 181	Applied Music - Bassoon
MUS 182	Applied Music - Trumpet
MUS 183	Applied Music - Trombone
MUS 184	Applied Music - French Horn
MUS 185	Applied Music - Baritone Horn
MUS 186	Applied Music - Tuba
MUS 187	Applied Music - Popular Guitar
MUS 188	Applied Music - Electric Bass
MUS 189	Applied Music - Jazz Drumming

MUS 190	Applied Music - Classical Guitar
MUS 192	Applied Music - Harpsichord
MUS 211	Music Theory IV
MUS 212	Music Theory V
MUS 213	Music Theory VI
MUS 241	Singing & Dictation IV
MUS 242	Singing & Dictation V
MUS 243	Singing & Dictation VI
OPT 205	Manufacturing Processes
PHI 205	Introduction to Philosophy
PHI 206	Introduction to Ethics
PHY 141	College Physics I
PHY 142	College Physics II
PHY 143	College Physics III
PHY 201	General Physics I
PHY 202	General Physics II
PHY 203	General Physics III
PLS 101	American Federal Government I
PLS 102	American Federal Government II
PLS 103	State Government
PLS 104	Urban Government
PLS 200	Political Life, Systems & Issues
PLS 201	International Relations
PSY 119	General Psychology
PSY 121	General Psychology I
PSY 122	General Psychology II
PSY 205	Child Development
PSY 206	Adolescent & Adult Psychology
PSY 208	Life Span Human Development
PSY 217	Abnormal Psychology
PSY 220	Personality Psychology
PSY 225	Social Psychology
PSY 242	Educational Psychology
SOC 111	General Sociology I
SOC 112	General Sociology II
SOC 114	Courtship & Marriage
SOC 115	Today's Changing Family
SOC 120	General Sociology
SOC 145	Comparing Cultures
SOC 205	Social Problems
SOC 215	Cultural Diversity
THE 106	Stagecraft
THE 111	Acting I
THE 198	Applied Theatre Technology
THE 206	Script Analysis
THE 299	Theatre Practicum: Performance

TRANSFER

General Education Course Requirements

At Sinclair Community College, General Education course requirements may be met by successful completion of:

- the Ohio Transfer Module* **, and
- BIS 105 or 160 (or ALH 104 for selected allied health programs; and ETD 198 or OPT 198 for selected engineering programs), and
- COM 206 or 211 or 225

* For some programs, one or more of the following MAT courses may be required instead of the Ohio Transfer Module Math course: MAT 101, 102, 105, 106, 109, 131, 191.

** For A.A.S. and A.T.S. programs, completion of the entire Ohio Transfer Module may not be required for degree completion.

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Ohio Transfer Module (OTM)

The Transfer Module is a subset or the complete set of a college or university's general education requirements. The Transfer Module consists of 54-60 quarter hours or 36 - 40 semester hours of courses in the following areas:

1. English
2. mathematics
3. arts and humanities
4. social and behavioral science
5. natural and physical sciences
6. interdisciplinary study.

A Transfer Module completed at one Ohio public college or university will automatically meet the requirements of the Transfer Module at another Ohio public college or university once the students are accepted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer that are not included in the Transfer Module.

Completing the Transfer Module

When completing the Transfer Module at Sinclair prior to transferring to a four-year institution, students are guaranteed completion of the Transfer Module requirements at any state college or university in the state of Ohio.

To finish the requirements for the Transfer Module at Sinclair, students have to start by completing the required minimum hours of the Transfer Module from each **section on the following list**. The total number of "minimum hours" is equal to 36. Since the Transfer Module at Sinclair **requires 54 quarter hours to be complete, students should consult with their academic advisor to determine the most appropriate courses—depending on their academic program and transfer institution — to take to complete the Transfer Module.**

NOTE: The Transfer Module is updated twice per year.

Sinclair's Transfer Module

English Composition/Oral Communication

(minimum 6 quarter hours met by ENG 111 & 112)

ENG 111	English Composition I	(3)
ENG 112	English Composition II	(3)
ENG 113	English Composition III	(3)
ENG 250	Personal Essay: Advanced Composition	(3)
COM 211	Effective Public Speaking	(3)

Mathematics

(minimum of 3 quarter hours)

MAT 108	Math & the Modern World	(3)
MAT 116	College Algebra	(5)
MAT 117	Trigonometry	(4)
MAT 122	Statistics I	(4)
MAT 132	Technical Mathematics II	(5)
MAT 133	Technical Mathematics III	(5)
MAT 151	Introduction to Mathematical Modeling	(3)
MAT 201	Calculus & Analytic Geometry I	(5)
MAT 202	Calculus & Analytic Geometry II	(5)
MAT 203	Calculus & Analytic Geometry III	(5)
MAT 204	Calculus & Analytic Geometry IV	(5)
MAT 215	Differential Equations	(5)
MAT 216	Elements of Linear Algebra	(4)
MAT 218	Calculus for Business & Economics	(5)
MAT 220	Statistics II	(4)

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Natural & Physical Sciences

(minimum of 9 quarter hours)

AST 101/107	Survey of Astronomy	(4)
AST 111/117	Introduction to Astronomy	(4)
AST 112/118	The Solar System	(4)
AST 113/119	Stars, Galaxies, & Cosmology	(4)
BIO 111/117	General Biology I	(4)
BIO 112/118	General Biology II	(4)
BIO 113/119	General Biology III	(4)
BIO 121/127	Human Anatomy & Physiology I	(5)
BIO 122/128	Human Anatomy & Physiology II	(5)
BIO 141/147	Principles of Anatomy & Physiology I	(4)
BIO 142/148	Principles of Anatomy & Physiology II	(4)
BIO 143/149	Principles of Anatomy & Physiology III	(4)
BIO 171	Principles of Biology I	(5)
BIO 172	Principles of Biology II	(5)
BIO 173	Principles of Biology III	(5)
BIO 205/206	Microbiology	(4)
BIO 222	Evolution	(3)
BIO 225/226	Ecology	(4)
BIO 235/236	Genetics	(5)
CHE 141/147	College Chemistry I	(4)
CHE 142/148	College Chemistry II	(4)
CHE 143/149	College Chemistry III	(4)
CHE 151/157	General Chemistry I	(5)
CHE 152/158	General Chemistry II	(5)
CHE 153/159	General Chemistry III	(5)
CHE 201/207	Organic Chemistry I	(5)
CHE 202/208	Organic Chemistry II	(5)
CHE 203/209	Organic Chemistry III	(5)
GLG 141/147	General Geology I	(4)
GLG 142/148	General Geology II	(4)
GLG 143/149	General Geology III	(4)
GLG 144	Geological Field Trips	(4)
PHY 100/110	Introduction to Physics	(4)
PHY 104/119	Sound, Light & Modern Physics	(4)
PHY 131	Technical Physics I	(4)
PHY 132	Technical Physics II	(4)
PHY 141	College Physics I	(4)
PHY 142	College Physics II	(4)
PHY 143	College Physics III	(4)
PHY 201/207	General Physics I	(6)
PHY 202/208	General Physics II	(6)
PHY 203/209	General Physics III	(6)

Social & Behavioral Sciences

(minimum of 9 quarter hours from at least two areas)

ECO 216	Principles of Macroeconomics	(4)
ECO 218	Principles of Microeconomics	(4)
GEO 101	Physical Geography	(4)
GEO 102	Human Geography	(3)
GEO 201	World Regional Geography I	(3)
GEO 202	World Regional Geography II	(3)
HIS 219	Survey of the Middle East	(3)
PLS 101	American Federal Government I	(3)
PLS 102	American Federal Government II	(3)
PLS 103	State Government	(3)
PLS 104	Urban Government	(3)
PLS 200	Political Life, Systems & Issues	(4)
PLS 201	International Relations	(4)
PSY 119	General Psychology	(5)
PSY 121	General Psychology I	(3)
PSY 122	General Psychology II	(3)

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Transfer Module

PSY 160	African-American Psychology	(3)	MUS 131	Survey of Musical Styles I	(3)
PSY 205	Child Development	(4)	MUS 132	Survey of Musical Styles II	(3)
PSY 206	Adolescent & Adult Psychology	(3)	MUS 133	Survey of Musical Styles III	(3)
PSY 208	Life Span Human Development	(5)	PHI 204	Great Books: Philosophy	(4)
PSY 217	Abnormal Psychology	(4)	PHI 205	Introduction to Philosophy	(4)
PSY 220	Personality Psychology	(4)	PHI 206	Introduction to Ethics	(4)
PSY 225	Social Psychology	(4)	REL 111	Eastern Religions	(4)
PSY 228	Psychology in the Work Place	(4)	REL 112	Western Religions	(4)
PSY 242	Educational Psychology	(4)	REL 135	American Religious Movements	(4)
SOC 111	General Sociology I	(3)	REL 204	Great Books: The Bible & Western Culture	(4)
SOC 112	General Sociology II	(3)	THE 105	Theatre Appreciation	(3)
SOC 120	General Sociology	(5)	THE 201	History of Theatre I	(3)
SOC 145	Comparing Cultures	(3)	THE 202	History of Theatre II	(3)
SOC 160	Social Patterns in Aging	(3)	THE 203	History of Theatre III	(3)
SOC 205	Social Problems	(4)			
SOC 208	Sociology of American Cities	(3)			
SOC 215	Cultural Diversity	(4)			
SOC 226	Criminology	(3)			

Arts & Humanities

(minimum of 9 quarter hours from at least two areas)

ART 101	Introduction to Art	(3)
ART 102	Art Appreciation: Art Media	(3)
ART 125	African Art	(3)
ART 231	Art of the Ancient World	(3)
ART 232	Art of the Medieval & Renaissance Worlds	(3)
ART 233	Art of the Modern World	(3)
ART 235	History of Photography	(3)
ART 236	History of Women Artists	(3)
ART 237	American Art History	(3)
DAN 155	Dance History	(3)
DAN 157	Dance Appreciation	(3)
HIS 101	United States History (1607-1815)	(3)
HIS 102	United States History (1815-1919)	(3)
HIS 103	United States History (1919-Present)	(3)
HIS 105	African-American History	(4)
HIS 111	Western Civilization (0-1300)	(3)
HIS 112	Western Civilization (1300-1815)	(3)
HIS 113	Western Civilization (1815-present)	(3)
HIS 214	History of Southeast Asia	(3)
HIS 215	Survey of African History	(3)
HIS 216	Survey of Latin American History	(3)
HIS 217	Survey of East Asia	(3)
HIS 218	History of Ohio	(3)
HUM 125	The Human Image	(3)
HUM 130	Humanity & the Challenge of Technology	(3)
HUM 131	The Search for Utopia	(3)
HUM 135	Environmental Ethics	(4)
HUM 255	People & Religion	(3)
LIT 201	Survey of English Literature (to 1660)	(3)
LIT 202	Survey of English Literature (1660-1832)	(3)
LIT 203	Survey of English Literature (1832-present)	(3)
LIT 211	Survey of American Literature I (Colonial & Early 19th Century)	(3)
LIT 212	Survey of American Literature II (Later 19th Century)	(3)
LIT 213	Survey of American Literature III (20th Century)	(3)
LIT 217	Images of Women in Literature	(3)
LIT 227	Introduction to Shakespeare	(3)
LIT 230	Great Books of the Western World	(3)
LIT 234	Literature of Africa, Asia, & Latin American	(3)
LIT 240	Children's Literature	(3)
MUS 115	Music Appreciation	(3)

Advanced Placement Credit Award

The State of Ohio, working through the University System of Ohio, 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 fall 2009:

1. Students obtaining an Advanced Placement (AP) exam score of three (3) or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied toward graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.
3. 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 toward graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of four (4) or five (5) is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.
5. In academic disciplines containing highly dependent sequences (Science, 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 course work within the sequence.

u.select

u.select (formerly CAS) is an online tool that will help students view program requirements, course equivalencies, and see how courses they have taken or plan to take transfer to another college or university.

Anyone can create a *free* u.select account in order to:

- View course equivalencies
- See program requirements
- Enter and store course work
- Request an evaluation of transfer work against a program

Access u.select at <https://oh.transfer.org/cas/>

Ohio Learning Network - Distance Education

The Ohio Learning Network provides an online course catalog at www.ohiolearns.org to help Ohioans find information regarding online degrees, certificates, and courses offered by accredited Ohio colleges and universities.

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Sinclair Online

The SinclairOnline program offers students convenience and flexibility in completing academic goals.

SinclairOnline

www.sinclair.edu/online
distance@sinclair.edu

(937) 512-2990 or toll free 1-888-226-2457,
FAX (937) 512-2891

Building 14, Second Floor, Room 14223, Dayton Campus

Online learning is a good alternative for motivated students who prefer flexible scheduling. Online/Distance learning course content is the same as regular, on-campus courses and meets all program and transfer requirements. Online/Distance learning courses also have the same low tuition rates and high quality instructors as traditional classes.

Online/Distance learning courses are NOT easier than in-person courses. In addition to reading the text and e-lectures, taking tests and quizzes, students may also be expected to participate in their courses through such activities as weekly bulletin board postings and/or group projects. Plan on spending at least six hours per week study time for each Online/Distance learning course.

Online & Distance Learning Course Delivery Formats

Although SinclairOnline courses have no scheduled class meeting times, students must meet specific deadlines established by the instructor, and course requirements must be completed within the term of course enrollment as outlined in the course syllabus. This requires motivation and determination. Students must budget their time appropriately, keep up with the course requirements and take responsibility for completing the course by the end of the term. These courses sometimes take more time than traditional in-class courses. Online Learning can work for students who have the desire to succeed and who are able to work independently.

Description

SinclairOnline courses encompass a broad range of disciplines across the college's curriculum and are a good alternative for motivated students who prefer flexible scheduling. Course content is the same as regular, on-campus courses and meets all program and transfer requirements.

Students register for SinclairOnline courses in the same manner they register for other Sinclair courses. All course work must be completed within the term it is taken and as outlined in the course syllabus.

SinclairOnline Registration Policy

Ongoing or returning Sinclair students will need a 2.0 minimum cumulative grade point average to enroll in online courses. Students who are new to Sinclair can register for online courses for which they meet prerequisites.

Late Registration

Late registration for all online courses ends the second day of the term.

Testing Information

Most online courses have online testing incorporated in the course. Courses that do not offer this option require that students living within 60 miles of the Dayton campus take their tests in the college Testing Center. (Information about testing will be included in the course syllabus.) A listing of the method of testing for each online course per specific term can be found on the SinclairOnline Web site (www.sinclair.edu/online).

Students who live beyond 60 miles of Dayton have the option of using a proctor to have their tests administered locally. It is the students' responsibility to obtain suitable proctors and proctors are not reimbursed for their time. More information and the proctor application form may be obtained on the Web site (www.sinclair.edu/online, click on "Testing Information").

How to Succeed in Online Courses

Online learning offers a variety of course delivery formats that expand students' course options. Courses available online, are convenient alternatives for Sinclair students. Most students succeed in online courses, but there are some important considerations for students new to this mode of delivery. Please take a moment to review this comparison between traditional and online courses.

Traditional Courses	Online Courses
<p>Content</p> <p>Traditional courses have specific learning objectives that the student must master and synthesize to pass the course.</p>	<p>Courses have the same content as traditional courses. They differ only in the delivery format.</p>
<p>Time</p> <p>Students who succeed in their courses spend at least two additional hours each week in study for each hour of in-class time. This means a time commitment of at least nine hours per week of in-class and study time for the typical three credit hour course.</p>	<p>Courses are convenient for students who like to work according to their own pace and schedule, but the time commitment necessary to succeed is the same or more as for traditional in-class courses. Courses contain deadlines for assignments and testing.</p>
<p>Structure</p> <p>Regular class attendance keeps students on track with their course work.</p>	<p>Students must have the self-discipline to keep up with their work throughout the term.</p>
<p>Support</p> <p>Traditional classes are inherently learning communities in which students can benefit from peer support and in-class discussions. Students also have ready access to their instructors if they have questions.</p>	<p>Online courses have some level of group activity. Instructors are accessible via e-mail or phone.</p>

SinclairOnline

These courses are available on the Internet. Using computers with modems and Internet access, students can retrieve information and assignments, send e-mail to the instructor and fellow students, participate in discussion forums, and link to other resources. A few online courses combine videotaped or CD lectures with the Internet format, but most are offered completely over the Internet. Students without personal computers and modems may use the computers located in the Sinclair open lab areas.

Basic Computer Skills

To be successful in any online course, it is important that students are comfortable with performing the following:

- Logging into the course through **my.sinclair** portal
- Using a web browser
- Opening and saving files
- Writing and editing documents
- Learning new computer skills
- Using students' Sinclair e-mail account (<http://my.sinclair.edu>) to send assignments
- Hardware/software requirements can be found online at www.sinclair.edu/online.

Access to Online Courses

Available in each student's Sinclair portal account (<http://my.sinclair.edu>). Technical or login assistance is available from the Help Desk at (937) 512-4357 or 1-866-781-4357.

Classes Start

As soon as the term begins. SinclairOnline courses are structured like in-class courses and run the entire length of the term. All assignments and tests must be completed within the term the course is taken.

Classes End

On the last day of the term. After that, access to online courses is unavailable.

Questions?

Consult the SinclairOnline Web site www.sinclair.edu/online or e-mail distance@sinclair.edu or call (937) 512-2990 or toll-free 1-888-226-2457.

Sinclair Degrees Attainable Through SinclairOnline

- Associate of Science
Liberal Arts & Sciences
- Associate of Applied Science
Business Management
- Associate of Applied Science
Health Information Management



Dayton Campus

Dayton Campus

Next to I-75 on the western edge of downtown Dayton, Sinclair's campus stretches from West Third to Fifth and Perry streets and beyond. Wherever students go—on the over 60 acres of campus—they're greeted by beautiful architecture and green spaces. Plus, underground corridors and covered walkways keep students out of the weather—and on time!

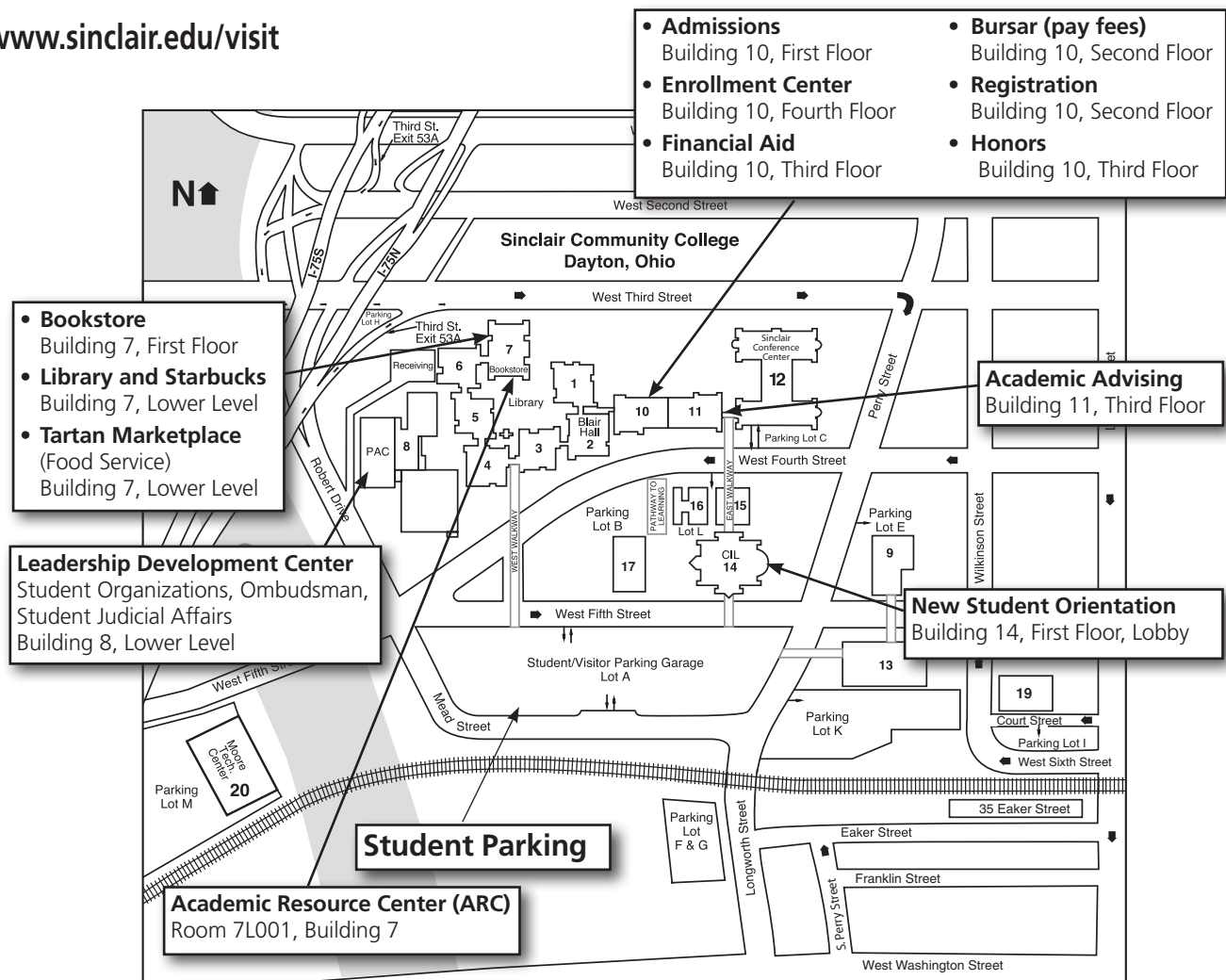
www.sinclair.edu/visit

How to Find a Classroom

Finding the way around is easy—once students get the hang of it. Classroom numbers are made up of the building number first and the floor level next, and the last numbers complete the classroom number. The building numbers don't totally follow in order; be sure to grab a map and don't hesitate to ask someone for help.

Buildings 1-7 surround the main plaza. The college Library stretches beneath. Enter the Library from the basement level of all seven buildings or get to Building 8 (PAC) from the basement level. Buildings 9, 13, 14 can be entered through the Fifth Street or Lot A parking garage.

For further details see inside front cover.



CAMPUS CENTERS

Library

www.sinclair.edu/library

Building 7, (937) 512-2855, Dayton Campus

For students who want a computer, a comfortable place to meet friends, a quiet place to study, or a cup of world famous coffee, the Library at Sinclair is the place. It is a state-of-the-art facility on the lower level of Buildings 1 through 7 and a complete digital library on the Internet. The Library offers an exciting mix of student friendly learning and social spaces.

Librarians and I.T. professionals work with faculty to assure student access to the college information resources needed to be successful learners. Librarians help students find information and use course reserves, a virtual extension of the classroom in which students find assigned readings and faculty know which students use assigned materials. I.T. support staff works with students using computers for papers, readings, online testing, and more.

Students will find computers, laptops, WIFI access, group study rooms, classrooms, Writing Center, Tutorial Services, Tutoring & Learning Center, individual study spaces, quiet reading room, traditional library collections, online digital information sources, Starbucks coffee bar, and lounge areas in one convenient location.

State-of-the-art computer resources include general office applications and specialized instructional software. Library and I.T. computer lab staff provides friendly, expert help in using computers, working with software, and finding information.

Library resources include books and e-books, magazines and newspapers, online articles, digital videos, other media, Internet sites, and much more. All of these resources are purchased with the sole objective of helping Sinclair students complete assignments and become successful learners.

The Sinclair Tartan Card serves as the library card for borrowing books and I.D. password for all of Sinclair's online news and research databases. Students with Internet access at home or work can connect at any time, 24 hours a day, 7 days a week. In addition, because Sinclair belongs to the OhioLINK consortium, students can use their Tartan Cards as library cards at other Ohio college and university libraries.

Library hours

Monday – Thursday, 7:30 a.m. – 9:30 p.m.

Friday, 7:30 a.m. – 5:00 p.m.

Saturday, 9:00 a.m. – 4:00 p.m.

Summer session and interim hours vary.

Testing Center

www.sinclair.edu/services/enroll/testing

Building 10, Room 10445, (937) 512-3076, Dayton Campus

The Testing Center, in addition to placement testing, provides academic testing for students collegewide. The Tartan Card or an Ohio driver's license is required for academic testing.

Students may call the Testing Center at (937) 512-3076 to verify that their exam is on file and ready to be administered. Children are not permitted in the center and may not be left unattended in the lobby.

Academic Testing Hours of Operation*:

Day(s)	Open	First Test Given	Last Test Given	Close
Mon. - Thurs.	8:00 a.m.	8:30 a.m.	7:00 p.m.	8:00 p.m.
Friday	8:00 a.m.	8:30 a.m.	4:00 p.m.	5:00 p.m.
Saturday	8:00 a.m.	8:00 a.m.	11:00 a.m.	12:00 p.m.

* No Saturday hours during term breaks and summer term and winter break.

Several times throughout the year the Testing Center will be closed for a half day staff training session. Contact the Testing Center for these dates.

Placement Testing Hours of Operation*

Please arrive at least two hours prior to closing for placement testing. Picture I.D. is required.

Day(s)	Open	Close
Mon. - Thurs.	8:00 a.m.	8:00 p.m.
Friday	8:00 a.m.	5:00 p.m.
Saturday	8:00 a.m.	12:00 p.m.

* No Saturday hours during summer term and winter break.

Computers on Dayton Campus

I.T. Computer Labs

I.T. Computer Labs are state-of-the-art computer facilities with convenient access to high quality computers, printers, scanners, CD-RW's and copiers.

Sinclair computer labs are managed by the college I.T. division. These labs provide first-class support for all Sinclair students, faculty and staff in the use of Information Technology.

Other equipment available includes plotters, Macintoshes, and a fax machine for local use in the Teleport. There are always lab assistants in the I.T. Computer Labs to help students with their learning objectives.

I.T. Computer Lab workstations are high end P.C.'s that have the Sinclair academic workstation image which includes: Windows Operating System, Microsoft Office, Internet Explorer, Library CD-ROM access, access to clip art on the network server, Telnet, Adobe Acrobat Reader and virus protection software.

Students will need to login with their network account to access division specific software applications.

Locations and Hours

I.T. Labs, Building 7, Library, Lower Level, (937) 512-2002

Monday – Thursday	7:30 a.m. - 9:30 p.m.
Friday	7:30 a.m. - 5:00 p.m.
Saturday	9:00 a.m. - 4:00 p.m. (Closed summer)
Sunday	Closed

I.T. Labs - Teleport, Building 13, Second Floor, Room 13223, (937) 512-5394

Monday – Thursday	8:00 a.m. - 9:30 p.m.
Friday	8:00 a.m. - 4:00 p.m.
Saturday	Closed
Sunday	12:30 p.m. - 6:30 p.m. (Teleport, closed summer)

I.T. Labs - CIL, Building 14, First Floor, Room 14109, (937) 512-5079

Monday – Thursday	8:00 a.m. - 9:30 p.m.
Friday	8:00 a.m. - 5:00 p.m.
Saturday	8:00 a.m. - 4:00 p.m. (Closed summer)
Sunday	Closed

I.T. Computer Labs are opened between terms. Hours will vary during the interim and summer term. Hours of operation are posted in each lab and on the lab Web site.

For more information on specific hardware, software, services and resources visit I.T. Labs at www.sinclair.edu/technology/labs.

Kiosks

Stand alone information computers are available to check personal information, grades, and locations on campus.

They are located in Building 3, 7, 13, and 20. Two are in Building 10 near Financial Aid and Third Floor walkway.

Bookstore

<http://bookstore.sinclair.edu>

Building 7, Room 7110, (937) 512-2665 (BOOK), Dayton Campus

Avoid the lines

Ordering online is the convenient way to get all course materials, supplies and Sinclair insignia items. It's the smart way to shop! Simply go to <http://bookstore.sinclair.edu>.

Pick up Bookstore orders at the Dayton campus, Englewood, Huber Heights, and Preble County Learning Centers, as well as Courseview Campus Center in Mason, and **pay no shipping or handling charges.**

Students may shop for all college needs at the Bookstore, located on the first floor of Building 7 including:

- New **and used** textbooks
- Course supplies
- Bookstore gift cards
- Official Sinclair clothing
- Postage stamps
- RTA bus passes
- Greeting cards
- Computer accessories

The beginning date for **buying course materials and supplies** is posted each term in the online course schedule and online at bookstore.sinclair.edu.

To get a **refund for textbooks** bought prior to the start date of the term, just return them in clean and resalable condition within 7 or 14 days (depending upon the type of purchase and term). **Return dates** vary during summer and mini-terms. Complete return information is provided with the sales receipt and on the Bookstore's Web site. **For all returns, buy backs, or exchanges, present the cash register receipt.**

Book BuyBack is held year-round during regular Bookstore hours. BuyBack without a receipt will receive a store credit or a Sinclair gift card.

Special extended hours are announced for the first week of classes. Hours of operation during summer term and when classes are not in session will be posted in the Bookstore and on the store's Web site.

Hours (when classes are in session)

Monday – Thursday, 8:30 a.m. – 7:00 p.m.

Friday, 8:30 a.m. – 4:30 p.m.

Check the Web site for store hours at Englewood, Huber Heights, Courseview Centers.

I.T. Help Desk

(937) 512-4357 (HELP), (866) 781-4357 (HELP)

The Information Technology Help Desk provides students, faculty and staff with a single primary point of contact for technology related issues.

Assistance is available over the phone at (937) 512-4357 (HELP) or toll free (866) 781-4357 (HELP), via the Help Desk Tickets Online found at <http://hdto.sinclair.edu> or via the Sinclair Knowledge base at <http://faqs.sinclair.edu> to search for answers to questions.

The Help Desk analysts are trained to help students with their questions about the supported software listed below. They will not be expected to answer questions about non-supported software or commercial online services (AOL, FastNet, etc).

Help Desk analysts do not have the resources to setup or repair personal computers, install personal software, nor can they assist with computer programming.

Supported Software and Services:

Registration Issues

Web Advisor

Online Card Office (Tartan Card)

Login instructions

Guest help

Transaction

Deposit

my.sinclair

Password Resets

Angel

Web Advisor

Browser issues

E-mail

Login instructions

Wireless Access

Harborlink

For more information about Help Desk hours and services students can log onto www.sinclair.edu/about/offices/helpdesk.

Help Desk hours

6:00 a.m. - 12:00 midnight

Finding a Place to Park

Sinclair student parking is a real bargain with the Tartan Card. (For more details on the Tartan Card see page 24).

Students can park on the Dayton Campus

- At several lots around this campus.
- All other campus sites have no charge for parking.
- **Parking for the disabled is located in all student lots.**
- **Welcome Stadium** - Personnel will direct students to shuttle to the Dayton Campus
- **Lot A** - This is the main student parking area. Entrances are from West Fifth Street and Mead Street
- **Lot H** - Entrance from Robert Drive (located under I-75), cash only
- **Lot F & G** - Entrance from Longworth Street (gravel lot)
- **Lot I** - Entrance from Court (Ludlow) Street (next to Building 19)
- **Lot K** - Entrance from Longworth Street, close to Mead Street (behind Building 13)
- **Lot M** - Entrance from Fifth Street (Building 20, across the river)
- **Lot C** - Under Building 12, students will be charged \$10.00 per hour
- Parking Meters – Beware! City of Dayton is very vigilant about checking these meters. Student will get tickets.

Parking Fees at Dayton Campus

Rates for student parking lots:

- \$1.00 (every in/out transaction) when paying with the Tartan Card (funds must be added to the Tartan Card) for those who are currently registered students.
- \$2.00 when paying with cash.

Free Shuttle Service

Sinclair typically operates a free shuttle service from the campus to overflow lots at the beginning of fall and winter terms. Call (937) 512-2518 for details.

Visit www.sinclair.edu/visit/parking for the most current information.

Southwestern Ohio Council for Higher Education (SOCHE)

www.soche.org

Full-time students at Sinclair can register for courses for credit at SOCHE institutions (see below for a complete list) at Sinclair's rate per credit hour. Students **need to pay any applicable lab or related fees at the host institution. To take advantage of this program:**

- The course cannot be available at Sinclair.
- Space must be available at the SOCHE institution, only during regular sessions of the academic year (summer sessions and self-supporting or sustaining programs are excluded).
- Students must:
 - Have advisor's permission.
 - Satisfy all course prerequisites.
 - Meet the host institution's admissions requirements.

For more information, contact the office of Registration & Student Records, Second Floor, Building 10, Dayton Campus, or the SOCHE Web site, www.soche.org.

The consortium of 20 colleges and universities, three corporate partners, and one foundation was established to promote inter-institutional cooperation and community service. SOCHE:

- Holds regular conferences for faculty and staff.
- Serves as a clearinghouse for the exchange of information.
- Promotes projects of educational research and experimentation.

Many cooperative programs exist in teaching, research, publishing, college finance and administration and other areas.

Consortium schools include:

- Air Force Institute of Technology
- Antioch University
- Capital University-Dayton Center
- Cedarville University
- Central State University
- Clark State Community College
- Edison Community College
- Kettering College of Medical Arts
- Miami-Jacobs College
- Sinclair Community College
- Southern State Community College
- United Theological Seminary
- Union Institute & University
- University of Dayton
- Urbana University
- Wilberforce University
- Wilmington College
- Wittenberg University
- Wright State University

Alternative Offerings

There are almost as many alternatives to learning as there are offerings from Sinclair. See the next few pages to fit your lifestyle.

School Linkages

Academic Resource Center (ARC)

Library, Room 7L001, (937) 512-3495, Dayton Campus

An ARC instruction facilitator will assess skill levels and guide students to help improve math, English and reading skills.

www.sinclair.edu/support/arc

Pre-College Programs

www.sinclair.edu/precollege

Building 12, Room 12331, (937) 512-5188, Dayton Campus

The office of Pre-College Programs promotes and provides access to academic support services, program and resources while proactively and collaboratively guiding students to achieve their academic and career goals in a learning college environment. Students interested in Advanced College Entry, Quick Start, Upward Bound, or Young Scholars, should contact Pre-College Programs at (937) 512-5188.

Advanced College Entry – Grades K-12

Building 12, Room 12331, (937) 512-2495, Dayton Campus

The ACE program is open to all K-12 students [except those high school students enrolled in Sinclair's Post Secondary Enrollment Options (PSEO), Tech Prep, or Quick Start programs]. Program participants have an opportunity to enroll, complete, and acquire college credit in any approved course offered at Sinclair. Enrollment in any course at Sinclair is at the discretion of the office of Pre-College Programs and the academic department.

Quick Start – Grades 11-12

Building 12, Room 12331, (937) 512-2335, Dayton Campus

This pre-college program offers college courses in technical academic areas to juniors and seniors enrolled in career education programs. Quick Start gives participating students an opportunity to experience college life, engage their interest and support their high school and college goals.

Upward Bound – Grades 9-12

Building 12, Room 12382, (937) 512-2331, Dayton Campus

A federally funded pre-college program for low-income and/or first generation students, Upward Bound is designed to increase the probability that participants will complete their high school education, enroll in, and graduate from college. Upward Bound provides several cultural trips, supplemental education, ACT/SAT review, and a six-week summer program of each year of participation.

Post Secondary Enrollment Options Program (PSEO) – Grades 9-12

See page 15.

School Linkages

Young Scholars Program – Grades 8-12

Building 12, Room 12331, (937) 512-3730, Dayton Campus

The Young Scholars Program (YSP) is a five-year pre-college program designed to help first generation Montgomery County youths become academically and socially prepared to graduate from high school and prepared to enter college. YSP targets academic middle students with grade point averages between 2.0 and 3.0. Selected students attend ten, four-hour Saturday sessions guided by a five-year curriculum, aligned with Ohio Graduation Test outcomes.

Out-of-School Youth Fast Forward Center

Job Center, Edwin C. Moses, (937) 512-FAST (3278)

The **Fast Forward Center** primarily serves youth, ages 15-21, who have previously dropped out of, or are not regularly attending, high school. The goal of the **Fast Forward Center** is to return the youth to high school, help them achieve proficiency, earn a high school diploma, and have a positive placement upon graduation (employment, military, or post secondary education). The **Fast Forward** program is one of the few (if not the only) countywide out-of-school youth initiatives in the country that encourages and allows students 15-21 to earn a high school diploma. G.E.D. is only recommended if the student is of the age where obtaining a high school diploma is not feasible (Ohio law allows high schools to be reimbursed for a child's education until that child is 22 years of age).

The **Fast Forward Center** is a partner with three alternative charter high schools that specifically serve dropouts, a charter middle school, and other Dayton-based alternative education programs to serve the needs of out-of-school youth. All of these programs are student driven, allowing students to work at their own pace and earn credits in a school geared toward credit recovery. The **Fast Forward Center** has made the process for any Montgomery County student wishing to return to school easy. The student simply calls 512-FAST. Once a call is received, an appointment is scheduled where the student is assessed in math and reading, and presented with school options. After the student chooses which school they would like to attend, the **Fast Forward Center** compiles a folder containing assessment results and contact information. The **Fast Forward Center** then refers the student to the school of their choice.

Miami Valley Tech Prep

Building 6, Room 6131, (937) 512-5146, Dayton Campus

The Miami Valley Tech Prep Consortium nurtures partnerships with educators and employers to create seamless career-technical education programs that begin in the junior year of high school and continue through an associate degree and beyond. Every facet of the College Tech Prep program is designed to address the 21st century workforce needs of the Miami Valley region by developing students who are college bound and career ready.

MVTPC is an award winning consortium, recognized nationally for unique programs that help students discover opportunities and make a powerful connection between education and careers.

Cooperative Education & Internship

Sinclair supports the concept that valuable learning occurs in settings other than the traditional classroom. Internship and Cooperative Education opportunities allow students to apply skills and competencies learned in the classroom in a work based setting. In many programs, students can earn actual degree credit while enrolled in academic internship courses.

For more information about Cooperative Education and Internships go to:

Business & Public Services (BPS)

www.sinclair.edu/academics/bps/intern

Science, Mathematics & Engineering (SME)

www.sinclair.edu/academics/sme/coop

Workforce Development & Corporate Services

Sinclair's Workforce Development & Corporate Services (WFD&CS) is a first-stop solution for a growing number of employers and individuals striving to function at the top of their game. WFD&CS offers a wide array of innovative, high value, customer focused programs and services in areas of professional development, career assessments and coaching, leadership, information technology, advanced manufacturing and online programs. To learn more about Sinclair's WFD&CS, call (937) 512-5741 or go to workforcesolutions@sinclair.edu. The Web site is <http://workforce.sinclair.edu>.

Project READ

www.project-read.org

Building 6, Room 6121, (937) 461-7323 or 512-4570, Dayton Campus

Although Sinclair does not have a G.E.D. program, a grant funded program, Project READ, provides student and volunteer referral for local literacy programs, outreach, and literacy awareness in the Greater Dayton Area. Project READ is the connecting resource for students for free classes [General Education Degree (G.E.D.), basic literacy, English as a Second Language (ESL)] and for those interested in becoming a literacy tutor in the community. Project READ also recruits tutors and manages the Literacy AmeriCorps Dayton program.

Learning Communities = Student Success

Building 1, Room 1031, (937) 512-2347, Dayton Campus

The Learning Communities program improves student success by providing opportunities for increased student engagement and pass rates. It also gives advisors and/or counselors direct classroom connections. The Learning Communities program ties two courses together with a common theme, schedules them back to back, and has two instructors joining forces to help students learn. Many are paired with the SCC 101 Student Success course. Students should look for the F section courses (AH, LA, BU or BU). Students may also look online for Learning Community courses.

Service Learning

Building 14, Room 14324, (937) 512-2040, Dayton Campus

Engage Your Mind, Serve Your Community, Change The World, Be the Difference!

Students who want to develop and explore academic, personal, social and career goals, gain work experience, and meet community needs can do that while meeting a course requirement. Students may sign up for Service Learning, a teaching and learning strategy that provides students with community based experiences to meet course objectives. Students participating in course related Service Learning gives "real world experience" building their resumes and increasing employment opportunities.

Students should check with academic advisors for courses with Service Learning or request a Service Learning opportunity from faculty. Examples of Service Learning projects range from accounting (preparing tax returns for low-income families), and designing Web sites, databases and brochures, to feeding and clothing the homeless, and tutoring, engineering and construction trade projects, to event planning parties for seniors and developmentally disabled, just to name a few. Students' participation in Service Learning entitles them to documentation to enhance their portfolios. Service Learning agencies and projects are listed on the Sinclair Service Learning Web site at www.sinclair.edu/about/learning/servicelearning.

International Study Abroad

Building 10, Room 10443, (937) 512-5306, Dayton Campus

Studying abroad allows students to get to know and understand another country's culture and everyday life. Students become more aware of perspectives that may be different from their own.

Through study abroad opportunities, ranging from a few weeks to an entire academic year, students can earn academic credit in a wide variety of disciplines.

To qualify, participants need to have a grade point average of 2.0 or better at Sinclair and meet any other specific requirements of the particular study abroad opportunity.

Information about the International Student I.D. Card (I.S.I.D.), overseas medical insurance, and study abroad opportunities is available in the Study Abroad office, Room 10443.

College for Lifelong Learning

www.sinclair.edu/lifelong

(formerly College for Seniors)

Building 10, Room 10112, (937) 512-5184, 512-2372

Dayton Campus

Adults of any age may enroll in non-credit seminars and workshops. Classes meet both on campuses and at various sites across the community. Topics include Lunch and a Topic, or Dinner and a Concert or Theatre, Writing About Your Life & Times, Introduction to Personal Computers, Taking Care of Mom & Dad, Managing Money, Dayton History, and more. Some classes carry a modest fee to cover instructional costs, while others are free. Classes are listed in the College for Lifelong Learning newsletter.

Adults age 60 or better may audit credit classes offered on campus or at any of the Learning Centers tuition free on a space available basis. For example, Sinclair's Physical Education department offers swimming, water aerobics, tennis, and Tai Chi, to name a few. Other areas include painting, pottery, piano lessons, personal computers, history, or a foreign language.

Enroll in these classes at Registration & Student Records, Second Floor, Building 10, Dayton Campus, **during the late registration period, usually the week before the term begins**. A special College for Lifelong Learning desk is there with representatives to help with class choices and the enrollment process. Students may also enroll at any of the Learning Centers. The most popular classes are listed in the College for Lifelong Learning newsletter. The complete list of classes is available online, or call the office for assistance.

Those adults age 60 or better, may also audit Sinclair classes held on campus or at off-campus sites. These classes are listed online and in the College for Lifelong Learning newsletter.

Other ways to take part in Sinclair's program are through theatre and dance performances, with special pricing for those age 60 or better by going through the College for Lifelong Learning office. Students may also join the Senior Dance Ensemble, attend art exhibits, and use the Sinclair facilities such as the Physical Education department and Library resources. Joining the advisory board can help shape future programs.

Food Services

Just about wherever students go around the Dayton Campus, they can fuel up for classes.

Starbucks in the Library!

Stop by for Latte, Cappuccino, Frappuccino or freshly brewed coffee, and a Starbucks famous pastries.

Campus vending services are available throughout campus. A wide variety of treats include freshly brewed coffee by the cup, JUST4U health conscious snacks, and bottled beverages.

Tartan Main Street Cafe

Building 10,
Third Floor

Hours*	
Monday - Thursday	7:30 a.m. - 8:00 p.m.
Friday	7:30 a.m. - 2:00 p.m.
Saturday	Closed

The Tartan Main Street Cafe features freshly made pizza and hot delicious paninis. Hot pretzels, bagels, soup, express packed salads and sandwiches are just a few of the many snack items available. Hot subs, quesadillas and bagel melt sandwiches are now available. Seattles Best Coffee, and assorted beverages are also featured.

Tartan Marketplace

Building 7,
Lower Level

Hours*	
Monday - Thursday	7:00 a.m. - 8:00 p.m.
Friday	7:00 a.m. - 2:30 p.m.
Saturday	7:30 a.m. - 2:00 p.m.

Check out the Chef's Cuisine for hot meals cooked to order; Italian Oven for freshly baked pizza; Corner Bakery for freshly baked muffins and Danish; Green Pickle Deli for made-to-order sandwiches and wraps; Salad Garden for fresh salads; and Fireside Grill for cheese steaks and burgers. Look for JUST4U icons identifying healthy options.

Tartan Cantina

Building 8,
Lower Level

Hours*	
Monday - Thursday	10:00 a.m. - 3:00 p.m.
Friday	10:00 a.m. - 2:00 p.m.
Saturday	Closed

Burritos made to order and other "south of the border" specialties.

Tartan Subshop

Building 3,
Third Floor

Hours*	
Monday - Thursday	7:30 a.m. - 8:00 p.m.
Friday	7:30 a.m. - 2:00 p.m.
Saturday	Closed

The Tartan Subshop serves Skyline Coneys, hot sandwiches daily, made-to-order deli sandwiches, fresh soups, hot dogs, salads, and assorted beverages.

Snack Shoppe

Building 13,
Fourth Floor

Hours*	
Monday - Thursday	7:30 a.m. - 8:00 p.m.
Friday	7:30 a.m. - 2:00 p.m.
Saturday	Closed

Pizza, deli sandwiches, Skyline Coneys, wraps, hot subs, bagel melts, prepared salads and assorted beverages.

ALTERNATIVE LEARNING



Regional Centers and Neighborhood Sites

Sinclair's Expanding Opportunities

Whether you are a full-time student starting college or an adult looking to begin a new career, the Learning Centers provide a pathway of courses to achieve your goals. If you're looking for a career in health care, business, technology, transferring to a four-year school, or career development, Sinclair has a pathway for you.

Learning Centers

Going to college just got easier for regional residents. Every minute counts, and convenience is key. Sinclair understands, so that's why Sinclair is bringing college to students.

At the Learning Centers, students can start when they are ready. With five-week and 11-week terms, two-week mini sessions, weekend classes, and day and evening sessions, students can arrange a schedule that works with their lives.

Three centers located next to the YMCAs, and the Courseview Campus Center at Mason, provide Sinclair's award winning academics and services in the convenience of students' neighborhoods.

The centers provide degree opportunities and general education and university parallel courses. There are day, evening, and weekend courses, on-site student services such as recruitment, admissions, registration, financial aid, student advising, and computer lab services.

Englewood Learning Center

1150 West National Road
Englewood, Ohio 45322
Corner of Hoke Road and State Route 40 in Englewood next to the Kleptz YMCA
(937) 836-8750

Huber Heights Learning Center

7301 Shull Road
Huber Heights, Ohio 45424
Next to the Huber Heights YMCA
(937) 233-5550

Preble County Learning Center

450 Washington-Jackson Road
Eaton, Ohio 45320
Next to the YMCA
(937) 456-5252

www.sinclair.edu/learningcenters

Each Learning Center Includes:

- Approximately 10,000 to 15,000 square feet of space with eight classrooms and one computer classroom
- An "Information Commons" combining library services function and open computer lab
- Some Bookstore services, a cashier for tuition and fee payment services
- Offices for private academic and personal counseling

The Learning Centers also provide student services in outreach recruitment, admissions and registration, financial aid information, academic advising and counseling, and computer lab services. Students attending these learning centers will not have to drive to the downtown Dayton campus to fulfill their student needs.

For more information on the Englewood, Huber Heights, Preble County Learning Centers, visit their Web sites at www.sinclair.edu/learningcenters.

Courseview Campus Center

www.sinclair.edu/courseview
5380 Courseview Drive, Mason
(513) 339-1212

Courseview Campus Center, Mason, Ohio, is located off Interstate 71 across from Kings Island and just north of Lindner Family Tennis Center. The leased facility houses classrooms and support facilities and has convenient parking.

Although Sinclair has been offering its award winning academics and student services in Warren County for years, this site brings a change in serving Warren County citizens. The center provides degree offerings for general education and university parallel courses. There are day, evening, and weekend courses, on-site student services such as recruitment, admissions, registration, financial aid, student advising, and computer lab services.

The Governor of Ohio signed into law a provision that made Sinclair Community College the official community college of Warren County. Sinclair has been granted the rights and responsibilities to provide direct educational services to both Warren and Montgomery counties.

Revenue to fund the Mason campus comes from Warren County student tuition, fees, and state subsidy. **No funds derived from Montgomery County property tax levy may be spent in Warren County.**

Wright-Patterson Neighborhood Center (WPAFB)

www.sinclair.edu/wpafb
2130 Fifth Street, Building 50, Area B
WPAFB, Ohio 45433
(937)781-9800, wpafb@sinclair.edu
Hours: Monday-Thursday, 8:00 a.m. - 3:00 p.m.

Sinclair has been a partner with Wright-Patterson Air Force Base for more than 30 years, offering classes on site at the Wright-Patterson Neighborhood Center. Students receive the same high quality instruction and service expected from the Dayton campus, in a variety of educational pathways. The Wright-Patterson Neighborhood Center provides degree offerings in general education and university parallel courses for transfer to a four-year institution. The center also offers on-site classes for active duty Air Force personnel wishing to complete their CCAF (Community College of the Air Force) degree. Classes are open to active duty and base employees, as well as any student from the community at large—civilian students are welcome! The Wright-Patterson Neighborhood Center provides intake services on site, including admission, registration, financial aid, and academic advising assistance. The center also offers day, evening, weekend, online and hybrid (mixed online/face-to-face) courses to suit any schedule.

Neighborhood Center Classes

Students attend college for many reasons: to pursue a degree, to update their knowledge and enhance career advancement opportunities, or simply to take courses for personal enrichment. Sinclair's Neighborhood Learning Centers are a convenient alternative for busy students. Classes are taught by full- and part-time faculty at the following locations throughout the Miami Valley:

Centerville High School
500 East Franklin Street
Centerville

Dwight L. Barnes Community and Continuing Education Center
3700 Far Hills Avenue
Kettering

Miami Valley Research Park
1900 Founders Drive
Dayton

Wright-Patterson Air Force Base
All classes are held in area B

Driving instructions to all off-campus sites can be found at www.sinclair.edu/offcampus



Services for Students

Sinclair creates access to academic support service, programs and resources that proactively and collaboratively guide, assist, and help students achieve their personal learning goals in a success oriented, learning college environment.

There are many services available, helping students achieve success while at Sinclair.

www.sinclair.edu/support

Counseling Services

www.sinclair.edu/support/counseling

Building 10, Room 10424, (937) 512-2752, Dayton Campus

Students interested in addressing challenges that may affect their ability to successfully progress within the Sinclair Community College setting, may contact Counseling Services for:

- Individual counseling about educational, personal or social concerns
- Individual Learning Plans and Counseling Action Plans for new and current students
- Educational information and skill development in areas, such as problem solving, time management, stress management, study skills, managing emotions and moods, career decisions, interpersonal relationships, and life management skills
- Resource information on alcohol/drug awareness, health education and holistic well being
- Comprehensive community referrals to off-campus agencies for additional assistance

All counseling services are free, confidential and available by appointment or walk-in basis.

Hours

Monday-Thursday, 8:00 a.m. - 7:00 p.m.

Friday, 8:00 a.m. - 5:00 p.m.

Summer hours will vary.

2 0 1 2
Semesters
sinclair.edu/semesters

Ombudsman

www.sinclair.edu/support/advocate

(937) 512-2205, Building 8, Room 8025, Dayton Campus

The Ombudsman provides assistance to individuals who indicate they have problems/issues or concerns that need resolution within the campus community. It may involve:

- Conflict resolution
- Coaching - advocacy/support

The Ombudsman can:

- Cut red tape
- Listen to problems
- Investigate, mediate, facilitate
- Clarify policies and procedures

Tutorial Services

www.sinclair.edu/support/tutor

Library, Building 7, Lower Level, (937) 512-2792,

Dayton Campus

Tutorial Services offers **FREE** individualized educational assistance in most 100 level courses to students enrolled at Sinclair for credit. Tutors, selected on the basis of scholastic ability and interpersonal skills, are available in open **learning laboratories**, on a **scheduled** basis, and in **group supplemental instruction** sessions. Students interested in receiving free tutoring or applying to become a paid tutor, visit the Tutorial office.

Hours

Monday - Thursday, 8:00 a.m. - 8:00 p.m.

Friday, 9:00 a.m. - 5:00 p.m.

Saturday, 10:00 a.m. - 2:00 p.m.

Summer hours will vary.

Disability Services

www.sinclair.edu/support/disability

Building 10, Room 10421, (937) 512-5113 or 512-3096 (TTY),
Dayton Campus

Disability Services offers accommodation provisions to enhance academic success and access in accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973.

The department offers reasonable academic accommodations, auxiliary aids, assistive technology, adaptive equipment, and support services to qualified individuals with disabilities. Assistance is available to faculty and staff working with this population. Other services include brief personal and academic counseling, and vocational exploration. The department is proactive in monitoring the campus to assure an accessible environment.

Students request and receive services on a voluntary basis. To qualify for services, individuals must contact Disability Services to schedule an appointment with a counselor. Services are individualized and based upon appropriate documentation and impact of the disabling condition(s).

Available Services:

- Adaptive equipment/furniture
- ADA work stations
- Alternative print materials/formats
- Community resource information
- Disability management advising
- Note-taking assistance
- Reader/writer services
- Sign language interpreters
- Special testing arrangements
- Tutoring

Hours

Monday - Thursday, 8:00 a.m. - 6:00 p.m.

Friday, 8:00 a.m. - 5:00 p.m.

Summer hours will vary.

African-American Male Initiative (AAMI)

Counseling Services, Building 10, Room 10424, (937) 512-2752,
Dayton Campus

The African-American Male Initiative (AAMI) is designed to assist and support African-American male students as they make their transition into the mainstream of college life. Counseling Services helps men in the AAMI attain their educational goals.

AAMI provides a nurturing, supportive environment and mentoring to help students build self-esteem and gain self-confidence. Students may participate in activities to teach them basic interpersonal skills and necessary employment survival skills. Students are provided a Counseling Action Plan to guide their progress.

AAMI men may be involved in individual counseling, group activities and mentoring opportunities.

Student Success Planning Services

Building 10, Room 10424, (937) 512-3032, Dayton Campus

New degree or certificate seeking students, based on their needs, will be offered the opportunity to develop an Individual Learning Plan (ILP) with an assigned Student Success Services counselor. After completing the placement test, students will receive information about the ILP at the Assessment/Intake Center. The ILP is an action plan that will serve as the new students' personal guide to becoming successful students.

Student Support Services

Building 11, Room 11342, (937) 512-3550, Dayton Campus

The Student Support Services (SSS) program is funded by the United States Department of Education to provide intensive services and activities that enhance chances of academic success for Sinclair's first generation and income eligible students. The program also works with the students to promote a comfortable college environment, so they can persist and accomplish their academic and career goals. At Sinclair, Student Support Services innovates strategies to facilitate these goals.

Career Services

Building 10, Room 10312, (937) 512-2772, Dayton Campus

Career Development Services

Students may use Career Services to help make the most of their education, talents, interests and experiences. The experienced, dedicated staff can help determine short and long term goals, select a college academic program, and/or change career fields. Receive assistance individually or in groups, and check out the variety of workshops, given each quarter, focused on career decision making and job readiness skills.

Services include:

- Computerized and online career assessments that provide inventories of interests, abilities, preferences and values
- Career fairs, on site and online
- Career and employment counseling
- Assistance with matching career fields with Sinclair academic programs
- Quick reference guide of salary information that corresponds to Sinclair academic programs
- Access to alumni who share information about their careers
- Extensive career library materials
- Computer simulated mock interview software
- Computerized and online information systems that contain Ohio job market data
- Online scholarship and financial aid information for students planning to transfer and/or continue their education
- On-campus student employment postings online and in house.

Job Seeker's Training

If finding full-time employment is a top priority, take advantage of the Job Seekers Training program, a free service open to the community. This intensive workshop meets for 2 1/2 hours a week, for six weeks, and trains students in assertive job seeking techniques. Interviewing, resume development, networking and use of the Internet for job searching are just a few of the program's services.

Joblink Online Employment Management System

By using the Internet to access this online employment system, students can:

- Register for Employment Services.
- Post a resume to the Career Services graduate database Web site.
- Review current job opportunities and future interview schedules.

Once students are eligible and are registered with the system, the computer can match them by academic programs and/or skills to available job opportunities, and refer their resume to employers for consideration.

Additional Services:

- On-campus Recruitment
- Resume Critiquing
- Employer Research Information
- Employment Counseling
- Full-time, part-time, and temporary job postings
- Allied Health Job Fair
- Career Exploration Fair
- Virtual Career Fair
- Career Opportunity Corner
- Lists of employers by academic programs
- Career fairs, on site and online
- Computer simulated mock interview software

Employment Services

Students who are going to graduate within three terms, or who are a Sinclair graduate or alumnus, can use the college's specialized employment services. Those who are planning to graduate from Sinclair and have accumulated 75 credit hours toward an associate degree or have completed a one-year certificate need to register for Employment Services Orientation. Alumni are encouraged to register with the Alumni Association before registering with Career Services.

Military Services

Building 10, Room 10324, (937) 512-2586, Dayton Campus

The Army Reserve Officer Training Corps (ROTC) program is designed to provide the Army, Army Reserve and National Guard with commissioned officers. The program helps students:

- Develop decision making capabilities through detailed examination of leadership
- Expand oral and written communication skills
- Provide technical training in basic military skills
- Develop an understanding of the relationship between the basic degree field and its application in the United States Army

Full-time students at Sinclair can:

- Enroll in Army ROTC and participate without obligation in the first two years of the four-year program
- Complete the final two years at another institution, OR
- Apply for advance placement and participate in only the final two years of ROTC, receiving commission as a second lieutenant upon graduation from Sinclair
- Join the Air Force Reserve Officer Training Corps (AF-ROTC) at Wright State University

The Southwestern Ohio Council for Higher Education (SOCHE) conducts registration through Sinclair's office of Registration & Student Records, Second Floor, Building 10. For further information contact:

Army ROTC	University of Dayton	(937) 229-3326
	Wright State University	(937) 775-2763
Air Force ROTC	Wright State University	(937) 775-2730

Academic Resource Center (ARC)

Library, Room 7L001, (937) 512-3495, Dayton Campus

Thinking about coming back to college? Students needing a little refresher on Math, English or Reading may use the Academic Resource Center (ARC).

The on-campus ARC is located in the library on the mezzanine level. An ARC instructor-facilitator will guide students through a self-paced tutorial to help improve Math, English and Reading Skills either before taking the placement test or enrolling in developmental courses. It's easy and it's free.

Hours

Monday, Wednesday, Friday, 9:30 a.m. - 4:00 p.m.

Tuesday, Thursday, 9:30 a.m. - 7:00 p.m.

Closed Saturday

In addition, there are ARC's at several Montgomery County high schools with the goal to expand to additional high schools in the county. Students in eleventh and twelfth grades have the opportunity to assess their basic skill level. If help in the area of basic skills is needed, students may go through the self-paced tutorials and bring their skills up to college level by high school graduation.

Alumni Affairs

www.sinclair.edu/alumni

Building 12, Room 12201, (937) 512-2510, Dayton Campus

The Alumni Affairs office develops and maintains relationships with all Sinclair's 40,000+ graduates through social and service opportunities, benefits, publications, and special events.

Alumni Association

Upon graduation, alumni receive a one-year, complimentary membership to the Sinclair Alumni Association. Members receive many benefits, including:

- Access to college facilities (certain limitations apply)
- Eligibility to run for a seat on the 15-member council
- Volunteer opportunities at association sponsored events and activities.

Proceeds from activities support the association's scholarship program. Dues are \$40 per year, or \$200 for a lifetime membership.

Campus Ministry

www.sinclair.edu/support/ministry

Building 10, Room 10310, (937) 512-2768, Dayton Campus

The Office of Campus Ministry: a Multi-Faith Center for Spiritual Life is served by two Interfaith Campus Ministers. Students, staff, faculty and administrators of all religious and spiritual traditions are welcome.

Campus Ministry offers:

- programming for spiritual growth
- pastoral care and spiritual companionship
- educational support on religious and spiritual questions or concerns
- short term dialogue groups, interfaith programming, retreats, and guest lectures.

Sinclair Public Safety

www.sinclair.edu/police

Building 7, Room 7112, (937) 512-2700, Dayton Campus

Sinclair takes pride in its safety record and is committed to maintaining a safe environment. On the Sinclair Dayton campus, students can enjoy all the advantages of an urban college, plus peace of mind in a beautiful, contained academic setting.

To reduce crime and ensure the campus community is safe and secure, the Sinclair department of Public Safety employs 23 sworn Public Safety officers, safety officers in Buildings 9, 12, 13, 14, 19, 20, Library, plus officers on each level of the garage and perimeter parking lots. Safety officers are also at the Huber Heights, Englewood, Preble County learning centers, Miami Valley Research Park, and the Courseview Campus Center on a limited basis. All of these officers provide visible public safety presence to prevent crime.

Information related to crimes committed on campus, crimes committed on adjacent streets and crimes committed at off-campus locations can be viewed at www.sinclair.edu/police. The past three years of crimes are noted, plus there is a "tip" line available if any student has a need to report issues anonymously. Also listed are the services provided by Sinclair department of Public Safety.

Students, faculty, staff and visitors are expected to promptly and accurately report any crime or incident that negatively affects the college to Sinclair Public Safety, Building 7, Room 7112, or call (937) 512-2700.

To deter crime and make themselves available, police patrol the campus and its parking lots on a regular basis. **Students should keep personal items with them at all times. Theft of unattended items is the most common crime on campus. For additional information concerning safety and the safety of belongings, contact the Sinclair Public Safety.**

Sinclair Police also provide **escorts** to the parking lots. Sinclair urges students to travel with care and avoid walking alone.

The **Lost & Found** is located in the department of Public Safety office, Room 7112.

Emergency Telephones/Intercoms

Emergency telephones and elevator intercoms are in the following **Dayton Campus** locations:

- Third floor of Buildings 1-6, 10, 11
- Basement level of Buildings 1-6
- First floor of Building 11
- North and south stairwells, Building 12 (all floors), and stairwells in Buildings 13, 14, 20.
- Each elevator in all buildings

When using an intercom, press the red button and the intercom will automatically connect to Sinclair Public Safety.

Additionally, an emergency **blue light system is installed in several outside areas:**

- Parking Garage A (all stairwells)
- Parking areas (B, C, D, E, H, I, K, L, M)
- First floor levels of Buildings 1, 9, 10, 13, 14, 15, 16, 19, 20
- First floor level between Buildings 3 and 4

Blue lights on top of poles mark the outside blue lights, including those in the parking garage. To receive emergency assistance, simply press the red button and the system will provide direct contact with Sinclair Public Safety.

Child Care

Early Childhood Education Centers

www.sinclair.edu/facilities/cec

Building 9, Room 9101, (937) 512-2234, Dayton Campus

Students who need child care services while on campus should call the Early Childhood Education Centers, a component of the Child & Family Education department which is owned and operated by Sinclair. The centers are licensed by the Ohio Department of Human Services and accredited by the National Association for the Education of Young Children.

The philosophy of the learning environment supports developmentally appropriate practices and child centered activities. Early Childhood degreed teachers and practicum students facilitate children's cognitive activities, social, physical and emotional growth. The children served are three, four and five years of age.

Two centers are available at reasonable rates: The **Early Childhood Learning Center**, a full-time program, and the **Flex-Time Center**, a part-time program.

For more information about the programs and fee structures, contact the Early Childhood Education Centers at (937) 512-2234. Tuition assistance is available for eligible students. Child care tuition payments are made at the Bursar's office (Building 10, Second Floor).

Living Accommodations

Sinclair does not provide housing facilities for students. However, dormitory housing is available for women at the Central YWCA, 141 West Third Street, only two blocks from the Sinclair campus.

For assistance with information about basic housing and apartment search, contact the Leadership Development office, Building 8, Room 8025, (937) 512-2509.

Health Services

Sinclair provides only emergency care in the form of first aid for those who become ill or are injured while on campus. Sinclair Public Safety officers are trained in emergency first aid and Cardiopulmonary Resuscitation (CPR) and are able to handle emergency situations.

First-aid kits are located in the following areas on Dayton Campus:

Room	Room	Room	Room	Room
1012	3033	4320	10112	11141
1015	3112	5021	10244	11426
1023	3122	5030		Auto Lab
1030	3134	5141	10324	Mail Center
1123	4001	6022	10411	Bookstore
1143	4012	6040		Library
2220	4224	7112		Bldg. 12
3013	4232	8026		13307
3021	4241	9106		13420
3023	4311	10001		16106

Note: For additional attention, please contact Sinclair Police, Room 7112, (937) 512-2534.

Health Insurance

Counseling Services

Building 10, Room 10424, (937) 512-2752, Dayton Campus

While Sinclair does not provide health care insurance, information is available on a health insurance plan that is provided to both full-time (12 or more credit hours) and part-time students (at least 9 credit hours) at special rates.

FI International students must purchase different insurance. FI insurance information is available Registration & Student Records, Building 10, Room 10231.

Health Insurance Portability and Accountability Act of 1996 (HIPAA)

Students may be required to provide medical or psychological records in order to document and receive specialized services. These records are protected under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) until they are provided to Sinclair Community College. At that point they become educational records under the protection of the Family Educational Rights and Privacy Act of 1974 (FERPA). Both these acts have strict rules to protect personal confidential information.

Dental Hygiene Clinic

Building 4, Room 4332, (937) 512-2548

Call for an appointment

Students may have their teeth cleaned and help a fellow student complete degree requirements at the same time—for only \$10.00.

Hours

Monday, Wednesday and Friday

Appointments are scheduled at 8:00 a.m. or 1:00 p.m.



Campus Life

Join In - Organizations & Clubs

www.sinclair.edu/student

**Building 8, Room 8025, (937) 512-2509,
Dayton Campus**

Learning comes in lots of forms—including building relationships and developing leadership skills. When students join a club they can make friendships and gain experience that will be with them through a lifetime of success.

Stop by the office of Student Leadership Development and Student Leadership Association, Room 8025, Building 8, lower level, to learn more about **leadership development activities, honor societies and clubs related to careers, special interests or activities.**

There are over 40 active clubs/organizations on campus. To learn more about clubs, leadership development activities, or honor societies stop by Student Leadership Development, Room 8025.

Student Leadership Development

Building 8, Room 8025, (937) 512-2509, Dayton Campus

The department of Student Leadership Development is a vital part of life at Sinclair Community College. Students may choose to participate in a number of activities offered through this office. Programs and services include:

- opportunities for students to develop their leadership skills.
- establish or join a student club
- community resource directory that provides information about off-campus housing
- locker rental
- and much more

For more information contact Student Leadership Development, Building 8, Room 8025.

Student Leadership Association

Building 8, Room 8025, (937) 512-2509, Dayton Campus

The Student Leadership Association (SLA) serves and represents the needs and desires of the student body, members of the faculty, administration and trustees; and promotes leadership in Student Leadership Development.

Because SLA is an important part of student life, students are automatically members of the association once they are accepted into the college. Sinclair encourages all students to become active members, so that the association really does represent student thought and opinion.

Funded through the Student Leadership Advisory Board, the SLA sponsors educational and entertainment activities such as dances, concerts, movies and many other events.

The Student Leadership Association executive board members:

- Authorize the chartering of student organizations and clubs.
- Approve constitutional or bylaw changes by an organization under the board's jurisdiction.
- Recommend action or policy to the college administration.
- Investigate any matter affecting the student body.
- Plan and present student programs.

To become an active member, students are encouraged to attend the Student Leadership Association meetings held monthly during each academic term. No meetings are scheduled during the summer term. Get information about the Student Leadership Association, its constitution and information on developing a club or organization in the Student Leadership Development office, Room 8025.

Sinclair Ohio Fellows Leadership Program

Building 8, Room 8025, (937) 512-2509, Dayton Campus

The Sinclair Ohio Fellows Leadership Program is designed to develop the leadership skills of Sinclair students who demonstrate initiative, maturity, intellectual curiosity, social concern, and a genuine desire to grow and lead.

Students may be nominated by a faculty member or may nominate themselves. The program advisory board interviews nominees and then selects students it feels will benefit from, and also contribute to, the program. New students are inducted each term.

Upon induction into the program, students are required to:

- Complete a growth contract
- Attend two cultural events per term (cost subsidized by the program)
- Attend monthly meetings
- Successfully complete the courses HUM 195, Patterns of Leadership, and HUM 194, Words & Community Issues (fall) (tuition and texts paid for by the program)
- Complete a community internship

The program also includes a mentor component, programs and activities designed to develop leadership skills, service and leadership projects and individual life/career planning.

Leadership Sinclair: Creating Excellent Outcomes (CEO)

Building 8, Room 8025, (937) 512-2509, Dayton Campus

The Leadership Sinclair CEO program provides participants with an opportunity to learn skills that will develop their leadership potential. The goal of Leadership Sinclair CEO is:

- to teach students the needed skills that will enable them to lead more effectively within the college, community and work place
- to encourage Sinclair students to see leadership as one of their fundamental goals in life
- to pursue leadership with intensity and excellence on a daily basis.

Any student enrolled in at least six (6) credit hours, in good academic standing, and maintaining a 2.0 GPA are eligible for application to Leadership Sinclair.

Students interested in this program should contact the Student Leadership Development office.

Phi Theta Kappa Honor Society

Building 10, Room 10341, (937) 512-2517, Dayton Campus

Sinclair students have the opportunity to earn scholastic recognition through membership in Phi Theta Kappa, the honor society for two-year colleges. Sinclair's chapter, Nu Pi, one of the most active student organizations on campus, offers opportunities for **campus and community service, leadership development, and scholarships.**

Phi Theta Kappa members become part of an international organization, which offers national scholarships and scholastic development.

To be eligible for membership, students must have earned 15 academic credit hours or more at Sinclair, with a cumulative GPA of 3.5 or higher.

After joining, members receive a Phi Theta Kappa notation on the Sinclair transcript. Members also have the right to wear the Phi Theta Kappa gold stole at graduation and will be provided a Phi Theta Kappa gold seal to affix to their diplomas.

Each member must maintain a 3.5 GPA. If the GPA falls below the 3.5 standard, the member will have one term to raise the GPA in order to maintain membership. If the student graduates with a GPA below 3.5, the Phi Theta Kappa notation will be removed from the college transcript.

Sinclair Honors Program

Building 10, Room 10339, (937) 512-4331, Dayton Campus

Highly motivated students who love to learn may find the Sinclair Honors Program is for them. Designed to meet special academic and leadership needs, the program gives students the opportunity to become independent learners through in-depth study of academic disciplines. Those who qualify can participate in one of two ways: Honors Scholars program and/or individual Honors courses.

The **Honors Scholars** program provides special recognition and scholarship opportunities. Honors scholars are expected to complete five Honors experiences in at least three disciplines, including one Honors Interdisciplinary course, and maintain a grade point average of 3.25 or higher.

With the instructor's permission, students can enroll in **individual Honors** courses, although students with no GPA or a GPA under 3.25 must see the Honors director or counselor for permission. To receive Honors credits, students must earn an "A" or "B" grade in the course. Earned Honors credit is recorded on their transcript. Students may earn their Honors recognition by successfully completing Honors designated courses, seminars and/or contracts.

For an application form and further information, contact the director of Honors, Derek Petry, derek.petry@sinclair.edu, Room 10339, Dayton Campus, (937) 512-4331, www.sinclair.edu/about/offices/honors.

Sigma Alpha Pi

Building 8, Room 8025, (937) 512-2509, Dayton Campus

The National Society of Leadership and Success—Helping Students Discover and Achieve Their Dreams. The Sinclair Community College chapter of Sigma Alpha Pi is designed to help individuals create the lives they desire by helping them discover what they truly want to do, and giving them the support, motivation, and tools to achieve their goals.

Monthly high impact presentations are delivered via Internet broadcast or DVDs. The presenters are nationally renowned keynote speakers talking about a wide variety of topics. Success Networking Teams (SNT) are formed and come together to network, share goals/obstacles, get advice from one another and commit to actions which achieve desired results. Each student is required to participate in a three-hour interactive DVD Leadership Training Day.

The society is a nationwide community that dramatically improves students' ability to successfully attain desired outcomes. The society guides individuals through the process of identifying and committing to focused and dedicated actions that lead to their personal success.

Ponnie Kendell Leadership Development Center

Where to go to relax

Building 8, Room 8025, (937) 512-2509, Dayton Campus

The Leadership Development Center provides lots of opportunities to get involved outside the classroom. The **Student Leadership Development office serves as a contact point for faculty, staff and student organizations to schedule activities or to use the Leadership Development Center.**

Located in the lower level of Building 8, the center includes:

- Stage area
- Computers
- Game room
- Tartan Cantina
- Conference rooms
- Area for dances, programs and service work.

Take part in activities such as:

- Leadership development training programs
- Competitive games
- Tournaments
- Annual cultural events
- Success seminars
- Educational workshops

Be sure to check out the full range of **scheduled activities** and services information offered throughout the term at www.sinclair.edu/student/leader.

Athletics

www.sinclair.edu/athletics

Building 8, Room 8023, (937) 512-2860, Dayton Campus

Intercollegiate Sports

Sinclair's intercollegiate sports program is quite diverse. Students can choose from four men's intercollegiate teams (basketball, tennis, baseball and golf) and three women's teams (basketball, volleyball and tennis).

As a member of the National Junior College Athletic Association, Sinclair participates with 30 other community colleges in Region XII, which includes a three-state area (Ohio, Michigan and Indiana).

Athletic scholarships are available in all seven sports. Additional information can be obtained by contacting the appropriate coach, (937) 512-2860:

Jeff Price	Men's Basketball
K.C. Gan	Women's Volleyball
Don Cundiff	Golf
TBA	Men's Tennis
Jeff Dillon	Women's Basketball
Steve Dintaman	Men's Baseball
Kristen Gibson	Women's Tennis

Physical Activity Center (PAC)

Whatever the age, or fitness goals, students will find a welcoming haven for both body and spirit at the PAC at the Dayton Campus. Its multi-level impressive facilities include:

- six-lane swimming pool and diving well
- gymnasium
- aerobic, self defense, T'ai Chi, Yoga and Pilates room
- weight room with cardiovascular machines, free-weight area and a variety of selectorized resistance equipment.

In addition, a multipurpose fieldhouse features a 1/9 mile running track; tennis, and badminton courts; indoor group cycling area; and a netting system for golf classes.

There are also fully equipped men's and women's locker facilities with amenities, a sports medicine training room and athletic locker rooms. Sinclair students, faculty, staff and alumni can enjoy open times or sign up for a full term class.

Wellness & Performance Lab

Building 8, Room 8L13, (937) 512-2860, Dayton Campus

Through the Wellness & Performance Lab, the Physical Education department and Dietetics & Nutritional Management department offer a menu of assessment services, carried out by students under close faculty supervision. Services include body composition analysis, nutrition analysis and nutrition assessment follow-up sessions. These services are offered at a modest cost to Sinclair faculty, staff and students as well as to members of the community. To learn more about these services, contact the Physical Education department or the Dietetics & Nutritional Management department.

Arts & Culture

Throughout the year, the **Art department** actively works to enhance student learning and enrich the Miami Valley's cultural landscape by hosting gallery exhibits featuring the work of professional artists, faculty, and students. Galleries serve as an educational resource for the entire community and its mission is to advocate and encourage the various forms of artistic expression.

Gallery hours vary depending upon campus schedules. The galleries, mostly in Building 13, Dayton Campus, include:

- the Burnell Roberts Triangle Gallery
- Works on Paper Gallery
- Hypotenuse Gallery
- Student Galleries along corridors
- Walkway Gallery
- African Art Exhibit
- Zone VI Photography Gallery

The **Music department** offers a wide variety of musical performances and events. The arts calendar is filled with student choir performances, guest artists, symphonies and much more.

Typical musical performances in Blair Hall, Dayton Campus, include:

- African-American Gospel Choir
- Bluegrass Saturdays
- Chamber Choir
- Classical Guitar Ensemble
- Community Concert Band and Wind Symphony
- Concert Chorale
- Concert Handbell Choir
- Jazz Ensemble
- Men's, Women's and Youth Wind ensembles
- Miami Valley Symphony Orchestra
- Sinclair Singers

Theatre at Sinclair

www.sinclair.edu/arts

Blair Hall, Building 2, Dayton Campus

Entertainment lovers of the Miami Valley have come to know and praise the performances offered by Sinclair students and community members at Blair Hall Theatre (Building 2), the perfect setting for Sinclair Theatre productions and music department concerts.

Parking for Blair Hall events is available free of charge after 6:00 p.m. and on weekends at public meters on Fourth Street.

Parking Lot B across the street from Building 2 is also free after 6:00 p.m. on Fridays and Saturdays and all day Sunday.

For weekday matinee performances, patrons must use student and public parking as indicated.

For those who want to act on stage or work behind the scenes, Sinclair's performing arts has something for everyone. The Guest Artist and Lecture Series, and Liberal Arts, Communication & Social Sciences division, in cooperation with Student Leadership Association and the Student Leadership Advisory Board, offers students a wide variety of events, performances, presentations and activities.

the Clarion

Building 8, Room 8027, (937) 512-2744, Dayton Campus

www.sinclairclarion.com

clarion@sinclair.edu

Sinclair Community College's student newspaper operates as a public forum for the students of the college. Published weekly during the regular academic year and once during the summer term, anyone interested may pick up a new edition every Tuesday during the term.

"Dedicated to the Cause of Communication," *the Clarion* is produced by students for students. Students may become involved in reporting, graphic design, editing, online reporting and web support, photography, advertising, and marketing. Some areas provide students opportunities to earn college credit for their work and be paid as student assistants. Scholarships are also available.

An award winning publication, *the Clarion* was honored recently with three Gold Circle Awards for 2009 from the Columbia Scholastic Press Association at Columbia University, and also was honored with a 2010 Ohio Newspaper Association award for editorial writing.

Additionally, *the Clarion*, with the support of the *Dayton Daily News*, hosts an annual journalism workshop for area high school students.

To become involved with *the Clarion*, contact the office at (937) 512-2744 or by e-mail at clarion@sinclair.edu.



Degrees & Programs

Whatever students choose to study, they are going to need to complete specific course work and meet certain prerequisites. Be sure to plan the program with an academic advisor or faculty advisor.

The programs, certificates, and short term certificates follow the division information, and are listed in alphabetical order.

To be successful, students must:

- Determine the transferability of all courses before taking classes at Sinclair. **Remember: the transfer school has the final determination of what courses will be accepted for that school's degree requirements.**
- Plan the program **carefully with both a Sinclair academic advisor and an advisor at the transfer school.**

Graduates of a University Parallel program will receive either an Associate of Arts or an Associate of Science degree and will usually be given junior status at the four-year transfer school.

University Parallel programs are suggested programs of study for those who ultimately plan to major, at a four-year school, in one of the areas listed on the following pages.

Transferability of all courses should be determined BEFORE students begin taking classes at Sinclair. Remember that the transfer school has the final determination of what courses will be accepted for that school's degree requirements.

A Vision for General Education

We believe in unlimited human potential. General Education is a process whereby lifelong learners grow and fulfill that potential. General Education supports individuals in the quest to become whole, complete persons by encouraging development in areas such as thought, communication, values, creativity, feeling, adaptability and awareness. General Education provides foundation skills necessary for successful living in the ever-changing present and future global environment.

In addition to encouraging uniqueness and personal development, General Education provides the commonalities which enable us to collaborate and achieve community. Indeed, as everyone faces the challenges inherent in human existence, General Education is a key to solving the problems of survival for individuals, communities, nations and the species.

2012
Semesters
sinclair.edu/semesters

General Education

A Definition

According to Sinclair's regional accrediting agency, The Higher Learning Commission of the North Central Association of Colleges and Schools (NCA), General Education consists of "understanding and appreciating diverse cultures, mastering multiple modes of inquiry, effectively analyzing and communicating information, and recognizing the importance of creativity and values to the human spirit."

NCA's statement on General Education also adds that these general education elements "allow people to live richer lives," and also are a "foundation for most careers and for the informed exercise of local, national, and international citizenship." The commission expects institutions of higher learning to address these important ends.

Finally, in helping to define general education, NCA states, "general education is intended to impart common knowledge and intellectual concepts to students and to develop in them the skills and attitudes that an organization's faculty believes every educated person should possess."

Through Sinclair's courses and programs of study, students acquire breadth of knowledge and gain competence to achieve independent intellectual inquiry. Courses must also stimulate understanding of personal, social, and civic values.

Sinclair Honor Code

The Sinclair Honor Code stems from the General Education competency relating to Values, Citizenship, Community.

As a member of the Sinclair Community College community of students, faculty, and staff, I will uphold the values of citizenship, social-responsibility, and personal accountability. I will maintain the highest standards of professional and academic ethics. I will uphold my personal integrity, dignity, and self-respect by being fair and honest at all times and by treating all individuals with respect. By honoring these ideals, I will be building a better future for myself, my college, and my local, regional, and global communities.

General Education Core Course Requirements

In order to determine what courses fulfill the requirements for general education and are applicable to the student's degree, he or she should see an academic advisor.

Each degree seeking student must complete a core of courses in the areas of communication, English, social science, humanities, mathematics and computer literacy. In addition to providing educational breadth, these courses support the development of the across-the-curriculum competencies listed below and on the next page.

General Education Course Requirements

At Sinclair Community College, General Education course requirements may be met by successful completion of:

- the Ohio Transfer Module* **, and
- BIS 105 or 160 (or ALH 104 for selected allied health programs; and ETD 198 or OPT 198 for selected engineering programs), and
- COM 206 or 211 or 225

* For some programs, one or more of the following MAT courses may be required instead of the Ohio Transfer Module Math course: MAT 101, 102, 105, 106, 109, 131, 191.

** For A.A.S. and A.T.S. programs, completion of the entire Ohio Transfer Module may not be required for degree completion.

Competencies Across the Curriculum & Measurable Outcomes

Oral Communication

is the creation of common understanding through the use of verbal and non-verbal messages in a variety of contexts.

At the completion of the associate degree at Sinclair, the student should be able to:

- Organize ideas in a logical and purposeful way, using effective verbal and non-verbal skills to explain those ideas in a variety of oral communication interactions
- Compose and deliver oral messages appropriate to an intended audience
- Acknowledge diverse opinions, cultural and individual differences in communication interactions
- Paraphrase information and opposing points of view in conversation
- Demonstrate understanding and use of attentive, effective, and respectful listening behaviors in oral communication situations
- Phrase questions in order to obtain information in a variety of interactions
- Use communication skills to manage conflict

Written Communication

is the written expression of clear ideas in standard English and the ability to analyze and interpret college level material.

At the completion of the associate degree at Sinclair, the student should be able to:

Apply the stages of the writing process (prewriting, drafting, revising, and editing) a document

- Identify suitable topics and controlling ideas
- Develop suitable topics and controlling ideas
- Generate and select logical and sufficient evidence/support
- Arrange ideas appropriately
- Engage in purposeful revision and editing (self-assessment, provide feedback to others, respond to assessment, etc.)
- Shape messages to appeal to multiple audiences and situations
- Compose works that apply the correct structures of composition:
 - Coherent paragraphing
 - Intelligible sentence structure
 - Precise and varied word choice
 - Correct spelling, grammar, and mechanics

Integrate Sources

- Select credible and relevant sources using the library, electronic resources, and/or field research
- Synthesize multiple sources to support one central idea
- Incorporate sources (using summary, paraphrase, and quotation)
- Cite and document appropriately for specific discipline

Read and Respond Critically

- Identify relationships between/among main points and supporting ideas
- Identify explicit and implicit ideas
- Evaluate effectiveness of written works
- Develop responses to readings that reflect higher level thinking skills

Critical Thinking /Problem Solving

is the application of higher order analytical and creative cognitive processes.

At the completion of the associate degree at Sinclair, the student should be able to:

- Raise relevant questions
- Articulate ideas or problems
- Organize observable data into useful formats
- Use appropriate problem solving methods
- Exhibit openness to alternative ideas
- Construct measures to evaluate appropriateness, truthfulness, usefulness or validity of an idea or argument
- Demonstrate analysis of information to support a chosen position with attention to consequences
- Recognize logical fallacies

Values/Citizenship/Community

is an awareness of personal obligations and responsibilities in one's community of influence.

At the completion of the associate degree at Sinclair, the student should be able to:

- Examine personal values
- Reflect on personal values
- Demonstrate recognition of different value systems
- Display behavior consistent with the ethical standards within a discipline or profession
- Act as a responsible citizen in a variety of communities
- Exhibit behavior congruent with policies contained in the Sinclair *Student Handbook*, including the Sinclair Honor Code
- Take responsibility for actions
- Demonstrate honesty in a variety of contexts
- Respect the rights of others
- Demonstrate respect for diverse cultures
- Understand the expectations, obligations, and processes of local and global citizenship

Information Literacy

is the ability to effectively locate, evaluate, and use information.

At the completion of the associate degree at Sinclair, the student should be able to:

- Formulate a thesis and questions based on need
- Identify appropriate investigative methods
- Access information using library resources, electronic resources and/or field resources
- Analyze information
- Evaluate information
- Organize information systematically and appropriately
- Use information legally

Computer Literacy

The ability to apply concepts and terminology in the basic operation of computers.

At the completion of the associate degree at Sinclair, the student should be able to:

Utilize electronic mail applications

- Create e-mail messages
- Manage mailboxes
- Use e-mail features (possible examples: open, reply, forward, open attachments, and scan for viruses)

Utilize Internet applications

- Navigate between and within Web sites
- Select appropriate search engines for desired information
- Construct and refine searches

Utilize word processing applications

- Create, format, and edit documents for readability and grammar
- Incorporate word processing features as needed: (possible examples: creating tables, importing graphic objects, inserting headers/footers, and designing layout)

Utilize operating system software and data management skills

- Employ desktop operating skills (use mouse buttons or keyboard shortcuts)
- Apply appropriate file and disk management techniques (rearrange files, copy, delete, rename, and backup data)



Degrees

Sinclair Community College offers many career paths to students of all ages and backgrounds.

Included are University Parallel programs, which transfer to four-year colleges and universities.

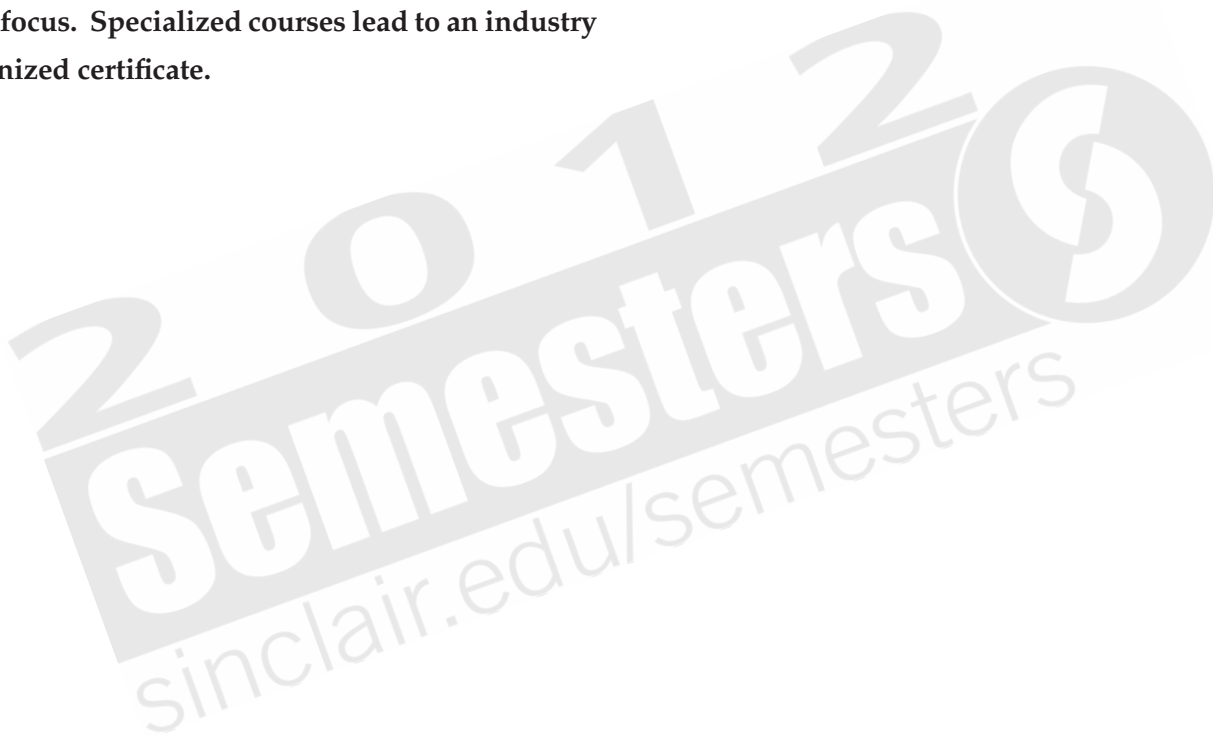
Career programs prepare students to enter a particular job/vocational area and lead to an associate of applied science degree.

Individualized degrees are designed by students with the help of the coordinator for Associate of Technical Study and Associate of Individualized Study.

Certificate programs prepare students for a particular career area, but not at the level required for an associate degree. Short Term Technical certificates are designed with work force preparation as the primary focus. Specialized courses lead to an industry recognized certificate.

Degrees

- A.A. - Associate of Arts
- A.A.S. - Associate of Applied Science
- A.S. - Associate of Science
- A.T.S. - Associate of Technical Study
- A.I.S. - Associate of Individualized Study



University Parallel Programs (A.A. & A.S.)

These programs transfer to four-year colleges and universities.

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Career Programs (A.A.S.)

These programs prepare students to enter a particular job/vocational area and lead to an associate of applied science degree. (May or may not transfer to a four-year institution.)

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These programs of study prepare students for a particular career area, but not at the level required for an associate degree.

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Individualized Degrees (A.I.S., A.T.S.)
**These are designed by students with help
of coordinator.**

Associate of Individualized Study	234
Associate of Technical Study	234
Advanced Technical Intelligence	235
Cyber Security & Computer Forensics	236

Specialized Courses
**Single courses that lead to an industry
recognized certificate.**

Basic Police Officer Training (CJS 280 & CJS 281)	238
Nurse Aide Training (ALH 120)	239





University Parallel Programs

2012
Semesters 
sinclair.edu/semesters

University Parallel

Description

The Transfer Module includes 54-60 credit hours of introductory courses in these areas: English Composition, Mathematics, Natural and Physical Sciences, Social and Behavioral Sciences and Arts/Humanities.

Type of Degree or Certificate

Transfer Module

54-60 Total Credit Hours

See Transfer Chapter,
page 43.

Sinclair Transfer Module

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 this program.

English Composition/Oral Communication

(minimum 6 quarter hours - met by ENG 111 & 112)

ENG 111	English Composition I	(3)
ENG 112	English Composition II	(3)
ENG 113	English Composition III	(3)
ENG 250	Personal Essay: Advanced Composition	(3)
COM 211	Effective Public Speaking	(3)

Mathematics

(minimum of 3 quarter hours)

MAT 108	Math & the Modern World	(3)
MAT 116	College Algebra	(5)
MAT 117	Trigonometry	(4)
MAT 122	Statistics I	(4)
MAT 132	Technical Mathematics II	(5)
MAT 133	Technical Mathematics III	(5)
MAT 151	Introduction to Mathematical Modeling	(3)
MAT 201	Calculus & Analytic Geometry I	(5)
MAT 202	Calculus & Analytic Geometry II	(5)
MAT 203	Calculus & Analytic Geometry III	(5)
MAT 204	Calculus & Analytic Geometry IV	(5)
MAT 215	Differential Equations	(5)
MAT 216	Elements of Linear Algebra	(4)
MAT 218	Calculus for Business & Economics	(5)
MAT 220	Statistics II	(4)

Natural & Physical Sciences

(minimum of 9 quarter hours)

AST 101/107	Survey of Astronomy	(4)
AST 111/117	Introduction to Astronomy	(4)
AST 112/118	The Solar System	(4)
AST 113/119	Stars, Galaxies, & Cosmology	(4)
BIO 111/117	General Biology I	(4)
BIO 112/118	General Biology II	(4)
BIO 113/119	General Biology III	(4)
BIO 121/127	Human Anatomy & Physiology I	(5)
BIO 122/128	Human Anatomy & Physiology II	(5)
BIO 141/147	Principles of Anatomy & Physiology I	(4)
BIO 142/148	Principles of Anatomy & Physiology II	(4)
BIO 143/149	Principles of Anatomy & Physiology III	(4)
BIO 171	Principles of Biology I	(5)
BIO 172	Principles of Biology II	(5)
BIO 173	Principles of Biology III	(5)
BIO 205/206	Microbiology	(4)
BIO 222	Evolution	(3)
BIO 225/226	Ecology	(4)
BIO 235/236	Genetics	(5)
CHE 141/147	College Chemistry I	(4)
CHE 142/148	College Chemistry II	(4)
CHE 143/149	College Chemistry III	(4)

CHE 151/157	General Chemistry I	(5)
CHE 152/158	General Chemistry II	(5)
CHE 153/159	General Chemistry III	(5)
CHE 201/207	Organic Chemistry I	(5)
CHE 202/208	Organic Chemistry II	(5)
CHE 203/209	Organic Chemistry III	(5)
GLG 141/147	General Geology I	(4)
GLG 142/148	General Geology II	(4)
GLG 143/149	General Geology III	(4)
GLG 144	Geological Field Trips	(4)
PHY 100/110	Introduction to Physics	(4)
PHY 104/119	Sound, Light & Modern Physics	(4)
PHY 131	Technical Physics I	(4)
PHY 132	Technical Physics II	(4)
PHY 141	College Physics I	(4)
PHY 142	College Physics II	(4)
PHY 143	College Physics III	(4)
PHY 201/207	General Physics I	(6)
PHY 202/208	General Physics II	(6)
PHY 203/209	General Physics III	(6)

Social & Behavioral Sciences

(minimum of 9 quarter hours from at least two areas)

ECO 216	Principles of Macroeconomics	(4)
ECO 218	Principles of Microeconomics	(4)
GEO 101	Physical Geography	(4)
GEO 102	Human Geography	(3)
GEO 201	World Regional Geography I	(3)
GEO 202	World Regional Geography II	(3)
HIS 219	Survey of the Middle East	(3)
PLS 101	American Federal Government I	(3)
PLS 102	American Federal Government II	(3)
PLS 103	State Government	(3)
PLS 104	Urban Government	(3)
PLS 200	Political Life, Systems & Issues	(4)
PLS 201	International Relations	(4)
PSY 119	General Psychology	(5)
PSY 121	General Psychology I	(3)
PSY 122	General Psychology II	(3)
PSY 160	African-American Psychology	(3)
PSY 205	Child Development	(4)
PSY 206	Adolescent & Adult Psychology	(3)
PSY 208	Life Span Human Development	(5)
PSY 217	Abnormal Psychology	(4)
PSY 220	Personality Psychology	(4)
PSY 225	Social Psychology	(4)
PSY 228	Psychology in the Work Place	(4)
PSY 242	Educational Psychology	(4)
SOC 111	General Sociology I	(3)
SOC 112	General Sociology II	(3)
SOC 120	General Sociology	(5)
SOC 145	Comparing Cultures	(3)
SOC 160	Social Patterns in Aging	(3)
SOC 205	Social Problems	(4)
SOC 208	Sociology of American Cities	(3)
SOC 215	Cultural Diversity	(4)
SOC 226	Criminology	(3)

University Parallel

Transfer Module

Continued

See Transfer Chapter,
page 43.

University Parallel Transfer Module

Continued

See Transfer Chapter,
page 43.

UNIVERSITY PARALLEL

Arts & Humanities

(minimum of 9 quarter hours from at least two areas)

ART 101	Introduction to Art	(3)
ART 102	Art Appreciation: Art Media	(3)
ART 125	African Art	(3)
ART 231	Art of the Ancient World	(3)
ART 232	Art of the Medieval & Renaissance Worlds	(3)
ART 233	Art of the Modern World	(3)
ART 235	History of Photography	(3)
ART 236	History of Women Artists	(3)
ART 237	American Art History	(3)
DAN 155	Dance History	(3)
DAN 157	Dance Appreciation	(3)
HIS 101	United States History (1607-1815)	(3)
HIS 102	United States History (1815-1919)	(3)
HIS 103	United States History (1919-Present)	(3)
HIS 105	African-American History	(4)
HIS 111	Western Civilization (0-1300)	(3)
HIS 112	Western Civilization (1300-1815)	(3)
HIS 113	Western Civilization (1815-present)	(3)
HIS 214	History of Southeast Asia	(3)
HIS 215	Survey of African History	(3)
HIS 216	Survey of Latin American History	(3)
HIS 217	Survey of East Asia	(3)
HIS 218	History of Ohio	(3)
HUM 125	The Human Image	(3)
HUM 130	Humanity & the Challenge of Technology	(3)
HUM 131	The Search for Utopia	(3)
HUM 135	Environmental Ethics	(4)
HUM 255	People & Religion	(3)
LIT 201	Survey of English Literature (to 1660)	(3)
LIT 202	Survey of English Literature (1660-1832)	(3)
LIT 203	Survey of English Literature (1832-present)	(3)
LIT 211	Survey of American Literature I (Colonial & Early 19th Century)	(3)
LIT 212	Survey of American Literature II (Later 19th Century)	(3)
LIT 213	Survey of American Literature III (20th Century)	(3)
LIT 217	Images of Women in Literature	(3)
LIT 227	Introduction to Shakespeare	(3)
LIT 230	Great Books of the Western World	(3)
LIT 234	Literature of Africa, Asia, & Latin American	(3)
LIT 240	Children's Literature	(3)
MUS 115	Music Appreciation	(3)
MUS 131	Survey of Musical Styles I	(3)
MUS 132	Survey of Musical Styles II	(3)
MUS 133	Survey of Musical Styles III	(3)
PHI 204	Great Books: Philosophy	(4)
PHI 205	Introduction to Philosophy	(4)
PHI 206	Introduction to Ethics	(4)
REL 111	Eastern Religions	(4)
REL 112	Western Religions	(4)
REL 135	American Religious Movements	(4)
REL 204	Great Books: The Bible & Western Culture	(4)
THE 105	Theatre Appreciation	(3)
THE 201	History of Theatre I	(3)
THE 202	History of Theatre II	(3)
THE 203	History of Theatre III	(3)

Art*

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 this program.

I. College Foundation (2 hours)

SCC 101 Student Success Experience

II. Ohio Transfer Module (54 hours)

Completion of the Ohio Transfer Module as follows:

English – 9 hours ENG 111, 112, 113

Communication - COM 211 - 3 hours

Mathematics - 3 hours from OTM

Natural & Physical Science - 9 hours from OTM

Social & Behavioral Science - 9 hours from OTM

Arts & Humanities - 21 hours

ART 231, 232, 233 - 9 hours

ART 125 or 236 - 3 hours

Choose two of the following courses not used above: ART 125,

ART 235, ART 236, ART 237 - 6 hours

One additional Arts & Humanities course from the OTM
which must be other than ART – 3 hours

III. Computer (3 hours)

BIS 160 Introduction to Word, PowerPoint & Excel

IV. Foundation Art & Design (15 hours)

ART 111, 112, 113

ART 108

ART 131

V. Fine Art Core (7 hours)

ART 161

ART 195, 295

ART 270 (1 hour)

VI. Fine Art Concentration (12 hours)

One sequence required:

ART 121, 122, 123

ART 132, 133, 251

ART 141, 142, 143

ART 162, 163 and photography elective

ART 211, 212, 213

ART 216, 217, 218

VII. Elective (8 hours)

Choose 8 hours of ART studio courses not used above.

* Sinclair's Art department is accredited by the National Association of Schools of Art and Design (NASAD).

University Parallel

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 the students' creative thinking abilities with its studio and art history courses.

Type of Degree or Certificate

Associate of Arts

Program Code ART.AA

101 Total Credit Hours

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.

University Parallel

Description

The Associate of Arts degree program in Liberal Arts & Sciences is designed for students who are planning to transfer to a four-year college or university and pursue baccalaureate degree programs such as Education, English, Geography, History, Modern Languages, Philosophy, Political Science, Psychology, Social Work, Sociology, etc. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. In addition, this degree will fulfill the requirements for the Ohio Transfer Module at other Ohio public colleges and universities.

Type of Degree or Certificate

Associate of Arts

Program Code LA.AA

94 Total Credit Hours

Transfer to Four Year

The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. In addition, this degree will fulfill the requirements for the Ohio Transfer Module at other Ohio public colleges and universities.

Associate of Arts in Liberal Arts & Sciences

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 this program.

- I. College Foundation (2 hours)**
SCC 101 Student Success Experience, 2 hours
- II. Ohio Transfer Module (54 hours)**
English (6 hours)
Math (3 hours)
Natural & Physical Sciences (9 hours)
Social & Behavioral Sciences (9 hours)
Arts & Humanities (9 hours)
- III. English Composition Series (3 hours)**
ENG 113 English Composition III, 3 hours
- IV. Natural & Physical Science (additional 3 hours minimum from Transfer Module)**
- V. Social & Behavioral Sciences (additional 6 hours from Transfer Module)**
- VI. Arts & Humanities (additional 6 hours from Transfer Module)**
- VII. Multicultural Course (3 hours)**
ART 125 African Art, 3 hours
ART 236 History of Women Artists, 3 hours
GEO 102 Human Geography, 3 hours
GEO 201 World Regional Geography I, 3 hours
GEO 202 World Regional Geography II, 3 hours
HUM 130 Humanity & the Challenge of Technology, 3 hours
LIT 217 Images of Women in Literature, 3 hours
LIT 234 Literature of Africa, Asia, & Latin America, 3 hours
PLS 200 Political Life, Systems, & Issues, 4 hours
PSY 225 Social Psychology, 4 hours
SOC 145 Comparing Cultures, 3 hours
SOC 215 Cultural Diversity, 4 hours
- VIII. Communication (3 hours required)**
COM 206 Interpersonal Communication, 3 hours
COM 211 Effective Public Speaking, 3 hours
COM 225 Small Group Communication, 3 hours
- IX. Computer Literacy (3 hours required)**
BIS 160 Introduction to Word, PowerPoint, & Excel, 3 hours
CHE 152 General Chemistry II, 5 hours
MAT 220 Statistics II, 4 hours
PHY 220 Introduction to Computational Physics, 4 hours
- X. Electives from the Area of Emphasis, Transfer Module, or Electives list to complete 94 hours**

Associate of Arts in Liberal Arts & Sciences Electives

University Parallel

Associate of Arts

Continued

UNIVERSITY PARALLEL

	Credit Hours		Credit Hours
Arts & Humanities			
ART (any course)	3-4	PSY 180	3
DAN (any course)	1-3	PSY 214	4
HIS (any course)	3-4	PSY 218	4
HUM (any course)	3-4	PSY 235	4
LIT (any course)	3	PSY 236	4
MUS (any course)	1-3	PSY 270	1-6
PHI (any course)	4	PSY 295	1-4
REL (any course)	4	PSY 297	1-6
THE (any course)	1-3	SOC 115	4
		SOC 117	3
		SOC 125	3
		SOC 130	3
		SOC 210	3
		SOC 214	3
		SOC 216	3
		SOC 217	3
		SOC 225	3
		SOC 227	3
Modern Languages			
AFR 121	3		
AFR 122	3		
FRE 101	4		
FRE 102	4		
FRE 103	4		
FRE 201	4		
FRE 202	4		
FRE 203	4		
GER 101	4		
GER 102	4		
GER 103	4		
GER 201	4		
GER 202	4		
GER 203	4		
SPA 101	4		
SPA 102	4		
SPA 103	4		
SPA 201	4		
SPA 202	4		
SPA 203	4		
Natural & Physical Sciences			
BIO 104	3		
CHE 120	4		
CHE 121	4		
CHE 122	4		
Social & Behavioral Sciences			
AFR 111	3		
AFR 112	3		
GEO (any course)	3-4		
PLS (any course)	3-4		
PSY 124	1		
PSY 126	3		
PSY 129	3		
PSY 135	3		
PSY 141	3		
PSY 165	4		
Physical Education			
PED 200			2
PED (any activity course)			1
Note: A maximum of two hours of PED activity courses may be applied to the A.A. degree.			
Substitutions to the electives listed above may only be made by the academic advisor by permission of the dean of Liberal Arts, Communication & Social Sciences.			

University Parallel

Description

An area of emphasis is a group of courses recommended for inclusion in the associate of arts degree program for students interested in pursuing the first two years of a program leading to a baccalaureate degree in the following areas:

- African-American Studies
- Appalachian Studies
- Creative Writing
- Education
- English
- Geography
- History
- Modern Languages
- Philosophy
- Political Science
- Psychology
- Social Work
- Sociology

Students interested in pursuing the first two years of a program leading to a professional degree (Pre-Law) should meet with an academic advisor to plan their program.

Completion of all courses listed in the emphasis area will lead to notation of the emphasis area on the students' degrees. While these courses have been selected based upon ease of transferability, requirements may vary with each transfer institution. Therefore, it is recommended that students meet with an academic advisor for assistance.

Type of Degree or Certificate

Associate of Arts

Associate of Arts in Liberal Arts & Sciences Emphasis Areas

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 this program.

African-American Studies

AFR	111, 112	African-American Studies
HIS	105	African-American History
HIS	215	Survey of African History
LIT	236	African-American Literature
SOC	215	Cultural Diversity
PSY	119 or (121 & 122)	General Psychology
PSY	160	African-American Psychology
SOC	120 or (111 & 112)	General Sociology

Appalachian Studies

GEO	206	Appalachian Environment
HUM	140	Appalachian Folkways
HUM	141	Appalachia
HUM	204	Religion in Appalachia
LIT	238	Appalachian Literature
SOC	118	Appalachian Families
SOC	119	Diversity in Appalachia
SOC	270	Sociology Internship
GEO	102	Human Geography
		or
SOC	145	Comparing Cultures
		or
SOC	210	Rural Communities
		or
SOC	215	Cultural Diversity

Creative Writing (English)

ENG	250	Personal Essay: Advanced Composition
ENG	255	Creative Writing: Poetry
ENG	256	Creative Writing: Fiction
ENG	257	Freelance Writing
ENG	258	Advanced Fiction Writing
ENG	259	Writing the Novel
ENG	264	Advanced Poetry Writing

Education

EDU	100	Foundations of Education
EDU	103	Educational Technology
EDU	105	Introduction to Exceptionalities
PSY	242	Educational Psychology

Early Childhood Education: Pre-Kindergarten to Grade 3, ages birth to age 8

Middle Childhood Education: Grades 4 to 9, ages 8 to 14

Adolescent to Young Adult Education: Grades 7 to 12, ages 12 to 21

Students interested in the Education Emphasis should meet with an academic advisor to plan their program based on the four-year institution to which they plan to transfer.

English

LIT	201, 202, 203	Survey of English Literature
LIT	211, 212, 213	American Literature
LIT	227 & 230	Shakespeare & Great Books

—continued

Geography

GEO	101, 102	Introduction to Geography
GEO	201, 202	World Geography
PLS	200, 201	Political Life; International Relations
ECO	216, 218	Principles of Macroeconomics, Principles of Microeconomics
SOC	120 or (111 & 112)	General Sociology

History

HIS	101, 102, 103	U.S. History
HIS	111, 112, 113	Western Civilization
<i>Choose one of the following:</i>		
HIS	105 or 218	African-American History; History of Ohio
<i>Choose two among:</i>		
HIS	214, 215, 216, 217, 219	Non-Western History

Modern Languages

SPA	101, 102, 103	Elementary Spanish
SPA	201, 202, 203	Intermediate Spanish
FRE	101, 102, 103	Elementary French
FRE	201, 202, 203	Intermediate French
GER	101, 102, 103	Elementary German
GER	201, 202, 203	Intermediate German
<i>Select two sequences of one language and one of another.</i>		

Philosophy/Religion

PHI	204	Great Books: Philosophy
PHI	205	Introduction to Philosophy
PHI	206	Introduction to Ethics
PHI	207	Logic
REL	111	Eastern Religions
REL	112	Western Religions
REL	135	American Religious Movements
REL	204	Great Books: The Bible & Western Culture

Political Science

PLS	101, 102	American Federal Government
PLS	103	State Government
PLS	104	Urban Government
PLS	200	Political Life, Systems, & Issues
PLS	201	International Relations

Psychology

PSY	119 or (121 & 122)	General Psychology
PSY	208 or (205 & 206)	Life Span Development
PSY	217	Abnormal Psychology
PSY	220	Personality Psychology
PSY	225	Social Psychology
Plus one other course at the 200 level in Psychology		

Social Work

PSY	119 or (121 & 122)	General Psychology
SOC	120 or (111 & 112)	General Sociology
SOC	145	Comparing Cultures
SWK	206	Social Work as a Profession
SWK	211	Basic Practice Theory I
SWK	212	Basic Practice Theory II
SWK	213	Social Welfare & Social Services

Sociology

PSY	119 or (121 & 122)	General Psychology
SOC	115	Today's Changing Family
SOC	120 or (111 & 112)	General Sociology
SOC	145	Comparing Cultures
SOC	160	Social Patterns in Aging
SOC	205	Social Problems
SOC	215	Cultural Diversity

University Parallel

Associate of Arts Emphasis Areas

Continued

University Parallel

Description

The Associate of Science degree program 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, Psychology and Pre-professional programs, i.e. Medicine, Dentistry, Pharmacy, etc. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. In addition, this degree will fulfill the requirements for the Ohio Transfer Module at other Ohio public colleges and universities.

Type of Degree or Certificate

Associate of Science

Program Code LA.AS

94 Total Credit Hours

Transfer to Four Year

The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. In addition, this degree will fulfill the requirements for the Ohio Transfer Module at other Ohio public colleges and universities.

Associate of Science

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 this program.

- I. College Foundation (2 hours required)**
SCC 101 Student Success Experience, 2 hours
- II. Ohio Transfer Module (54 hours)**
English (6 hours) ENG 111, ENG 112
Math (4 hours required)
Natural & Physical Sciences (minimum 12 hour sequence)
Social & Behavioral Sciences (9 hours)
Arts & Humanities (9 hours)
- III. English Composition Series (3 hours)**
ENG 113 English Composition III, 3 hours
- IV. Natural & Physical Sciences (12-18 hours).
Select one sequence (required)**
Astronomy
AST 111, AST 112, AST 113 (4 hours each)
Biology
BIO 171, BIO 172, BIO 173 (5 hours each)
Chemistry
CHE 141, CHE 142, CHE 142 (4 hours each)
CHE 151, CHE 152, CHE 153 (5 hours each)
CHE 201, CHE 202, CHE 203 (5 hours each)
Geology
GLG 141, GLG 142, GLG 143 or GLG 144 (4 hours each)
Physics
PHY 100, PHY 104, AST 101 (4 hours each)
PHY 141, PHY 142, PHY 143 (4 hours each)
PHY 201, PHY 202, PHY 203 (6 hours each)
- V. Social & Behavioral Sciences (additional 6 hours from Transfer Module)**
From Transfer Module or Associate of Science electives list
- VI. Arts & Humanities (additional 6 hours from Transfer Module or Associate of Science electives list)**

Associate of Science

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 this program.

VII. Multicultural Course (3 hours)

- ART 125 African Art, 3 hours
- ART 236 History of Women Artists, 3 hours
- GEO 102 Human Geography, 3 hours
- GEO 201 World Regional Geography I, 3 hours
- GEO 202 World Regional Geography II, 3 hours
- HUM 130 Humanity & the Challenge of Technology, 3 hours
- LIT 217 Images of Women in Literature, 3 hours
- LIT 234 Literature of Africa, Asia, & Latin America, 3 hours
- PLS 200 Political Life, Systems, & Issues, 4 hours
- PLS 205 Model United Nations/International Issues, 3 hours
- PSY 225 Social Psychology, 4 hours
- SOC 145 Comparing Cultures, 3 hours
- SOC 215 Cultural Diversity, 4 hours

VIII. Communication (3 hours required)

- COM 206 Interpersonal Communication, 3 hours
- COM 211 Effective Public Speaking, 3 hours
- COM 225 Small Group Communication, 3 hours

IX. Computer Literacy (3 hours required)

- BIS 160 Introduction to Word, PowerPoint, & Excel, 3 hours
- CHE 152 General Chemistry II, 5 hours
- MAT 220 Statistics II, 4 hours
- PHY 220 Introduction to Computational Physics, 4 hours

X. Electives from Areas of Emphasis, Transfer Module or Electives list to complete 94 hours

Associate of Science Electives

	Credit Hours		Credit Hours
Arts & Humanities			
ART (any course)	3	PSY 218	4
DAN (any course)	1-3	PSY 235	4
HIS (any course)	3-4	PSY 236	4
HUM (any course)	3-4	PSY 270	1-6
LIT (any course)	3	PSY 295	1-4
MUS (any course)	1-3	PSY 297	1-6
PHI (any course)	4	SOC 115	4
REL (any course)	4	SOC 117	3
THE (any course)	1-3	SOC 125	3
		SOC 130	3
		SOC 210	3
		SOC 214	3
		SOC 216	3
		SOC 217	3
		SOC 225	3
		SOC 227	3
Modern Languages			
AFR 121	3		
AFR 122	3		
FRE 101	4		
FRE 102	4		
FRE 103	4		
FRE 201	4		
FRE 202	4		
FRE 203	4		
GER 101	4		
GER 102	4		
GER 103	4		
GER 201	4		
GER 202	4		
GER 203	4		
SPA 101	4		
SPA 102	4		
SPA 103	4		
SPA 201	4		
SPA 202	4		
SPA 203	4		
Natural & Physical Sciences			
BIO 104	3		
CHE 120	4		
CHE 121	4		
CHE 122	4		
Social & Behavioral Sciences			
AFR 111	3		
AFR 112	3		
GEO 204 (any course)	3		
PLS (any course)	3		
PSY 124	1		
PSY 126	3		
PSY 129	3		
PSY 135	3		
PSY 140	3		
PSY 141	3		
PSY 165	4		
PSY 180	3		
PSY 214	4		
		Other	
		ACC 121	5
		ACC 122	5
		ASL 111	3
		ASL 112	3
		ASL 113	3
		ASL 228	4
		ASL 229	4
		ASL 230	4
		COM (any course)	3
		FIN 215	3
		JOU 101	3
		JOU 102	3
		LAW 101	4
		LAW 102	4
		MAN 105	3
		MAN 205	3
		MRK 201	3
		MRK 202	3
		Physical Education	
		PED 200	2
		PED (any activity course)	1

Note: A maximum of two hours of PED activity courses may be applied to the A.S. degree.

Substitutions to the electives listed above may only be made by the academic advisor by permission of the dean of Science, Mathematics & Engineering.

Associate of Science Emphasis Areas

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 this program.

Biology

BIO	171, 172, 173	Principles of Biology I, II, III
CHE	151, 152, 153	General Chemistry I, II, III
CHE	201, 202, 203	Organic Chemistry I, II, III
MAT	201, 202, 203	Calculus & Analytic Geometry I, II, III

Chemistry

CHE	151, 152, 153	General Chemistry I, II, III
CHE	201, 202, 203	Organic Chemistry I, II, III
PHY	201, 202, 203	General Physics I, II, III
MAT	201, 202, 203, 204	Calculus & Analytic Geometry I, II, III, IV

Computational Physics

PHY	211	Introduction to Computational Methods
PHY	212	Introduction to Modeling & Simulation
PHY	220	Introduction to Computational Physics

Education

EDU	100	Foundations of Education
EDU	103	Educational Technology
EDU	105	Introduction to Exceptionalities
PSY	242	Educational Psychology

Adolescent to Young Adult Education: Grade 10 to age 21 in a math or science concentration. Students interested in the education emphasis should meet with an academic advisor to plan their program based on the four-year institution to which they plan to transfer.

Geology

GLG	141, 142	General Geology I, II and
GLG	143 or 144	General Geology III or Geological Field Trips
CHE	151, 152, 153	General Chemistry I, II, III
PHY	201, 202, 203	General Physics I, II, III
MAT	201, 202, 203, 204	Calculus & Analytic Geometry I, II, III, IV

Mathematics

MAT	117	Trigonometry
MAT	201, 202, 203, 204	Calculus & Analytic Geometry I, II, III, IV
MAT	215	Differential Equations
MAT	216	Elements of Linear Algebra

Physics

PHY	201, 202, 203	General Physics I, II, III
PHY	220	Introduction to Computational Physics
MAT	201, 202, 203, 204	Calculus & Analytic Geometry I, II, III, IV
CHE	151, 152, 153	General Chemistry I, II, III

University Parallel

Description

An area of emphasis is a group of courses recommended for inclusion in the associate of arts degree program for students interested in pursuing the first two years of a program leading to a baccalaureate degree in the following areas:

Biology
Chemistry
Computational Physics
Education
Environmental Science
Geology
Mathematics
Physics

Students interested in pursuing the first two years of a program leading to a professional degree (Pre-Chiropractic, Pre-Dentistry, Pre-Medicine, Pre-Mortuary Science, Pre-Optometry, Pre-Pharmacy, Pre-Veterinary) should meet with an academic advisor to plan their programs.

Completion of all courses listed in the emphasis area will lead to notation of the emphasis area on the students' degree. While these courses have been selected based upon ease of transferability, requirements may vary with each transfer institution. Therefore, it is recommended that students meet with an academic advisor for assistance.

Type of Degree or Certificate

Associate of Science

University Parallel

Description

The University Parallel or Transfer programs are designed for the student who wants to pursue a baccalaureate degree at a four-year institution in a business discipline. The purpose for the transfer degree program is to provide the basic core of business and general education requirements for the first two years of a four-year program. The primary objective of these programs is to provide for transfer to a four-year institution rather than preparation for a job.

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

Type of Degree or Certificate

Associate of Science

Program Code BUS.AS

98-104 Total Credit Hours

Career Opportunities

The primary objective of these programs is to provide for transfer to a four-year institution rather than preparation for a job.

Business Administration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ACC	121	Introduction to Financial Accounting	5
ENG	111	English Composition I	3
MAT	116	College Algebra	5
SCC	101	Student Success Experience	2
	_____	Social & Behavioral Sciences Elective	3
		TOTAL	18
SECOND QUARTER			
ACC	122	Introduction to Managerial Accounting	5
ENG	112	English Composition II	3
MAT	218	Calculus for Business & Economics	5
	_____	Arts & Humanities Elective	3
		TOTAL	16
THIRD QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	131	Business Communications I	3
	_____	Natural Sciences Elective	4 - 6
	_____	Arts & Humanities Elective	3
MAN	205	Principles of Management	3
		TOTAL	16 - 18
FOURTH QUARTER			
COM	211	Effective Public Speaking	3
MAT	122	Statistics I	4
	_____	Natural Sciences Elective	4 - 6
ECO	218	Principles of Microeconomics	4
MAN	225	Human Relations & Organizational Behavior	3
		TOTAL	18 - 20
FIFTH QUARTER			
	_____	Natural Sciences Elective	4 - 6
ECO	216	Principles of Macroeconomics	4
	_____	Social & Behavioral Sciences Elective	3
MRK	201	Marketing I	3
		TOTAL	14 - 16
SIXTH QUARTER			
	_____	Social & Behavioral Sciences Elective	3
	_____	Arts & Humanities Elective	6
MRK	202	Marketing II	3
LAW	101	Business Law I	4
		TOTAL	16

Communication

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 this program.

- I. College Foundation (2 hours)**
SCC 101 Student Success Experience
- II. Ohio Transfer Module (54 hours)**
Completion of the minimum requirements in each of the categories of the Transfer Module with an additional 6 credit hours from both the Social/Behavioral and Art/Humanities to equal a total of 54 hours
English - 9 hours
Mathematics - 3 hours
Natural & Physical Science - 9 hours
Social & Behavioral Science - 15 hours
(Choose from at least two areas)
Arts & Humanities - 15 hours
(Choose from at least two areas)
Choose one additional course from Ohio Transfer Module - 3 hours
- III. Computer (3 hours)**
BIS 160
- IV. Communication (22 hours)**
Required:
COM 206, 211, 220, 225, 278*
Choose three courses:
COM 201, 212, 227, 230, 235, 245, 265, 270, 285
COM 286, 287, 290, 297
JOU 101, 102, 203, 270
- V. Electives (12 hours)**
Courses must be approved by an academic advisor.

* Students should keep copies of all communication course projects, papers, etc., for completion of the capstone.

University Parallel

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 a successful transfer to a four-year college or university baccalaureate program. A communication degree can provide opportunities in journalism, speech education, business, industry, government, broadcast media, law, ministry, social services, and public relations. Through careful course selection and internship experience, 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. Specific articulation agreements have been developed with Wright State University, University of Dayton. See an academic advisor for appropriate course selection.

Type of Degree or Certificate

Associate of Arts

Program Code COM.AA

93 Total Credit Hours

Career Opportunities

Associate of Arts degrees in communication studies from Sinclair can lead to a successful transfer to four-year colleges or universities. This can provide career opportunities in such areas as communication, journalism, broadcast media, education, business, industry, government, law, ministry, social services, public relations, or provide valuable communication skills to enrich any career.

Transfer to Four Year

Specific articulation agreements have been developed with Wright State University and University of Dayton.

University Parallel

Description

The Multimedia Journalism emphasis degree is a collaboration of Communication and Journalism with the Visual Communications program to provide state-of-the-art instruction in multimedia journalism. Multimedia journalism is the fastest growing area of journalism and this degree prepares students to work as producers for news and corporation Web sites. Students may also elect to transfer to a four-year college or university baccalaureate program to continue their studies in journalism or communication.

Type of Degree or Certificate

Associate of Arts

Program Code COMMJ.AA

107 Total Credit Hours

Career Opportunities

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

Transfer to Four Year

Specific articulation agreements have been developed with Wright State University and University of Dayton.

Communication Multimedia Journalism Emphasis

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 this program.

I. College Foundation (2 hours)

SCC 101 Student Success Experience

II. Ohio Transfer Module (54 hours)

English - 9 hours

Mathematics - 3 hours

Natural & Physical Science - 9 hours

Social & Behavioral Science - 15 hours

(Choose from at least two areas)

Arts / Humanities - 15 hours

(Choose from at least two areas)

(Choose one additional course from Ohio Transfer Module – 3 hours)

III. Computer (7 hours)

BIS 160 Introduction to Word, PowerPoint, & Excel - 3 hours

CIS 137 Introduction to XHTML/JavaScript - 4 hours

IV. Communication Emphasis (22 hours)

Required:

COM 201 Introduction to Mass Communication - 3 hours

COM 206 Interpersonal Communication - 3 hours

COM 211 Effective Public Speaking - 3 hours

COM 225 Small Group Communication - 3 hours

COM 278* Communication Capstone - 1 hour

JOU 101 Journalism I - 3 hours

JOU 203 Multimedia Journalism - 3 hours

JOU 270 Journalism Internship - 3 hours

V. Electives (22 hours)

VIS 108 Typography - 3 hours

VIS 110 Design Lab Orientation - 1 hours

VIS 114 Interactive Digital Theory - 3 hours

VIS 115 Digital Video - 3 hours

VIS 117 Web Page Design I - 3 hours

VIS 118 Web Page Design II - 3 hours

VIS 146 Digital Illustration - 3 hours

VIS 147 Digital Imaging - 3 hours

* Students should keep copies of all communication course projects, papers, etc., for completion of the capstone.

Engineering University Transfer

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
SME 101 Introductory Mathematics for Engineering Applications	5
SME 110 Scientific Thought & Method	4
MAT 201 Calculus and Analytic Geometry I	5
ENG 111 English Composition I	3
TOTAL	17
SECOND QUARTER	
MAT 202 Calculus and Analytic Geometry II	5
PHY 201 General Physics I	6
PHY 207 Lab for PHY 201	
CHE 151 General Chemistry I	5
CHE 157 Lab for CHE 151	
ENG 112 English Composition II	3
TOTAL	19
THIRD QUARTER	
MAT 203 Calculus and Analytic Geometry III	5
PHY 208 Lab for PHY 202	
PHY 202 General Physics II	6
_____ Social & Behavioral Sciences Elective	3
_____ Arts & Humanities Elective	3
TOTAL	17
FOURTH QUARTER	
COM 211 Effective Public Speaking	3
MAT 204 Calculus & Analytic Geometry IV	5
PHY 203 General Physics III	6
PHY 209 Lab for PHY 203	
_____ Social & Behavioral Sciences Elective	3
TOTAL	17
FIFTH QUARTER	
ETD 211 Statics: Calculus Based	5
MAT 215 Differential Equations	5
_____ Engineering Technical Elective	3
_____ Arts & Humanities Elective	3
TOTAL	16
SIXTH QUARTER	
ETD 212 Dynamics: Calculus Based	5
ENG 113 English Composition III	3
_____ Engineering Technical Elective	3
_____ Arts & Humanities Elective	3
_____ Social & Behavioral Sciences Elective	3
TOTAL	17

Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

University Parallel

Description

The Engineering University Transfer, Associate of Science degree program is for students who plan to transfer to a four-year college or university for a degree in Engineering. This program is designed to bring freshman students up to the level of third year university students in Engineering. Course sequence is designed to meet the basic requirements of most universities. Students are strongly advised to consult the particular school they will be entering as well as a Sinclair academic counselor, before signing up for different courses.

The students who wish to earn an associate degree must complete the last thirty hours at Sinclair in order to meet residency requirements. Exceptions to this requirement must be approved in advance in writing by the dean of Science, Mathematics & Engineering.

Students need to see an academic counselor for assistance in selecting electives toward their major and acceptability by the receiving transfer institution. Choose from recommended Engineering Electives: CHE 152, EET 251, ETD 261, ETD 280, ETD 284, PHY 210, PHY 211, PHY 212, PHY 220. Remaining electives can be selected from the Ohio Transfer Module.

Program Prerequisites

- Successful placement into declared major (see an academic advisor).
- 12 credit hours of college level course work with a grade of "C" or better.

Type of Degree or Certificate

Associate of Applied Science

Program Code ESUP.AS

103 Total Credit Hours

Transfer to Four Year

Note: University of Dayton / Sinclair Dual Admission – Students planning a future in engineering technology should consider dual admission to Sinclair and the University of Dayton. Students who complete an associate degree in a qualifying Science, Mathematics & Engineering major at Sinclair will be assured admissions to a corresponding program at U.D. with junior level standing. Upon becoming active U.D. students, they will receive an annual one-third tuition scholarship. Also, students will have access to some University of Dayton and Sinclair facilities while attending both institutions. Call (937) 512-2282 for details. U.T./ Sinclair Distance Education program for the Electronics & Computer Engineering Technology program.

University Parallel

Description

One of the strengths of the Sinclair program is the emphasis on public performance with an opportunity for students to perform in recitals each quarter. These performing experiences prepare the student for additional music studies or for the world of work. Students are advised to work with an academic advisor for appropriate course selection. A 20-minute solo recital is required before graduation.

Type of Degree or Certificate

Associate of Arts

Program Code MUS.AA

103-109 Total Credit Hours

Transfer to Four Year

Graduates of this program receive an associate of arts degree in music and may choose to transfer to a four-year institution for further study. This program satisfies specific articulation agreements with Wright State University and the University of Dayton.

Music Education**

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 this program.

- I. Applied Music Instrument - Major (12 hours)**
MUS 168-192 (2 credit hours, repeatable credit)
- II. Applied Music—Minor Instrument** (6 hours)**
MUS 116, 117, 118
MUS 216, 217, 218
or
MUS 171 (1 credit hour, repeatable credit)
- III. Music Theory and Sight Singing & Dictation (25 hours)**
MUS 111, 112, 113
MUS 211, 212, 213
MUS 139
MUS 141, 142, 143
MUS 241, 242, 243
- IV. Survey of Musical Styles (9 hours)**
MUS 131, 132, 133
- V. Ensemble (6 hours)**
MUS 166, 194, 195, 296 (1 credit hour, repeatable credit)
- VI. Vocal Diction (6 hours)***
MUS 106, 107, 108
(Voice majors and minors only)
- VII. Communication (12 hours)**
ENG 111, 112, 113
COM Elective*
- VIII. Natural Sciences (12 hours) & Mathematics (3 hours)**
Choose from Ohio Transfer Module
- IX. Social Sciences* (9 hours)**
- X. Music Elective* (9 hours)**

* See academic advisor.

** Sinclair's Music program is accredited by the National Association of Schools of Music (NASM).

Music Performance**

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 this program.

- I. **Applied Music—Major Instrument (24 hours)**
MUS 168-192 (4 credit hours, repeatable credit)
- II. **Applied Music—Minor Instrument (6 hours)**
MUS 116, 117, 118
MUS 216, 217, 218
or
MUS 171 (1 credit hour, repeatable credit)
- III. **Music Theory and Sight Singing & Dictation (25 hours)**
MUS 111, 112, 113
MUS 141, 142, 143
MUS 211, 212, 213
MUS 241, 242, 243
MUS 139
- IV. **Survey of Musical Styles (9 hours)**
MUS 131, 132, 133
- V. **Ensemble (6 hours)**
(1 credit hour, repeatable credit)
MUS 166, 194, 195, 296
- VI. **Vocal Diction (6 hours)**
(Voice majors and minors only)
MUS 106, 107, 108
- VII. **Communication (12 hours)**
ENG 111, 112, 113
COM Elective*
- VIII. **Natural Sciences (12 hours) & Mathematics (3 hours)**
Choose from Ohio Transfer Module
- IX. **Social Sciences* (6 hours)**

* See academic advisor.

** Sinclair's Music program is accredited by the National Association of Schools of Music (NASM).

University Parallel

Description

One of the strengths of the Sinclair program is the emphasis on public performance with an opportunity for students to perform in recitals each quarter. These performing experiences prepare the student for additional music studies or for the world of work. Students are advised to work with an academic advisor for appropriate course selection. A 30-minute solo recital is required before graduation.

Type of Degree or Certificate

Associate of Arts

Program Code PFM.AA

103-109 Total Credit Hours

Transfer to Four Year

Graduates of this program receive an associate of arts degree in music and may choose to transfer to a four-year institution for further study. This program satisfies specific articulation agreements with Wright State University and the University of Dayton.

University Parallel

Description

This program is designed for students seeking Physical Education, Exercise Science or Sport and Recreation Management careers and will fulfill the freshman and sophomore educational requirements at most four-year colleges or universities. The track in Physical Education prepares the students for a career in Sports Pedagogy, the teaching of Physical Education pre-K through 12. Students complete the two-year degree and transfer, continuing with the requirements needed to obtain their teaching license. An associate's degree with a track in Exercise Science is offered as a continuation of the Exercise Specialist certificate. (See Short Term certificates in this division) This two-year degree gives students the opportunity to study in depth the principles and methods of fitness training and then either enter professional practice or transfer for completion of a baccalaureate degree. Students who complete the Exercise Science track are also eligible to sit for the ACSM (American College of Sports Medicine) Health/Fitness Instructor. The track in Sport and Recreation management provides two years of a solid foundation in sport related business. Course work includes facility management, sport 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.

Type of Degree or Certificate

Associate of Arts

Program Code PED.AA

94-98 Total Credit Hours

Transfer to Four Year

This program is designed for students seeking Physical Education, Exercise Science or Sport and Recreation Management careers and will fulfill the freshman and sophomore educational requirements at most four-year colleges or universities.

Career Opportunities

The Physical Education program at Sinclair is designed for students who wish to transfer to four-year institutions to acquire a bachelor degree. Employment opportunities are available in teaching at elementary, intermediate or high schools, and in private and corporate fitness centers.

Physical Education

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
PED	235 Introduction to Physical Education	3
	or	
	250 Introduction to Exercise Science	
	or	
	260 Introduction to Sport Management	
ENG	111 English Composition I	3
PSY	121 General Psychology I	3
PED	200 First Aid & Safety	2
BIO	107 Human Biology	4 - 5
	or	
	111 General Biology I	
	or	
	141 Principles of Anatomy & Physiology I	
	TOTAL	15 - 16
SECOND QUARTER		
ENG	112 English Composition II	3
PED	234 Concepts of Total Fitness	3
PSY	122 General Psychology II	3
BIO	112 General Biology II	4
	or	
	142 Principles of Anatomy & Physiology II	
BIS	160 Introduction to Word, PowerPoint, & Excel	3
	TOTAL	16
THIRD QUARTER		
ENG	113 English Composition III	3
PED	239 Athletic Injuries	3
BIO	113 General Biology III	4
	or	
	143 Principles of Anatomy & Physiology III	
PED	236 Personal & Community Health	3
	or	
	261 Athletic Facility Planning & Management	
PED	263 History of Sport & Physical Education	2 - 3
	or	
	272 Methods of Teaching Strength Training and PED Elective	
ALH	130 Electrocardiography for the Healthcare Provider	
	TOTAL	18 - 19

—continued on next page

Physical Education

(continued)

Course & Title			Credit Hours
FOURTH QUARTER			
COM	206	Interpersonal Communication	3
HIS	101	United States History (1607-1815)	3
	111	Western Civilization (0-1300)	
		or	
		Humanities Elective	3
PED	237	Organization & Administration of Recreation, Fitness and Sports Programming	3
PED	193	Physical Fitness Evaluation	3
		or	
	249	Principles of Coaching & Leadership	
		or	
	268	Motor Development	
			TOTAL
			15
FIFTH QUARTER			
MAT	108	Math & the Modern World	3 - 5
		or	
	116	College Algebra	
		or	
	122	Statistics I	
HIS	102	United States History (1815-1919)	3
		or	
	112	Western Civilization (1300-1815)	
		Humanities Elective	3
COM	211	Effective Public Speaking	3
MRK	208	Sports Marketing	3
		or	
PED	251	Principles and Methods of Training	
		or	
	269	Motor Learning & Performance	
			TOTAL
			15 - 17
SIXTH QUARTER			
PED	270	Physical Education Internship	3
HIS	103	United States History (1919-Present)	3
		or	
	113	Western Civilization (1815-present)	
		SOC/BEH Elective	3
DIT	111	Nutrition for a Healthy Lifestyle	3
		or	
FIN	208	Sports Finance	
PED	238	Physical Education for the Elementary School	3
		or	
	252	Principles & Methods of Training II	
		or	
		PED Elective	
			TOTAL
			15

University Parallel

Description

Physical Education Track

DIT 111, PED 235, PED 236, PED 238, PED 263, PED 268, PED 269

Exercise Science Track

ALH 130, DIT 111, PED 193, PED 236, PED 250, PED 251, PED 252, PED 272

Sport & Recreation Management Track

FIN 208, MRK 208, PED 249, PED 260, PED 261, PED 263

University Parallel

Description

This degree is designed as a university parallel program for students to transfer to four-year institutions. This comprehensive and intense degree is focused on student development and performance training. Classroom theory is applied in a multiple performance theatre season.

UNIVERSITY PARALLEL

Type of Degree or Certificate

Associate of Arts

Program Code THEP.AA

96 Total Credit Hours

Transfer to Four Year

This degree is designed as a university parallel program for students to transfer to four-year institutions.

Theatre Performance

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 this program.

- I. College Foundation (2 hours)**
SCC 101 Student Success Experience
- II. Ohio Transfer Module (54 hours)**
English (9 hours)
Mathematics (3 hours)
Natural & Physical Science (9 hours)
Social & Behavioral Science (15 hours)
(choose from at least two areas)
Arts/Humanities: THE 105, 201, 202, 203,
LIT 217, 227, or 230 (15 hours)
(choose one additional course from Ohio Transfer Module (3 hours))
- III. Computer (3 hours)**
BIS 160 Introduction to Word, PowerPoint, & Excel
- IV. Communication (3 hours)**
COM 206 Interpersonal Communication
- V. Theatre Core (9 hours)**
THE 106 and 107 Stagecraft and Lab
THE 198 Applied Theatre Technology
(3 quarters, 1 credit hour per quarter)
THE 206 Script Analysis (3 hours)
- VI. Performance Concentration (25 hours)**
THE 111, 112, 113 Acting I, II, III (9 hours)
THE 108 Voice & Speech for the Actor (3 hours)
THE 109 Movement for the Actor (3 hours)
THE 213 Auditions (3 hours)
DAN elective (choose from Ballet, Jazz or Tap (3 hours))
MUS 171 Applied Voice (1 hour)
THE elective (courses not used above, maximum of 2 credits
for performance practicum (3 hours))

Theatre Technology

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 this program.

- I. College Foundation (2 hours)**
SCC 101 Student Success Experience
- II. Ohio Transfer Module (54 hours)**
English (9 hours)
Mathematics (3 hours)
Natural & Physical Science (9 hours)
Social & Behavioral Science
(choose from at least two areas - 15 hours)
Arts/Humanities: THE 105, 201, 202, 203, (LIT 217 or 227 or 230)
One course from Ohio Transfer Module (3 hours)
- III. Computer (3 hours)**
BIS 160 Introduction to Word, PowerPoint, & Excel
- IV. Communication (3 hours)**
COM 206 Interpersonal Communication
- V. Theatre Core (9 hours)**
THE 106 and 107 Stagecraft and Lab
THE 198 Applied Theatre Technology
(3 quarters, 1 credit hour per quarter)
THE 206 Script Analysis (3 hours)
- VI. Technical Theatre Concentration (24 hours)**
THE 103 Acting for the Non-major (3 hours)
or
THE 111 Acting I (3 hours)
THE 198 Applied Theatre Technology
(1 credit in addition to Core requirement)
THE 115 and 117 Stage Lighting Technology and
Lighting Lab (3 hours)
THE 125 and 129 Costume Fundamentals (3 hours)
THE 126 Stage Make-up (3 hours)
THE 220 Theatre Portfolio (3 hours)
THE 240 Stage Management (3 hours)
THE 298 Theatre Practicum: Technical (2 hours)
ART elective Choose **one** of the following:
ART 101 Art Appreciation: Introduction to Art (3 hours)
ART 102 Art Media (3 hours)
ART 111 Art Drawing I (3 hours)
ART 112 Art Drawing II (3 hours)

University Parallel

Description

This degree is designed as a university parallel program for students to transfer to four-year institutions. This comprehensive and intense degree is focused on the application of rigorous classroom theory and laboratory experience in theatrical productions.

Type of Degree or Certificate

Associate of Arts

Program Code THET.AA

95 Total Credit Hours

Transfer to Four Year

This degree is designed as a university parallel program for students to transfer to four-year institutions.





Career Programs

2012
Semesters 
sinclair.edu/semesters

Career Program

Description

Accountants prepare, analyze, and verify financial reports, and monitor information systems that furnish this information to managers. Managers such as business executives, bankers, government leaders, and investors all rely on financial statements and other reports prepared by accountants to summarize and interpret the multitude of financial transactions that occur in every business. An accountant must have the ability to develop and present understandable and reliable analyses of business operations which can be used in making business decisions. Students study the responsibilities of an accountant, giving insight into a business organization. Employment opportunities exist in private business and industry, government, and independent accounting firms. Positions available to graduates include accountant, cost accountant, payroll accountant, auditor, tax accountant, and financial analyst. Students who complete the accounting program can qualify to sit for the CPA exam in Ohio. They will need to complete a few additional courses and a qualifying exam (or exams) that are determined by the Ohio Board of Accountancy.

Type of Degree or Certificate

Associate of Applied Science

Program Code ACC.AAS

104 Total Credit Hours

Career Opportunities

Graduates will be prepared to fill various entry level accounting positions in public accounting, industry, and governmental organizations. These positions may be in general accounting, auditing, payroll, accounts receivable, accounts payable, finance, product costing, or taxes. Internship Option - Accounting students have the option to participate in the Internship program to earn credit hours in a work based setting. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Accounting work may apply to use their current work site with new duty or project assignments. Approval of both the worksite supervisor and internship coordinator will be required. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769. Accreditation - This program is fully accredited by the Association of Collegiate Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Accounting

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
ACC	121	Introduction to Financial Accounting	5
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
MAN	105	Introduction to Business	3
			TOTAL
			16
SECOND QUARTER			
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAT	122	Statistics I	4
ACC	122	Introduction to Managerial Accounting	5
BIS	160	Introduction to Word, PowerPoint, & Excel	3
		Arts & Humanities Elective	3
			TOTAL
			18
THIRD QUARTER			
ACC	125	Personal Computer Applications in Accounting	3
FIN	215	Corporation Finance	3
		Business Elective	3
ECO	216	Principles of Macroeconomics	4
LAW	101	Business Law I	4
			TOTAL
			17
FOURTH QUARTER			
ACC	201	Intermediate Accounting I	3
ACC	211	Cost Accounting I	3
ACC	240	Microcomputer Accounting Systems	3
ECO	218	Principles of Microeconomics	4
LAW	102	Business Law II	4
			TOTAL
			17
FIFTH QUARTER			
ACC	202	Intermediate Accounting II	3
ACC	212	Cost Accounting II	3
ACC	270	Accounting Internship	3
		or	
		Business Elective	
ACC	221	Federal Taxes I	3
MAN	205	Principles of Management	3
MRK	201	Marketing I	3
			TOTAL
			18
SIXTH QUARTER			
ACC	203	Intermediate Accounting III	3
ACC	235	Auditing Theory & Practice	3
ACC	222	Federal Taxes II	3
MAN	255	Management Information Systems I	3
ACC	270	Accounting Internship	3
		or	
		Business Elective	
COM	211	Effective Public Speaking	3
		or	
	225	Small Group Communication	
			TOTAL
			18

American Sign Language

Interpreting for the Deaf

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ASL	101	Orientation to Deafness	3
ASL	228	Intermediate American Sign Language I	4
ENG	111	English Composition I	3
PSY	121	General Psychology I	3
COM	211	Effective Public Speaking	3
			16
SECOND QUARTER			
ASL	102	Interpreting For Deaf I	3
ASL	116	Community Resources for the Deaf	3
ASL	229	Intermediate American Sign Language II	4
ENG	112	English Composition II	3
PSY	122	General Psychology II	3
			16
THIRD QUARTER			
ASL	103	Interpreting for Deaf II	3
ASL	230	Intermediate American Sign Language III	4
ASL	201	Interpreting I	4
ENG	207	Role of Interpreter	3
ENG	116	Advanced Vocabulary Building	3
			17
FOURTH QUARTER			
	—	American Sign Language Elective	3
	—	MAT Elective	4
CIS	297	Special Topic in CIS	1
	—	Arts & Humanities Elective	3
			11
FIFTH QUARTER			
ASL	202	Interpreting II	4
ASL	231	Advanced American Sign Language I	4
ASL	236	Transliterating	4
ASL	261	ASL Practicum I	3
SCC	297	Special Topic in SOC	3
			18
SIXTH QUARTER			
ASL	203	Interpreting III	4
ASL	211	Medical/Technical/Legal Interpreting	4
ASL	232	Advanced American Sign Language II	4
ASL	262	ASL Practicum II	3
			15
SEVENTH QUARTER			
ASL	204	Interpreting IV	4
ASL	212	Specialized Interpreting	4
ASL	233	Advanced American Sign Language III	4
ASL	263	ASL Practicum III	3
			15

**All students must receive a grade of "C" or better.

Career Program

Description

This program prepares students for entry level interpreting/transliterating positions in which deaf or hard-of-hearing persons and hearing persons need to communicate. It provides an opportunity for students to develop skills in American Sign Language and manually coded English. It also provides a basic understanding of deaf culture, interpreting ethics, and legislation having an impact on individuals with disabilities. This program is approved by the Ohio Department of Education to meet the standards for a five-year license as Interpreter for the Hearing Impaired. A transfer articulation is available to students planning on completing a four-year degree in Sign Language Interpreting from Wright State University.

Type of Degree or Certificate

Associate of Applied Science

Program Code ASL.AAS

108 Total Credit Hours

Transfer to Four Year

A transfer articulation is available to students planning on completing a four-year degree in Sign Language Interpreting from Wright State University.

Career Opportunities

Employment opportunities are available in areas such as educational, medical, legal, theatrical, governmental and religious interpreting.

CAREER

Career Program

Description

Architectural Technology is designed to develop student skills for efficient application of the art and science related to the building construction industry. Spacious laboratories contain the latest high tech equipment. Emphasis is on developing architectural drafting skills, both manual and computer-aided.

Type of Degree or Certificate

Associate of Applied Science

Program Code ARC.AAS

110 Total Credit Hours

Transfer to Four Year

The Architectural Technology program can be a good starting point to transfer to an architectural engineering four-year program. The educational sequence can lead to becoming a registered architect.

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.

Architectural Technology

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 this program.

Course & Title		Hours
FIRST QUARTER		
CAT	101 Architectural Drafting	3
CAT	110 Introduction to Civil and Architectural Technology	3
ETD	198 Personal Computer Applications for Engineering Technology	2
MAT	131 Technical Mathematics I	5
CAT	121 Civil Construction Blueprints & Drafting	2
ETD	199 Introduction to Computer Aided Drafting Concepts	2
SCC	101 Student Success Experience	2
		TOTAL
		19
SECOND QUARTER		
CAT	106 Commercial Construction Methods and Materials	3
CAT	131 Properties of Construction Materials	3
MAT	132 Technical Mathematics II	5
CAT	105 Residential Construction Methods & Materials	4
CAT	102 Architectural Detail Drafting	3
		TOTAL
		18
THIRD QUARTER		
CAT	216 Construction Estimating	4
PHY	131 Technical Physics I	4
CAT	201 Introduction to Revit Architecture	3
CAT	145 Introduction to OSHA Construction Standards	1
ENG	111 English Composition I	3
COM	206 Interpersonal Communication	3
		TOTAL
		18
FOURTH QUARTER		
ETD	213 Statics	4
CAT	255 Engineering Technology Project Management	4
CAT	207 Architectural Building Codes	3
CAT	240 Residential Design with CAD	4
ENG	112 English Composition II	3
		TOTAL
		18
FIFTH QUARTER		
ETD	222 Strength of Materials	4
	Social & Behavioral Sciences Elective	3
OPT	101 Introduction to Operations	3
CAT	241 Commercial Design with CAD	4
CAT	212 Mechanical Systems Design & Drawing with CAD	4
		TOTAL
		18
SIXTH QUARTER		
CAT	270 Civil Architectural Internship	3
CAT	278 Civil Architectural Capstone	4
	Arts & Humanities Elective	3
CAT	260 Architectural Energy Analysis	3
CAT	245 Soil Mechanics	4
ETD	121 Ethics for Engineering Technology Professionals	2
		TOTAL
		19

Automation & Control Technology with Robotics

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
EGR	100	Fundamental Mechanical Skills	3
ETD	101	Introduction to Engineering Design with Inventor	3
MAT	131	Technical Mathematics I	5
EET	119	Basic Electrical Circuits & Controls	4
TOTAL			17
SECOND QUARTER			
MAT	132	Technical Mathematics II	5
EGR	128	Robotics in CIM Systems	3
EGR	161	Phasic & Stamp	3
ENG	111	English Composition I	3
EET	198	Digital Technology	3
TOTAL			17
THIRD QUARTER			
EGR	144	Sensors	3
EGR	252	Teach Pendant Robot Programming	3
EGR	231	Introduction to Troubleshooting of Automated Systems	3
ETD	128	Introduction to Design Engineering Symbolology	3
EET	281	Programmable Logic Controllers	3
EET	139	Electrical Machinery	4
TOTAL			19
FOURTH QUARTER			
EGR	217	Fluid Power & Control	4
EGR	220	Machine Vision	3
EGR	210	Human-Machine Interfaces (HMIs)	3
EET	282	Advanced Programmable Logic Controller	3
EET	166	Industrial Machine Wiring & Standards	3
TOTAL			16
FIFTH QUARTER			
EGR	255	Industrial Networking	3
EGR	232	Advanced Troubleshooting of Automated Systems	3
EGR	244	Automation & Control Devices	3
COM	206	Interpersonal Communication	3
	211	Effective Public Speaking	
ENG	112	English Composition II	3
OPT	211	Applied Industrial Risk Management	3
TOTAL			18
SIXTH QUARTER			
OPT	130	Lean Operations	3
EGR	278	Automated Manufacturing Project	3
	—	Social Science Elective	3
PHY	131	Technical Physics I	4
	—	Engineering Technical Elective	3
	—	Arts & Humanities Elective	3
		or	
PHI	207	Logic	3
TOTAL			19

Career Program

Description

The Automation & 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 environment.

Type of Degree or Certificate

Associate of Applied Science

Program Code AMCT.AAS

106 Total Credit Hours

Career Opportunities

Control system technician and designer, electrical and electronic systems engineering technician, industrial equipment sales, purchasing, installation, and service, industrial maintenance technician, maintenance/ troubleshooting, manufacturing technician, plant maintenance technician, non-HVAC, prototyping and research, retrofitting/upgrading, robotic and non-robotic system integration engineering technician.

**Approved Technical Electives

EET	159	Programming for Electronics Technology	3
EGR	215	Control Systems	3
EGR	250	Robot Mechanical Unit Repair	3
EGR	251	Robot Controller Diagnostics	3
EGR	256	Automated Data Acquisition Systems	3
EGR	261	Engineering Problem Solving Using "C"	4
EGR	262	Advanced C++ Programming Engineering Applications	4
EGR	270	Engineer Internship	1-12
OPT	112	Ergonomics	3
OPT	208	Engineering Technology Economics	3

CAREER

Career Program

Description

Fully accredited by the National Automotive Technicians Education Foundation, the Associate of Applied Science in Automotive Technology provides training for students aspiring to become automotive technicians. Training in automotive management is also presented in the comprehensive program. Graduates are finding excellent employment opportunities existing in dealerships, independent services facilities, machine shops and corporate service franchises. Some graduates may also find employment as sales representatives, parts managers, service managers and as automotive instructors.

Type of Degree or Certificate

Associate of Applied Science

Program Code AUT.AAS

106 Total Credit Hours

Career Opportunities

Entry level positions for automotive service technicians are available in dealerships, independent garages, service stations, and automotive machine shops. In addition, graduates are also employed as sales representatives for parts manufacturers and distributors, as claims adjusters for insurance companies, and as automotive service instructors. Graduates with practical experience, education, a willingness to work, and a high degree of professionalism may expect to move into management positions.

Automotive Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
AUT	124	Electrical/Electronic Systems Level I	5
AUT	165	Automotive Brake System	5
ETD	198	Personal Computer Applications for Engineering Technology	2
AUT	102	Introduction to Automotive Service	3
TOTAL			17
SECOND QUARTER			
AUT	115	Engine Performance I	7
AUT	108	Engine Systems	5
OPT	211	Applied Industrial Risk Management	3
COM	206	Interpersonal Communication	3
TOTAL			18
THIRD QUARTER			
AUT	125	Electrical/Electronic Systems II	7
AUT	146	Automotive Heating & Air Conditioning	5
ENG	111	English Composition I	3
—	—	Engineering Technical Elective	3
TOTAL			18
FOURTH QUARTER			
AUT	241	Automatic Transmissions	7
AUT	142	Manual Transmissions & Drive Line	5
INT	109	Fundamentals of Tool & Manufacturing Processes	4
—	—	Social & Behavioral Sciences Elective	3
TOTAL			19
FIFTH QUARTER			
AUT	245	Engine Performance II	7
AUT	210	Steering, Suspension & Alignment	5
ENG	112	English Composition II	3
INT	141	Applied Shop Mathematics I	3
TOTAL			18
SIXTH QUARTER			
AUT	215	Automotive Service Operations	10
AUT	111	Automotive Management	3
—	—	Arts & Humanities Elective	3
TOTAL			16

The Automotive Technology program also supports the General Motors ASEP (Automotive Service Education Program), the Chrysler CAP (Chrysler Dealer Apprenticeship Program) and the American Honda programs. These programs are two-year associate degree programs in which students alternate between college training and a paid dealership work experience. For further information about these programs, contact the department chairperson.

Automotive Technology (Chrysler CAP)

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
AUT 165 Automotive Brake System	5
AUT 124 Electrical/Electronic Systems Level I	5
AUT 102 Introduction to Automotive Service	3
AUT 270 Automotive Internship	2
TOTAL	15
SECOND QUARTER	
AUT 125 Electrical/Electronic Systems II	7
OPT 211 Applied Industrial Risk Management	3
SOC 111 General Sociology I	3
AUT 270 Automotive Internship	2
TOTAL	15
THIRD QUARTER	
AUT 210 Steering, Suspension & Alignment	5
AUT 146 Automotive Heating & Air Conditioning	5
ENG 111 English Composition I	3
AUT 270 Automotive Internship	2
TOTAL	15
FOURTH QUARTER	
AUT 115 Engine Performance I	7
INT 109 Fundamentals of Tool & Manufacturing Processes	4
ETD 198 Personal Computer Applications for Engineering Technology	2
AUT 270 Automotive Internship	2
TOTAL	15
FIFTH QUARTER	
AUT 108 Engine Systems	5
AUT 142 Manual Transmissions & Drive Line	5
ENG 112 English Composition II	3
AUT 270 Automotive Internship	2
TOTAL	15
SIXTH QUARTER	
AUT 245 Engine Performance II	7
AUT 111 Automotive Management	3
INT 141 Applied Shop Mathematics I	3
AUT 270 Automotive Internship	2
TOTAL	15
SEVENTH QUARTER	
AUT 241 Automatic Transmissions	7
COM 206 Interpersonal Communication	3
HUM 130 Humanity & the Challenge of Technology	3
AUT 270 Automotive Internship	2
TOTAL	15

The Automotive Technology program also supports the General Motors ASEP (Automotive Service Education Program), the Chrysler CAP (Chrysler Dealer Apprenticeship Program) and the American Honda programs. These programs are two-year associate degree programs in which students alternate between college training and a paid dealership work experience. For further information about these programs, contact the department chairperson.

Career Program

Description

Fully accredited by the National Automotive Technicians Education Foundation, the Associate of Applied Science in Automotive Technology provides training for students aspiring to become automotive technicians for Chrysler dealerships. Specific Chrysler training is presented to apprentice student technicians as they apply course content to a co-op experience. Students attend classes for half a quarter and then apprentice at a Chrysler, Dodge or Jeep dealership the other half. Students are paid for work rendered during the co-op. Upon graduation, students will receive hundreds of hours of official Chrysler training credits that are recorded in their training system, an A.A.S. degree from the college, and a full-time job opportunity from the sponsoring dealer.

Type of Degree or Certificate

Associate of Applied Science

Program Code CAP.AAS

105 Total Credit Hours

Career Opportunities

Entry level positions for automotive service technicians are available in dealerships, independent garages, service stations, and automotive machine shops. In addition, graduates are also employed as sales representatives for parts manufacturers and distributors, as claims adjusters for insurance companies, and as automotive service instructors. Graduates with practical experience, education, a willingness to work, and a high degree of professionalism may expect to move into management positions.

CAREER

Career Program

Description

Fully accredited by the National Automotive Technicians Education Foundation, the Associate of Applied Science in Automotive Technology provides training for students aspiring to become automotive technicians for General Motors dealerships. Specific General Motors training is presented to apprentice student technicians as they apply learned content to a co-op experience. Students attend classes for half a quarter and then apprentice at a GM sponsoring dealership the other half. Students are paid for work rendered during the co-op. Upon graduation, students will receive hundreds of hours of official GM training credits that are recorded in GM's training system, an A.A.S. degree from Sinclair, and a full-time job opportunity from the sponsoring dealer.

Program Prerequisites

First time college students are encouraged to take EN 101 or EGR 160.

Type of Degree or Certificate

Associate of Applied Science

Program Code ASEP.AAS

105 Total Credit Hours

Career Opportunities

Entry level positions for automotive service technicians are available in dealerships, independent garages, service stations, and automotive machine shops. In addition, graduates are also employed as sales representatives for parts manufacturers and distributors, as claims adjusters for insurance companies, and as automotive service instructors. Graduates with practical experience, education, a willingness to work, and a high degree of professionalism may expect to move into management positions.

Automotive Technology (GM ASEP)

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AUT	124	Electrical/Electronic Systems Level I	5
AUT	102	Introduction to Automotive Service	3
AUT	108	Engine Systems	5
AUT	270	Automotive Internship	<u>2</u>
TOTAL			15
SECOND QUARTER			
AUT	115	Engine Performance I	7
ETD	198	Personal Computer Applications for Engineering Technology	2
INT	141	Applied Shop Mathematics I	3
AUT	270	Automotive Internship	<u>2</u>
TOTAL			14
THIRD QUARTER			
AUT	210	Steering, Suspension & Alignment	5
AUT	165	Automotive Brake System	5
ENG	111	English Composition I	3
AUT	270	Automotive Internship	<u>2</u>
TOTAL			15
FOURTH QUARTER			
AUT	146	Automotive Heating & Air Conditioning	5
AUT	142	Manual Transmissions & Drive Line	5
AUT	270	Automotive Internship	2
INT	109	Fundamentals of Tool & Manufacturing Processes	<u>4</u>
TOTAL			16
FIFTH QUARTER			
AUT	125	Electrical/Electronic Systems II	7
OPT	211	Applied Industrial Risk Management	3
ENG	112	English Composition II	3
AUT	270	Automotive Internship	<u>2</u>
TOTAL			15
SIXTH QUARTER			
AUT	241	Automatic Transmissions	7
COM	206	Interpersonal Communication	3
AUT	111	Automotive Management	3
AUT	270	Automotive Internship	<u>2</u>
TOTAL			15
SEVENTH QUARTER			
AUT	245	Engine Performance II	7
EGR	132	Connecting Technology & Our Lives	3
SOC	111	General Sociology I	3
AUT	270	Automotive Internship	<u>2</u>
TOTAL			15

The Automotive Technology program also supports the General Motors ASEP (Automotive Service Education Program), the Chrysler CAP (Chrysler Dealer Apprenticeship Program) and the American Honda programs. These programs are two-year associate degree programs in which students alternate between college training and a paid dealership work experience. For further information about these programs, contact the department chairperson.

Automotive Technology (Honda PACT)

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AUT	124	Electrical/Electronic Systems Level I	5
AUT	165	Automotive Brake System	5
INT	141	Applied Shop Mathematics I	3
ETD	198	Personal Computer Applications for Engineering Technology	2
			<u>15</u>
SECOND QUARTER			
AUT	125	Electrical/Electronic Systems II	7
AUT	108	Engine Systems	5
COM	206	Interpersonal Communication	3
	—	Communications Elective	3
			<u>18</u>
THIRD QUARTER			
AUT	115	Engine Performance I	7
AUT	146	Automotive Heating & Air Conditioning	5
ENG	111	English Composition I	3
AUT	102	Introduction to Automotive Service	3
			<u>18</u>
FOURTH QUARTER			
AUT	241	Automatic Transmissions	7
AUT	142	Manual Transmissions & Drive Line	5
OPT	211	Applied Industrial Risk Management	3
INT	109	Fundamentals of Tool & Manufacturing Processes	4
			<u>19</u>
FIFTH QUARTER			
AUT	245	Engine Performance II	7
AUT	210	Steering, Suspension & Alignment	5
ENG	112	English Composition II	3
			<u>15</u>
SIXTH QUARTER			
AUT	215	Automotive Service Operations	10
AUT	111	Automotive Management	3
	—	Humanities Elective	3
			<u>16</u>

The Automotive Technology program also supports the General Motors ASEP (Automotive Service Education Program), the Chrysler CAP (Chrysler Dealer Apprenticeship Program) and the American Honda programs. These programs are two-year associate degree programs in which students alternate between college training and a paid dealership work experience. For further information about these programs, contact the department chairperson.

Career Program

Description

Fully accredited by the National Automotive Technicians Education Foundation, the Associate of Applied Science in Automotive Technology provides training for students aspiring to become automotive technicians. Training in automotive management is also presented in the comprehensive program. Graduates are finding excellent employment opportunities existing in dealerships, independent services facilities, machine shops and corporate service franchises. Some graduates may also find employment as sales representatives, parts managers, service managers and as automotive instructors.

Type of Degree or Certificate

Associate of Applied Science

Program Code AUTHA.AAS

101 Total Credit Hours

Career Opportunities

Entry level positions for automotive service technicians are available in dealerships, independent garages, service stations, and automotive machine shops. In addition, graduates are also employed as sales representatives for parts manufacturers and distributors, as claims adjusters for insurance companies, and as automotive service instructors. Graduates with practical experience, education, a willingness to work, and a high degree of professionalism may expect to move into management positions.

CAREER

Career Program

Description

This is the primary degree in the Aviation Technology program which leads to an Associate of Applied Science in Aviation Technology. The students, having completed this course work, would have the background and skills to either continue on toward a bachelor degree in Aviation Science (or related field), or begin a career in the aviation field in various capacities.

Type of Degree or Certificate

Associate of Applied Science

Program Code AVIAT.AAS

91-96 Total Credit Hours

Transfer to Four Year

Transfer to four-year degree in Aviation Science (or related field).

Career Opportunities

Career opportunities are available in corporate business aviation, aerospace engineering, air traffic control aviation/airport management, and human factors.

Aviation Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
ENG	111	English Composition I	3
AVT	105	Orientation to Aviation	3
MAT	116	College Algebra	5
		or	
	131	Technical Mathematics I	
ETD	198	Personal Computer Applications for Engineering Technology	
		TOTAL	<u>2</u> 15
SECOND QUARTER			
MAT	117	Trigonometry	4 - 5
		or	
	132	Technical Mathematics II	
AVT	245	Aviation Law	3
AVT	119	Aviation Meteorology	3
	—	Arts & Humanities Elective	<u>3</u>
		TOTAL	13 - 14
THIRD QUARTER			
PHY	131	Technical Physics I	4
		or	
	141	College Physics I	
ENG	112	English Composition II	3
AVT	125	Developments in Aviation	3
AVT	270	Aviation Internship	2
AVT	110	Ground School/Private Pilot	<u>5</u>
		TOTAL	18
FOURTH QUARTER			
	—	Aviation Elective	3 - 4
	—	Engineering Technical Elective	3
	—	Engineering Technical Elective	3
	—	Engineering Technical Elective	3
AVT	211	Advanced Navigation Science	<u>3</u>
		TOTAL	15 - 16
FIFTH QUARTER			
	—	Aviation Elective	3 - 4
AVT	242	Aircraft Accident Investigation	3
AVT	240	Human Factors in Aviation	3
AVT	206	Aerodynamics	3
	—	Social & Behavioral Sciences Elective	<u>3</u>
		TOTAL	15 - 16
SIXTH QUARTER			
COM	206	Interpersonal Communication	3
AVT	247	Flight Mechanics	3
AVT	140	Introduction to Business Aviation : Opportunities, Processes and Jobs	3
	—	Aviation Elective	3 - 4
	—	Aviation Elective	<u>3 - 4</u>
		TOTAL	15 - 17

Aviation Technology

Maintenance Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
AVT	115	Ground Operations & Servicing	3
AVT	112	Performance Calculations	2
ENG	111	English Composition I	3
MAT	116	College Algebra	5
		or	
	131	Technical Mathematics I	
ETD	198	Personal Computer Applications for Engineering Technology	
			2
TOTAL			17
SECOND QUARTER			
AVT	105	Orientation to Aviation	3
AVT	117	Fluid Lines & Fittings	3
AVT	245	Aviation Law	3
MAT	117	Trigonometry	4 - 5
		or	
	132	Technical Mathematics II	
	—	Arts & Humanities Elective	
			3
TOTAL			16 - 17
THIRD QUARTER			
ENG	112	English Composition II	3
AVT	229	Aircraft Finishes	3
AVT	109	Composites For Aircraft	4
AVT	119	Aviation Meteorology	3
PHY	131	Technical Physics I	4
		or	
	141	College Physics I	
			17
TOTAL			17
FOURTH QUARTER			
AVT	218	Landing Gear	4
AVT	237	Airframe Inspections	2
AVT	140	Introduction to Business Aviation : Opportunities, Processes and Jobs	3
		Social & Behavioral Sciences Elective	3
AVT	217	Hydraulics & Pneumatics Systems	3
			15
TOTAL			15
FIFTH QUARTER			
AVT	234	Reciprocating Engines III	3
AVT	242	Aircraft Accident Investigation	3
AVT	219	Turbine Engines	4
AVT	240	Human Factors in Aviation	3
AVT	206	Aerodynamics	3
COM	206	Interpersonal Communication	3
			19
TOTAL			19
SIXTH QUARTER			
AVT	129	Propellers	5
AVT	138	Engine Fuel & Fuel Metering	5
AVT	247	Flight Mechanics	3
AVT	270	Aviation Internship	3
AVT	125	Developments in Aviation	3
			19
TOTAL			19

This program provides FAA licensed Aviation & Powerplant Mechanics with additional knowledge and training to obtain an associate degree in Aviation Technology.

Career Program

Description

This option is designed for students who have completed Sinclair's three Aviation Maintenance certificates, or hold Airframe and Powerplant certificates granted by the Federal Aviation Administration. This degree option can also be useful, without the maintenance certificates, for students who want to prepare for careers in aviation maintenance management.

Type of Degree or Certificate

Associate of Applied Science

Program Code AVIAO.AAS

103-104 Total Credit Hours

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.

Career Program

Description

This option under the primary program is designed for students who want to pursue a career as a professional pilot. The course and lab work prepare students for FAA pilot certifications. Students must meet minimum flight hour requirements and must pass FAA knowledge, oral, and flight exams.

Type of Degree or Certificate

Associate of Applied Science

Program Code APPAO.AAS

103-104 Total Credit Hours

Career Opportunities

Bureau of Labor Statistics states: "Regional airlines and low-cost carriers will present the best opportunities. Population growth and an expanding economy in the long run are expected to boost the demand for air travel contributing to job growth. New jobs will be created as airlines expand their capacity to meet this rising demand by increasing the number of aircraft in operation and the number of flights offered."

Transfer to Four Year

Transfer to four year degree in Aviation Science (or related field).

Aviation Technology

Professional Pilot & Airway Science Option

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
SCC	101 Student Success Experience	2
ETD	198 Personal Computer Applications for Engineering Technology	2
AVT	110 Ground School/Private Pilot	5
AVT	124 Private Pilot Flight	4
MAT	116 College Algebra	5
	or	
	131 Technical Mathematics I	
		TOTAL
		18
SECOND QUARTER		
ENG	111 English Composition I	3
AVT	105 Orientation to Aviation	3
AVT	150 Crew Resource Management	2
AVT	224 Instrument Pilot Flight	4
AVT	170 Instrument Pilot Ground School	5
		TOTAL
		17
THIRD QUARTER		
ENG	112 English Composition II	3
AVT	119 Aviation Meteorology	3
AVT	125 Developments in Aviation	3
AVT	211 Advanced Navigation Science	3
MAT	117 Trigonometry	4 - 5
	or	
	132 Technical Mathematics II	
		TOTAL
		16 - 17
FOURTH QUARTER		
AVT	242 Aircraft Accident Investigation	3
AVT	250 Commercial Pilot Ground School	4
AVT	263 Commercial Pilot Flight	4
PHY	131 Technical Physics I	4
	or	
	141 College Physics I	
	_____ Arts & Humanities Elective	3
		TOTAL
		18
FIFTH QUARTER		
AVT	206 Aerodynamics	3
AVT	240 Human Factors in Aviation	3
AVT	255 Multi-Engine Pilot Ground School	4
AVT	266 Multi-Engine Pilot Flight	4
	_____ Social & Behavioral Sciences Elective	3
		TOTAL
		17
SIXTH QUARTER		
COM	206 Interpersonal Communication	3
AVT	247 Flight Mechanics	3
AVT	258 Flight Instructor Ground School	4
AVT	269 Flight Instructor Flight Course	4
AVT	270 Aviation Internship	3
		TOTAL
		17

Biotechnology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CHE	120	Introduction to Chemistry or	4
	131	Technical Chemistry I	
BTN	110	Biotechnology & Bioethics	3
BTN	120	Laboratory Safety & Regulatory Compliance	3
MAT	106	Allied Health Mathematics or	4 - 5
	116	College Algebra	
SCC	101	Student Success Experience or	2 - 4
SME	110	Scientific Thought & Method	
			TOTAL 16 - 19
SECOND QUARTER			
BIO	111	General Biology I	4
BTN	130	Biological Reagents Preparation	4
ENG	111	English Composition I	3
	—	Any Elective	3
			TOTAL 14
THIRD QUARTER			
BIO	112	General Biology II	4
BTN	140	Cell Culture	3
CHE	122	Introduction to Biochemistry	4
ENG	112	English Composition II	3
			TOTAL 14
FOURTH QUARTER			
COM	206	Interpersonal Communication or	3
	211	Effective Public Speaking or	
	225	Small Group Communication	
BIS	160	Introduction to Word, PowerPoint, & Excel or	2 - 3
	161	Intermediate Word, PowerPoint, & Excel or	
	172	Integrated Solutions	
	—	Arts & Humanities Elective	3
			TOTAL 8 - 9
FIFTH QUARTER			
BIO	107	Human Biology	5
BTN	210	Protein Purification & Analysis	6
BIO	113	General Biology III	4
			TOTAL 15
SIXTH QUARTER			
BTN	230	Molecular Biology Techniques	6
	—	PSY/SOC Elective	3
BTN	201	Biotechnology Careers	2
	—	Any Elective	3
			TOTAL 14
SEVENTH QUARTER			
BTN	240	Bioinformatics	3
BTN	235	HPLC Methods	2
BTN	220	Microbiology & Fermentation Methods	4
	—	Multicultural Elective	3
	—	Arts & Humanities Elective	3
			TOTAL 15

Students entering the biotechnology program must see an academic advisor.

Career Program

Description

The Associate of Applied Science degree in Biotechnology provides a full range of courses to prepare students for entry level positions in the biotechnology field. The 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.

Type of Degree or Certificate

Associate of Applied Science

Program Code BTN.AAS

96-100 Total Credit Hours

Career Program

Description

Current and future industry/business needs require information technology support staff competent in a number of software programs and capable of integrating applications to be more productive. Support staff members, as well as all information technology workers, are required to work in teams, actively participate as customer service agents, and use new technologies to maximize business productivity. Employment opportunities continue to grow in all businesses, governmental agencies, and industries both large and small.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code BIS.AAS

93-94 Total Credit Hours

Career Opportunities

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

Internship Requirement

Business Information Systems students are required to complete an internship as part of the degree program. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Business Information Systems work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. BIS students may apply to the internship program upon completion of Intermediate Microsoft Office applications course work; however, internship credit may not be earned until completion of additional prerequisites. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769. The Business Internship office assists students in the intern search process and does not guarantee an internship location.

Business Information Systems

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 this program.

Course & Title

FIRST QUARTER

Course & Title	Credit Hours
ENG 111 English Composition I	3
BIS M85 Microsoft Word	2
MAN 205 Principles of Management	3
BIS 105 Computer Concepts	3
SCC 101 Student Success Experience	2
COM 206 Interpersonal Communication	3
TOTAL	16

SECOND QUARTER

ENG 112 English Composition II	3
LAW 101 Business Law I	4
BIS M45 Microsoft Excel	2
BIS M55 Microsoft PowerPoint	2
BIS M75 The Internet	3
BIS 102 Document Formatting	2
TOTAL	16

THIRD QUARTER

ACC 121 Introduction to Financial Accounting	5
ENG 199 Text Editing	3
MAT 105 Business Mathematics	4
BIS M25 Desktop Publishing	2
ECO 105 General Economics	3 - 4
ECO 216 Principles of Macroeconomics	
TOTAL	17 - 18

FOURTH QUARTER

BIS M35 Microsoft Access	2
BIS M86 Advanced/Expert Word	2
BIS 103 Advanced Document Formatting/Skillbuilding	4
BIS 201 Customer Service	3
CIS 130 Introduction to Web Development	3
TOTAL	14

FIFTH QUARTER

BIS M36 Advanced/Expert Access	3
BIS M46 Advanced/Expert Excel	3
BIS 215 Office Applications Practicum/Seminar	4
_____ Computer Information Systems Elective	3
_____ Business Elective	3
TOTAL	16

SIXTH QUARTER

BIS 172 Integrated Solutions	2
BIS 202 Advanced Customer Service Concepts	3
BIS 114 Records Management & Electronic Files	3
BIS 270 Business Information Systems Internship	3
_____ Arts & Humanities Elective	3
TOTAL	14

Business Information Systems

Medical Office Option

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
ENG 111 English Composition I	3
BIS 101 Personal Computer Keyboarding	2
SCC 101 Student Success Experience	2
HIM 121 Basic Medical Terminology	3
COM 206 Interpersonal Communication	3
TOTAL	13
SECOND QUARTER	
ENG 112 English Composition II	3
MAT 105 Business Mathematics	4
BIS M45 Microsoft Excel	2
BIS M85 Microsoft Word	2
HIM 122 Specialized Medical Terminology	3
TOTAL	14
THIRD QUARTER	
ENG 199 Text Editing	3
BIS M35 Microsoft Access	2
BIS M55 Microsoft PowerPoint	2
BIS 102 Document Formatting	2
MAN 205 Principles of Management	3
BIS M75 The Internet	3
TOTAL	15
FOURTH QUARTER	
BIS 114 Records Management & Electronic Files	3
HIM 260 ICD-9-CM Medical Office Coding	3
BIS 116 Medical Office Procedures	4
BIS 251 Medical Transcription I	4
BIS M86 Advanced/Expert Word	2
TOTAL	16
FIFTH QUARTER	
BIS 215 Office Applications Practicum/Seminar	4
BIS 220 Computer Applications for the Medical Office	4
BIS 201 Customer Service	3
HIM 261 CPT Medical Office Coding	3
_____ Business Elective	3-4
TOTAL	17 - 18
SIXTH QUARTER	
BIS 202 Advanced Customer Service Concepts	3
BIS 270 Business Information Systems Internship	3
LAW 101 Business Law I	4
_____ Arts & Humanities Elective	3
ECO 105 General Economics	3-4
_____ or	
216 Principles of Macroeconomics	
TOTAL	16 - 17

Career Program

Description

Current and future industry/business needs require information technology support staff competent in a number of software programs and capable of integrating applications to be more productive. Medical office support staff members, as well as all information workers, are required to work in teams, actively participate in patient customer service, and use new technologies to maximize medical office productivity. Employment opportunities include medical office receptionists, secretaries, billing/insurance clerks, transcriptionists, and medical office administrators in physicians' offices, urgent care centers, managed care organizations, research facilities, laboratories, nursing homes, and hospitals.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code BIM0.AAS

91-93 Total Credit Hours

Career Opportunities

Employment opportunities include medical office receptionists, secretaries, billing/insurance clerks, transcriptionists, and medical office administrators in physicians' offices, urgent care centers, managed care organizations, research facilities, laboratories, nursing homes, and hospitals.

Internship Requirement

Business Information Systems students are required to complete an internship as part of the degree program. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Business Information Systems work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. BIS students may apply to the internship program upon completion of Intermediate Microsoft Office applications course work; however, internship credit may not be earned until completion of additional prerequisites. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769. The Business Internship office assists students in the intern search process and does not guarantee an internship location.

CAREER

Career Program

Description

Current and future industry/business needs require information technology support staff competent in a number of software programs and capable of integrating applications to be more productive. This program combines Business Information Systems (BIS) courses with Computer Information Systems (CIS) courses to develop students' skills in computer application software, troubleshooting software, and operating systems. Employment opportunities include paraprofessional positions in information technology, online customer service, and personal computer software application troubleshooting.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code BIPCA.AAS

91-92 Total Credit Hours

Career Opportunities

Employment opportunities include paraprofessional positions in information technology, online customer service, and personal computer software application troubleshooting.

Internship Requirement

Business Information Systems students are required to complete an internship as part of the degree program. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Business Information Systems work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. BIS students may apply to the internship program upon completion of Intermediate Microsoft Office applications course work; however, internship credit may not be earned until completion of additional prerequisites. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769. The Business Internship office assists students in the intern search process and does not guarantee an internship location.

Business Information Systems

Personal Computer Applications

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
BIS	M75	The Internet	3
BIS	M85	Microsoft Word	2
MAT	105	Business Mathematics	4
SCC	101	Student Success Experience	2
COM	206	Interpersonal Communication	3
			<u>3</u>
TOTAL			17
SECOND QUARTER			
ENG	112	English Composition II	3
BIS	M45	Microsoft Excel	2
BIS	102	Document Formatting	2
LAW	101	Business Law I	4
BIS	105	Computer Concepts	3
ECO	105	General Economics	3 - 4
			<u>3</u>
			or
			Principles of Macroeconomics
TOTAL			17 - 18
THIRD QUARTER			
ACC	121	Introduction to Financial Accounting	5
BIS	M25	Desktop Publishing	2
BIS	M86	Advanced/Expert Word	2
CIS	107	Introduction to Operating Systems	3
			<u>3</u>
			Arts & Humanities Elective
TOTAL			15
FOURTH QUARTER			
CIS	130	Introduction to Web Development	3
BIS	M35	Microsoft Access	2
BIS	M55	Microsoft PowerPoint	2
ACC	125	Personal Computer Applications in Accounting	3
MAN	205	Principles of Management	3
			<u>3</u>
TOTAL			13
FIFTH QUARTER			
			Computer Information Systems Elective
BIS	M46	Advanced/Expert Excel	3
BIS	201	Customer Service	3
BIS	114	Records Management & Electronic Files	3
			<u>3</u>
TOTAL			12
SIXTH QUARTER			
CIS	265	Database Management Systems	3
BIS	M36	Advanced/Expert Access	3
BIS	172	Integrated Solutions	2
BIS	202	Advanced Customer Service Concepts	3
BIS	270	Business Information Systems Internship	3
CIS	162	Troubleshooting Desktop Applications on a Microsoft Windows Operating System	3
			<u>3</u>
TOTAL			17

Business Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	201	Introduction to Supervision	3
MAN	105	Introduction to Business	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
			TOTAL 14
SECOND QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAN	205	Principles of Management	3
MAT	122	Statistics I	4
ACC	121	Introduction to Financial Accounting	5
			TOTAL 18
THIRD QUARTER			
COM	211	Effective Public Speaking	3
MAN	225	Human Relations & Organizational Behavior	3
ACC	122	Introduction to Managerial Accounting	5
ECO	218	Principles of Microeconomics	4
			TOTAL 15
FOURTH QUARTER			
MAN	255	Management Information Systems I	3
ECO	216	Principles of Macroeconomics	4
MRK	201	Marketing I	3
	—	Social & Behavioral Sciences Elective	3
	—	Business Elective	3
			TOTAL 16
FIFTH QUARTER			
MRK	202	Marketing II	3
MAN	110	Introduction to International Business	3
MAN	241	Introduction to Supply Chain Management	3
LAW	101	Business Law I	4
			TOTAL 13
SIXTH QUARTER			
	—	Business Elective	6
	—	Management Elective	3
MAN	270	Management Internship	3 - 5
		or	
MAN	279	Business Capstone	
	—	Arts & Humanities Elective	3
			TOTAL 15 - 17

Career Program

Description

Management professionals work with people and other resources to accomplish an organization's goals. They assume a broad range of responsibilities and roles, from first-line supervision to mid-level coordination of organizational planning and operations with strategic planning executives. Managers excel in abstract logic and reasoning, computational expertise, communication, interpersonal activities and teamwork.

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 organization, and governmental agencies.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code GBM.AAS

91-93 Total Credit Hours

Career Opportunities

Opportunities for managers include supervision, office managers, management trainees, assistant managers and owners within a variety of settings, including small and medium-sized businesses, corporations, industries, non-profit organization, and governmental agencies.

Internship Option

Business Management students have the option to participate in the Internship program to earn credit hours in a work based setting. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Business Management work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769.

Career Program

Description

This area of concentration within the Management program prepares existing or potential entrepreneurs in wide variety of small business functions. In addition to general education courses and traditional management courses, the following key areas are emphasized for entrepreneurs: opportunity analysis, steps to becoming an entrepreneur, organizational structure, marketing plan development, financial plan development, and the complete business plan development. Opportunities for entrepreneurs are not limited to just self-employment, as many small "entrepreneurial" firms hire like-minded employees that understand and thrive in the higher risk environment of small enterprise.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code ENTR.AAS

95 Total Credit Hours

Career Opportunities

This degree will prepare those who want to enter into business with an entrepreneurial mindset, or to begin businesses of their own. The degree will allow students to gain knowledge in the areas of small business management; planning, financing, and marketing the business concept, products, and services. Emphasis is on general business skills, as well as on the specific skill of developing a business plan for loan approval. Potential investors and creditors rely heavily on the well prepared business plan as well as the knowledge of the entrepreneur, and this certificate is meant to meet that requirement. Additionally, a degree in entrepreneurship may help to prepare students for supervisory roles within small to medium-sized businesses.

Internship Option

Business Management Entrepreneurship Concentration students have the option to participate in the Internship program to earn credit hours in a work based setting. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Business Management Entrepreneurship Concentration work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769

Business Management Entrepreneurship Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
MAN	105	Introduction to Business	3
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
	—	Social & Behavioral Sciences Elective	3
		TOTAL	17
SECOND QUARTER			
BIS	161	Intermediate Word, PowerPoint, & Excel	3
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAT	122	Statistics I	4
ECO	218	Principles of Microeconomics	4
COM	206	Interpersonal Communication	3
		TOTAL	17
THIRD QUARTER			
ACC	121	Introduction to Financial Accounting	5
COM	211	Effective Public Speaking	3
LAW	101	Business Law I	4
MAN	205	Principles of Management	3
MRK	220	Small Business Marketing	3
		TOTAL	18
FOURTH QUARTER			
ACC	122	Introduction to Managerial Accounting	5
BIS	M35	Microsoft Access	2
MAN	110	Introduction to International Business	3
MAN	201	Introduction to Supervision	3
	—	Business Elective	3
		TOTAL	16
FIFTH QUARTER			
MRK	201	Marketing I	3
ENT	240	Small Business Finance	3
MAN	241	Introduction to Supply Chain Management	3
ECO	216	Principles of Macroeconomics	4
		TOTAL	13
SIXTH QUARTER			
ENT	260	Business Plan Development	5
MRK	236	Consumer Behavior	3
	—	Business Elective	3
	—	Arts & Humanities Elective	3
		TOTAL	14

Business Management

Supply Chain Management Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	105	Introduction to Business	3
MAN	201	Introduction to Supervision	3
COM	206	Interpersonal Communication	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
MAN	106	Introduction to RFID	2
			TOTAL
			19
SECOND QUARTER			
MAN	205	Principles of Management	3
ACC	121	Introduction to Financial Accounting	5
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAT	122	Statistics I	4
			TOTAL
			18
THIRD QUARTER			
MAN	225	Human Relations & Organizational Behavior	3
MAN	241	Introduction to Supply Chain Management	3
ACC	122	Introduction to Managerial Accounting	5
ECO	218	Principles of Microeconomics	4
LAW	101	Business Law I	4
			TOTAL
			19
FOURTH QUARTER			
MAN	242	Advanced Supply Chain Management (SCM)	3
MAN	255	Management Information Systems I	3
OPT	251	Supply Chain Operations & Logistics	5 - 6
		or	
MAN	248	DoD Acquisition Logistics Fundamentals and	
	247	DoD Systems Acquisition Management	
ECO	216	Principles of Macroeconomics	4
MRK	201	Marketing I	3
			TOTAL
			18 - 19
FIFTH QUARTER			
MAN	110	Introduction to International Business	3
MAN	210	Introduction to Project Management	3
MRK	202	Marketing II	3
			TOTAL
			9
SIXTH QUARTER			
COM	211	Effective Public Speaking	3
MAN	270	Management Internship	3 - 5
		or	
	279	Business Capstone	
		Arts & Humanities Elective	3
MAN	244	Negotiation Techniques	3
			TOTAL
			12 - 14

Career Program

Description

The AAS 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-consumer 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. SCM specialists have opportunities for management positions at all levels in virtually every type of business, throughout small and medium-sized businesses, corporations, industries, non-profit organizations, and government agencies.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code SCM.AAS

95-98 Total Credit Hours

Career Opportunities

This degree will help to prepare those who want to enter the field of general management with an emphasis on Supply Chain Management. SCM professionals have opportunities management positions in warehouses, transportation and logistics companies and many small to medium-sized businesses that purchase, inventory and transport products. This degree will allow students to gain knowledge in the areas of small business management, negotiation skills, operations and logistics, and general management.

Internship Option

Business Management Supply Chain Management Concentration students have the option to participate in the Internship program to earn credit hours in a work based setting. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Business Management Supply Chain Management Concentration work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769.

CAREER

Career Program

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 topic such as surveying, construction management and structural analysis prepares students to produce and utilize construction documents and perform basic design and analysis. The curriculum is designed to maximize articulation to four year programs emphasizing Civil Engineering Technology and Construction Engineering Technology. The degree is accredited by the Technology Accreditation Commission of ABET, which assures quality and nationally recognized excellence.

Type of Degree or Certificate

Associate of Applied Science

Program Code CEGT.AAS

109 Total Credit Hours

Transfer to Four Year

The curriculum is designed to maximize articulation to four year programs emphasizing Civil Engineering Technology and Construction Engineering Technology.

Career Opportunities

Graduates of Sinclair's Civil Engineering Technology program find jobs as designers, managers, contractors, drafters, surveyors, and estimators for government agencies, consulting firms, building and design organizations, and contractors. In addition, careers are available with firms specializing in testing services.

Civil Engineering Technology**

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CAT	101	Architectural Drafting	3
CAT	110	Introduction to Civil and Architectural Technology	3
ETD	198	Personal Computer Applications for Engineering Technology	2
MAT	131	Technical Mathematics I	5
CAT	121	Civil Construction Blueprints & Drafting	2
ETD	199	Introduction to Computer Aided Drafting Concepts	2
SCC	101	Student Success Experience	2
			TOTAL
			19
SECOND QUARTER			
CAT	106	Commercial Construction Methods and Materials	3
CAT	131	Properties of Construction Materials	3
COM	206	Interpersonal Communication	3
MAT	132	Technical Mathematics II	5
CAT	105	Residential Construction Methods & Materials	4
			TOTAL
			18
THIRD QUARTER			
CAT	123	Basic Construction Surveying	4
CAT	216	Construction Estimating	4
PHY	131	Technical Physics I	4
CAT	201	Introduction to Revit Architecture	3
ETD	261	Advanced Analytical Tools for Engineering Technology	2
CAT	145	Introduction to OSHA Construction Standards	1
			TOTAL
			18
FOURTH QUARTER			
CAT	221	Topographic Surveying & Geomatics	4
CAT	227	Introduction to GIS & GPS	3
ETD	213	Statics	4
ENG	111	English Composition I	3
CAT	255	Engineering Technology Project Management	4
			TOTAL
			18
FIFTH QUARTER			
CAT	223	Subdivision Design	4
ETD	222	Strength of Materials	4
ETD	121	Ethics for Engineering Technology Professionals	2
		Social & Behavioral Sciences Elective	3
ENG	112	English Composition II	3
OPT	101	Introduction to Operations	3
			TOTAL
			19
SIXTH QUARTER			
CAT	229	Advanced Construction Surveying	3
CAT	245	Soil Mechanics	4
CAT	270	Civil Architectural Internship	3
CAT	278	Civil Architectural Capstone	4
		Arts & Humanities Elective	3
			TOTAL
			17

** Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

Computer Aided Manufacturing

CNC Technology Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
INT	107	Principles of Manufacturing	4
INT	109	Fundamentals of Tool & Manufacturing Processes	4
INT	116	CNC Operations	3
OPT	112	Ergonomics	3
TOTAL			16
SECOND QUARTER			
INT	113	Fundamentals of CNC	3
INT	141	Applied Shop Mathematics I	3
ENG	111	English Composition I	3
ETD	198	Personal Computer Applications for Engineering Technology	2
OPT	100	Tooling & Machining Metrology	2
OPT	125	Introduction to World Class Operations	3
TOTAL			16
THIRD QUARTER			
ENG	112	English Composition II	3
ETD	199	Introduction to Computer Aided Drafting Concepts	2
COM	206	Interpersonal Communication	3
INT	142	Applied Shop Mathematics II	3
INT	204	Computer Numerical Control Lathe Programming	3
OPT	101	Introduction to Operations	3
TOTAL			17
FOURTH QUARTER			
INT	211	Advanced Computer Numerical Control	3
INT	143	Applied Shop Mathematics III	3
ETD	280	Advanced Computer Aided Drafting	3
OPT	205	Manufacturing Processes	3
—	—	Arts & Humanities Elective	3
TOTAL			15
FIFTH QUARTER			
INT	114	Jig & Fixture Design	3
INT	212	Computer Assisted Programming	3
INT	145	Shop Floor Programming	3
MAT	101	Elementary Algebra	4
OPT	126	Supervision & Team Leadership	3
TOTAL			16
SIXTH QUARTER			
INT	213	Computer Numerical Control Applications	4
INT	225	Tool Design	3
OPT	113	Coordinate Measurement	3
OPT	216	Facilities Planning	3
—	—	Arts & Humanities Elective	3
TOTAL			16

Career Program

Description

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

Type of Degree or Certificate

Associate of Applied Science

Program Code CAMCT.AAS

96 Total Credit Hours

Career Opportunities

Employment is available for foremen, planners, methods specialists, technicians, and computer numerical control programmers. Career opportunities have been plentiful for graduates, with over 90% working within their career fields.

Career Program

Description

Graduates of the Project STEP II certificate program are candidates for completion of the two-year associate degree option in Computer Aided Manufacturing. 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 value engineering.

Type of Degree or Certificate

Associate of Applied Science

Program Code CAMPM.AAS

103 Total Credit Hours

Computer Aided Manufacturing Precision Machining Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
INT	109	Fundamentals of Tool & Manufacturing Processes	4
INT	141	Applied Shop Mathematics I	3
INT	161	Machine Operations Laboratory I	8
INT	107	Principles of Manufacturing	4
			<u>19</u>
SECOND QUARTER			
INT	113	Fundamentals of CNC	3
INT	142	Applied Shop Mathematics II	3
INT	162	Machine Operations Laboratory II	8
OPT	100	Tooling & Machining Metrology	2
SCC	101	Student Success Experience	2
			<u>18</u>
THIRD QUARTER			
INT	143	Applied Shop Mathematics III	3
INT	163	Machine Operations Laboratory III	8
INT	116	CNC Operations	3
INT	145	Shop Floor Programming	3
			<u>17</u>
FOURTH QUARTER			
INT	204	Computer Numerical Control Lathe Programming	3
INT	211	Advanced Computer Numerical Control	3
MAT	101	Elementary Algebra	4
ENG	111	English Composition I	3
OPT	101	Introduction to Operations	3
			<u>16</u>
FIFTH QUARTER			
INT	114	Jig & Fixture Design	3
INT	212	Computer Assisted Programming	3
		Arts & Humanities Elective	3
ENG	112	English Composition II	3
OPT	205	Manufacturing Processes	3
ETD	198	Personal Computer Applications for Engineering Technology	2
			<u>17</u>
SIXTH QUARTER			
COM	206	Interpersonal Communication	3
OPT	206	Value Analysis	3
INT	213	Computer Numerical Control Applications	4
INT	225	Tool Design	3
		Arts & Humanities Elective	3
			<u>16</u>

Computer Information Systems

Microsoft Security Specialist Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
BIS	160	Introduction to Word, PowerPoint, & Excel	3
		or	
	161	Intermediate Word, PowerPoint, & Excel	
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
CIS	107	Introduction to Operating Systems	3
		TOTAL	16
SECOND QUARTER			
CIS	100	CIS Student Orientation for Success	2
CIS	111	Introduction to Problem Solving & Computer Programming	4
MAT	122	Statistics I	4
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
CIS	230	Computer Networks	3
		TOTAL	16
THIRD QUARTER			
COM	225	Small Group Communication	3
COM	206	Interpersonal Communication	3
CIS	265	Database Management Systems	3
CIS	272	Microsoft Windows Server Operating System	4
CIS	271	Administering a Microsoft Windows Client Operating System	4
		TOTAL	17
FOURTH QUARTER			
CIS	210	Computer Systems Analysis	3
CIS	273	Managing a Windows Network Infrastructure	4
CIS	274	Windows Directory Services Administration	4
LAW	101	Business Law I	4
MAN	205	Principles of Management	3
		TOTAL	18
FIFTH QUARTER			
ACC	121	Introduction to Financial Accounting	5
CIS	253	Securing a Windows Network Environment	4
CIS	206	Network Security I	3
ECO	218	Principles of Microeconomics	4
		TOTAL	16
SIXTH QUARTER			
CIS	207	Network Security II	3
MRK	201	Marketing I	3
		Arts & Humanities Elective	3
CIS	257	Microsoft Internet Security & Acceleration (ISA) Server	4
		or	
	259	Designing Security for Windows Networks	
CIS	278	CIS Capstone	4
		TOTAL	17

Career Program

Description

The Microsoft Security Specialist area of concentration prepares students to work in the area of computer and network security in a Microsoft Windows environment. Microsoft specific content in network protocols, encryption, wired and wireless security techniques and other topics are included. Vendor independent concepts are also included. Students will learn both day-to-day administrative skills and design concepts to achieve a more secure network setting.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code MSSC.AAS

100 Total Credit Hours

Career Opportunities

Employment opportunities in this expanding field include entry level positions such as programmers, web developers, help desk analysts, network administrators, user support specialists, network security analyst, and network engineers.

Internship Option

Computer Information System students have the option to participate in the Internship program to earn credit hours in a work based setting. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing Computer Information Systems work may apply to use their current work site with new duty or project assignments. Approval of both the work site supervisor and internship coordinator will be required. Eligibility verification, application, and approval to participate are required. For more information visit the Business Internship Web site www.sinclair.edu/academics/bps/intern/index.cfm or office in Building 5, Room 5113, (937) 512-2769.

Career Program

Description

The CIS Network Engineer area of concentration helps to prepare students in pursuit of industry certification. Students learn the basics of routing / switching and advanced technologies to prepare for the Cisco CCNA certification. The curriculum discusses networking concepts in depth, covering such areas as: how communication works in data networks and the Internet; how to use network protocol models to explain the layers of communication; describing the importance of addressing and naming schemes at various levels; how a router or switch works and their role in networks; the characteristics of routing protocols; troubleshooting concepts; the impact of VoIP applications on a network; implement basic security on a router or switch.

Course emphasizes critical thinking, problem solving, collaboration and the practical application of skills. This program is fully accredited by the ACBSP, and Sinclair is a Regional Academy within the Cisco Academy program.

Program Prerequisites

BIS 105 Computer Concepts
and
MAT 101 Elementary Algebra

Type of Degree or Certificate

Associate of Applied Science

Program Code NEEN.AAS

98 Total Credit Hours

Career Opportunities

Employment opportunities in this expanding field include entry level positions such as programmers, web developers, help desk analysts, network administrators, user support specialists, network security analyst, and network engineers.

Internship Option

See page 124.

Computer Information Systems Network Engineer Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
		or	
	161	Intermediate Word, PowerPoint, & Excel	
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
CIS	107	Introduction to Operating Systems	3
SCC	101	Student Success Experience	2
			<u>2</u>
TOTAL			16
SECOND QUARTER			
COM	206	Interpersonal Communication	3
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAT	122	Statistics I	4
CIS	111	Introduction to Problem Solving & Computer Programming	4
CIS	100	CIS Student Orientation for Success	2
			<u>2</u>
TOTAL			16
THIRD QUARTER			
CIS	241	Cisco Networking Fundamentals	7
COM	225	Small Group Communication	3
		Humanities Elective	3
CIS	265	Database Management Systems	3
			<u>3</u>
TOTAL			16
FOURTH QUARTER			
CIS	242	Cisco Router Fundamentals	7
CIS	210	Computer Systems Analysis	3
LAW	101	Business Law I	4
MAN	205	Principles of Management	3
			<u>3</u>
TOTAL			17
FIFTH QUARTER			
CIS	243	Cisco Routing in LANs	7
ACC	121	Introduction to Financial Accounting	5
ECO	218	Principles of Microeconomics	4
			<u>4</u>
TOTAL			16
SIXTH QUARTER			
CIS	270	CIS Internship	3
		or	
		Business Elective	
CIS	278	CIS Capstone	4
MRK	201	Marketing I	3
CIS	244	Cisco Routing in WANs	7
			<u>7</u>
TOTAL			17

Computer Information Systems

Network Manager Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
CIS	107	Introduction to Operating Systems	3
SCC	101	Student Success Experience	2
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	111	English Composition I	3
CIS	100	CIS Student Orientation for Success	2
			TOTAL
			18
SECOND QUARTER			
CIS	111	Introduction to Problem Solving & Computer Programming	4
CIS	230	Computer Networks	3
MAT	122	Statistics I	4
ENG	112	English Composition II	3
COM	206	Interpersonal Communication	3
			TOTAL
			17
THIRD QUARTER			
CIS	265	Database Management Systems	3
CIS	210	Computer Systems Analysis	3
CIS	271	Administering a Microsoft Windows Client Operating System	4
LAW	101	Business Law I	4
			TOTAL
			14
FOURTH QUARTER			
COM	225	Small Group Communication	3
CIS	273	Managing a Windows Network Infrastructure	4
CIS	274	Windows Directory Services Administration	4
ACC	121	Introduction to Financial Accounting	5
			TOTAL
			16
FIFTH QUARTER			
ECO	218	Principles of Microeconomics	4
MAN	205	Principles of Management	3
CIS	212	Windows Application Infrastructure	4
CIS	213	Windows Server Enterprise Administrator	4
			TOTAL
			15
SIXTH QUARTER			
CIS	270	CIS Internship	3
		or	
		Business Elective	
CIS	278	CIS Capstone	4
MRK	201	Marketing I	3
		Humanities Elective	3
		CIS Concentration	4
			TOTAL
			17

Career Program

Description

The ever increasing importance of networked computers and solutions to business problems over the past two decades has generated a need for skilled, highly trained workers in network management positions. Students in the Computer Information Systems program are provided technical skills for entry level positions in this field. Students are prepared to work in the areas of network administration, network operating systems and protocols, and business applications dependent on a networked environment. Students learn to use commercially available network and application software on local area networks and microcomputers.

Program Prerequisites

BIS 105 Computer Concepts and
MAT 101 Elementary Algebra

Type of Degree or Certificate

Associate of Applied Science

Program Code NEMA.AAS

97 Total Credit Hours

Career Opportunities

Employment opportunities in this expanding field include entry level positions such as programmers, web developers, help desk analysts, network administrators, user support specialists, network security analyst, and network engineers.

Concentration Electives

Choose two:

CIS	253	Securing a Windows Network Environment	4
CIS	257	Microsoft Internet Security & Acceleration (ISA) Server	4
CIS	259	Designing Security of Windows Network	4
CIS	275	Designing Windows Active Directory & Network Infrastructure	4
CIS	277	Planning a Windows Network Infrastructure	4
CIS	279	Microsoft SQL Server Administration	4

Internship Option

See page 124.

Career Program

Description

The rapid spread of computers and computer based technologies over the past two decades has generated a need for skilled, highly trained workers in programming positions. Students in the Computer Information Systems Software Development track are provided skills for entry level information systems positions. Students are prepared in the areas of program design and documentation of structured, object oriented programs in business applications using languages such as Java, C++ and Visual Basic .NET. Employment opportunities in this field include entry level programmers. There has been an increased demand for higher skill level in the Software Development track beyond the associate degree that can be earned at Sinclair resulting in a 2 + 2 articulation agreement with Wright State University to transfer this associate degree to their Bachelor of Arts in Computer Science General and their Bachelor of Arts in Computer Science with a Business concentration.

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

Program Prerequisites

BIS 105 Computer Concepts and
MAT 101 Elementary Algebra

Type of Degree or Certificate

Associate of Applied Science

Program Code SODE.AAS

97-98 Total Credit Hours

Career Opportunities

Employment opportunities in this expanding field include entry level positions such as programmers, web developers, help desk analysts, network administrators, user support specialists, network security analyst, and network engineers.

Internship Option

See page 124.

Computer Information Systems Software Development Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAT	116	College Algebra	5
		or	
BIS	121	Mathematics for Business Analysis	
	160	Introduction to Word, PowerPoint, & Excel	3
		or	
	161	Intermediate Word, PowerPoint, & Excel	
ENG	111	English Composition I	3
CIS	107	Introduction to Operating Systems	3
SCC	101	Student Success Experience	2
			TOTAL
			<u>16</u>
SECOND QUARTER			
CIS	100	CIS Student Orientation for Success	2
CIS	111	Introduction to Problem Solving & Computer Programming	4
COM	225	Small Group Communication	3
MAT	122	Statistics I	4
ENG	112	English Composition II	3
			TOTAL
			<u>16</u>
THIRD QUARTER			
CIS	112	Object Oriented Concepts	3
CIS	265	Database Management Systems	3
CIS	231	Introduction to Linux +	3
COM	206	Interpersonal Communication	3
ACC	121	Introduction to Financial Accounting	5
			TOTAL
			<u>17</u>
FOURTH QUARTER			
CIS	210	Computer Systems Analysis	3
CIS	268	Introduction to Oracle: SQL & PL/SQL	3
CIS	280	Java Programming I	4
MAN	205	Principles of Management	3
LAW	101	Business Law I	4
			TOTAL
			<u>17</u>
FIFTH QUARTER			
CIS	230	Computer Networks	3
CIS	281	Java Programming II	4
ECO	218	Principles of Microeconomics	4
CIS	147	Visual Basic Programming I	3 - 4
		or	
	233	C++ Programming I	
		or	
	284	Client/Server Web Tools Using ASP.NET	
		or	
	285	Web Application Development with Java	
			TOTAL
			<u>14 - 15</u>
SIXTH QUARTER			
CIS	236	C++ Programming III	4
CIS	278	CIS Capstone	4
MRK	201	Marketing I	3
CIS	270	CIS Internship	3
		or	
	_____	Business Elective	
	_____	Arts & Humanities Elective	
			TOTAL
			<u>17</u>

Computer Information Systems

User Support Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
		or	
	161	Intermediate Word, PowerPoint, & Excel	
CIS	107	Introduction to Operating Systems	3
SCC	101	Student Success Experience	2
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
ENG	111	English Composition I	3
			<u>3</u>
TOTAL			16
SECOND QUARTER			
CIS	225	Operating Systems Troubleshooting	3
CIS	238	P.C. Installation Management	4
COM	206	Interpersonal Communication	3
CIS	100	CIS Student Orientation for Success	2
ENG	112	English Composition II	3
			<u>3</u>
TOTAL			15
THIRD QUARTER			
CIS	164	Introduction to User Support	3
COM	225	Small Group Communication	3
CIS	111	Introduction to Problem Solving & Computer Programming	4
CIS	230	Computer Networks	3
MAT	122	Statistics I	4
			<u>4</u>
TOTAL			17
FOURTH QUARTER			
MAN	205	Principles of Management	3
CIS	210	Computer Systems Analysis	3
CIS	166	User Support Tools & Techniques	3
ACC	121	Principles of Financial Accounting	5
CIS	265	Database Management Systems	3
			<u>3</u>
TOTAL			17
FIFTH QUARTER			
CIS	264	A+ Certification IT Technician	4
ECO	218	Principles of Microeconomics	4
		Humanities Elective	3
CIS	271	Administering a Microsoft Windows Client Operating System	4
CIS	270	CIS Internship	3
		or	
		Business Elective	
			<u>3</u>
TOTAL			18
SIXTH QUARTER			
MRK	201	Marketing I	3
CIS	278	CIS Capstone	4
CIS	162	Troubleshooting Desktop Applications on a Microsoft Windows Operating System	3
LAW	101	Business Law I	4
			<u>4</u>
TOTAL			14

Career Program

Description

The rapid spread of computers and computer-based technologies over the past two decades has generated a need for skilled, highly trained workers in user support. Students in this concentration develop technical skills for entry level user support positions and learn how to install, support and troubleshoot P.C. hardware and operating systems for the business and commercial environments as well as personal use. In addition, students are prepared in the areas of flowcharting and documenting structured programs, network administration, microcomputer and network operating systems administration, how to use business applications. Students also learn soft skills needed to work with customers and employees in a group environment.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code USSU.AAS

97 Total Credit Hours

Career Opportunities

Employment opportunities in this expanding field include entry level positions such as programmers, web developers, help desk analysts, network administrators, user support specialists, network security analyst, and network engineers.

Internship Option

See page 124.

Career Program

Description

The rapid spread of computers and computer based technologies has generated a need for skilled, highly trained workers in programming and web development. Students are prepared in the areas of developing and maintaining websites, flowcharting and documenting structured programs, network administration, microcomputer and network operating systems, and applications using computer languages such as php, Java, and C++. Employment opportunities in this expanding field include positions such as programmers and web developers.

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

Program Prerequisites

BIS 105 Computer Concepts and
MAT 101 Elementary Algebra

Type of Degree or Certificate

Associate of Applied Science

Program Code WEDE.AAS

99 Total Credit Hours

Career Opportunities

Employment opportunities in this expanding field include entry level positions such as programmers, web developers, help desk analysts, network administrators, user support specialists, network security analyst, and network engineers.

Concentration Electives

CIS 134	Introduction to Flash	3
CIS 223	Extensible Markup Language	3
CIS 224	Web Server Administration & Security	4
CIS 251	PHP Web Programming	3
CIS 284	Web Client/Server Web Tools Using ASP.NET	3

Internship Option

See page 124.

Computer Information Systems

Web Development Concentration

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
CIS 100	CIS Student Orientation for Success	2
CIS 107	Introduction to Operating Systems	3
CIS 130	Introduction to Web Development	3
BIS 160	Introduction to Word, PowerPoint, & Excel	3
SCC 101	Student Success Experience	2
ENG 111	English Composition I	3
		<u>3</u>
TOTAL		16
SECOND QUARTER		
CIS 111	Introduction to Problem Solving & Computer Programming	4
COM 206	Interpersonal Communication	3
ENG 112	English Composition II	3
MAT 116	College Algebra	5
121	or Mathematics for Business Analysis	
—	Arts & Humanities Elective	3
		<u>3</u>
TOTAL		18
THIRD QUARTER		
CIS 131	Intermediate Web Development	3
CIS 137	Introduction to XHTML/JavaScript	4
CIS 230	Computer Networks	3
COM 225	Small Group Communication	3
MAT 122	Statistics I	4
		<u>4</u>
TOTAL		17
FOURTH QUARTER		
CIS 210	Computer Systems Analysis	3
ACC 121	Introduction to Financial Accounting	5
CIS 265	Database Management Systems	3
CIS 223	Extensible Markup Language	3
		<u>3</u>
TOTAL		14
FIFTH QUARTER		
MAN 205	Principles of Management	3
ECO 218	Principles of Microeconomics	4
LAW 101	Business Law I	4
CIS 134	Web Animation	3
CIS 284	Client/Server Web Tools Using ASP.NET	3
		<u>3</u>
TOTAL		17
SIXTH QUARTER		
CIS 270	CIS Internship or Business Elective	3
—	CIS Concentration Elective	4
CIS 278	CIS Capstone	4
MRK 201	Marketing I	3
CIS 251	php Web Programming	3
		<u>3</u>
TOTAL		17

Construction Management Technology

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
CAT 101 Architectural Drafting	3
CAT 110 Introduction to Civil and Architectural Technology	3
CAT 121 Civil Construction Blueprints & Drafting	2
CAT 145 Introduction to OSHA Construction Standards	1
ETD 198 Personal Computer Applications for Engineering Technology	2
ETD 199 Introduction to Computer Aided Drafting Concepts	2
SCC 101 Construction Management Technology	4
SCC 101 Student Success Experience	2
TOTAL	19
SECOND QUARTER	
CAT 105 Residential Construction Methods & Materials	4
CAT 106 Commercial Construction Methods and Materials	3
CAT 131 Properties of Construction Materials	3
COM 206 Interpersonal Communication	3
COM 206 Construction Management Technology	4
TOTAL	17
THIRD QUARTER	
CAT 123 Basic Construction Surveying	4
CAT 201 Introduction to Revit Architecture	3
CAT 216 Construction Estimating	4
CAT 216 Construction Management Technology	4
ENG 111 English Composition I	3
TOTAL	18
FOURTH QUARTER	
CAT 207 Architectural Building Codes	3
CAT 221 Topographic Surveying & Geomatics	4
CAT 255 Engineering Technology Project Management	4
ENG 112 English Composition II	3
MAT 131 Technical Mathematics I	5
TOTAL	19
FIFTH QUARTER	
CAT 252 Construction Law & Specifications	3
ETD 121 Ethics for Engineering Technology Professionals	2
MAT 132 Technical Mathematics II	5
CAT 231 OSHA Construction Standards	3
CAT 231 Social & Behavioral Sciences Elective	3
OPT 101 Introduction to Operations	3
TOTAL	19
SIXTH QUARTER	
CAT 229 Advanced Construction Surveying	3
CAT 270 Civil Architectural Internship	3
CAT 278 Civil Architectural Capstone	4
PHY 131 Technical Physics I	4
PHY 131 Arts & Humanities Elective	3
TOTAL	17

Career Program

Description

Construction Management Technology concentrates on developing technicians who can work in the construction process as drafters, surveyors, inspectors or management trainees with a curriculum that prepares an individual to progress to a management level in the exciting field of construction.

Type of Degree or Certificate

Associate of Applied Science

Program Code CMO.AAS

109 Total Credit Hours

Transfer to Four Year

Graduates can transfer to bachelor completion degrees in programs that emphasize management and leadership.

Career Opportunities

Craftsperson, surveyor, estimator, inspector, management trainee for construction firms (commercial and residential) as well as governmental agencies.

Career Program

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.

Type of Degree or Certificate

Associate of Applied Science

Program Code CJCO.AAS

94-96 Total Credit Hours

Career Opportunities

Employment is available in the corrections as Correctional Officers, Security Guards, County Probation and Parole Officers, positions in commercial, school, and private security organizations, and Correctional Treatment Specialists. Employment growth is anticipated to be as fast as the average for all occupations, and job opportunities are expected to be favorable.

Quarter Five Electives

CJS 104	Criminal Evidence, & Procedures	3
CJS 130	Homeland Security Administration	3
CJS 155	Homeland Security Issues	3
CJS 170	Community Based Policing	3
CJS 205	Criminal Investigation	3
CJS 209	Computer Crime	3
CJS 215	Introduction to Forensic Science	3
CJS 270	Criminal Justice Science Internship I	3

Quarter Six Electives

CJS 104	Criminal Evidence, & Procedures	3
CJS 125	Police Organization, Administration, & Leadership	3
CJS 130	Homeland Security Administration	3
CJS 155	Homeland Security Issues	3
CJS 170	Community Based Policing	3
CJS 205	Criminal Investigation	3
CJS 209	Computer Crime	3
CJS 215	Introduction to Forensic Science	3
CJS 271	Criminal Justice Science Internship II	3

Criminal Justice Science

Corrections Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
CJS	101	Introduction to Criminal Justice Science	3
ENG	111	English Composition I	3
PED	234	Concepts of Total Fitness	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
		Arts & Humanities Elective	3
		TOTAL	17
SECOND QUARTER			
ENG	112	English Composition II	3
CJS	102	Constitutional Law	3
CJS	140	Human Relations & Cultural Diversity	3
SOC	111	General Sociology I	3
MAT	101	Elementary Algebra	4
		or	
	105	Business Mathematics	
		or	
	191	Pre-College Algebra I	
		TOTAL	16
THIRD QUARTER			
COM	206	Interpersonal Communication	3
		or	
	211	Effective Public Speaking	
CJS	111	Criminal Justice Ethics & Professionalism	3
CJS	105	Criminal Law	3
CJS	165	Corrections Administration & Operations	3
SOC	112	General Sociology II	3
		TOTAL	15
FOURTH QUARTER			
CJS	110	Criminal Justice Science Oral and Written Communications	3
CJS	200	Mediation & Conflict Resolution	3
CJS	210	Youthful Offenders & The Law	3
PSY	121	General Psychology I	3
MHT	126	Introduction to Substance Related Disorders	4
		TOTAL	16
FIFTH QUARTER			
PSY	122	General Psychology II	3
CJS	265	Criminal Justice Research	3
CJS	145	Correctional Case Management	3
BIO	104	HIV/AIDS	3-5
		or	
	107	Human Biology	
		or	
CHE	120	Introduction to Chemistry	
		or	
PHY	100	Introduction to Physics	
		Criminal Justice Elective	3
		TOTAL	15-17
SIXTH QUARTER			
CJS	226	Contemporary Issues and Best Practices in Corrections	3
CJS	295	Criminal Justice Science Seminar	3
SPA	161	Conversational Spanish for Criminal Justice	3
SOC	226	Criminology	3
		Criminal Justice Elective	3
		TOTAL	15

Criminal Justice Science

Law Enforcement Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
PED	234	Concepts of Total Fitness	3
SOC	111	General Sociology I	3
ENG	111	English Composition I	3
CJS	101	Introduction to Criminal Justice Science	3
SCC	101	Student Success Experience	2
			TOTAL
			14
SECOND QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	112	English Composition II	3
SOC	112	General Sociology II	3
CJS	102	Constitutional Law	3
MAT	101	Elementary Algebra	4
		or	
	105	Business Mathematics	
		or	
	191	Pre-College Algebra I	
			TOTAL
			16
THIRD QUARTER			
CJS	140	Human Relations & Cultural Diversity	3
CJS	105	Criminal Law	3
CJS	209	Computer Crime	3
CJS	111	Criminal Justice Ethics & Professionalism	3
PSY	121	General Psychology I	3
COM	206	Interpersonal Communication	3
		or	
	211	Effective Public Speaking	
			TOTAL
			18
FOURTH QUARTER			
CJS	104	Criminal Evidence, Procedures and Courtroom Testimony	3
CJS	205	Criminal Investigation	3
CJS	110	Interrogation, Documentation & Testimony	3
CJS	215	Introduction to Forensic Science	3
PSY	122	General Psychology II	3
			TOTAL
			15
FIFTH QUARTER			
CJS	200	Mediation & Conflict Resolution	3
CJS	265	Criminal Justice Research	3
CJS	170	Community Based Policing	3
BIO	104	HIV/AIDS	3 - 5
		or	
	107	Human Biology	
		or	
CHE	120	Introduction to Chemistry	
	—	Criminal Justice Elective	3
			TOTAL
			15 - 17
SIXTH QUARTER			
CJS	125	Police Organization & Administration	3
CJS	295	Criminal Justice Science Seminar	3
SPA	161	Conversational Spanish for Criminal Justice	3
SOC	226	Criminology	3
	—	Arts & Humanities Elective	3
			TOTAL
			15

Career Program

Description

This program prepares students for careers as law enforcement officers. It is designed for students who are new to law enforcement, as well as for those who are already employed as law enforcement officers and want to add to their knowledge and perform well on civil service exams for promotions.

Type of Degree or Certificate

Associate of Applied Science

Program Code CJLE.AAS

93-95 Total Credit Hours

Career Opportunities

Employment is available in the Private Detective and Investigation areas, Police and Detectives, Gaming Surveillance, Claims Adjusters, and Appraisers. Strict competition is anticipated for most jobs despite much-faster-than-average employment growth.

Electives

CJS	145	Correctional Case Management	3
CJS	130	Homeland Security Administration	3
CJS	165	Corrections Administration & Operations	3
CJS	155	Homeland Security Issues	3
CJS	270	Criminal Justice Science Internship I	3
CJS	210	Youthful Offenders & The Law	3
CJS	226	Contemporary Practices in Corrections	3

Career Program

Description

Working with the supervision of a dentist, dental hygienists scale, polish teeth, chart abnormalities, take radiographs, apply preventive agents, impart dental health information and take health histories.

This program, accredited by the Commission on Dental Accreditation, is designed to be completed in seven (7) consecutive quarters on a full-time basis. The general education courses and selected Dental Hygiene courses may be taken prior to admission to the program. A grade of 2 or higher is required in all courses. The student must successfully complete the application requirements as outlined in the Dental Hygiene admission packet. Life & Health Sciences admission packets may be obtained from the office of Admissions (Building 10, Room 10112). Students must submit the Life & Health Sciences application form by mail, or in person to Building 11, Room 11346.

The graduate is eligible to take the Dental Hygiene National Board, the North East Regional Board or similar state boards, and to apply for state licensing.

Program Prerequisites

DEH 120	Introduction to Dental Terminology and	1 cr. hr.
BIO 141	Principles of Anatomy & Physiology I and	4 cr. hrs.
BIO 142	Principles of Anatomy & Physiology II and	4 cr. hrs.
ALH 104	Allied Health Informatics	2 cr. hrs.

Type of Degree or Certificate

Associate of Applied Science

107 Total Credit Hours

Career Opportunities

Career options may vary according to state practice act restrictions. Dental hygienists have a variety of career options in a wide range of employment settings, including private practice, hospitals, HMO's, community health programs, long-term care facilities, school systems, dental product marketing and sales, federal facilities and product companies, military bases, universities and research centers.

Dental Hygiene

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
DEH 103	Head & Neck Anatomy	3
BIO 143	Principles of Anatomy & Physiology III	4
DEH 101	Dental Anatomy	2
CHE 122	Introduction to Biochemistry	4
ENG 111	English Composition I	3
DEH 105	Introduction to Dental Hygiene	2
TOTAL		18
SECOND QUARTER		
DEH 111	Pre-clinical Dental Hygiene I	4
DEH 155	Oral Pathology & Embryology	3
DEH 157	Research Methodology	2
BIO 205	Microbiology	4
ENG 112	English Composition II	3
TOTAL		16
THIRD QUARTER		
DEH 112	Pre-clinical Dental Hygiene II	4
DEH 106	Nutrition & Oral Health	2
DEH 135	Dental Radiology	4
DEH 156	Dental Hygiene Research Project	1
DEH 220	Medical Emergencies in the Dental Office	2
ALH 220	Pathophysiology	4
TOTAL		17
FOURTH QUARTER		
DEH 113	Clinical Dental Hygiene I	4
DEH 165	Computer Applications in Dentistry	1
DEH 215	Periodontics I	2
MAT 101	Elementary Algebra	4
PSY 119	General Psychology	5
TOTAL		16
FIFTH QUARTER		
DEH 125	Dental Materials	3
DEH 211	Clinical Dental Hygiene II	5
DEH 210	Drug Therapy in Dentistry	2
DEH 235	Community Dental Health I	3
TOTAL		13
SIXTH QUARTER		
DEH 212	Clinical Dental Hygiene III	5
DEH 253	Pain Control in Dentistry	2
DEH 250	Periodontics II	2
COM 211	Effective Public Speaking	3
SOC 111	General Sociology I	3
TOTAL		15
SEVENTH QUARTER		
DEH 213	Clinical Dental Hygiene IV	5
DEH 236	Community Dental Health II	2
DEH 255	Dental Hygiene Practice	2
—	Arts & Humanities Elective	3
TOTAL		12

Dietetics & Nutritional Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ALH	103	Introduction to Health Care Delivery	3
CHE	120	Introduction to Chemistry	4
DIT	112	Medical Terminology for DIT	2
DIT	109	Introduction to Dietetics	2
MAT	101	Elementary Algebra	4
TOTAL			15
SECOND QUARTER			
DIT	129	Human Nutrition	5
DIT	137	Food Sanitation & Safety	3
CHE	122	Introduction to Biochemistry	4
ALH	104	Allied Health Informatics	2
HMT	101	Dining/Kitchen Orientation	2
TOTAL			16
THIRD QUARTER			
DIT	135	Nutrition in the Life Cycle	4
DIT	224	Community Nutrition	3
ENG	111	English Composition I	3
HMT	112	Food Principles & Basic Preparation	5
TOTAL			15
FOURTH QUARTER			
COM	206	Interpersonal Communication	3
ENG	112	English Composition II	3
SOC	111	General Sociology I	3
	—	DIT Elective	2
	—	Humanities Elective	3
PSY	121	General Psychology I	3
TOTAL			17
FIFTH QUARTER			
DIT	226	Dietetics Directed Practice I	4
DIT	221	Medical Nutrition Therapy I	3
DIT	225	Educational Methods & Materials	3
DIT	240	Food & Culture	2
DIT	208	Advanced Food Preparation & International Cuisine	2
DIT	209	Laboratory for DIT 208	2
DIT	200	Dining Assistant	1
TOTAL			17
SIXTH QUARTER			
DIT	227	Dietetics Directed Practice II	4
DIT	219	Laboratory for DIT 216	1
DIT	216	Food Preparation & Dietary Service	4
DIT	218	Directed Practice for DIT 216	3
DIT	222	Medical Nutrition Therapy II	3
TOTAL			15
SEVENTH QUARTER			
DIT	255	Dietetics Seminar	2
DIT	236	Dietary Organization & Management	4
DIT	237	Directed Practice for DIT 236	3
DIT	228	Dietetics Directed Practice III	3
DIT	223	Medical Nutrition Therapy III	3
TOTAL			15

Career Program

Description

Graduates of the dietetic program are trained food and nutrition professionals who function as members of the food service and nutrition care teams under the supervision of a registered dietitian. They promote health by providing personalized services and referral to ensure proper nutrition.

The Dietetics & Nutritional Management Technology program is fully accredited by the American Dietetic Association, Commission on Accreditation for Dietetic Education (CADE) a specialized accrediting body recognized by the Council of Postsecondary Accreditation and the United States Department of Education. It is also approved by the Dietary Managers Association. Completion of the DIT program will enable the graduates to become registered technician members of the American Dietetic Association (ADA) upon successful completion of a national examination.

Life & Health Sciences admission packets may be obtained from the office of Admissions (Building 10, Room 10112). Students must submit the Life & Health Sciences application form by mail or in person to Building 11, Room 11346.

Type of Degree or Certificate

Associate of Applied Science

Program Code DIT.AAS

110 Total Credit Hours

Career Opportunities

Graduates of Sinclair's Dietary Managers program can find employment in dietary departments in hospitals, long term care facilities, day care centers, school food service systems, correctional institutions and other non-commercial food service settings.

Dietary managers may work as food service directors, assistant food service directors, supervisors, clinical care professionals, multi-department managers, high level administrators in large service organizations, consultants, or entrepreneurs.

CAREER

Career Program

Description

This program provides the knowledge, skills, and competencies important to an entry level teacher working with, or planning to work with, young children. It meets the Pre-kindergarten Associate Teacher Licensure standards established by the State of Ohio Department of Education. Graduates of this program are eligible to apply to the Ohio Department of Education for the Pre-kindergarten Associate Teacher Licensure. A two-plus-two transfer articulation is available to students planning on completing a four-year degree in Early Childhood Education from the University of Dayton and Central State University.

NOTE: Students interested in completing this degree program must have a full criminal background investigation completed before enrolling in second quarter courses.

Type of Degree or Certificate

Associate of Applied Science

Program Code ECE.AAS

106 Total Credit Hours

Career Opportunities

A two-plus-two transfer articulation is available to students planning on completing a four-year degree in Early Childhood Education from the University of Dayton and Central State University.

Students interested in applying for Ohio Department of Education Pre-Kindergarten Licensure must comply with the following criteria:

- complete an interview prior to graduation with the CFE department chairperson
- "C" or better in all ECE courses
- complete a criminal background check

Early Childhood Education

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ECE	101	Introduction to Early Childhood Education	3
ECE	106	Childhood Nutrition, Health, & Safety	3
ECE	150	The Young Child	4
ENG	111	English Composition I	3
SOC	111	General Sociology I	3
—	—	Business Elective	2
			TOTAL
			18
SECOND QUARTER			
ECE	120	Observing Young Children	3
ECE	145	Guidance of Young Children	3
ENG	112	English Composition II	3
SOC	215	Cultural Diversity	4
PSY	121	General Psychology I	3
			TOTAL
			16
THIRD QUARTER			
ECE	117	Language & Literacy Experiences in Early Childhood	4
ECE	146	The Challenging Child	3
ENG	113	English Composition III	3
PSY	122	General Psychology II	3
COM	206	Interpersonal Communication	3
—	—	or	
—	211	Effective Public Speaking	3
			TOTAL
			16
FOURTH QUARTER			
ECE	119	Creative Experiences in Early Childhood	4
ECE	229	Principles & Practices of Interaction	3
ECE	118	Math & Science Experiences in Early Childhood	4
—	—	Early Childhood Education Elective	2
—	—	Humanities Elective	3
			TOTAL
			16
FIFTH QUARTER			
ECE	160	Teaching Techniques in ECE	3
ECE	208	Inclusion: Principles & Practices	4
SOC	115	Today's Changing Family	4
—	—	OTM Elective	3
			TOTAL
			14
SIXTH QUARTER			
ECE	215	Building Family & Community Relationships	3
ECE	280	Student Teaching I	6
—	—	Early Childhood Education Elective	3
—	—	OTM Elective	3
			TOTAL
			15
SEVENTH QUARTER			
ECE	281	Student Teaching II	7
—	—	MAT Elective	4
			TOTAL
			11

Electronics Engineering Technology**

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
SCC	101 Student Success Experience	2
EET	114 Basic Electronic Measurements	4
EET	116 Electronics Schematics & Layout	4
MAT	131 Technical Mathematics I	5
ETD	198 Personal Computer Applications for Engineering Technology	2
		TOTAL
		17
SECOND QUARTER		
EET	131 Digital Logic & Circuits	4
EET	150 D.C. Circuits	4
ENG	111 English Composition I	3
MAT	132 Technical Mathematics II	5
OPT	101 Introduction to Operations	3
		TOTAL
		19
THIRD QUARTER		
EET	155 A.C. Circuits	4
EET	159 Programming for Electronics Technology	3
EET	251 Digital Systems I	4
ENG	112 English Composition II	3
OPT	205 Manufacturing Processes	3
		TOTAL
		17
FOURTH QUARTER		
EET	201 Semiconductor Devices & Circuits	4
EET	252 Digital Systems II	4
PHY	131 Technical Physics I	4
COM	206 Interpersonal Communication	3
OPT	105 Introduction to OSHA General Industry Standards	1
ETD	121 Ethics for Engineering Technology Professionals	2
		TOTAL
		18
FIFTH QUARTER		
EET	207 Linear Integrated Circuits	4
EET	261 Microprocessor/Microcontroller Systems	4
PHY	132 Technical Physics II	4
EET	270 EET Internship	3
	or	
	EET Elective	
	Humanities Elective	3
		TOTAL
		18
SIXTH QUARTER		
EET	262 Microprocessor Applications	4
EET	278 Electronics Project Capstone	4
EET	270 EET Internship	3
	or	
	EET Elective	
EET	281 Programmable Logic Controllers	3
	Social Science Elective	3
ETD	132 Metallurgy	2
		TOTAL
		19

Students planning to transfer to a BSEET program should substitute MAT 131-132-133 series with MAT 102-116-117 & Technical Physics series PHY 131-132 with PHY 141-142 courses for better transfer of credits. Transfer credits are determined by the accepting institution.

** Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

Career Program

Description

This program provides students with exciting opportunities to put engineering 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 is TAC/ABET accredited and thereby assures quality education in 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 BSEET programs. Several articulation agreements exist between Sinclair's EET program and four-year colleges and universities.

Type of Degree or Certificate

Associate of Applied Science

Program Code EET.AAS

108 Total Credit Hours

Transfer to Four Year

Several articulation agreements exist between Sinclair's EET program and four-year colleges and universities.

Career Opportunities

Electronics technician troubleshooting and testing equipment, assist engineers with design and fabrication.

Approved EET Electives:

EET	156	Alternative Energy Sources	3
EET	256	Introduction to Fuel Cells	3
EET	264	P.C. Troubleshooting & Repair I	3
EET	265	P.C. Troubleshooting & Repair II	3

Career Program

Description

This program provides students with exciting opportunities to put engineering 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 prepares graduates with skills necessary to enter careers in installation, operation, application, maintenance and repair of existing computer systems and associated software. The CET program assures quality education in state-of-the-art equipped laboratories and highly qualified faculty. Those who wish to further their studies are well prepared for entry into four-year BSCET programs.

Type of Degree or Certificate

Associate of Applied Science

Program Code CETT.AAS

105 Total Credit Hours

Electronics Engineering Technology

Computer Engineering Technology Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
EET	114	Basic Electronic Measurements	4
EET	116	Electronics Schematics & Layout	4
ETD	198	Personal Computer Applications for Engineering Technology	2
SCC	101	Student Success Experience	2
MAT	131	Technical Mathematics I	5
			TOTAL
			17
SECOND QUARTER			
EET	131	Digital Logic & Circuits	4
EET	150	D.C. Circuits	4
EET	164	P.C. Assembly	3
ENG	111	English Composition I	3
MAT	132	Technical Mathematics II	5
			TOTAL
			19
THIRD QUARTER			
EET	159	Programming for Electronics Technology	3
EET	155	AC Circuits	4
EET	251	Digital Systems I	4
EGR	161	Pbasic & Stamp	3
ENG	112	English Composition II	3
			TOTAL
			17
FOURTH QUARTER			
EET	201	Electronics I	4
EET	261	Microprocessor/Microcontroller Systems	4
EET	264	P.C. Troubleshooting & Repair -I	3
PHY	131	Technical Physics I	4
COM	206	Interpersonal Communication	3
			TOTAL
			18
FIFTH QUARTER			
EET	265	P.C. Troubleshooting & Repair II	3
EET	271	Alternative Operating Systems & Applications	3
EGR	261	Engineering Problem Solving Using "C"	4
PHY	132	Technical Physics II	4
	—	Humanities Elective	3
			TOTAL
			17
SIXTH QUARTER			
EET	262	Microprocessor Applications	4
EET	270	EET Internship	3
EET	272	P.C. Based Engineering Systems	3
EET	278	Electronics Project Capstone	4
	—	Social Science Elective	3
			TOTAL
			17

Emergency Medical Services

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
EMS 135	EMT-Paramedic I: Introduction to ALS Care	9
MAT 106	Allied Health Mathematics	4
CHE 120	Introduction to Chemistry	4
	TOTAL	17
SECOND QUARTER		
EMS 136	EMT-Paramedic II: Cardiovascular Emergencies	9
HIM 121	Basic Medical Terminology	3
	PED Activity Elective	1
BIO 141	Principles of Anatomy & Physiology I	4
	TOTAL	17
THIRD QUARTER		
EMS 137	EMT-Paramedic III: Pediatric & Trauma Emergencies	9
BIO 142	Principles of Anatomy & Physiology II	4
ENG 111	English Composition I	3
	TOTAL	16
FOURTH QUARTER		
EMS 138	EMT-Paramedic IV: The Medical Patient	9
BIS 160	Introduction to Word, PowerPoint, & Excel	3
	Allied Health Elective	1
	TOTAL	13
FIFTH QUARTER		
EMS 139	EMT-Paramedic V: Integration	9
BIO 143	Principles of Anatomy & Physiology III	4
	EMS Elective	3
	TOTAL	16
SIXTH QUARTER		
COM 206	Interpersonal Communication	3
	or	
	211 Effective Public Speaking	
ALH 142	Fundamentals of Disease Processes	4
	EMS Elective	6
	TOTAL	13
SEVENTH QUARTER		
PSY 119	General Psychology	5
ENG 112	English Composition II	3
	EMS Elective	3
	Arts & Humanities Elective	3
	TOTAL	14

Career Program

Description

Emergency Medical Services program is designed to augment the skills of the practicing paramedic. Paramedics are challenged with a variety of courses to increase their skill sets in clinical and managerial areas. Students will gain experience from currently practicing paramedics, fire fighters and managers. This degree is designed to advance clinical skills in out-of-hospital patient care. It is focused on fundamental courses applicable for most allied health professions. Successful candidates will take valuable courses that can be applied towards an RN, Physician Assistant or other allied health career. Students interested in this degree should contact either the EMS department at (937) 512-5338 or contact the academic advisors located on the Third Floor of Building 11.

Program Prerequisites

EMT Basic licensure

Type of Degree or Certificate

Associate of Applied Science

Program Code EMSVS.AAS

106 Total Credit Hours

Career Opportunities

- Fire Department
- Hospitals
- Private Ambulance

Mainly available in the following areas: In Southwestern Ohio, EMT's must be licensed, minimally as a Level 1 Firefighter to meet the requirements for full time employment at the fire department. Sinclair offers both the Level 1 and Level 2 fire courses. Persons working full time as a Firefighter/Paramedic will increase wages significantly. The associate degree, though not required for immediate employment, will best serve the students who are looking to advance once hired.

EMS Electives

EMS 201	EMS Management: Fundamentals	3
EMS 202	EMS Management: Medical Legal/CQI	3
EMS 215	Human Body for the EMS Provider	3
EMS 220	Critical Care Paramedic I: Introduction to Critical Care	3
EMS 221	Critical Care Paramedic II: Pharmacodynamics & Critical Care	3
EMS 222	Critical Care Paramedic III: Care of Specialty Patients	3
EMS 230	Disaster Management for the Health Care Provider	3

Career Program

Description

Emergency Medical Services program is designed to augment the skills of the practicing paramedic. Paramedics are challenged with a variety of courses to increase their skill sets in clinical and managerial areas. Students will gain experience from currently practicing paramedics, fire fighters and managers. This degree allows students to combine 16 hours of fire science education. It is designed for the firefighter paramedic who wishes to advance within his or her career. Students interested in this degree should contact either the EMS department at (937) 512-5338 or contact the academic advisors located on the Third Floor of Building 11.

Program Prerequisites
EMT Basic Licensure

Type of Degree or Certificate
Associate of Applied Science

Program Code EMSFO.AAS

107 Total Credit Hours

Career Opportunities

- Fire Department
- Hospitals
- Private Ambulance

Mainly available in the following areas: In Southwestern Ohio, EMT's must be licensed, minimally as a Level 1 Firefighter to meet the requirements for full time employment at the fire department. Sinclair offers both the Level 1 and Level 2 fire courses. Persons working full time as a Firefighter/Paramedic will increase wages significantly. The associate degree, though not required for immediate employment, will best serve the students who are looking to advance once hired.

Emergency Medical Services

Fire Science Option

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
MAT	106 Allied Health Mathematics	4
EMS	215 Human Body for the EMS Provider	3
EMS	135 EMT-Paramedic I: Introduction to ALS Care	9
TOTAL		16
SECOND QUARTER		
FST	125 Fire Investigation Procedure	4
HIM	121 Basic Medical Terminology	3
	PED Elective	1
EMS	136 EMT-Paramedic II: Cardiovascular Emergencies	9
TOTAL		17
THIRD QUARTER		
ENG	111 English Composition I	3
FST	120 Fire Safety Inspector	6
EMS	137 EMT-Paramedic III: Pediatric & Trauma Emergencies	9
TOTAL		18
FOURTH QUARTER		
ENG	112 English Composition II	3
EMS	138 EMT-Paramedic IV: The Medical Patient	9
	Arts & Humanities Elective	3
TOTAL		15
FIFTH QUARTER		
FST	204 Water Suppression Systems	4
EMS	201 EMS Management: Fundamentals	3
EMS	139 EMT-Paramedic V: Integration	9
TOTAL		16
SIXTH QUARTER		
FST	202 Building Construction	4
COM	206 Interpersonal Communication	3
	or	
	211 Effective Public Speaking	
BIS	160 Introduction to Word, PowerPoint, & Excel	3
EMS	202 EMS Management: Medical Legal / CQI	3
TOTAL		13
SEVENTH QUARTER		
	Fire Science Technology Elective	4
PSY	119 General Psychology	5
EMS	220 Introduction to Out of Hospital Critical Care	3
	or	
	221 Critical Care Paramedic II: Pharmacodynamics & Critical Care	
	or	
	222 Critical Care Paramedic III: Care of Specialty Patients	
	or	
	230 Disaster Management for the Health Care Provider	
TOTAL		12

Environmental Engineering Technology**

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ETD	150	Environmental Assessment & Analysis	4
ETD	198	Personal Computer Applications for Engineering Technology	2
MAT	131	Technical Mathematics I	5
BIO	107	Human Biology	5
BIO	108	Lab for BIO 107	
SCC	101	Student Success Experience	
			<u>2</u>
TOTAL			18
SECOND QUARTER			
ENG	111	English Composition I	3
ETD	155	Water Treatment Analysis	4
MAT	132	Technical Mathematics II	5
CHE	151	General Chemistry I	5
CHE	157	Lab for CHE 151	
OPT	105	Introduction to OSHA General Industry Standards	3
			<u>3</u>
TOTAL			18
THIRD QUARTER			
ENG	112	English Composition II	3
CHE	152	General Chemistry II	5
PHY	141	College Physics I	4
CHE	158	Lab for CHE 152	
ETD	261	Advanced Analytical Tools for Engineering Technology	2
CAT	131	Properties of Construction Materials	3
			<u>3</u>
TOTAL			17
FOURTH QUARTER			
CHE	153	General Chemistry III	5
ETD	121	Ethics for Engineering Technology Professionals	2
ETD	213	Statics	4
ETD	251	OSHA 1910.120 Hazardous Waste Operations	5
CHE	159	Lab for CHE 153	
OPT	101	Introduction to Operations	3
			<u>3</u>
TOTAL			19
FIFTH QUARTER			
ETD	255	Waste Management	4
CHE	121	Introduction to Organic Chemistry	4
HUM	135	Environmental Ethics	3
HVA	286	Fluid Mechanics	3
COM	211	Effective Public Speaking	3
CHE	127	Lab for CHE 121	
			<u>3</u>
TOTAL			17
SIXTH QUARTER			
CAT	245	Soil Mechanics	4
ETD	270	Mechanical Engineering Technology Internship	3
ETD	278	Mechanical Engineering Technology Capstone	4
		Social & Behavioral Sciences Elective	3
OPT	205	Manufacturing Processes	3
			<u>3</u>
TOTAL			17

** Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

Career Program

Description

This program prepares students for entry level positions in the field of environmental engineering technology. The curriculum provides a background in environmental laws and regulations, air and water pollution, groundwater studies, site assessments, emergency response to situations involving hazardous chemicals/wastes; storage, treatment, and disposal of hazardous wastes, sampling and analysis; and remediation. Skills and knowledge acquired will lead to possible employment in consulting, industrial and government organizations. The program is accredited by the Technology Accreditation Commission of ABET, which assures quality and nationally recognized excellence.

Type of Degree or Certificate

Associate of Applied Science

Program Code EVT.AAS

106 Total Credit Hours

Transfer to Four Year

The program prepares students to work as environmental engineering technicians or continue their education and obtain a bachelor's degree in Environmental Science or Environmental Engineering Technology.

Career Opportunities

This is an excellent career field for both men and women who are looking for non-traditional and challenging hands-on occupations. Graduates from this program can find employment opportunities around the world in environmental planning and risk management or environmental engineering technology.

Employers are governmental agencies such as OSHA and OEPA, as well as industrial firms charged with the responsibility to keep the environment clean.

Career Program

Description

This program provides a full range of courses which address fire protection engineering and safety issues. The program prepares students for careers in fire protection engineering, inspection, arson investigation, engineering design of early detection, warning and suppression systems, emergency response, and fire administration. Courses include fire protection systems design, fire investigation, fire codes, safety management, building construction, hazardous materials, and administrative issues. Real-world experience is gained through internship with a fire department, fire inspection services or arson investigation companies. Graduates are prepared to enter the work force as fire engineering technicians and work as fire/safety officers in general industry or construction firms; design firms specializing in sprinkler systems or fire protection design; arson investigators, fire inspectors or continue their education and obtain a bachelor's degree in Fire Engineering.

Type of Degree or Certificate

Associate of Applied Science

Program Code FST.AAS

101 Total Credit Hours

Transfer to Four Year

Graduates are prepared to continue their education and obtain a bachelor's degree in Fire Engineering.

Career Opportunities

Employment is available in municipal fire protection, industrial fire safety occupations, and fire safety organizations. Students also find employment in organizations that deal with fire protection systems design, fire risk assessment and fire protection equipment installation. Students can continue their education and obtain a bachelor degree in the field of fire protection engineering technology.

Fire Science Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
FST	101	Introduction to Fire Science	4
FST	102	Fire Protection & Organization	4
ENG	111	English Composition I	3
MAT	116	College Algebra	5
			<u>16</u>
SECOND QUARTER			
FST	116	Fire Protections Systems I	3
FST	125	Fire Investigation Procedure	4
FST	202	Building Construction	4
ETD	198	Personal Computer Applications for Engineering Technology	2
MAT	117	Trigonometry	4
			<u>17</u>
THIRD QUARTER			
FST	103	Fire Prevention Fundamentals, Codes & Ordinances	4
CHE	151	General Chemistry I	5
PHY	141	College Physics I	4
CAT	207	Architectural Building Codes	3
ETD	128	Print Reading with GD&T	3
			<u>19</u>
FOURTH QUARTER			
FST	201	Fire Hydraulics	5
ENG	112	English Composition II	3
PHY	142	College Physics II	4
ETD	199	Introduction to Computer Aided Drafting Concepts	2
			<u>14</u>
FIFTH QUARTER			
FST	204	Water Suppression Systems	4
COM	211	Effective Public Speaking	3
PLS	101	American Federal Government I	3
		Humanities Elective	3
ETD	280	Advanced Computer Aided Drafting	3
			<u>16</u>
SIXTH QUARTER			
FST	218	Plans Review for Fire Safety	3
FST	220	Fire Protection Systems Design	4
FST	270	Fire Science Technology Internship	3
FST	278	Fire Administration Capstone	4
ETD	121	Ethics for Engineering Technology Professionals	2
MAN	210	Introduction to Project Management	3
		or	
PSY	129	Work Group Dynamics	3
			<u>19</u>

Fire Science Technology

Fire Administration Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
FST	193	Firefighter II Transition	8
MAT	101	Elementary Algebra	4
ENG	111	English Composition I	3
	—	Social & Behavioral Sciences Elective	3-5
		TOTAL	18 - 20
SECOND QUARTER			
FST	251	Fire Officer Level I	8
ENG	112	English Composition II	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
	—	Natural Sciences Elective	3-5
		TOTAL	17 - 19
THIRD QUARTER			
FST	252	Fire Officer Level II	4
MAN	205	Principles of Management	3
COM	211	Effective Public Speaking	3
	—	Fire Science Technology Elective	4
	—	Natural Sciences Elective	3-5
		TOTAL	17 - 19
FOURTH QUARTER			
FST	253	Fire Officer Level III	4
	—	Fire Science Technology Elective	3
	—	Natural Sciences Elective	9
		TOTAL	16
FIFTH QUARTER			
FST	254	Fire Officer Level IV	4
FST	202	Building Construction	4
	—	Fire Science Technology Elective	4
	—	Social & Behavioral Sciences Elective	3
		TOTAL	15
SIXTH QUARTER			
	—	Fire Science Technology Elective	7
	—	Arts & Humanities Elective	3
	—	Social & Behavioral Sciences Elective	3
	—	Natural Sciences Elective	5
		TOTAL	18

Career Program

Description

This program provides a full range of courses which address fire administration and safety issues. Courses include Firefighter II, Fire Officer I-IV, management, economics, state/local government, accounting and administrative issues. Graduates are prepared to enter the work force as firefighters, fire officers, investigators, instructors, managers and fire administrators or continue their education and obtain a degree in Fire Science or business management.

Fire Officer I and II are accredited by the National Board on Fire Service Professional Qualifications.

Type of Degree or Certificate

Associate of Applied Science

Program Code FAO.AAS

101-107 Total Credit Hours

Career Opportunities

This program prepares the graduate for positions of command or supervisory level rank as fire instructors, fire officers and fire administrators. Students entering the program should have strong active duty fire service experience. Students can continue their education in the areas of public administration, urban management or political science.

Fire Science Technology Electives

FST	102	Fire Protection & Organization	4
FST	115	Fire Apparatus & Equipment	3
FST	116	Fire Protection Systems I	3
FST	120	Fire Safety Inspector	6
FST	125	Fire Investigation Procedure	4
FST	152	Technical Rescue Refresher	2
FST	169	Rapid Intervention Team	2
FST	201	Fire Hydraulics	5
FST	202	Building Construction	4
FST	204	Water Suppression Systems	4
FST	209	Fire Service Instructor	6

Career Program

Description

Health Information Technicians are experts in the field of managing and protecting patient health information and medical records, administering computer information systems, and coding the diagnoses and procedures for health care services provided to patients. HIM professionals work in a variety of settings including, but not limited to, hospitals, physician offices, long-term care facilities, home health agencies, insurance companies, and government agencies. The program is designed to be completed in seven (7) full-time consecutive quarters. Some students elect to attend on a part-time basis, extending the length of study to three academic years. The curriculum includes three professional practice experiences at area health care facilities for which students are expected to provide their own transportation. A complete physical exam and specific immunizations are required at the student's expense prior to enrolling in the first professional practice experience course. To enroll in most health information management courses, a student must first be accepted into the HIM program. An overall grade point average of 2 is a requirement of admission and must be maintained in order to continue through the program.

Life & Health Sciences application packets are available from the office of Admissions (Building 10, Room 10112). Students must submit the Life & Health Sciences application form by mail or in person to Building 11, Room 114346.

The Health Information Management program is fully accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Program Prerequisites

BIO 121 Human Anatomy & Physiology I
5 cr. hrs.
and
HIM 121 Basic Medical Terminology
3 cr. hrs.
and
GPA of 2.0 or higher

Type of Degree or Certificate

Associate of Applied Science

Program Code HIM.AAS

91 Total Credit Hours

Career Opportunities

Employment prospects for health information management specialists are excellent throughout the nation. Positions are available in work place settings involved with acquisition and maintenance of patient health information. Many HIM graduates work in hospitals and clinics. Additional job opportunities include: 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.

Health Information Management

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
BIO	122 Human Anatomy & Physiology II	5
HIM	122 Specialized Medical Terminology	3
HIM	110 Health Information Processing I	3
BIS	160 Introduction to Word, PowerPoint, & Excel	3
TOTAL		14
SECOND QUARTER		
HIM	111 Health Information Processing II	3
HIM	260 ICD-9-CM Medical Office Coding	3
HIM	261 CPT Medical Office Coding	3
HIM	165 Drug Classification for Coding	1
ALH	142 Fundamentals of Disease Processes	4
TOTAL		14
THIRD QUARTER		
HIM	135 Medicolegal Aspects of Health Care Records	3
HIM	240 Hospital Ambulatory Coding	4
HIM	265 Health Care Data in Reimbursement	3
BIS	161 Intermediate Word, PowerPoint, & Excel	3
TOTAL		13
FOURTH QUARTER		
HIM	178 HIM Intermediate Capstone	1
BIS	M35 Microsoft Access	2
MAT	101 Elementary Algebra	4
	or	
	106 Allied Health Mathematics	
COM	211 Effective Speaking I	3
	or	
	206 Interpersonal Communication	
ENG	111 English Composition I	3
	or	
	131 Business Communications I	
TOTAL		13
FIFTH QUARTER		
HIM	241 Hospital Inpatient Coding	4
HIM	244 Health Care Quality Improvement	3
HIM	245 Health Information Resource Management	3
HIM	250 Supervised Professional Practice I	1
ENG	112 English Composition II	3
	or	
	132 Business Communications II	
TOTAL		14
SIXTH QUARTER		
HIM	246 Health Care Information Systems	3
HIM	228 Clinical Abstracting	3
HIM	249 Health Care Statistics	2
HIM	251 Supervised Professional Practice II	1
PSY	121 General Psychology I	3
	or	
SOC	111 General Sociology I	
TOTAL		12
SEVENTH QUARTER		
HIM	218 Cancer Registry	1
HIM	252 Supervised Professional Practice III	2
HIM	278 HIM Capstone	2
	HIM Portfolio Elective	3
	Arts & Humanities Elective	3
TOTAL		11

Heating, Ventilating, Air Conditioning & Refrigeration Engineering Technology**

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAT	131	Technical Mathematics I	5
ETD	198	Personal Computer Applications for Engineering Technology	2
HVA	144	Introduction to HVAC Systems	3
SCC	101	Student Success Experience	2
ETD	199	Introduction to Computer Aided Drafting Concepts	2
EET	120	Introduction to D.C. & A.C. Circuits	3
TOTAL			17
SECOND QUARTER			
MAT	132	Technical Mathematics II	5
HVA	170	Air & Water Distribution Systems	5
HVA	184	Basics of Cooling & Cooling Systems	3
COM	206	Interpersonal Communication	3
CAT	139	Mechanical Systems Blueprint Reading	2
TOTAL			18
THIRD QUARTER			
HVA	174	Building Psychrometrics & Load Calculations	5
HVA	250	Industrial Process Exhaust	3
PHY	131	Technical Physics I	4
ETD	261	Advanced Analytical Tools for Engineering Technology	2
HVA	180	Boilers in HVAC Systems	3
TOTAL			17
FOURTH QUARTER			
HVA	186	Modern Refrigeration Practice	3
HVA	253	Advanced HVAC Applications	3
HVA	240	Principles of Process Control	3
CAT	202	Introduction to Revit MEP	3
ENG	111	English Composition I	3
CAT	131	Properties of Construction Materials	3
TOTAL			18
FIFTH QUARTER			
HVA	276	Current Topics in Heating, Ventilating & Air Conditioning	3
HVA	243	Controls for Building HVAC Systems	3
HVA	272	Mechanical Cost Estimating	3
HVA	254	Advanced HVAC Applications II	3
ENG	112	English Composition II	3
ETD	121	Ethics for Engineering Technology Professionals	2
CAT	145	Introduction to OSHA Construction Standards	1
TOTAL			18
SIXTH QUARTER			
HVA	177	Testing, Adjusting & Balancing in HVAC Systems	3
HVA	278	HVACR Applications Capstone Project	6
—	—	Social & Behavioral Sciences Elective	3
—	—	Arts & Humanities Elective	3
OPT	101	Introduction to Operations	3
TOTAL			18

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Career Program

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, design, facilities operation, project management, or as a laboratory technician for an equipment manufacturer. 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 HVACR technician or designer with a wealth of knowledge regarding proper system operation. Accreditation by the Technology Accreditation Commission of ABET, Inc. insures program quality and facilitates acceptance graduates who desire to pursue a bachelor's degree.

Type of Degree or Certificate

Associate of Applied Science

Program Code HVACR.AAS

106 Total Credit Hours

Career Opportunities

The program focuses on the basic operating principles of commercial and industrial HVAC systems, allowing one to pursue careers in sales, service, design, facilities operation, project management, or as a laboratory technician for an equipment manufacturer.

Career Program

Description

The demand for entry level management personnel in restaurants, hotels, resorts, convention and visitor centers, private clubs, meeting and event planners, catering businesses, and tourism centers continues to out pace resources. Efficient and profitable operation of these businesses requires managers to recruit, train, and supervise an adequate number of employees. This program prepares students in supervisory skills, cost controls, and human relation skills needed to manage lodgings, restaurants, meetings, and event planning or tourism operations. Employment opportunities for lodging, restaurant, resort, private club entry level managers, conventions and visitor centers, travel agents, and meeting and event planners are available to students in the hospitality management and tourism industry. This program is accredited by the American Culinary Federation Foundation Accrediting Commission and the Commission on Accreditation of Hospitality Management Programs.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code HMTT.AAS

103-105 Total Credit Hours

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.

Internship Requirements

Hospitality Management program students are required to complete three internships as part of their certificate program. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already working in the culinary field may apply to use their current work site with new duty or project assignments. Students should contact the Hospitality Management department for eligibility and approval. Information may also be found in the Business Internship office, Building 5, Room 5113.

Hospitality Management & Tourism

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
HMT	101	Dining/Kitchen Orientation	2
HMT	105	Introduction to the Hospitality & Tourism Industry	3
HMT	110	Menu Planning	2
HMT	107	Sanitation & Safety	3
SCC	101	Student Success Experience	2
MAT	105	Business Mathematics	4 - 5
		or	
	116	College Algebra	
			TOTAL
			16 - 17
SECOND QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
HMT	112	Food Principles & Basic Preparation	5
COM	206	Interpersonal Communication	3
HUM	115	International Environment: Culture & Business	3
			TOTAL
			17
THIRD QUARTER			
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAN	205	Principles of Management	3
HMT	114	Advanced Food Preparation	5
HMT	201	Food Service Equipment Design & Maintenance	3
BIS	201	Customer Service	3
			TOTAL
			17
FOURTH QUARTER			
ACC	121	Introduction to Financial Accounting	5
HMT	125	Bar Operations Management	3
HMT	141	Destination Geography I	3
PSY	121	General Psychology I	3
HMT	230	Risk & Prevention Management	3
			TOTAL
			17
FIFTH QUARTER			
MAN	225	Human Relations & Organizational Behavior	3
HMT	142	Destination Geography II	3
HMT	215	Food & Labor Cost Controls	3
HMT	225	Organization & Administration of Hospitality Industry	3
HMT	226	Purchasing for the Hospitality Industry	3
HMT	291	Hospitality Management & Tourism Internship I	3
			TOTAL
			18
SIXTH QUARTER			
HMT	223	Tourism for the Hospitality Industry	3
HMT	292	Hospitality Management & Tourism Internship II	3
HMT	227	Marketing in the Hospitality & Tourism Industry	3
HMT	295	Hospitality Management & Tourism Seminar	3
ECO	105	General Economics	3 - 4
		or	
	216	Principles of Macroeconomics	
		Communications Elective	3
			TOTAL
			18 - 19

Hospitality Management & Tourism

Culinary Arts Concentration

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
HMT 101 Dining/Kitchen Orientation	2
HMT 105 Introduction to the Hospitality and Tourism Industry	3
HMT 107 Sanitation & Safety	3
HMT 110 Menu Planning	2
MAT 105 Business Mathematics	4
SCC 101 Student Success Experience	2
TOTAL	16
SECOND QUARTER	
HMT 112 Food Principles & Basic Preparation	5
DIT 108 Introduction to Food & Nutrition	3
HMT 125 Bar Operations Management	3
ENG 111 English Composition I	3
or	
131 Business Communications I	
COM 206 Interpersonal Communication	3
TOTAL	17
THIRD QUARTER	
HMT 114 Advanced Food Preparation	5
HMT 201 Food Service Equipment Design & Maintenance	3
HMT 226 Purchasing for the Hospitality Industry	3
ENG 112 English Composition II	3
or	
132 Business Communications II	
TOTAL	14
FOURTH QUARTER	
HMT 207 Butchery & Fish Management	3
HMT 291 Hospitality Management & Tourism Internship I	3
Humanities Elective	3
PSY 121 General Psychology I	3
TOTAL	12
FIFTH QUARTER	
HMT 206 Garde Manger	5
HMT 292 Hospitality Management & Tourism Internship II	3
ACC 121 Principles of Financial Accounting	5
MAN 205 Principles of Management	3
TOTAL	16
SIXTH QUARTER	
HMT 208 Pastry & Confectionery	5
HMT 293 Hospitality Management & Tourism Internship III	3
HMT 225 Organization & Administration of Hospitality Industry	3
HMT 230 Risk & Prevention Management	3
BIS 160 Introduction to Word, PowerPoint, & Excel	3
TOTAL	17
SEVENTH QUARTER	
HMT 209 Professional Cooking	5
HMT 215 Food & Labor Cost Controls	3
ECO 105 General Economics	3-4
or	
216 Principles of Macroeconomics	
HMT 227 Marketing in the Hospitality & Tourism Industry	3
TOTAL	14-15

Career Program

Description

The serving of good food is important to the reputation of any restaurant. Chefs, cooks, and other restaurant workers are responsible for the reputation of a restaurant. Chefs and cooks are responsible for preparing meals that are pleasing to the taste and the eye. Many chefs have earned a reputation for both themselves, and the establishments where they work due to their skillful preparation of traditional dishes and the creation of new ones. Through this specialized program, students develop extensive skills and knowledge of food preparation and presentation. Students also gain a total understanding of the duties and responsibilities of a chef and other culinary personnel. Employment opportunities for chefs, cooks, bakers, pastry chefs, production personnel, and caterers are available in this rapidly growing field at fine restaurants, clubs, hotels and health care facilities. The program is accredited by the American Culinary Federation Foundation Accrediting Commission.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code CAO.AAS

106-107 Total Credit Hours

Career Opportunities

Restaurant cooks, short-order cooks, fast food cooks, private household cooks, Personal chef, food preparation workers.

Internship Requirements

Culinary Arts program students are required to complete three internships as part of their certificate program. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already working in the culinary field may apply to use their current work site with new duty or project assignments. Students should contact the Hospitality Management Culinary Arts department for eligibility and approval. Information may also be found in the Business Internship office, Building 5, Room 5113.

Career Program

Description

A degree in hospitality and tourism prepares students for careers in a wide array of hospitality and tourism professions including lodging, conventions and destination services management, food service, travel and tourism, and recreation related industries to name a few. The Hotel/Lodging career concentration prepares students for entry level positions in this industry. The course work includes specific courses related to the hotel industry such as reservations/computer systems, house-keeping, and operations of both small and large hotel/lodging facilities in addition to business courses that are essential to success in this industry.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code HMTTL.AAS

104-106 Total Credit Hours

Career Opportunities

Front office managers, convention services managers, assistant managers.

Hospitality Management & Tourism

Hotel Lodging Concentration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
HMT	105	Introduction to the Hospitality & Tourism Industry	3
HMT	107	Sanitation & Safety	3
HMT	141	Destination Geography I	3
MAT	105	Business Mathematics	4 - 5
	116	College Algebra	
			TOTAL
			15 - 16
SECOND QUARTER			
HMT	142	Destination Geography II	3
HMT	136	Front Office Operations	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
HUM	115	International Environment: Culture & Business	3
COM	206	Interpersonal Communication	3
ENG	111	English Composition I	3
	131	Business Communications I	
			TOTAL
			18
THIRD QUARTER			
MAN	205	Principles of Management	3
HMT	137	Hospitality Industry Computer Systems	3
HMT	201	Food Service Equipment Design & Maintenance	3
HMT	125	Bar Operations Management	3
BIS	201	Customer Service	3
ENG	112	English Composition II	3
	132	Business Communications II	
			TOTAL
			18
FOURTH QUARTER			
ACC	121	Introduction to Financial Accounting	5
PSY	121	General Psychology I	3
HMT	150	Meeting & Event Planning I	3
HMT	138	Hotel & Lodging Operations Management	3
HMT	225	Organization & Administration of Hospitality Industry	3
			TOTAL
			17
FIFTH QUARTER			
HMT	139	Housekeeping Management	3
HMT	215	Food & Labor Cost Controls	3
HMT	226	Purchasing for the Hospitality Industry	3
HMT	291	Hospitality Management & Tourism Internship I	3
MAN	225	Human Relations & Organizational Behavior	3
	—	Communications Elective	3
			TOTAL
			18
SIXTH QUARTER			
HMT	223	Tourism for the Hospitality Industry	3
HMT	227	Marketing in the Hospitality & Tourism Industry	3
HMT	230	Risk & Prevention Management	3
HMT	292	Hospitality Management & Tourism Internship II	3
HMT	295	Hospitality Management & Tourism Seminar	3
ECO	105	General Economics	
	218	Principles of Microeconomics	3 - 4
			TOTAL
			18 - 19

Hospitality Management & Tourism

Meeting & Event Planning Concentration

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
SCC 101 Student Success Experience	2
BIS 160 Introduction to Word, PowerPoint, & Excel	3
HMT 105 Introduction to the Hospitality & Tourism Industry	3
HMT 107 Sanitation & Safety	3
HMT 140 Domestic Air	2
HMT 141 Destination Geography I	3
TOTAL	16
SECOND QUARTER	
HMT 142 Destination Geography II	3
HMT 143 Reference & Reservations	4
HMT 150 Meeting & Event Planning I	3
ENG 111 English Composition I	3
or	
132 Business Communications II	
MAT 105 Business Mathematics	4 - 5
or	
116 College Algebra	
TOTAL	17 - 18
THIRD QUARTER	
HMT 110 Menu Planning	2
HMT 144 International Travel	3
ACC 121 Introduction to Financial Accounting	5
BIS 201 Customer Service	3
ENG 112 English Composition II	3
or	
132 Business Communications II	
TOTAL	16
FOURTH QUARTER	
HMT 151 Meeting & Event Planning II	3
HMT 223 Tourism for the Hospitality Industry	3
COM 206 Interpersonal Communication	3
MAN 205 Principles of Management	3
ECO 105 General Economics	3 - 4
or	
216 Principles of Macroeconomics	
_____ Communications Elective	3
TOTAL	18 - 19
FIFTH QUARTER	
HMT 230 Risk & Prevention Management	3
HMT 291 Hospitality Management & Tourism Internship I	3
MAN 225 Human Relations & Organizational Behavior	3
HUM 115 International Environment: Culture & Business	3
PSY 121 General Psychology I	3
_____ Career Elective	3
TOTAL	18
SIXTH QUARTER	
HMT 225 Organization & Administration of Hospitality Industry	3
HMT 226 Purchasing for the Hospitality Industry	3
HMT 227 Marketing in the Hospitality & Tourism Industry	3
HMT 292 Hospitality Management & Tourism Internship II	3
HMT 295 Hospitality Management & Tourism Seminar	3
_____ Career Elective	3
TOTAL	18

Career Program

Description

Meetings, a gathering of people, are held all around the world every day. It could be a simple meeting in a company board room, a large convention at a special destination or anything in between. In order for the meetings to achieve their purpose someone has been in charge, be it a secretary, member of a group, or a professional meeting planner. The Meeting & Event Planning career concentration assists students in gaining knowledge in all aspects of planning and staging meetings or special events. The curriculum includes basic knowledge of understanding the client's needs, developing a program, site selection, negotiating contracts, using multi media and speakers, registration, meeting logistics, post event activities, and professionalism. Students will complete and present a full proposal and provide all information regarding the staging of the event to prepare them for the work force.

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

Career Electives

HMT 138, COM 211, ENT 105, MHT 215, HMT 125, Foreign Language course.

Type of Degree or Certificate

Associate of Applied Science

Program Code HMTTM.AAS

103-105 Total Credit Hours

Career Opportunities

Meeting/event planner for corporate events, association/non-profit events, government events, suppliers, event planning firms to name a few.

Career Program

Description

The travel and tourism industry is one of the world's largest employers. A degree in hospitality and tourism prepares students for careers in a wide array of hospitality and tourism professions including lodging, conventions and destination services management, food service, travel and tourism, and recreation related industries to name a few.

While the minimum entry credential for many jobs in the industry is a high school diploma, individuals with more education and training will enjoy better job opportunities and higher salaries. The Tourism career concentration is designed to meet the core competencies of the hospitality/tourism industry to better prepare our graduates to enter the work force.

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

Career Electives

HMT 138, COM 211, ENT 105, MHT 215, HMT 125, Foreign Language course.

Type of Degree or Certificate

Associate of Applied Science

Program Code HMTT.AAS

103-105 Total Credit Hours

Career Opportunities

Car rental, travel agency, tour operator, convention & visitors bureaus, hotel, airline, to name a few, and many types of positions in each area.

Hospitality Management & Tourism

Tourism Concentration

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 this program.

Course & Title

FIRST QUARTER

Course & Title	Credit Hours
SCC 101 Student Success Experience	2
BIS 160 Introduction to Word, PowerPoint, & Excel	3
HMT 105 Introduction to the Hospitality & Tourism Industry	3
HMT 107 Sanitation & Safety	3
HMT 140 Domestic Air	2
HMT 141 Destination Geography I	3
TOTAL	16

SECOND QUARTER

HMT 142 Destination Geography II	3
HMT 143 Reference & Reservations	4
HMT 145 Airline Computer I	3
ENG 111 English Composition I	3
or	
131 Business Communications I	
MAT 105 Business Mathematics	4 - 5
or	
116 College Algebra	
TOTAL	17 - 18

THIRD QUARTER

HMT 144 International Travel	3
HMT 146 Airline Computer II	3
ACC 121 Introduction to Financial Accounting	5
BIS 201 Customer Service	3
ENG 112 English Composition II	3
or	
132 Business Communications II	
TOTAL	17

FOURTH QUARTER

HMT 223 Tourism for the Hospitality Industry	3
HMT 224 Advanced Airline Computer	2
COM 206 Interpersonal Communication	3
MAN 205 Principles of Management	3
ECO 105 General Economics	3 - 4
or	
216 Principles of Macroeconomics	
Communications Elective	3
TOTAL	17 - 18

FIFTH QUARTER

HMT 230 Risk & Prevention Management	3
HMT 291 Hospitality Management & Tourism Internship I	3
MAN 225 Human Relations & Organizational Behavior	3
HUM 115 International Environment: Culture & Business	3
PSY 121 General Psychology I	3
Career Elective	3
TOTAL	18

SIXTH QUARTER

HMT 225 Organization & Administration of Hospitality Industry	3
HMT 226 Purchasing for the Hospitality Industry	3
HMT 227 Marketing in the Hospitality & Tourism Industry	3
HMT 292 Hospitality Management & Tourism Internship II	3
HMT 295 Hospitality Management & Tourism Seminar	3
Career Elective	3
TOTAL	18

Interior Design*

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
BIS	160	Introduction to Word, PowerPoint, & Excel	3
VIS	106	Design Basics: 2-D	3
IND	131	Interior Design I	3
ENG	111	English Composition I	3
CAT	101	Architectural Drafting	3
			TOTAL
			17
SECOND QUARTER			
VIS	107	Design Basics: 3-D	3
IND	132	Interior Design II	3
ENG	112	English Composition II	3
ETD	199	Introduction to Computer Aided Drafting Concepts	2
			TOTAL
			11
THIRD QUARTER			
VIS	109	Design Drawing	3
IND	133	Interior Design III	3
ENG	113	English Composition III	3
ART	101	Introduction to Art	3
CAT	102	Architectural Detail Drafting	3
			TOTAL
			15
FOURTH QUARTER			
MAN	105	Introduction to Business	3
ART	102	Art Appreciation: Art Media	3
PSY	121	General Psychology I	3
		MAT Elective	4
			TOTAL
			13
FIFTH QUARTER			
IND	231	Advanced Interior Design I	4
PSY	122	General Psychology II	3
IND	240	History of Furniture	3
		Business Elective	3
CAT	201	Introduction to Revit Architecture	3
			TOTAL
			16
SIXTH QUARTER			
IND	134	Interior Textiles & Materials	3
IND	232	Advanced Interior Design II	4
SOC	111	General Sociology I	3
ART	108	Design Basics: Color	3
MRK	236	Consumer Behavior	3
	245	Principles of Retailing	3
			TOTAL
			16
SEVENTH QUARTER			
IND	233	Advanced Interior Design III	3
VIS	276	Visual Communications Portfolio Development	4
COM	206	Interpersonal Communication	3
		IND Elective	3
			TOTAL
			13

* Sinclair's Interior Design program is accredited by the National Association of Schools of Art and Design (NASAD).

Career Program

Description

The goal of this program is to provide state-of-the-art instruction aimed at developing real-world job skills. Advanced design and drafting skills, business practices, and portfolio development are also part of the curriculum.

Interior design graduates typically pursue careers as designers or consultants in design studios, architecture firms, or commercial retailers. Design work is creative, fast-paced, and detail oriented. Developing floor plans, selecting and coordinating colors, floors and wall coverings, furniture and other accessories and preparing drawings, cost estimates, and contracts are all common activities for an interior designer. The goal of this program is to provide state-of-the-art instruction aimed at helping develop real-world job skills. Advanced design and drafting skills, business practices and portfolio development are also part of the curriculum.

Type of Degree or Certificate

Associate of Applied Science

Program Code IND.AAS

101 Total Credit Hours

Career Opportunities

Interior design graduates typically pursue careers as designers or consultants in design studios, architecture firms, or commercial retailers. Design work is creative, fast paced, and detail oriented. Developing floor plans, selecting and coordinating colors, floors and wall coverings, furniture and other accessories and preparing drawings, cost estimates, and contracts are all common activities for an interior designer.

Career Program

Description

Marketing Management graduates play a vital role in any organization that needs products and services effectively and profitably distributed. Organizational functions of these graduates range from direct sales and customer services to management and coordination of personnel, sales territories, and promotional activities. Graduates may be involved in aspects of product development, advertising, promotion, marketing strategies, pricing, and research. Skills gained include excellent interpersonal and written communication, organizational ability, attention to detail, computational expertise, particularly in the areas of accounting and statistics, and understanding of human behavioral patterns. Employment opportunities include sales representatives, marketing research technicians, industrial marketing managers, and representatives in advertising agencies, media organizations, retailers, and service or industrial corporations.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code MRK.AAS

95 Total Credit Hours

Career Opportunities

Employment opportunities include sales representatives, marketing research technicians, industrial marketing managers, and representatives in advertising agencies, media organizations, retailers, and service or industrial corporations. Marketing Management graduates are prepared to work in the private, public or governmental sectors.

Internship Option

Marketing Management majors have a choice to complete three Business electives or earn nine credit hours of Marketing internship as part of the degree program. Interns perform entry level tasks related to the skills and competencies developed in the classroom; the experience exposes them to the basic elements of the career field. Students already performing marketing work may apply to use the current work site with approval of both the work site supervisor and internship coordinator; new duties or projects will be required. Marketing majors are encouraged to apply to the Business internship program upon completion of prerequisite course work (see MAN 270 course description).

Marketing Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAT	116	College Algebra	5
		or	
	121	Mathematics for Business Analysis	
ACC	121	Introduction to Financial Accounting	5
ENG	111	English Composition I	3
MAN	105	Introduction to Business	3
			TOTAL
			16
SECOND QUARTER			
MAT	122	Statistics I	4
ECO	218	Principles of Microeconomics	4
ACC	122	Introduction to Managerial Accounting	5
ENG	112	English Composition II	3
			TOTAL
			16
THIRD QUARTER			
COM	211	Effective Public Speaking	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
MRK	201	Marketing I	3
ECO	216	Principles of Macroeconomics	4
	—	Social & Behavioral Sciences Elective	3
			TOTAL
			16
FOURTH QUARTER			
MRK	215	Advertising	3
MRK	245	Principles of Retailing	3
MRK	202	Marketing II	3
MRK	225	Sales Fundamentals	3
ENG	131	Business Communications I	
MAN	205	Principles of Management	3
			TOTAL
			18
FIFTH QUARTER			
MRK	235	Marketing Research	3
MRK	236	Consumer Behavior	3
MAN	241	Introduction to Supply Chain Management	3
	—	Arts & Humanities Electives	3
	—	Social & Behavioral Sciences Elective	3
			TOTAL
			15
SIXTH QUARTER			
		MRK Elective	3
MAN	270	Management Internship	3
		or	
		Business Elective	
MAN	279	Business Capstone	5
MRK	220	Small Business Marketing	3
			TOTAL
			14

Mechanical Engineering Technology**

CAD Design Option

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
ETD 101 Introduction to Engineering Design	3
MAT 131 Technical Mathematics I	5
COM 211 Effective Public Speaking	3
ETD 128 Print Reading with GD&T	3
ETD 198 Personal Computer Applications for Engineering Technology	2
SCC 101 Student Success Experience	2
TOTAL	18
SECOND QUARTER	
EET 198 Digital Technology	3
ENG 111 English Composition I	3
MAT 132 Technical Mathematics II	5
ETD 102 Principles of Engineering	3
ETD 118 Introduction to the Product Realization Process	1
OPT 101 Introduction to Operations	3
TOTAL	18
THIRD QUARTER	
ENG 112 English Composition II	3
ETD 110 Engineering Design & Development	3
ETD 284 Solidworks Basics	5
PHY 131 Technical Physics I	4
ETD 261 Advanced Analytical Tools for Engineering Technology	2
TOTAL	17
FOURTH QUARTER	
ETD 213 Statics	4
ETD 133 Non-Metallic Materials	2
ETD 291 Unigraphics Basics	5
CAT 255 Engineering Technology Project Management	4
ETD 132 Metallurgy	2
OPT 105 Introduction to OSHA General Industry Standards	1
TOTAL	18
FIFTH QUARTER	
ETD 121 Ethics for Engineering Technology Professionals	2
ETD 222 Strength of Materials	4
ETD 238 Product Development & Testing	2
_____ Social & Behavioral Sciences Elective	3
_____ Arts & Humanities Elective	3
OPT 205 Manufacturing Processes	3
TOTAL	17
SIXTH QUARTER	
ETD 214 Dynamics with Kinematic Analysis	4
ETD 278 Engineering Technology Design Capstone	4
ETD 245 Machine Design	5
ETD 270 Mechanical Engineering Technology Internship	3
TOTAL	16

** Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

Career Program

Description

The Mechanical Engineering Technology program (CAD Design) provides the courses needed to begin a rewarding career as a technician in the engineering field. As a mechanical graduate, career options are open to a diverse number of fields and companies. Using state-of-the-art laboratory equipment, students complete relevant and practical coursework taught by knowledgeable and enthusiastic faculty. Emphasis is on design theory and techniques with instruction in three CAD software applications. For the first two quarters, this curriculum is the same as the University Transfer option.

The degree is accredited by the Technology Accreditation Commission of ABET, which assures quality and nationally recognized excellence. Graduates can transfer to a number of four year engineering technology schools; students who complete the University Transfer concentration of Mechanical Engineering Technology maximize course transfer.

Type of Degree or Certificate

Associate of Applied Science

Program Code ETD.AAS

104 Total Credit Hours

Transfer to Four Year

Students planning to transfer to a four-year Mechanical Engineering Technology program should consider the MET - University Transfer option.

Career Opportunities

The MET graduate entering industry would most likely aspire to an entry-level position in product design, development, testing, technical operations, or technical services and sales. The MET graduate is prepared to immediately begin technical assignments since technology programs stress current industrial practices and design procedures. Technicians and technologists may become professionally certified in their specific areas of expertise. Technologists may become registered professional engineers in many states; however, the requirements are usually different than those for engineers.

Career Program

Description

The Mechanical Engineering Technology program provides the courses needed to begin a rewarding career as a technician in the engineering field. As a mechanical graduate, career options are open to a diverse number of fields and companies. Using state-of-the-art laboratory equipment, students will complete relevant and practical coursework taught by knowledgeable, enthusiastic faculty. The courses are non-calculus based and there are several electives that can tailor the degree to an individual's needs. The Mechanical Engineering Technology degree transfers readily to many institutions. The degree is accredited by the Technology Accreditation Commission of ABET, which assures quality and nationally recognized excellence.

Type of Degree or Certificate

Associate of Applied Science

Program Code MEGT.AAS

103 Total Credit Hours

Transfer to Four Year

This program is an excellent choice for students desiring a four-year degree in Mechanical Engineering Technology.

Career Opportunities

The MET graduate entering industry would most likely aspire to an entry-level position in conceptual design, systems engineering, manufacturing, or product research and development. The MET graduate is relatively broad and has an analytical, creative mind challenged by open-ended technical problems. MET's are eligible to become registered professional engineers in many states by a process of examination and documentation of experiences.

Mechanical Engineering Technology**

University Transfer Option

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 this program.

Course & Title			Hours
FIRST QUARTER			
COM	211	Effective Public Speaking	3
ETD	101	Introduction to Engineering Design	3
ETD	128	Print Reading with GD&T	3
MAT	131	Technical Mathematics I	5
ETD	198	Personal Computer Applications for Engineering Technology	2
SCC	101	Student Success Experience	2
			<u>2</u>
			TOTAL 18
SECOND QUARTER			
EET	198	Digital Technology	3
ENG	111	English Composition I	3
ETD	102	Principles of Engineering	3
MAT	132	Technical Mathematics II	5
ETD	118	Introduction to the Product Realization Process	1
OPT	101	Introduction to Operations	3
			<u>3</u>
			TOTAL 18
THIRD QUARTER			
CHE	151	General Chemistry I	5
ENG	112	English Composition II	3
ETD	110	Engineering Design & Development	3
PHY	131	Technical Physics I	4
ETD	261	Advanced Analytical Tools for Engineering Technology	2
			<u>2</u>
			TOTAL 17
FOURTH QUARTER			
ETD	213	Statics	4
ETD	133	Non-Metallic Materials	2
PHY	132	Technical Physics II	4
ETD	132	Metallurgy	2
CAT	255	Engineering Technology Project Management	4
OPT	105	Introduction to OSHA General Industry Standards	1
			<u>1</u>
			TOTAL 17
FIFTH QUARTER			
ETD	121	Ethics for Engineering Technology Professionals	2
ETD	222	Strength of Materials	4
ETD	238	Product Development & Testing	2
HVA	286	Fluid Mechanics	3
—	—	Social & Behavioral Sciences Elective	3
—	—	Arts & Humanities Elective	3
			<u>3</u>
			TOTAL 17
SIXTH QUARTER			
ETD	214	Dynamics with Kinematic Analysis	4
ETD	278	Mechanical Engineering Technology Capstone	4
MAT	133	Technical Mathematics III	5
OPT	205	Manufacturing Processes	3
			<u>3</u>
			TOTAL 16

** Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

Medical Assistant

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAS	103	Medical Law & Ethics	2
HIM	121	Basic Medical Terminology	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
BIO	107	Human Biology	5
ENG	111	English Composition I	3
	131	Business Communications I	
			TOTAL
			16
SECOND QUARTER			
MAS	102	Medical Office Accounting	3
HIM	122	Specialized Medical Terminology	3
ALH	104	Allied Health Informatics	2
ALH	142	Fundamentals of Disease Processes	4
ALH	106	Introduction to Basic Health Care Practice	2
ENG	112	English Composition II	3
		or	
ENG	132	Business Communications II	
			TOTAL
			17
THIRD QUARTER			
MAS	104	Basic Clinical Assisting Procedures	4
MAS	105	Medical Office Management	3
PSY	121	General Psychology I	3
ALH	201	Survey of Drug Therapy	2
COM	206	Interpersonal Communication	3
HIM	260	ICD-9-CM Medical Office Coding	3
			TOTAL
			18
FOURTH QUARTER			
PSY	122	General Psychology II	3
ALH	140	Basic Life Support Training	1
		Communications Elective	3
MAT	101	Elementary Algebra	4
		or	
	106	Allied Health Mathematics	
HIM	261	CPT Medical Office Coding	3
			TOTAL
			14
FIFTH QUARTER			
MAS	111	Medical Billing I	4
MAS	106	Medical Office Emergency Procedures	3
MAS	201	Family Practice Clinical Assisting Procedures	3
MAS	203	Medical Assisting Directed Practice I	2
			TOTAL
			12
SIXTH QUARTER			
MAS	204	Medical Assisting Directed Practice II	3
MAS	206	Special Clinical Assisting Procedures	3
MAS	207	Medical Laboratory Procedures	3
ALH	130	Electrocardiography for the Health Care Provider	1
		Portfolio Elective	3
			TOTAL
			13
SEVENTH QUARTER			
MAS	205	Medical Assisting Directed Practice III	5
MAS	208	Medical Assisting Seminar	2
BIS	220	Computer Applications for the Medical Office	4
		Humanities Elective	3
			TOTAL
			14

Career Program

Description

Medical assistants are multi-skilled professionals who assist physicians with the administrative and clinical aspects of patient care. The Sinclair Community College Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). To enroll in medical assisting classes, an individual must be accepted into the Medical Assistant Technology program. A grade of "C" is required in all medical assisting courses and the required general education courses. An overall grade point average of at least 2 is required to continue in the program. A cumulative grade point average of at least "C" (2) is required for graduation. The student will be required to complete 360 hours of non-paid directed practice during their second year of the program. The graduate is eligible to take the National Certification Examination to become a Certified Medical Assistant (CMA).

Note: Professional CPR is required prior to MAS 106 and must remain current throughout the program. A complete physical examination and specific immunizations are required at the student's expense, prior to enrolling in the directed practice component of the curriculum.

Life & Health Sciences admission packets may be obtained by going online. Students must submit the Life & Health Sciences application form.

Program Prerequisites

ALH 103	Introduction to Health Care Delivery	3 cr. hrs.
	and	
MAS 101	Introduction to Medical Assisting	2 cr. hrs.

Type of Degree or Certificate

Associate of Applied Science

Program Code MAS.AAS

104 Total Credit Hours

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 (HMO's), multi-physician group practices and medical specialty clinics have opened new career opportunities.

Career Program

Description

The Mental Health Technology program prepares entry level human service workers for employment working on a professional team with clinical supervision. Duties may include client interviewing, crisis intervention and advocacy, activity therapy, group leadership, and case management.

Graduates of this program work directly with a diverse group of clients in a wide variety of human service agencies. The course of studies can be completed on a full-time (7 quarters) or part-time basis with day and evening options available. The practicum portion of the curriculum provides over 500 hours of supervised clinical experience in human service agencies. Graduates are eligible for registration by the Ohio Counselor and Social Worker Board. This program is accredited by the Council for Standards in Human Service Education. An informational interview during or after MHT 101 and a 2 GPA is required for admission to the program.

Life & Health Sciences admission packets may be obtained from Admissions (Building 10, Room 10112). Students must submit the Life & Health Sciences application form by mail or in person to Building 11, Room 11346.

Type of Degree or Certificate

Associate of Applied Science

Program Code MHT.AAS

105-106 Total Credit Hours

Career Opportunities

Entry level positions in a wide variety of mental health, addictions treatment, and human service agencies, clinics, and hospitals, include inpatient and outpatient services; day treatment, case management, and transitional housing programs for the mentally ill, substance abuse programs, services to the homeless and survivors of battering and abuse; programs associated with the criminal justice system; and services for children and the elderly.

Mental Health Technology

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
ENG 111	English Composition I	3
PSY 121	General Psychology I	3
SOC 111	General Sociology I	3
ALH 104	Allied Health Informatics	2
MHT 101	Introduction to Mental Health Work	3
TOTAL		14
SECOND QUARTER		
ALH 103	Introduction to Health Care Delivery	3
ENG 112	English Composition II	3
MAT 105	Business Mathematics	4
PSY 122	General Psychology II	3
TOTAL		13
THIRD QUARTER		
PSY 217	Abnormal Psychology	4
BIO 107	Human Biology	5
MHT 115	Social Case Work	3
MHT 201	Interviewing & Assessment	4
MHT 126	Introduction to Substance Related Disorders	4
TOTAL		20
FOURTH QUARTER		
COM 206	Interpersonal Communication	3
PSY 160	African-American Psychology	3
PSY 208	Life Span Human Development	5
_____	Arts & Humanities Elective	3
TOTAL		14
FIFTH QUARTER		
MHT 205	Psychosocial Interventions	3
MHT 202	Practicum in Mental Health I	5
MHT 211	Group Dynamics I	3
_____	MHT Elective	3
TOTAL		14
SIXTH QUARTER		
MHT 212	Group Dynamics II	3
MHT 203	Practicum in Mental Health II	5
MHT 245	Mental Health & the Family	4
_____	MHT Career Related Elective	3
TOTAL		15
SEVENTH QUARTER		
MHT 213	Group Dynamics III	3
MHT 204	Practicum in Mental Health III	5
SOC 205	Social Problems	4
MHT 236	Assessment & Diagnosis of Chemical Dependency	3 - 4
	or	
239	Dual Diagnosis: Substance Abuse & Mental Illness	
	or	
206	Case Management	
TOTAL		15 - 16

Mental Health Technology

Chemical Dependency

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
PSY	121	General Psychology I	3
SOC	111	General Sociology I	3
ALH	104	Allied Health Informatics	2
MHT	101	Introduction to Mental Health Work	3
MHT	123	Street Drug Actions	1
TOTAL			15
SECOND QUARTER			
ENG	112	English Composition II	3
PSY	122	General Psychology II	3
ALH	103	Introduction to Health Care Delivery	3
MHT	126	Introduction to Substance Related Disorders	4
MAT	105	Business Mathematics	4
TOTAL			17
THIRD QUARTER			
PSY	217	Abnormal Psychology	4
BIO	107	Human Biology	5
MHT	201	Interviewing & Assessment	4
MHT	115	Social Case Work	3
TOTAL			16
FOURTH QUARTER			
COM	206	Interpersonal Communication	3
PSY	160	African-American Psychology	3
PSY	208	Life Span Human Development	5
—	—	Arts & Humanities Elective	3
TOTAL			14
FIFTH QUARTER			
MHT	211	Group Dynamics I	3
MHT	205	Psychosocial Interventions	3
MHT	235	Family Dynamics of Chemical Dependency	4
MHT	202	Practicum in Mental Health I	5
TOTAL			15
SIXTH QUARTER			
MHT	212	Group Dynamics II	3
MHT	236	Assessment & Diagnosis of Chemical Dependency	4
MHT	203	Practicum in Mental Health II	5
MHT	209	Treatment Planning	2
MHT	139	Substance Abuse Prevention	1
TOTAL			15
SEVENTH QUARTER			
MHT	237	Treatment Techniques in Chemical Dependency	4
MHT	204	Practicum in Mental Health III	5
MHT	213	Group Dynamics III	3
MHT	238	Ethical Issues in Behavioral Health Care	3
TOTAL			15

Career Program

Description

The chemical dependency program prepares entry level workers for employment working on a professional team with clinical supervision in a chemical dependency treatment setting. Duties may include client interviewing, crisis intervention and advocacy, group leadership and case management. Graduates of this program work directly with a diverse group of clients. The course of study can be completed on a full-time (7 quarters) or part-time basis with day and evening options available. The practicum portion of the curriculum provides over 500 hours of supervised clinical experience. Graduates are eligible for registration with the Ohio Counselor and Social Worker Board as a Social Work Assistant. The curriculum meets the educational requirements only for licensure as a chemical dependency counselor with the Ohio Chemical Dependency Professionals Board.

Program Prerequisites

DEV 065 Academic Reading AND DEV 075 Foundations of Paragraph Writing AND DEV 110 Foundations of Essay Writing AND DEV 085 Basic Mathematics II

Type of Degree or Certificate

Associate of Applied Science

Program Code MHTCD.AAS

107 Total Credit Hours

Career Opportunities

Graduates of the program work in chemical dependency treatment facilities as case managers, residential supervisors, and treatment assistants. After two and one-half years employment experience supervised by a licensed independent chemical dependency counselor, graduates may take the state examination for licensure as a chemical dependency counselor level 2. Chemical Dependency counselors are employed by chemical dependency treatment services and also by mental health treatment facilities.

Career Program

Description

The nursing program provides students with the opportunity to become registered nurses. The curriculum is divided among non-nursing and nursing courses, where students participate in classroom activities and hospital experiences caring for people of all ages and health needs.

The Associate Degree Nursing (ADN) program is accredited by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York, New York 10006, (800) 669-1656, ext. 153, and approved by the State of Ohio Board of Nursing. To enroll in Nursing classes, an individual must be accepted into the Nursing program. The eight-quarter curriculum may be taken on a part-time basis, but Nursing courses must be taken in sequence. General education courses may be taken before admission to the Nursing program, prior to the quarter required, or within the quarter required. A grade of "C" is required in all Nursing courses and the required general education courses. An overall grade point average of at least 2 is required to continue in the program. A cumulative grade point average of at least "C" (2) is required for graduation. The graduate is eligible to take the National Licensing Examination (N-CLEX-R.N.) to become a Registered Nurse (R.N.).

Life & Health Sciences admission packets may be obtained from the office of Admissions (Building 10, Room 10112). Students must submit the Life & Health Sciences application form by mail or in person to Building 11, Room 11346.

Admission Requirements

- Successful completion of all DEV courses or appropriate score on placement test
- High school chemistry (within previous five years with grade of "C" or better or college equivalent)
- Nursing pre-admission exam
- Certified Nurse Assistant status
Note: CPR certification is required prior to NUR 122 and must remain current throughout the program.

Type of Degree or Certificate

Associate of Applied Science

Program Code NUR.AAS

108 Total Credit Hours

Career Opportunities

Registered nurses have a variety of employment opportunities. Work settings may include hospitals, extended care and long term care facilities, rehabilitation programs, physicians' offices, home health agencies, and various types of clinics.

Nursing

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIO	141	Principles of Anatomy & Physiology I	4
COM	206	Interpersonal Communication	3
PSY	119	General Psychology	5
ENG	111	English Composition I	3
ALH	103	Introduction to Health Care Delivery	3
TOTAL			18
SECOND QUARTER			
NSG	120	Human Response	3
NSG	121	Identifying Responses Through Assessment	3
MAT	109	Nursing Mathematics	3
BIO	142	Principles of Anatomy & Physiology II	4
BIO	148	Lab for BIO 142	4
BIO	205	Microbiology	4
TOTAL			17
THIRD QUARTER			
NSG	122	Promoting Healthy Responses to Physiological Stressors	8
NSG	123	Promoting Healthy Responses Through Psychomotor Interventions	3
BIO	143	Principles of Anatomy & Physiology III	4
BIO	149	Lab for BIO 143	4
TOTAL			15
FOURTH QUARTER			
NSG	220	Promoting Healthy Responses to Specific Stressors I	8
PSY	208	Life Span Human Development	5
ALH	219	General Pharmacology	3
TOTAL			16
FIFTH QUARTER			
NSG	221	Promoting Healthy Responses to Psychosocial Stressors	4
NSG	222	Promoting Healthy Responses to Specific Stressors II	4
ALH	104	Allied Health Informatics	2
TOTAL			10
SIXTH QUARTER			
ENG	112	English Composition II	3
NSG	223	Promoting Healthy Responses in Women	4
NSG	224	Promoting Healthy Responses to Specific Stressors III	4
TOTAL			11
SEVENTH QUARTER			
NSG	225	Promoting Healthy Responses in the Child & Family	4
NSG	226	Promoting Healthy Responses to Interrelated Pathophysiological Stressors	4
		Portfolio Elective	3
TOTAL			11
EIGHTH QUARTER			
NSG	230	Directed Nursing Practice	7
		Arts & Humanities Elective	3
TOTAL			10

Continuing Education Courses

Continuing Education Nursing specialty courses are available to registered nurses and nursing students who have completed NSG 220. Continuing Education courses reinforce previous learning, increase knowledge and develop technical skills in nursing specialty areas. Non-specialty courses are available to all interested health personnel. For details, contact the office of Continuing Education in Nursing, Room 6120, (937) 512-2563.

Advanced Placement for LPN's

Sinclair offers an advanced placement into the nursing program for qualified LPN's. Licensed Practical Nurses may substitute BIO 211 for BIO 141, 142, and 143 and may receive advanced placement credit for NSG 120, 121, 122, and 123 upon successful completion of NSG 132 and NSG 133. For more information, contact the Nursing office at (937) 512-2848.

Occupational Therapy Assistant

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ALH 103	Introduction to Health Care Delivery		3
HIM 121	Basic Medical Terminology		3
OTA 131	Therapeutic Self		9
SCC 101	Student Success Experience		2
OTA 151	Lab for OTA 131		
OTA 161	Clinical for OTA 131		
	TOTAL		17
SECOND QUARTER			
ALH 142	Fundamentals of Disease Processes		4
ENG 111	English Composition I		3
OTA 104	Functional Muscles		1
OTA 132	The Nature of Being Human		9
OTA 152	Lab for OTA 132		
OTA 162	Clinical for OTA 132		
	TOTAL		17
THIRD QUARTER			
BIS 160	Introduction to Word, PowerPoint, & Excel		3
PSY 121	General Psychology I		3
OTA 105	Functional Nervous System		1
OTA 133	The Dysfunctional Human		9
OTA 153	Lab for OTA 133		
OTA 163	Clinical for OTA 133		
	TOTAL		16
FOURTH QUARTER			
COM 206	Interpersonal Communication		3
ENG 112	English Composition II		3
SOC 111	General Sociology I		3
	TOTAL		9
FIFTH QUARTER			
PSY 122	General Psychology II		3
SOC 215	Cultural Diversity		4
OTA 231	Treatment Issues I		9
OTA 251	Lab for OTA 231		
OTA 261	Clinical for OTA 231		
	TOTAL		16
SIXTH QUARTER			
MAT 106	Allied Health Mathematics		4
OTA 232	Treatment Issues II		9
OTA 252	Lab for OTA 232		
OTA 262	Clinical for OTA 232		
	Arts & Humanities Elective		3
	TOTAL		16
SEVENTH QUARTER			
OTA 220	Clinical Affiliation I		3
OTA 233	Clinical Issues I		1
	TOTAL		4
EIGHTH QUARTER			
OTA 234	Clinical Issues II		1
OTA 221	Clinical Affiliation II		3
	TOTAL		4

Career Program

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 and mental disabilities so that they are able to function independently. The program includes extensive clinical training which must be finished within 12 months of completion of the academic course work. The program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, PO Box 31220, Bethesda, MD 20824-1220. AOTA's telephone number is (301) 652-2682.

Life & Health Sciences admission packets may be obtained online at <http://www.sinclair.edu/academics/lhs/index.cfm>.

Program Prerequisites

ALH 104	Allied Health Informatics	2 cr. hrs.
BIO 107	Human Biology	5 cr. hrs.
OTA 101	Introduction to Occupational Therapy Assistant	3 cr. hrs.

Completed within the last five years with a grade of "C" or better.

Type of Degree or Certificate

Associate of Applied Science

Program Code OTA.AAS

99 Total Credit Hours

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. The national average starting salary for a COTA is \$28,000. COTA's work in hospitals, clinics, schools, nursing facilities, group homes, and rehabilitation centers.

Career Program

Description

The Operations Technology program prepares individuals for leadership roles in the operations of business, industry and service organizations by providing them with the modern tools of today's high technology workplace. Students learn analysis, continuous improvement, quality assurance and problem solving techniques that can be applied toward financial, health care, manufacturing and service/retail fields. In addition to their associate degree, graduates earn a Six Sigma Green Belt certification, have an opportunity to become an ASQ Certified Quality Improvement Associate, become an ISO internal auditor, and are awarded an OSHA 10-hour card. Students take part in lecture-lab structured courses and hands-on demonstrations of course principles assuring student will gain practical knowledge as well as the fundamentals. Those who wish to further their studies may transfer to the best four-year colleges and universities.

Type of Degree or Certificate

Associate of Applied Science

Program Code OPT.AAS

107 Total Credit Hours

Operations Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
MAT	131	Technical Mathematics I	5
OPT	101	Introduction to Operations	3
OPT	125	Introduction to World Class Operations	3
OPT	126	Supervision & Team Leadership	3
SCC	101	Student Success Experience	2
TOTAL			19
SECOND QUARTER			
ENG	112	English Composition II	3
OPT	112	Ergonomics	3
OPT	130	Lean Operations	3
OPT	204	Operations Processes	3
ETD	121	Ethics for Engineering Technology Professionals	2
ETD	198	Personal Computer Applications for Engineering Technology	2
OPT	105	Introduction to OSHA General Industry Standards	1
TOTAL			17
THIRD QUARTER			
CHE	120	Introduction to Chemistry	4
ENG	113	English Composition III	3
ETD	199	Introduction to Computer Aided Drafting Concepts	2
OPT	110	Operations Work Measurement	2
OPT	212	Operations Project Management	3
—	—	Operations Technology Elective	3
TOTAL			17
FOURTH QUARTER			
COM	206	Interpersonal Communication	3
	211	or Effective Public Speaking	
OPT	201	Statistical Process Control	3
OPT	205	Manufacturing Processes	3
OPT	207	Operations Systems Analysis	3
OPT	209	Operations Cost Analysis	3
—	—	Operations Technology Elective	3
TOTAL			18
FIFTH QUARTER			
OPT	208	Engineering Technology Economics	3
OPT	221	Quality Assurance	4
OPT	240	Six Sigma - Green Belt	3
OPT	251	Supply Chain Operations and Logistics	5
—	—	Arts & Humanities Elective	3
TOTAL			18
SIXTH QUARTER			
OPT	206	Value Analysis	3
OPT	216	Facilities Planning	3
OPT	223	ISO 9000/16949 Quality Systems & Auditing	3
OPT	267	Quality Certification Review	3
OPT	278	Operations Technology Capstone	3
—	—	Arts & Humanities Elective	3
TOTAL			18

Operations Technology**

Industrial Engineering Technology Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
MAT	131	Technical Mathematics I	5
OPT	101	Introduction to Operations	3
OPT	125	Introduction to World Class Operations	3
OPT	126	Supervision & Team Leadership	3
SCC	101	Student Success Experience	2
TOTAL			19
SECOND QUARTER			
ENG	112	English Composition II	3
MAT	132	Technical Mathematics II	5
OPT	112	Ergonomics	3
OPT	130	Lean Operations	3
ETD	198	Personal Computer Applications for Engineering Technology	2
COM	206	Interpersonal Communication	3
	211	Effective Public Speaking	
TOTAL			19
THIRD QUARTER			
ENG	113	English Composition III	3
ETD	199	Introduction to Computer Aided Drafting Concepts	2
MAT	133	Technical Mathematics III	5
OPT	110	Operations Work Measurement	2
OPT	212	Operations Project Management	3
PHY	131	Technical Physics I	4
TOTAL			19
FOURTH QUARTER			
OPT	201	Statistical Process Control	3
OPT	205	Manufacturing Processes	3
OPT	207	Operations Systems Analysis	3
OPT	209	Operations Cost Analysis	3
PHY	132	Technical Physics II	4
ETD	132	Metallurgy	2
TOTAL			18
FIFTH QUARTER			
OPT	111	Manufacturing Work Measurement	2
OPT	208	Engineering Technology Economics	3
OPT	240	Six Sigma - Green Belt	3
OPT	251	Supply Chain Operations and Logistics	5
OPT	105	Introduction to OSHA General Industry Standards	1
	—	Arts & Humanities Elective	3
TOTAL			17
SIXTH QUARTER			
OPT	206	Value Analysis	3
OPT	216	Facilities Planning	3
OPT	223	ISO 9000/16949 Quality Systems & Auditing	3
OPT	278	Operations Technology Capstone	3
ETD	121	Ethics for Engineering Technology Professionals	2
	—	Arts & Humanities Elective	3
TOTAL			17

** Accredited by the Technology Accreditation Commission of ABET, 111 Market Place Suite 1050, Baltimore, Maryland 21202, phone: (410) 347-7700.

Career Program

Description

The Industrial Engineering Technology (IET) option of the Operations Technology 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. In addition to their associate degree, graduates earn a Six Sigma Green Belt certification, become an ISO internal auditor, and are awarded an OSHA 10-hour card. Students take part in lecture-lab structured courses and hands-on demonstrations of course principles assuring student will gain practical knowledge as well as the fundamentals. Those who wish to further their studies may transfer to the best four-year colleges and universities.

Type of Degree or Certificate

Associate of Applied Science

Program Code OPTIO.AAS

109 Total Credit Hours

CAREER

Career Program

Description

The Manufacturing Option of the Operations Technology program prepares individuals for leadership roles in the operations of business, industry and service organizations with a special emphasis on manufacturing 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. In addition to their associate degree, graduates earn a Six Sigma Green Belt certification, become an ISO internal auditor, and are awarded an OSHA 10-hour card. Students take part in lecture-lab structured courses and hands-on demonstrations of course principles assuring student will gain practical knowledge as well as the fundamentals. Those who wish to further their studies may transfer to the best four-year colleges and universities.

Type of Degree or Certificate

Associate of Applied Science

Program Code OPTMO.AAS

108 Total Credit Hours

Operations Technology Manufacturing Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
MAT	131	Technical Mathematics I	5
OPT	101	Introduction to Operations	3
OPT	125	Introduction to World Class Operations	3
OPT	126	Supervision & Team Leadership	3
SCC	101	Student Success Experience	<u>2</u>
TOTAL			19
SECOND QUARTER			
ENG	112	English Composition II	3
ETD	128	Print Reading with GD&T	3
OPT	100	Tooling & Machining Metrology	2
OPT	112	Ergonomics	3
OPT	130	Lean Operations	3
OPT	225	Design & Process Failure Modes & Effects Analyses	2
ETD	198	Personal Computer Applications for Engineering Technology	<u>2</u>
TOTAL			18
THIRD QUARTER			
CHE	120	Introduction to Chemistry	4
ENG	113	English Composition III	3
OPT	105	Introduction to OSHA General Industry Standards	1
ETD	199	Introduction to Computer Aided Drafting Concepts	2
OPT	110	Operations Work Measurement	2
OPT	113	Coordinate Measurement	3
OPT	212	Operations Project Management	<u>3</u>
TOTAL			18
FOURTH QUARTER			
COM	206	Interpersonal Communication	3
		or	
	211	Effective Public Speaking	
OPT	201	Statistical Process Control	3
OPT	205	Manufacturing Processes	3
OPT	207	Operations Systems Analysis	3
OPT	209	Operations Cost Analysis	3
ETD	121	Ethics for Engineering Technology Professionals	<u>2</u>
TOTAL			17
FIFTH QUARTER			
ETD	132	Metallurgy	2
OPT	208	Engineering Technology Economics	3
OPT	240	Six Sigma - Green Belt	3
OPT	251	Supply Chain Operations and Logistics	5
	—	Operations Technology Elective	3
	—	Arts & Humanities Elective	<u>3</u>
TOTAL			19
SIXTH QUARTER			
ETD	133	Non-Metallic Materials	2
OPT	206	Value Analysis	3
OPT	216	Facilities Planning	3
OPT	223	ISO 9000/16949 Quality Systems & Auditing	3
OPT	278	Operations Technology Capstone	3
	—	Arts & Humanities Elective	<u>3</u>
TOTAL			17

Paralegal

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
PAR	105	Paralegal Principles	4
PAR	106	Paralegal Principles - Technology	2
COM	206	Interpersonal Communication	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
			TOTAL
			15
SECOND QUARTER			
PLS	101	American Federal Government I	3
PAR	121	Litigation I	3
PAR	111	Legal Research & Writing	4
ENG	112	English Composition II	3
ACC	121	Introduction to Financial Accounting	5
			TOTAL
			18
THIRD QUARTER			
PAR	112	Legal Research & Writing II	4
PAR	115	Contract Law & the Uniform Commercial Code	3
PLS	102	American Federal Government II	3
ENG	199	Text Editing	3
PAR	122	Litigation II	3
			TOTAL
			16
FOURTH QUARTER			
PAR	201	Business Organization I	3
MAT	105	Business Mathematics	4 - 5
	116	College Algebra	
PAR	220	Legal Ethics	3
PAR	211	Probate Law I	3
	_____	Arts & Humanities Elective	3
			TOTAL
			16 - 17
FIFTH QUARTER			
PAR	215	Family Law	3
PAR	291	Paralegal Internship I	2
	_____	PAR Elective	6
PAR	131	Real Estate Transactions I	3
ECO	105	General Economics	3 - 4
	216	Principles of Macroeconomics	
			TOTAL
			17 - 18
SIXTH QUARTER			
	_____	PAR Elective	6
PAR	292	Paralegal Internship II	2
PSY	121	General Psychology I	3
		or	
SOC	111	General Sociology I	
	_____	PAR Career Elective	3 - 5
PAR	205	Criminal Law & Procedure	3
			TOTAL
			17 - 19

Career Program

Description

Student Success: Nearly a thousand graduates of Sinclair's Paralegal program now work in the legal profession and business world. Established in 1978, Sinclair's was the first paralegal Program in the area, and the first in the area to be approved by the American Bar Association.

Definition of Paralegal: The American Bar Association defines a paralegal, or legal assistant, as "a person, qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible."

Program Outcomes: The Paralegal Program provides a practical, interactive learning environment to prepare ethical, competent paralegals. They acquire analytical, communication, and technical skills necessary to excel in a diverse legal community. Students who successfully complete the program will be able to:

1. Competently analyze substantive and procedural issues which arise in the law to prepare and interpret documents.
2. Exemplify a high standard of ethical and professional behavior as a member of a legal team.
3. Competently conduct factual and legal research and communicate the results clearly and concisely.
4. Demonstrate fluency in information technology.

Curriculum: The Paralegal Program includes legal theory and practical assignments that incorporate ethical legal practices and extensive training in technology used in the legal field. All paralegal students are required to complete an attorney-supervised internship for hands-on experience using paralegal skills.

Eligibility: Students must be accepted into the Paralegal Program before beginning paralegal courses. Applicants who are able to perform at the college level in math, English, and reading are eligible for the program. Successful completion of Paralegal Principles (PAR 105) and co-requirement Paralegal Principles Technology (PAR 106) are required before students may enroll in other paralegal courses. Students must earn a "C" or better in all paralegal courses to pass.

Official Program Recognition: This program is approved by the American Bar Association, and fully accredited by the Association of Collegiate Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

All full-time faculty are licensed attorneys. Three faculty members have been honored with NISOD Teaching Excellence Awards, and one retired program chair is recognized by Sinclair as a Professor Emeritus.

Program Prerequisites

PAR 105	Paralegal Principles	4 cr. hrs.
PAR 106	Paralegal Principles: Technology	2 cr. hrs.

Type of Degree or Certificate

Associate of Applied Science

Program Code PAR.AAS

99-103 Total Credit Hours

Career Opportunities

The paralegal profession is one of the fastest growing careers, locally and nationally. The U.S. Department of Labor Occupational Outlook for Paralegals says paralegal jobs "are projected to grow faster than the average for all occupations through 2014." The State of Ohio reports an average annual wage for paralegals of over \$45,000 as of 2008. Graduates of the Sinclair Paralegal Program now work in large and small law firms, courts, government agencies, corporate legal departments, financial institutions, insurance agencies, legal aid services, and real estate offices. Sinclair's Career Services Office provides job hunting help.

Completion of the Paralegal Program does not authorize a graduate to practice law as an attorney, or to give legal advice.

Career Program

Description

Physical therapist assistants, under the supervision of physical therapists, implement treatment programs for patients of all ages who suffer from disabilities and limitations due to illness, injury, or other causes. Admission to the program occurs with completion of program prerequisites listed below. The program begins a new class of students fall quarter each year. Upon completion of the program, a graduate is eligible to take the national examination for state licensure.

Information regarding admission is available from the Life & Health Sciences advisors in Room 11-346 and on the program web page at sinclair.edu.

Program Prerequisites

BIO 121	Human Anatomy & Physiology I and	5 cr. hrs.
PHY 100	Introduction to Physics and	4 cr. hrs.
PTA 106	Introduction to Physical Therapy and	1 cr. hr.
ALH 104	Allied Health Informatics and	2 cr. hrs.
2.5 GPA		

Type of Degree or Certificate

Associate of Applied Science

Program Code PTA.AAS

90 Total Credit Hours

Career Opportunities

Physical therapy is in demand due to medical advances related to treatment of disease and trauma and the need to maintain quality of life. Information regarding the role of the Physical Therapist and Physical Therapist Assistant is available at www.apta.org. Please contact the program office regarding which Fall class year is currently being filled or visit the program web page at sinclair.edu for additional program expectations and outcomes.

Physical Therapist Assistant

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
PTA 116	Movement Science I	5
PTA 110	Fundamentals of PTA Practice	4
ENG 111	English Composition I	3
BIO 122	Human Anatomy & Physiology II	5
PTA 117	Lab for PTA 116	
TOTAL		17
SECOND QUARTER		
MAT 101	Elementary Algebra	4
PTA 118	Movement Science II	5
ALH 220	Pathophysiology	4
PTA 112	Pathology for PTA	1
PTA 129	Introduction to Therapeutic Exercise	3
PTA 132	Lab for PTA 129	
PTA 119	Lab for PTA 118	
TOTAL		17
THIRD QUARTER		
PTA 124	Clinical Procedures I	5
PTA 221	Clinical Procedures III	2
PTA 133	Intermediate Therapeutic Exercise	3
PTA 138	Lab for PTA 133	
COM 225	Small Group Communication	3
SOC 111	General Sociology I	3
PTA 125	Lab for PTA 124	
PTA 222	Lab for PTA 221	
TOTAL		16
FOURTH QUARTER		
PTA 230	Neuroscience for the Physical Therapist Assistant	1
PTA 226	Clinical Procedures II	2
ENG 112	English Composition II	3
PTA 211	Clinical Practicum I	3
PTA 238	Advanced Therapeutic Exercise	3
PTA 239	Lab for PTA 238	
PTA 228	Lab for PTA 226	
TOTAL		12
FIFTH QUARTER		
PTA 235	Practice Management	3
SOC 215	Cultural Diversity	4
PTA 233	Rehabilitation Skills	6
PSY 121	General Psychology I	3
PTA 234	Lab for PTA 233	
TOTAL		16
SIXTH QUARTER		
PTA 212	Clinical Practicum II	3
PTA 213	Clinical Practicum III	3
PSY 122	General Psychology II	3
—	Arts & Humanities Elective	3
TOTAL		12

Radiologic Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ALH	104	Allied Health Informatics	2
ENG	112	English Composition II	3
BIO	121	Human Anatomy & Physiology I	5
RAT	121	Introduction to Radiography & Positioning	4
RAT	130	Skeletal Anatomy for Radiography	1
RAT	131	Patient Care in Radiography	2
TOTAL			17
SECOND QUARTER			
RAT	111	Clinical Competency Development I	4
RAT	122	Radiographic Positioning	4
RAT	132	Ethics & Law in Medical Imaging	2
BIO	122	Human Anatomy & Physiology II	5
TOTAL			15
THIRD QUARTER			
PHY	106	Physics for Radiologic Technology	5
RAT	112	Clinical Competency Development II	4
RAT	123	Fluoroscopy in Radiography	5
TOTAL			14
FOURTH QUARTER			
COM	206	Interpersonal Communication	3
RAT	215	Pathology for Radiographers	2
SOC	111	General Sociology I	3
	—	Arts & Humanities Elective	3
TOTAL			11
FIFTH QUARTER			
RAT	212	Clinical Competency Development III	6
RAT	219	Pharmacology for Radiographers	1
RAT	218	Advanced Radiographic Practice	2
RAT	222	Principles of Radiographic Techniques	5
TOTAL			14
SIXTH QUARTER			
RAT	199	Principles of Digital Medical Imaging	2
RAT	213	Clinical Competency Development IV	6
RAT	231	Sectional Anatomy	2
TOTAL			10
SEVENTH QUARTER			
RAT	214	Clinical Education Development Capstone	6
RAT	226	Synopsis in Radiography	2
RAT	229	Quality Management in Medical Imaging	1
RAT	232	Radiation Biology	2
SOC	145	Comparing Cultures	3
TOTAL			14

Career Program

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. Successful completion of the ARRT credentialing examination simultaneously satisfies the Ohio Department of Health Radiologic Licensure Program requirements.

The Radiologic Technology Program (RAT) offers a dual track enrollment program where students are accepted to begin the program two (2) times per year in fall and winter with graduation for each track in the spring and fall, respectively. Each academic track consists of seven quarters of didactic and clinical courses. Program courses for Track A begin in the fall and program courses for Track B begin in the winter. Required general education courses may be completed prior to acceptance into the Radiologic Technology Program. These courses may be completed at Sinclair's Dayton campus, Sinclair's Learning Centers or through the Distance Learning Division. Students may complete all general education courses prior to beginning the first technical quarter in the radiologic technology program course sequence. Academic advising for developing an academic plan and for general education course scheduling is available through the Sinclair Academic Advising office. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL. 60606.

For admission to the Radiologic Technology Program a Life and Health Sciences application must be completed and submitted on-line at http://www.sinclair.edu/academics/lhs/pub/lhs_form.cfm. Students may also contact a Life and Health Sciences academic advisor in person in building 11, room 11346 or by calling (937) 512-3700. To be eligible for admission to the Radiologic Technology Program, all admission requirements and course prerequisites must be completed by the April 1 deadline.

Required Program Prerequisites

PHY 100	Introduction to Physics
ENG 111	English Composition I
HIM 121	Basic Medical Terminology
ALH 106	Introduction to Basic Health Care Practice
MAT 101	Elementary Algebra
ALH 103	Introduction to Health Care Delivery

Type of Degree or Certificate

Associate of Applied Science

Program Code RAT.AAS

95 Total Credit Hours

Career Opportunities

Opportunities persist due to technological advances, and the need for proper patient diagnosis. Opportunities exist for technologists in all sections of the U.S., in hospitals, ambulatory imaging centers, private offices, education, equipment manufacturers and suppliers, and in research centers.

CAREER

Career Program

Description

Students acquire a variety of skills in selling, renting and buying property. Courses are offered which are required by the Ohio Division of Real Estate for persons taking the real estate sales and brokers examinations. Other courses offered include commercial appraisal, property management, and real estate investing. Students learn to study property listings, interview prospective clients, show properties, discuss conditions of the sale or terms of the lease and negotiate loans on property. Employment opportunities for building consultants, residential leasing agents, sales representatives, brokers, appraisers, and apartment managers are available from real estate firms, developers, and property management companies.

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

Type of Degree or Certificate

Associate of Applied Science

Program Code RES.AAS

97 Total Credit Hours

Career Opportunities

Opportunities are available for building consultants, residential leasing agents, sales representatives, salespersons, brokers, appraisers, and apartment managers with real estate firms, developers, and property management companies.

Real Estate/Property Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
RES	121	Real Estate Abstracting I	3
RES	201	Real Estate Principles & Practices	4
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	111	English Composition I	3
	131	or Business Communications I	
ENT	105	Introduction to Entrepreneurship	3
			<u>16</u>
SECOND QUARTER			
ENG	112	English Composition II	3
	132	or Business Communications II	
MAN	205	Principles of Management	3
RES	122	Real Estate Abstracting II	3
RES	202	Real Estate Law	4
PLS	104	Urban Government	3
			<u>16</u>
THIRD QUARTER			
LAW	101	Business Law I	4
MAN	225	Human Relations & Organizational Behavior	3
MAT	105	Business Mathematics	4
RES	203	Real Estate Finance	2
RES	204	Real Estate Appraisal for Realtors	2
			<u>15</u>
FOURTH QUARTER			
ACC	121	Introduction to Financial Accounting	5
BIS	M35	Microsoft Access	2
BIS	201	Customer Service	3
ECO	218	Principles of Microeconomics	4
RES	215	Real Estate Investing	3
			<u>17</u>
FIFTH QUARTER			
PSY	121	General Psychology I	3
RES	221	Property Management	3
ACC	122	Introduction to Managerial Accounting	5
SOC	145	Comparing Cultures	3
MRK	201	Marketing I	3
			<u>17</u>
SIXTH QUARTER			
FIN	215	Corporation Finance	3
COM	211	Effective Public Speaking	3
ECO	216	Principles of Macroeconomics	4
RES	278	Real Estate Capstone	3
	—	Arts & Humanities Elective	3
			<u>16</u>

Respiratory Care

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIO	107	Human Biology	5
ALH	103	Introduction to Health Care Delivery	3
ALH	106	Introduction to Basic Health Care Practice	2
TOTAL			10
SECOND QUARTER			
BIO	125	Cardiopulmonary Anatomy & Physiology	5
ENG	111	English Composition I	3
RET	110	Respiratory Therapeutics I	5
TOTAL			13
THIRD QUARTER			
ENG	112	English Composition II	3
RET	224	Cardiopulmonary Pharmacology	3
		Humanities Elective	3
RET	120	Respiratory Therapeutics II	4
TOTAL			13
FOURTH QUARTER			
RET	130	Cardiopulmonary Disease Processes	4
ALH	130	Electrocardiography for the Health Care Provider	1
RET	140	Adjuncts to Respiratory Care	8
TOTAL			13
FIFTH QUARTER			
		Communication Arts Elective	3
		Psychology Elective	3
ALH	104	Allied Health Informatics	2
RET	147	Specialty Clinical Practice	3
TOTAL			11
SIXTH QUARTER			
RET	230	Respiratory Critical Care I	10
ALH	220	Pathophysiology	4
TOTAL			14
SEVENTH QUARTER			
RET	240	Respiratory Critical Care II	10
RET	250	Pediatrics & Neonatology	3
TOTAL			13
EIGHTH QUARTER			
RET	260	Assessment of Pulmonary Function	3
RET	280	Correlations in Respiratory Care	6
ALH	141	Emergency Cardiac Care (ACLS)	2
		Portfolio Elective	3
TOTAL			14

Career Program

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.

This program is accredited by The Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021-4244; 817-283-2835; Fax: 817-354-8519; Web Page: www.coarc.com

Upon completion of the program, a graduate is considered eligible and qualified to take the certification and registry examinations, and the specialty examinations for pediatrics/neonatology and pulmonary function technology offered by the National Board for Respiratory Care. Selective admission and additional program information may be obtained from the Life & Health Sciences counselors, Room 11346, (937) 512-3700, and from the department chairperson, Room 3340, (937) 512-2268.

Following application to the College, interested candidates for the program should complete a Life & Health Sciences (LHS) application and review the information packet available online within the LHS divisional website.

Effective September 1, 2010, a 2.5 GPA will be required for admission to the program. A grade of "C" must be earned in all courses of the curriculum, and an overall grade point average (GPA) of at least 2.0 is necessary for continuance in the program and graduation.

Program Prerequisites

HIM 121 Basic Medical Terminology and
 MAT 106 Allied Health Mathematics and
 CHE 120 Introduction to Chemistry

Type of Degree or Certificate

Associate of Applied Science

Program Code RET.AAS

101 Total Credit Hours

Career Program

Description

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.

Surgical Technology is a seven-quarter associate degree program accredited by the Commission on Accreditation of Allied Health Education Programs. To enroll in Surgical Technology (SUT) courses, a student must be accepted into the program. The curriculum may be taken on a part-time basis, but Surgical Technology classes must be taken in sequence. A grade of "C" (2) must be earned in all required courses, and an overall grade point average of at least 2 is necessary for continuance in the program and graduation. The graduate is eligible to take the National Certification Examination for Surgical Technologists. Professional CPR certification is required prior to SUT 111 and must remain current throughout the program.

Life & Health Sciences admission packets may be obtained from the office of Admissions (Building 10, Room 10112). Students must submit the Life & Health Sciences application form by mail or in person to Building 11, Room 11346.

Admission Requirement

- High school chemistry
or
- CHE 120, or an equivalent course, with a grade of "C" or better within the last five years
or
- BIO 107 grade of "C" or better

Type of Degree or Certificate

Associate of Applied Science

Program Code SUT.AAS

108 Total Credit Hours

Career Opportunities

The surgical technologist may find employment in hospital operating rooms, delivery rooms, endoscopy units, emergency departments, renal dialysis units, outpatient surgery facilities, surgical clinics, cardiac catheterization laboratories, central processing departments, physician offices, and other settings where invasive therapeutic or diagnostic surgical procedures are performed.

Surgical Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIO	121	Human Anatomy & Physiology I	5
COM	206	Interpersonal Communication	3
ALH	103	Introduction to Health Care Delivery	3
ENG	111	English Composition I	3
HIM	121	Basic Medical Terminology	<u>3</u>
TOTAL			17
SECOND QUARTER			
BIO	122	Human Anatomy & Physiology II	5
PSY	119	General Psychology	5
SUT	111	Surgical Technology Fundamentals	<u>6</u>
TOTAL			16
THIRD QUARTER			
BIO	205	Microbiology	4
ALH	104	Allied Health Informatics	2
SUT	112	Surgical Process	<u>10</u>
TOTAL			16
FOURTH QUARTER			
ALH	201	Survey of Drug Therapy	2
MAT	106	Allied Health Mathematics	4
SUT	211	Surgical Procedures I	<u>10</u>
TOTAL			16
FIFTH QUARTER			
ALH	142	Fundamentals of Disease Processes	4
ENG	112	English Composition II	3
SUT	212	Surgical Procedures II	<u>10</u>
TOTAL			17
SIXTH QUARTER			
SUT	213	Surgical Procedures III	11
	_____	Portfolio Elective	<u>2</u>
TOTAL			13
SEVENTH QUARTER			
	_____	Humanities Elective	3
SUT	220	Surgical Technology Role Transition	<u>10</u>
TOTAL			13

Visual Communications*

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
ENG	111	English Composition I	3
VIS	114	Interactive Digital Theory	3
VIS	106	Design Basics: 2-D	3
VIS	105	Printing Basics	3
VIS	110	Design Lab Orientation	1
ART	111	Art Drawing I	3
			<u>3</u>
TOTAL			18
SECOND QUARTER			
VIS	107	Design Basics: 3-D	3
VIS	108	Typography	3
VIS	146	Digital Illustration	3
ENG	112	English Composition II	3
			or
	131	Business Communications I	
VIS	147	Digital Imaging	3
			<u>3</u>
TOTAL			15
THIRD QUARTER			
VIS	109	Design Drawing	3
VIS	148	Digital Page Layout	3
VIS	117	Web Page Design	3
ENG	113	English Composition III	3
			or
	132	Business Communications II	
VIS	115	Digital Video	
			or
	150	Screen Printing	3
VIS	180	History of Design	3
			<u>3</u>
TOTAL			18
FOURTH QUARTER			
VIS	206	Design Principles I	4
VIS	236	Design Applications I	4
MAT	101	Elementary Algebra	4
			or
	105	Business Mathematics	
VIS	118	Web Page Design II	3
			or
	151	Offset Printing	
VIS	201	Digital PrePress I	3
			<u>3</u>
TOTAL			18

—continued on next page

Career Program

Description

The goal of the program is to provide state-of-the-art instruction to help students develop real-world job skills in visual communications. Design work is creative, fast paced and in demand by most businesses. Whether it is stationery, brochures, magazines, advertising, packaging, signage, television graphics, animation or multi-media, designers probably had a hand in it. Advanced computer skills, portfolio development and job-seeking strategies are incorporated into the curriculum.

Visual Communications graduates typically pursue careers as graphic designers (also called commercial artists) in design studios, advertising agencies, magazine and book publishing companies or corporate design departments. Many Visual Communications majors enter the work place after graduation; others choose to continue their education in design or a related field at a four-year institution.

Type of Degree or Certificate

Associate of Applied Science

Program Code VIS.AAS

103 Total Credit Hours

Career Opportunities

Visual Communications graduates typically pursue careers as graphic designers (also called commercial artists) in design studios, advertising agencies, magazine and book publishing companies or corporate design departments. Many Visual Communications majors enter the work place after graduation; others choose to continue their education in design or a related field at a four-year institution.

Career Program

Description

The goal of the program is to provide state-of-the-art instruction to help students develop real-world job skills in visual communications. Design work is creative, fast paced and in demand by most businesses. Whether it is stationery, brochures, magazines, advertising, packaging, signage, television graphics, animation or multimedia, designers probably had a hand in it. Advanced computer skills, portfolio development and job-seeking strategies are incorporated into the curriculum.

Visual Communications graduates typically pursue careers as graphic designers (also called commercial artists) in design studios, advertising agencies, magazine and book publishing companies or corporate design departments. Many Visual Communications majors enter the work place after graduation; others choose to continue their education in design or a related field at a four-year institution.

Type of Degree or Certificate

Associate of Applied Science

Program Code VIS.AAS

103 Total Credit Hours

Career Opportunities

Visual Communications graduates typically pursue careers as graphic designers (also called commercial artists) in design studios, advertising agencies, magazine and book publishing companies or corporate design departments. Many Visual Communications majors enter the work place after graduation; others choose to continue their education in design or a related field at a four-year institution.

Visual Communications*

Continued

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 this program.

Course & Title			Credit Hours
FIFTH QUARTER			
COM	206	Interpersonal Communication	3
VIS	207	Design Principles II	4
VIS	237	Design Applications II	4
ART	101	Introduction to Art	3
VIS	116	Digital Animation	3
	202	Digital PrePress II	
			TOTAL
			17
SIXTH QUARTER			
PSY	121	General Psychology I	3
ART	161	Photography I	4
VIS	276	Visual Communications Portfolio Development	4
VIS	278	Visual Communications Capstone	3
MRK	236	Consumer Behavior	3
	_____	or ART Elective	
	_____	or Vis Com Elective	
	265	Digital Authoring	
	270	Visual Communications Internship	
MRK	215	Advertising	
	205	Direct Marketing	
	245	Principles of Retailing	
			TOTAL
			17

* Sinclair's Visual Communications program is accredited by the National Association of Schools of Art and Design (NASAD).



Certificate Programs

2012
Semesters 
sinclair.edu/semesters

Certificate

Description

The Airframe Aviation Maintenance certificate will prepare the student with the Federal Aviation Administration knowledge and hours required for the FAA Airframe certificate. The subjects covered are welding, sheet metal, composites, fabric and wood structures, finishes, assembly and rigging, airframe electrical, cabin atmosphere control systems, instruments, communication, navigation, hydraulics, pneumatics, landing gear systems, position and warning, fuel systems, ice and rain, fire protection, and airframe inspections.

Type of Degree or Certificate

Certificate

Program Code AAM.CRT

54 Total Credit Hours

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.

Airframe Aviation Maintenance

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AVT	136	Sheet Metal I	4
AVT	227	Fabric & Wood Structures	3
AVT	229	Aircraft Finishes	3
AVT	109	Composites For Aircraft	<u>4</u>
TOTAL			14
SECOND QUARTER			
AVT	121	Assembly & Rigging	5
AVT	108	Ice & Rain/Fire Protection	2
AVT	236	Sheet Metal II	3
AVT	137	Aircraft Structural Welding	<u>2</u>
TOTAL			12
THIRD QUARTER			
AVT	132	Electrical Systems I	4
AVT	214	Cabin Atmosphere Control Systems	3
AVT	133	Instrument Systems	2
AVT	134	Communication/Navigation Systems	2
AVT	107	Fuel Systems	<u>3</u>
TOTAL			14
FOURTH QUARTER			
AVT	218	Landing Gear	4
AVT	106	Position & Warning Systems	2
AVT	232	Electrical Systems II	3
AVT	237	Airframe Inspections	2
AVT	217	Hydraulics & Pneumatics Systems	<u>3</u>
TOTAL			14

CERTIFICATE

Automotive Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AUT 102	Introduction to Automotive Service		3
AUT 165	Automotive Brake System		5
AUT 124	Electrical/Electronic Systems Level I		5
AUT 210	Steering, Suspension & Alignment		5
	TOTAL		18
SECOND QUARTER			
AUT 115	Engine Performance I		7
AUT 142	Manual Transmissions & Drive Line		5
AUT 108	Engine Systems		5
	TOTAL		17
THIRD QUARTER			
AUT 125	Electrical/Electronic Systems II		7
AUT 146	Automotive Heating & Air Conditioning		5
	TOTAL		12
FOURTH QUARTER			
AUT 245	Engine Performance II		7
AUT 241	Automatic Transmissions		7
	TOTAL		14

Certificate

Description

This program is designed for students who want to become automotive technicians without pursuing an associate degree. It will allow students to expand their knowledge of the automotive industry and secure employment with dealerships, independent services facilities, machine shops, and corporate services franchises.

Type of Degree or Certificate

Certificate

Program Code AUT.CRT

61 Total Credit Hours

CERTIFICATE

Career Program

Description

This program is designed for students who want to become automotive technicians without pursuing an associate degree. It will allow students to expand their knowledge of the automotive industry and secure employment with dealerships, independent services facilities, machine shops, and corporate services franchises.

Type of Degree or Certificate

Certificate

Program Code AUTHO.CRT

58 Total Credit Hours

Automotive Technology (HONDA)

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AUT	165	Automotive Brake System	5
AUT	124	Electrical/Electronic Systems Level I	5
AUT	210	Steering, Suspension & Alignment	5
		TOTAL	15
SECOND QUARTER			
AUT	115	Engine Performance I	7
AUT	142	Manual Transmissions & Drive Line	5
AUT	108	Engine Systems	5
		TOTAL	17
THIRD QUARTER			
AUT	125	Electrical/Electronic Systems II	7
AUT	146	Automotive Heating & Air Conditioning	5
		TOTAL	12
FOURTH QUARTER			
AUT	245	Engine Performance II	7
AUT	241	Automatic Transmissions	7
		TOTAL	14

CERTIFICATE

Business Information Systems

Information Processing Option

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
MAT	105	Business Mathematics	4
BIS	101	Personal Computer Keyboarding	2
BIS	105	Computer Concepts	3
BIS	M75	The Internet	3
BIS	M85	Microsoft Word	2
TOTAL			17
SECOND QUARTER			
ENG	112	English Composition II	3
BIS	102	Document Formatting	2
COM	206	Interpersonal Communication	3
BIS	114	Records Management & Electronic Files	3
BIS	201	Customer Service	3
BIS	M55	Microsoft PowerPoint	2
BIS	M86	Advanced/Expert Word	2
TOTAL			18
THIRD QUARTER			
ENG	199	Text Editing	3
BIS	103	Advanced Document Formatting/Skillbuilding	4
BIS	M45	Microsoft Excel	2
BIS	202	Advanced Customer Service Concepts	3
BIS	M25	Desktop Publishing	2
BIS	M35	Microsoft Access	2
TOTAL			16

Certificate

Description

In this one-year certificate program, students receive specialized training necessary to work with personal computers and end-user software applications, such as Microsoft Word, Excel, PowerPoint, Publisher, and Access. Also, students master the basics of customer service, work place technology and electronic files management to provide administrative support in a variety of entry level office positions.

Type of Degree or Certificate

Certificate

Program Code BUIP.CRT

51 Total Credit Hours

CERTIFICATE

Certificate

Description

In this one-year certificate program, students receive specialized training necessary to work with personal computers and end-user software applications in a medical office. Students master the basics of medical terminology, medical office procedures, medical transcription and medical billing to provide administrative support in a variety of medical office environments.

Type of Degree or Certificate

Certificate

Program Code BUMS.CRT

51 Total Credit Hours

Business Information Systems Medical Office Specialist

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	111	English Composition I	3
MAT	105	Business Mathematics	4
BIS	101	Personal Computer Keyboarding	2
HIM	121	Basic Medical Terminology	3
TOTAL			12
SECOND QUARTER			
ENG	112	English Composition II	3
BIS	102	Document Formatting	2
BIS	M45	Microsoft Excel	2
BIS	M85	Microsoft Word	2
HIM	122	Specialized Medical Terminology	3
TOTAL			12
THIRD QUARTER			
MAN	205	Principles of Management	3
HIM	260	ICD-9-CM Medical Office Coding	3
BIS	116	Medical Office Procedures	4
ENG	199	Text Editing	3
TOTAL			13
FOURTH QUARTER			
HIM	261	CPT Medical Office Coding	3
BIS	201	Customer Service	3
BIS	220	Computer Applications for the Medical Office	4
BIS	251	Medical Transcription I	4
TOTAL			14

Business Information Systems

Personal Computers in Business

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	105	Computer Concepts	3
BIS	M75	The Internet	3
MAN	105	Introduction to Business	3
BIS	M85	Microsoft Word	2
ACC	121	Introduction to Financial Accounting	5
ENG	111	English Composition I	3
TOTAL			19
SECOND QUARTER			
CIS	107	Introduction to Operating Systems	3
BIS	M35	Microsoft Access	2
BIS	M45	Microsoft Excel	2
BIS	M55	Microsoft PowerPoint	2
BIS	M86	Advanced/Expert Word	2
	—	Communication Arts Elective	3
TOTAL			14
THIRD QUARTER			
BIS	M36	Advanced/Expert Access	3
BIS	M46	Advanced/Expert Excel	3
BIS	172	Integrated Solutions	2
CIS	130	Introduction to Web Development	3
CIS	162	Troubleshooting Desktop Applications on a Microsoft Windows Operating System	3
	—	Computer Information Systems Elective	3
TOTAL			17

Certificate

Description

Students learn how to use personal computers for business administration, decision support, and financial applications. The personal computers certificate is intended for those with higher education and/or skills to update their knowledge with personal computer techniques.

Type of Degree or Certificate

Certificate

Program Code PCB.CRT

50 Total Credit Hours

CERTIFICATE

Certificate

Description

With this program, 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.

Type of Degree or Certificate

Certificate

Program Code BM.CRT

49 Total Credit Hours

Business Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	205	Principles of Management	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
MAT	122	Statistics I	4
COM	206	Interpersonal Communication	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
		TOTAL	<u>16</u>
SECOND QUARTER			
MAN	225	Human Relations & Organizational Behavior	3
MAN	255	Management Information Systems I	3
COM	211	Effective Public Speaking	3
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
ECO	218	Principles of Microeconomics	4
		TOTAL	<u>16</u>
THIRD QUARTER			
MRK	201	Marketing I	3
MAN	110	Introduction to International Business	3
		Management Elective	3
		Business Elective	3
MAN	<u>279</u>	Business Capstone	<u>5</u>
		TOTAL	<u>17</u>

Computer Aided Manufacturing

Project Step II

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
INT	107	Principles of Manufacturing	4
INT	109	Fundamentals of Tool & Manufacturing Processes	4
INT	141	Applied Shop Mathematics I	3
INT	161	Machine Operations Laboratory I	8
TOTAL			19
SECOND QUARTER			
INT	113	Fundamentals of CNC	3
INT	142	Applied Shop Mathematics II	3
INT	162	Machine Operations Laboratory II	8
OPT	100	Tooling & Machining Metrology	2
TOTAL			16
THIRD QUARTER			
INT	143	Applied Shop Mathematics III	3
INT	163	Machine Operations Laboratory III	8
		INT Elective	3
INT	116	CNC Operations	3
TOTAL			17

Certificate

Description

A nine-month intensive training program offered by Sinclair Community College in cooperation with the Dayton Tooling & Manufacturing Association, the Computer Aided Manufacturing certificate completion prepares a graduate for employment in the tool & die industry as well as career advancement. To enroll for the three quarters of training beginning in September and finishing in June, a student must formally apply for admittance to the program through the Science, Mathematics & Engineering Technologies division. The student who is accepted into the program will receive 25-30 hours of classroom and laboratory instruction per week as well as producing for personal use tools valued at approximately \$1,500. Classes are available evenings to accommodate students who are unable to attend during the day.

Type of Degree or Certificate

Certificate

Program Code CAMPS.CRT

52 Total Credit Hours

Career Opportunities

The Tooling & Machining certificate completion prepares graduates for employment in the tool & die industry.

CERTIFICATE

Certificate

Description

Accredited by the Ohio Department of Public Safety, Division of Emergency Medical Services, this five-quarter sequence of courses provides classroom, laboratory, in-hospital, and field clinical experience. A physical examination and specific immunizations are required at the student's expense prior to clinical practicums. The student is required to earn at least a 78 percent in paramedic course series. Following successful completion of EMS 135, EMS 136, EMS 137, EMS 138, and EMS 139, the student is eligible to sit for the Ohio certifying examination for Emergency Medical Technician-Paramedic. Day and evening classes are available to accommodate work schedules. Admission packets are available from the office of Admissions, Room 10112 or the EMS office. ODPS Accreditation #326

Program Prerequisites

Ohio EMT-Basic Certification, complete health assessment, Current CPR card

Type of Degree or Certificate

Certificate

Program Code EPST.CRT

45 Total Credit Hours

EMT Paramedic Certification

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
EMS 135	EMT-Paramedic I: Introduction to ALS Care	<u>9</u>
	TOTAL	9
SECOND QUARTER		
EMS 136	EMT-Paramedic II: Cardiovascular Emergencies	<u>9</u>
	TOTAL	9
THIRD QUARTER		
EMS 137	EMT-Paramedic III: Pediatric & Trauma Emergencies	<u>9</u>
	TOTAL	9
FOURTH QUARTER		
EMS 138	EMT-Paramedic IV: The Medical Patient	<u>9</u>
	TOTAL	9
FIFTH QUARTER		
EMS 139	EMT-Paramedic V: Integration	<u>9</u>
	TOTAL	9

Early Childhood Studies

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ECE	101	Introduction to Early Childhood Education	3
ECE	106	Childhood Nutrition, Health, & Safety	3
ECE	150	The Young Child	4
ENG	111	English Composition I	3
TOTAL			13
SECOND QUARTER			
ECE	145	Guidance of Young Children	3
ECE	120	Observing Young Children	3
		Early Childhood Education Elective	3
SOC	111	General Sociology I	3
COM	211	Effective Public Speaking	3
TOTAL			15
THIRD QUARTER			
ECE	117	Language & Literacy Experiences in Early Childhood	4
ECE	135	Group Care for Infant & Toddler	3
ECE	146	The Challenging Child	3
		Early Childhood Education Elective	3
ECE	208	Inclusion: Principles & Practices	4
TOTAL			17

Certificate

Description

This program prepares individuals to work with young children in a variety of education and child care settings. Those individuals completing this certificate will meet Ohio Job & Family Services Child Day Care Center licensing requirements for child care staff training.

Type of Degree or Certificate

Certificate

Program Code ECE.CRT

45 Total Credit Hours

CERTIFICATE

Certificate

Description

This program prepares existing or potential entrepreneurs in wide variety of small business functions. In addition to traditional management courses, the following key areas are emphasized for entrepreneurs: entrepreneurial management, small business marketing, small business finance, and business plan development.

Type of Degree or Certificate

Certificate

Program Code ENT.CRT

51 Total Credit Hours

Career Opportunities

This certificate will prepare those who want to enter into business with an entrepreneurial mindset, or to begin businesses of their own. The certificate will allow students to gain knowledge in the areas of small business management: planning, financing, and marketing the business concept, products, and services. Emphasis is on general business skills, as well as on the specific skill of developing a business plan for loan approval. Potential investors and creditors rely heavily on the well prepared business plan as well as the knowledge of the entrepreneur, and this certificate is meant to meet that requirement.

Entrepreneurship

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
COM	211	Effective Public Speaking	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
MAN	110	Introduction to International Business	3
		Social and Behavioral Sciences Elective	3
MAN	105	Introduction to Business	3
		TOTAL	18
SECOND QUARTER			
BIS	M35	Microsoft Access	2
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MRK	220	Small Business Marketing	3
LAW	101	Business Law I	4
MAN	201	Introduction to Supervision	3
ENT	240	Small Business Finance	3
		TOTAL	18
THIRD QUARTER			
ECO	218	Principles of Microeconomics	4
ENT	260	Business Plan Development	5
MAN	205	Principles of Management	3
MRK	236	Consumer Behavior	3
		TOTAL	15

Food Service Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
HMT	105	Introduction to the Hospitality & Tourism Industry	3
HMT	107	Sanitation & Safety	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
HMT	101	Dining/Kitchen Orientation	<u>2</u>
		TOTAL	16
SECOND QUARTER			
ACC	121	Introduction to Financial Accounting	5
HMT	112	Food Principles & Basic Preparation	5
HMT	110	Menu Planning	2
MAN	205	Principles of Management	3
	—	Hospitality Management Elective	<u>3-5</u>
		TOTAL	18-20
THIRD QUARTER			
HMT	114	Advanced Food Preparation	5
HMT	201	Food Service Equipment Design & Maintenance	3
HMT	215	Food & Labor Cost Controls	3
HMT	225	Organization & Administration of Hospitality Industry	3
HMT	226	Purchasing for the Hospitality Industry	<u>3</u>
		TOTAL	17

Certificate

Description

The Food Service Management certificate program combines classroom instruction and laboratory experience in food preparation and service for the restaurant and lodging industry. The curriculum includes the National Restaurant Association ProManagement courses that lead to the ProManagement certificate.

Type of Degree or Certificate

Certificate

Program Code FSM.CRT

51-53 Total Credit Hours

Career Opportunities

This certificate provides experience for food preparation and service for restaurants and lodging industry.

CERTIFICATE

Certificate

Description

The General Aviation Maintenance certificate provides knowledge and skills for the general knowledge area required for FAA certification as an airframe and powerplant maintenance technician. Students will learn to apply mathematics and physics principles to practical aircraft maintenance problems, read and interpret aircraft drawings, conduct aircraft ground operations and servicing, interpret maintenance publications, understand maintenance technician responsibilities, understand FAA regulations, and perform weight and balance calculations.

Type of Degree or Certificate

Certificate

Program Code GAM.CRT

46 Total Credit Hours

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.

General Aviation Maintenance

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 this program.

Course & Title

FIRST QUARTER

Course & Title			Credit Hours
AVT	105	Orientation to Aviation	3
AVT	112	Performance Calculations	2
AVT	113	Drawings for Aviation Maintenance	4
AVT	114	Fluids & Gasses	2
AVT	115	Ground Operations & Servicing	3
TOTAL			14

SECOND QUARTER

AVT	117	Fluid Lines & Fittings	3
AVT	213	Corrosion Control	4
AVT	110	Ground School/Private Pilot	5
AVT	116	Regulations & Documentation	5
TOTAL			17

THIRD QUARTER

AVT	131	Electrical Aviation Maintenance	5
AVT	118	Weight & Balance	4
AVT	135	Materials & Processes	6
TOTAL			15

Powerplant Aviation Maintenance

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AVT 126	Reciprocating Engines I		5
AVT 128	Instruments & Fire Protection		3
AVT 139	Induction/Exhaust/Cooling		4
	TOTAL		12
SECOND QUARTER			
AVT 226	Reciprocating Engines II		5
AVT 231	Engine Electrical		4
AVT 127	Lubrication		5
	TOTAL		14
THIRD QUARTER			
AVT 234	Reciprocating Engines III		3
AVT 122	Engine Ignition & Starting I		4
AVT 239	Powerplant Inspections		2
AVT 138	Engine Fuel & Fuel Metering		5
	TOTAL		14
FOURTH QUARTER			
AVT 219	Turbine Engines		4
AVT 129	Propellers		5
AVT 222	Engine Ignition & Starting II		3
	TOTAL		12

Certificate

Description

The Powerplant Aviation Maintenance certificate will prepare the student with the knowledge and hours required for the Federal Aviation Administration's Powerplant certificate. The subjects covered include reciprocating and turbine engine operation theory, lubrication, powerplant electricity, ignition, starting, fire protection, auxiliary power units, engine instruments, induction, exhaust, cooling, fuel systems and fuel metering, propeller operation and overhaul, and powerplant inspection.

Type of Degree or Certificate

Certificate

Program Code PPAM.CRT

52 Total Credit Hours

Career Opportunities

The Bureau of Labor Statistics projects "favorable future job opportunities" over the long term as older mechanics and technicians retire. Maintenance (M.R.O.'s) 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.

CERTIFICATE

Certificate

Description

Students are prepared to apply the mathematics and basic laws of physics to the non-destructive testing and quality inspection of mechanical and electronic systems.

Type of Degree or Certificate

Certificate

Program Code QCT.CRT

46 Total Credit Hours

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.

Quality Control Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
OPT	100	Tooling & Machining Metrology	2
OPT	107	Engineering Disasters	1
OPT	120	Process Metrology	3
MAT	131	Technical Mathematics I	5
ETD	128	Print Reading with GD&T	3
ETD	198	Personal Computer Applications for Engineering Technology	2
TOTAL			16
SECOND QUARTER			
INT	109	Fundamentals of Tool & Manufacturing Processes	4
OPT	101	Introduction to Operations	3
OPT	113	Coordinate Measurement	3
OPT	223	ISO 9000/16949 Quality Systems & Auditing	3
OPT	225	Design & Process Failure Modes & Effects Analyses	2
TOTAL			15
THIRD QUARTER			
OPT	137	Packaging Concepts & Materials	3
OPT	201	Statistical Process Control	3
OPT	240	Six Sigma - Green Belt	3
ENG	111	English Composition I	3
COM	206	Interpersonal Communication	3
	211	or Effective Public Speaking	
TOTAL			15

Supply Chain Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	241	Introduction to Supply Chain Management	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
LAW	101	Business Law I	4
COM	206	Interpersonal Communication	3
		or	
	211	Effective Public Speaking	
MAN	106	Introduction to RFID	<u>2</u>
		TOTAL	18
SECOND QUARTER			
MAN	110	Introduction to International Business	3
MAN	205	Principles of Management	3
MAN	242	Advanced Supply Chain Management (SCM)	3
ENG	112	English Composition II	3
		or	
	132	Business Communications II	
MAT	122	Statistics I	<u>4</u>
		TOTAL	16
THIRD QUARTER			
OPT	251	Supply Chain Operations & Logistics	5 - 6
		or	
MAN	247	DoD Systems Acquisition Management and	
MAN	248	DoD Acquisition Logistics Fundamentals	
MAN	244	Negotiation Techniques	3
MAN	255	Management Information Systems I	3
MAN	201	Introduction to Supervision	<u>3</u>
		TOTAL	14 - 15

Certificate

Description

With this certificate program, students gain a basic understanding of Supply Chain Management (SCM) processes to prepare them for an SCM position or to update the skills of those currently employed in an SCM role. This study involves consideration and application of processes to develop coordinated supplier-to-consumer 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.

Type of Degree or Certificate

Certificate

Program Code SCMC.CRT

48-49 Total Credit Hours

CERTIFICATE

Certificate

Description

This four-quarter certificate concentrates on developing the skills needed to become employed as technicians for surveying or civil engineering firms.

Type of Degree or Certificate

Certificate

Program Code SUR.CRT

50 Total Credit Hours

Career Opportunities

Individuals with skills in the use of surveying equipment and surveying software programs are always in demand to work with surveying professionals in surveying firms, civil engineering and architectural design firms as well as contractors and construction management organizations.

Surveying

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CAT	101	Architectural Drafting	3
CAT	105	Residential Construction Methods & Materials	4
CAT	110	Introduction to Civil & Architectural Technology	3
ETD	198	Personal Computer Applications for Engineering Technology	2
TOTAL			12
SECOND QUARTER			
CAT	121	Civil Construction Blueprints & Drafting	2
COM	206	Interpersonal Communication	3
ETD	199	Introduction to Computer Aided Drafting Concepts	2
MAT	131	Technical Mathematics I	5
TOTAL			12
THIRD QUARTER			
CAT	145	Introduction to OSHA Construction Standards	1
CAT	123	Basic Construction Surveying	4
CAT	199	Architectural 2-D Drafting	3
MAT	132	Technical Mathematics II	5
TOTAL			13
FOURTH QUARTER			
CAT	221	Topographic Surveying & Geomatics	4
CAT	227	Introduction to GIS & GPS	3
CAT	231	OSHA Construction Standards	3
ENG	111	English Composition I	3
TOTAL			13



Short Term Technical Certificate Programs

2012
Semesters
sinclair.edu/semesters

Short Term

Description

For students interested in activity programs in long term care facilities. Meets requirements for the 90-hour training program required by the National Association of Activity Professionals and the National Certification Council for Activity Professionals. This program requires a practicum at a facility.

Type of Degree or Certificate

Short Term Certificate

Program Code ACP.STC

9 Total Credit Hours

Activity Programming

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MHT	155	Basics of Activities Programming	3
TOTAL			<u>3</u>
SECOND QUARTER			
MHT	156	Administration of Activities Programming	3
TOTAL			<u>3</u>
THIRD QUARTER			
MHT	157	Issues in Activities Programming	3
TOTAL			<u>3</u>

SHORT TERM

Short Term

Description

State-of-the-art networking skills; includes wired and wireless networks, networking equipment such as wireless routers and low to mid-level firewall hardware. This certificate helps prepare students for careers as network installers, wireless network administrators, network security analysts, systems engineers, hardware and support specialists.

Type of Degree or Certificate

Short Term Certificate

Program Code ANE.STC

24 Total Credit Hours

Advanced Networking Engineer

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	200	Fundamentals of Programming a Firewall	4
CIS	201	Wireless Network Administrator	<u>4</u>
TOTAL			8
SECOND QUARTER			
CIS	245	Remote Access for CCNP®	4
CIS	246	Router Internetworking for CCNP®	<u>4</u>
TOTAL			8
THIRD QUARTER			
CIS	247	Multilayer Switching for CCNP®	4
CIS	248	Network Support & Troubleshooting for CCNP®	<u>4</u>
TOTAL			8

Advanced Technical Intelligence

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SME	121	Introduction to Intelligence Community	3
SME	122	Fundamentals of Remote Sensing in Intelligence	<u>3</u>
		TOTAL	6
SECOND QUARTER			
SME	201	Introduction to Spectral Sensing with Applications in Intelligence	3
SME	202	Introduction to Radar for Measurement & Signal Intelligence (MASINT)	<u>3</u>
		TOTAL	6
THIRD QUARTER			
SME	211	Introduction to Overhead Persistent Non-Imaging Infrared (OPIR)	3
SME	212	MASINT Fundamentals	<u>3</u>
		TOTAL	6

Aircraft Dispatcher

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AVT	119	Aviation Meteorology	3
AVT	146	Introduction to Airline Operations	3
AVT	150	Crew Resource Management	2
AVT	246	Air Traffic Control Communications	<u>3</u>
		TOTAL	11
SECOND QUARTER			
AVT	167	IFR Navigation & Planning	4
AVT	157	Aircraft Performance I	3
AVT	158	Aircraft Performance II	<u>3</u>
		TOTAL	10
THIRD QUARTER			
AVT	166	Practical Dispatch Applications	4
AVT	168	Aircraft Dispatcher Oral Preparation	2
AVT	159	CRJ Aircraft Systems	<u>2</u>
		TOTAL	8

Short Term

Description

Advanced Technical Intelligence is an upcoming field to impart special skills needed to work in the defense industry. Only U.S. Citizens who can qualify and obtain secret clearance need apply. This is in partnership with ATIC (Advanced Technical Intelligence Center for Human Capital Development). Courses are offered at ATIC's secure facility as an evening program. All 18 credits will transfer to an Associate of Technical Studies Degree.

Program Prerequisite

US Citizenship is required

Type of Degree or Certificate

Short Term Certificate

Program Code ATI.STC

18 Total Credit Hours

SHORT TERM

Short Term

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) 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.

Program Prerequisite

AVT 110 Ground School/Private Pilot

Type of Degree or Certificate

Short Term Certificate

Program Code ADSP.STC

29 Total Credit Hours

Career Opportunities

The program develops the knowledge and skills required to serve as an aircraft dispatcher and to enter a career in the corporate business and commercial aviation industries.

Short Term

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 the 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.

Type of Degree or Certificate

Short Term Certificate

Program Code AFAS.STC

17 Total Credit Hours

Career Opportunities

This program develops the knowledge and skills required to serve as a flight attendant and to enter a career in the corporate business and commercial aviation industries.

Airline Flight Attendant

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 this program.

Course & Title

FIRST QUARTER

AVT	146	Introduction to Airline Operations	3
AVT	150	Crew Resource Management	2
AVT	151	Crew Survival & Rescue Techniques	4
AVT	148	Airline Crew Emergency Management	5
AVT	102	Orientation to In-Flight Services	3
TOTAL			17

Automotive High Performance

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 this program.

Course & Title

FIRST QUARTER

AUT	221	High-Performance Engine Blocks & Rotating Assemblies	7
TOTAL			7

SECOND QUARTER

AUT	222	High-Performance Cylinder Heads @ Valve Train	7
TOTAL			7

THIRD QUARTER

AUT	223	High-Performance Engine Assembly and Dynamometer Testing	7
TOTAL			7

FOURTH QUARTER

AUT	224	High Performance Induction Systems	7
TOTAL			7

Students apply learned knowledge toward the building of their own high performance engine and fuel delivery system.

Short Term

Description

This program provides in-depth, hands-on experience in various areas of high performance engines; an ideal choice to supplement a degree seeking student wishing to specialize in the engine area. Also designed to prepare students for the ASE (Automotive Service Excellence) engine machinist series. Students completing the certificate may be employed in a high performance engine shop, general engine machine shop, or work on a race team.

Courses are dedicated to specific areas of engine development. Engine blocks, cylinder head and valve train, assembly and dynamometer testing as well as fuel systems for performance engines are covered.

Program Prerequisites

AUT 108 Engine Systems
or
AUT 115 Engine Performance I
or
chairperson's signature

Type of Degree or Certificate

Short Term Certificate

Program Code AHPC.STC

28 Total Credit Hours

Career Opportunities

Students completing the certificate may be employed in a high performance engine shop, general engine machine shop, or work on a race team.

Baking Specialist

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
HMT	107	Sanitation & Safety	3
HMT	102	Kitchen Chemistry	3
HMT	126	Baking I	5
HMT	127	Lab for Baking I	
			11
SECOND QUARTER			
HMT	118	Artisan Breads I	5
HMT	128	Cake Production & Decorating	5
			10

Basic Drawing

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ART	111	Art Drawing I	3
VIS	109	Design Drawing	3
		or	
ART	112	Art Drawing II	
ART	113	Art Drawing III	3
ART	121	Painting I	4
		or	
	211	Advanced Drawing I	
		or	
	221	Advanced Painting I	
		or	
	216	Life Drawing & Anatomy I	
			13

Short Term

Description

This certificate is designed to prepare students who would like to be employed as a professional baker, or those with some culinary experience who want to further their knowledge in this specialized area. Note: Students must pass HMT 107 prior to registering for any course that has a lab component.

Type of Degree or Certificate

Short Term Certificate

Program Code BPSE.STC

21 Total Credit Hours

Career Opportunities

Job opportunities include baking/pastry professionals in a variety of food service settings, including restaurant, hotels, resorts, catering business, independent bakeries/pastry shops, wholesale/retail markets, and high volume bakeries.

SHORT TERM

Short Term

Description

This certificate proves 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.

Type of Degree or Certificate

Short Term Certificate

Program Code DRWG.STC

13 Total Credit Hours

Short Term

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 a small, medium, or large company. The skills apply equally well to an entry level help desk support position. Technical course work emphasizes operating systems and troubleshooting skills.

Type of Degree or Certificate

Short Term Certificate

Program Code BOSS.STC

18-19 Total Credit Hours

Career Opportunities

The skills apply equally well to an entry level help desk support position.

Business Operations System Support I

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	107	Introduction to Operating Systems	3
ENG	111	English Composition I	3
		or	
	131	Business Communications I	
			TOTAL
			6
SECOND QUARTER			
CIS	230	Computer Networks	3
COM	206	Interpersonal Communication	3
			TOTAL
			6
THIRD QUARTER			
CIS	231	UNIX I	3-4
		or	
	271	Administering a Microsoft Windows Client Operating System	
CIS	162	Microsoft Office Troubleshooting & Problem Solving	3
		or	
	225	Operating Systems Troubleshooting	
			TOTAL
			6-7

Business Operations System Support II

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	111	Introduction to Problem Solving & Computer Programming	4
MAN	210	Introduction to Project Management	3
			TOTAL
			7
SECOND QUARTER			
CIS	206	Network Security I	3
MAN	205	Principles of Management	3
			TOTAL
			6
THIRD QUARTER			
CIS	207	Network Security II	3
BIS	201	Customer Service	3
			TOTAL
			6
FOURTH QUARTER			
COM	225	Small Group Communication	3
CIS	272	Microsoft Windows Server Operating System	4
			TOTAL
			7

Short Term

Description

This short term certificate has been created to provide a path for working students as they continue their professional development and education. The BOSS I certificate has attracted working professionals as they strive to improve their preparedness for increasing responsibility in the work place. This BOSS II certificate builds on the course work completed in BOSS I and provides a logical progression towards degree completion.

Type of Degree or Certificate

Short Term Certificate

Program Code BOSS2.STC

26 Total Credit Hours

Career Opportunities

The skills apply equally well to an entry level help desk support position.

Call Center

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ENG	131	Business Communications I	3
ENG	199	Text Editing	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
BIS	201	Customer Service	3
BIS	202	Advanced Customer Service Concepts	3
TOTAL			15

Chemical Dependency Counseling

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MHT	126	Introduction to Substance Related Disorders	4
MHT	235	Family Dynamics of Chemical Dependency	4
MHT	123	Street Drug Actions	1
MHT	139	Substance Abuse Prevention	1
MHT	264	Motivational Interviewing	1
MHT	239	Dual Diagnosis: Substance Abuse & Mental Illness	3
TOTAL			14
SECOND QUARTER			
MHT	236	Assessment & Diagnosis of Chemical Dependency	4
MHT	238	Ethical Issues in Behavioral Healthcare	3
MHT	209	Treatment Planning	2
MHT	237	Treatment Techniques in Chemical Dependency	4
TOTAL			13

Short Term

Description

This certificate is designed for those seeking employment within a call center environment or those interested in improving their customer service skills and telephone techniques. Call centers have become quite sophisticated with effective measures for productivity. Students will learn how a call center operates and how the productivity measures are used. Students who complete this certificate can continue with a two-year associate degree in the BIS department and all courses will transfer.

Type of Degree or Certificate

Short Term Certificate

Program Code CC.STC

15 Total Credit Hours

Career Opportunities

Employment opportunities include account secretaries in accounting departments in private businesses and industries, educational institutions, and other governmental agencies.

SHORT TERM

Short Term

Description

This series of courses meets the 270 clock hour chemical dependency specific education required by the Ohio Professional Chemical Dependency Board for individuals who have earned a degree in behavioral science. Applicants must have an associate, bachelor or masters degree in a human service field to use this certificate for state licensure.

Contact Mental Health Technology department directly for questions.

Program Prerequisite

DEV 065 Academic Reading DEV 075 Foundations of Paragraph Writing DEV 110 Foundations of Essay Writing

Type of Degree or Certificate

Short Term Certificate

Program Code CDC.STC

27 Total Credit Hours

Short Term

Description

This certificate is intended to provide expanded competencies and proficiencies to practicing professionals, students enrolled in health science programs, and entry level individuals. The students will be required to complete 100 hours of non-paid clinicals during ALH 137. Students who complete this course will receive a certificate of completion.

Type of Degree or Certificate

Short Term Certificate

Program Code CPST.STC

6 Total Credit Hours

Clinical Phlebotomy

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ALH	111	Clinical Phlebotomy	$\frac{3}{3}$
TOTAL			$\frac{3}{3}$
SECOND QUARTER			
ALH	137	Clinical Phlebotomy Practice	$\frac{3}{3}$
TOTAL			$\frac{3}{3}$

Computational Physics

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
PHY	211	Introduction to Computational Methods	$\frac{4}{4}$
TOTAL			$\frac{4}{4}$
SECOND QUARTER			
PHY	212	Introduction to Modeling & Simulation	$\frac{4}{4}$
TOTAL			$\frac{4}{4}$
THIRD QUARTER			
PHY	220	Introduction to Computational Physics	$\frac{5}{5}$
TOTAL			$\frac{5}{5}$

Short Term

Description

This certificate is designed for an individual to attain concrete knowledge of modeling and simulation as applied to physics. While the discipline specific course in the certificate is computational physics, this certificate exposes the student to a wide variety of modeling a simulation techniques used in Biology, Chemistry, Physics, and several Engineering fields. The skills attained will prepare the transfer student for entry into the minor program offering by the Ralph Regula School of Computational Science and will strengthen the in-service professional's knowledge of the fast growing field of modeling and simulation.

Type of Degree or Certificate

Short Term Certificate

Program Code CPHY.STC

13 Total Credit Hours

Computer Aided Manufacturing

Top Gun Machining Academy

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ETD	231	Advanced Design Interpretation	3
INT	226	Advanced Job Processing	3
INT	227	Advanced CNC Mill Programming	3
INT	228	Advanced CNC Milling	3
OPT	117	Advanced Quality & Inspection	3
TOTAL			15

Computer Numerical Control Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
INT	107	Principles of Manufacturing	4
INT	109	Fundamentals of Tool & Manufacturing Processes	4
INT	116	CNC Operations	3
TOTAL			11
SECOND QUARTER			
INT	113	Fundamentals of CNC	3
INT	204	Computer Numerical Control Lathe Programming	3
INT	211	Advanced Computer Numerical Control	3
TOTAL			9
THIRD QUARTER			
INT	212	Computer Assisted Programming	3
INT	145	Shop Floor Programming	3
TOTAL			6

Short Term

Description

The Top Gun Machining Academy is an advanced level, critical thinking program designed to elevate good technicians into top performers. The certificate consists of three foundation courses, Advanced Design Interpretation, Advanced Job Processing, and Advanced Quality followed by specialized courses in Tooling and Machining such as Advanced CNC Milling and Advanced CNC Mill Programming. Students are expected to have substantial industrial experience prior to entering this certificate program.

Type of Degree or Certificate

Short Term Certificate

Program Code CTGMA.STC

15 Total Credit Hours

SHORT TERM

Short Term

Description

The CNC (Computer Numerical Control) 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.

Type of Degree or Certificate

Short Term Certificate

Program Code CNC.STC

26 Total Credit Hours

Short Term

Description

This program is designed for experienced crafts people 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 requirements. Upon completing this program, crafts people will be qualified to move into management positions in the construction industry.

Type of Degree or Certificate

Short Term Certificate

Program Code CNTS.STC

39 Total Credit Hours

Career Opportunities

Upon completing this program, crafts people will be qualified to move into management positions within the construction industry.

Construction Supervisor

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
CAT 138	Architectural Blueprint Reading	3
CAT 139	Mechanical Systems Blueprint Reading	2
CAT 131	Properties of Construction Materials	3
COM 206	Interpersonal Communication	3
ETD 198	Personal Computer Applications for Engineering Technology	2
TOTAL		13
SECOND QUARTER		
CAT 207	Architectural Building Codes	3
CAT 216	Construction Estimating	4
CAT 252	Construction Law & Specifications	3
CAT 121	Civil Construction Blueprints & Drafting	2
TOTAL		12
THIRD QUARTER		
CAT 123	Basic Construction Surveying	4
OPT 101	Introduction to Operations	3
CAT 231	OSHA Construction Standards	3
CAT 255	Engineering Technology Project Management	4
TOTAL		14

Short Term

Description

The purpose of this certificate is to develop knowledgeable construction workers with basic skills in a variety of disciplines. 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.

Type of Degree or Certificate

Short Term Certificate

Program Code CNTC.STC

33 Total Credit Hours

Career Opportunities

This program is designed to make students employable as an entry level craftsperson in construction. The demand for these jobs is exploding as the older work force is retiring and the next generation is needed. The curriculum is intentionally broad in scope so that students are introduced to several areas of building construction.

Construction Technician

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
CAT 145	Introduction to OSHA Construction Standards	1
CAT 151	Portland Cement Concrete	4
CAT 153	Introduction to Structural Framing	4
TOTAL		9
SECOND QUARTER		
CAT 154	Structural Framing Systems II	4
CAT 157	Residential Electrical Systems	4
TOTAL		8
THIRD QUARTER		
CAT 155	Structural Framing Systems III	5
CAT 156	Commercial Interiors	4
CAT 159	Excavation Equipment & Operations	4
CAT 270	Civil Architectural Internship	3
TOTAL		16

Continuous Process Improvement

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
OPT	101	Introduction to Operations	3
			TOTAL 3
SECOND QUARTER			
OPT	130	Lean Operations	3
			TOTAL 3
THIRD QUARTER			
OPT	201	Statistical Process Control	3
			TOTAL 3
FOURTH QUARTER			
OPT	240	Six Sigma - Green Belt	3
			TOTAL 3

Corrections

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CJS	101	Introduction to Criminal Justice Science	3
CJS	102	Constitutional Law	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
PED	234	Concepts of Total Fitness	3
			TOTAL 12
SECOND QUARTER			
CJS	111	Criminal Justice Ethics & Professionalism	3
CJS	165	Corrections Administration & Operations	3
CJS	110	Interrogation, Documentation & Testimony	3
MHT	126	Introduction to Substance Related Disorders	4
			TOTAL 13
THIRD QUARTER			
CJS	140	Human Relations & Cultural Diversity	3
CJS	226	Contemporary Practices in Corrections	3
CJS	105	Criminal Law	3
PED	200	First Aid & Safety	2
SPA	161	Conversational Spanish for Criminal Justice	3
PED	105	Physical Fitness	1
		or	
	154	Aerobic Conditioning	
		or	
	164	Cardio Sculpt	
			TOTAL 15

Short Term

Description

This certificate promotes (1) technical communication skills and teamwork, (2) project management skills, (3) lean manufacturing and continuous improvement skills, (4) application of quality principles, statistics and probability theories, and (5) problem solving skills as they relate to process improvement. This program reflects the underlying skills necessary for the successful application of "six sigma" methodologies. A typical title for an employee with these skills is a process improvement specialist.

This short term certificate 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 Operations Technology degree.

Type of Degree or Certificate

Short Term Certificate

Program Code CTIM.STC

12 Total Credit Hours

Short Term

Description

This certificate is designed to provide the student with the basics necessary for entry level employment in a correctional environment. These courses can be applied to the associate degree in Corrections if desired.

Type of Degree or Certificate

Short Term Certificate

Program Code COR.STC

40 Total Credit Hours

SHORT TERM

Short Term

Description

This certificate is designed to prepare students for entry level data analytics positions responsible for the knowledge, setup and usage of data analysis and business intelligence solutions. Data analytics is expanding in businesses, government agencies and not-for-profit organizations to allow companies or organizations to make better business decisions based on data and information. Students will have the ability to understand how to structure the data and prepare reports in a way that is meaningful to business users. Coursework will include data base concepts, data modeling, SQL, data analysis, data mining tools, mathematical and statistical techniques, project management and systems analysis. Strong communication skills in order to interact with key business users and understand their requirements is emphasized.

Program Prerequisite

BIS 104 Introduction to PC Usage AND
MAT 116 College Algebra OR MAT 121
Mathematics for Business Analysis

Type of Degree or Certificate

Short Term Certificate

Program Code DA.STC

33 Total Credit Hours

Short Term

Description

The desktop publishing certificate provides an introduction to the fundamental skills, techniques and software used to create a variety of printed items, including stationery, brochures, newsletters and advertisements. The course work is designed to accommodate the needs of the novice and business professionals whose jobs include desktop publishing tasks.

Type of Degree or Certificate

Short Term Certificate

Program Code DP.STC

16 Total Credit Hours

Data Analytics

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	M45	Microsoft Excel	2
CIS	111	Introduction to Problem Solving & Computer Programming	4
MAT	122	Statistics I	4
TOTAL			10
SECOND QUARTER			
MAT	220	Statistics II	4
BIS	M46	Advanced/Expert Excel	3
CIS	210	Computer Systems Analysis	3
CIS	265	Database Management Systems	3
TOTAL			13
THIRD QUARTER			
CIS	268	Introduction to Oracle: SQL & PL/SQL	3
CIS	270	CIS Internship	3
CIS	269	Data Analytics Theory and Solutions	4
TOTAL			10

Desktop Publishing

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
VIS	106	Design Basics: 2-D	3
VIS	110	Design Lab Orientation	1
TOTAL			4
SECOND QUARTER			
VIS	146	Digital Illustration	3
VIS	108	Typography	3
TOTAL			6
THIRD QUARTER			
VIS	147	Digital Imaging	3
VIS	148	Digital Page Layout	3
TOTAL			6

Dietary Manager

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
DIT	200	Dining Assistant	1
DIT	203	Medical Nutrition Therapy for Dietary Managers	4
DIT	204	Practicum for DIT 203	3
TOTAL			8
SECOND QUARTER			
DIT	137	Food Sanitation & Safety	3
DIT	216	Food Preparation & Dietary Service	4
DIT	218	Directed Practice for DIT 216	3
DIT	219	Laboratory for DIT 216	1
TOTAL			11
THIRD QUARTER			
DIT	236	Dietary Organization & Management	4
DIT	237	Directed Practice for DIT 236	3
TOTAL			7

Digital Printing

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
VIS	108	Typography	3
VIS	105	Printing Basics	3
VIS	110	Design Lab Orientation	1
TOTAL			7
SECOND QUARTER			
VIS	146	Digital Illustration	3
VIS	147	Digital Imaging	3
TOTAL			6
THIRD QUARTER			
VIS	148	Digital Page Layout	3
VIS	150	Screen Printing	3
TOTAL			6
FOURTH QUARTER			
VIS	201	Digital PrePress I	3
VIS	151	Offset Printing	3
TOTAL			6
FIFTH QUARTER			
VIS	202	Digital PrePress II	3
TOTAL			3

Short Term

Description

Approved by the Dietary Managers Association, this certificate program may be applied to the associate degree in dietetics technology. Field experiences are under the direct supervision of a registered dietitian preceptor with at least two years post-registration competency. Students who complete this program are qualified to be the food service directors/supervisors in health care delivery systems. An application for admission may be obtained from the Dietetics & Nutritional Management department, Room 13426 or the Allied Health counselors, Room 6120.

Program Prerequisites

DEV 065 Developmental Reading 4 cr. hrs.
and
DEV 084 Basic Mathematics I 4 cr. hrs.

Type of Degree or Certificate

Short Term Certificate

Program Code DMST.STC

26 Total Credit Hours

SHORT TERM

Short Term

Description

The digital printing certificate provides an introduction to fundamental and advanced techniques and the software used to prepare page layouts and designs for printing. The course work includes a variety of digital prepress techniques and the use of computer hardware and software commonly used in the industry. The course work is designed to accommodate the needs of the novice and business professionals whose jobs require these skills.

Type of Degree or Certificate

Short Term Certificate

Program Code DPT.STC

28 Total Credit Hours

Career Opportunities

The course work is designed to accommodate the needs of the novice and business professionals whose jobs require these skills.

Short Term

Description

This short-term certificate offers knowledge and basic skills to work in 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 an in-depth knowledge and lab skills. The courses in this certificate lead into an associate degree in Electronics Engineering Technology at Sinclair.

Students entering this program need the following background to be successful: (1) Completion of senior-level high school algebra; (2) basic computer literacy; (3) Sinclair placement test results beyond DEV 064, Fundamentals of Reading, and MAT 101, Elementary Algebra; and (4) at least a 2 cumulative grade-point average (ongoing students taking the online courses).

Program Prerequisites

DEV 108 Introduction to Algebra
or
approval of division counselor
or
equivalent

Type of Degree or Certificate

Short Term Certificate

Program Code DS.STC

16 Total Credit Hours

Short Term

Description

Introduction to the industrial design process and computer aided drafting and design. The latest version of AutoCAD software is used in training students.

Type of Degree or Certificate

Short Term Certificate

Program Code DD.STC

34 Total Credit Hours

Digital Systems

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
EET 114	Basic Electronic Measurements	<u>4</u>
TOTAL		4
SECOND QUARTER		
EET 131	Digital Logic & Circuits	<u>4</u>
TOTAL		4
THIRD QUARTER		
EET 251	Digital Systems I	4
EET 252	Digital Systems II	<u>4</u>
TOTAL		8

Drafting & Design

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
COM 206	Interpersonal Communication	3
ETD 128	Introduction to Design Engineering Symbolology	3
ETD 198	Personal Computer Applications for Engineering Technology	2
ETD 199	Introduction to Computer Aided Drafting Concepts	<u>2</u>
TOTAL		10
SECOND QUARTER		
ENG 111	English Composition I	3
ETD 230	Introduction to Geometric Design & Tolerancing	3
ETD 280	Advanced Computer Aided Drafting	<u>3</u>
TOTAL		9
THIRD QUARTER		
MAT 131	Technical Mathematics I	5
ETD 101	Introduction to Engineering Design with Inventor and Engineering Design & Development	10
	or	
291	Unigraphics Basics	
	and	
287	Solidedge Basics	
	and	
CAT 240	Residential Design with CAD	
TOTAL		<u>15</u>

Electrical Construction

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
EET	181	Electrical Construction I	8
EET	182	Electrical Construction II	8
EET	183	Electrical Construction III	8
EET	184	Electrical Construction IV	8
TOTAL			32

Electrocardiography

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ALH	107	Introduction to Electrocardiography	3
ALH	108	Lab for ALH 107	
TOTAL			3

Short Term

Description

This short term certificate will fulfill the needs of the electrical construction industry for educating and training electricians in the Dayton and Cincinnati area. Each course is taken twice for a total of 8 credit hours per year. Courses are only offered in the fall and winter quarters.

Type of Degree or Certificate

Short Term Certificate

Program Code EETEC.STC

32 Total Credit Hours

SHORT TERM

Short Term

Description

This course is intended to provide expanded skills among health care professionals as well as current ALH students to increase marketability for employment. Classes held in the evening with clinicals during the day. Students who complete this course will receive a certificate of completion.

Type of Degree or Certificate

Short Term Certificate

Program Code ELST.STC

3 Total Credit Hours

Short Term

Description

Accredited by the Ohio Department of Public Safety, Division of Emergency Medical Services, this one-quarter course provides classroom, laboratory, in-hospital, and field clinical experience. A physical examination and specific immunizations are required at the student's expense prior to clinical practicums. The student is required to earn at least a 78 percent on EMS 117 and pass all required skills in EMS 118. Following successful completion of EMS 117 and EMS 118, the student is eligible to sit for the Ohio certifying examination for Emergency Medical Technician-Basic. Day and evening classes are available to accommodate work schedules. See the academic advisors or the EMS office, Building 19, Room 19223 for assistance with the admission process. ODPS Accreditation #326

Type of Degree or Certificate

Short Term Certificate

Program Code EBST.STC

10 Total Credit Hours

Career Opportunities

The job outlook for EMT's in Dayton is growing rapidly. Jobs are mainly available in the following areas:

- Fire Department
- Hospital
- Private Ambulance

In Southwestern Ohio, EMT's must be licensed, minimally as a Level 1 Firefighter to meet the requirements for full time employment at the fire department. Sinclair offers both the Level 1 and Level 2 fire courses. Persons working full time as a Firefighter/Paramedic will increase wages significantly.

EMT-Basic Certification

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 this program.

Course & Title

FIRST QUARTER

Course & Title	Credit Hours
EMS 117 EMT-Basic Theory & Practice I & II	10
EMS 118 Laboratory for EMS 117	
TOTAL	10

Short Term

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.

Type of Degree or Certificate

Short Term Certificate

Program Code ENRGY.STC

35 Total Credit Hours

Energy Technology

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 this program.

Course & Title

Course & Title	Credit Hours
CAT 139 Mechanical Systems Blueprint Reading	2
EET 156 Alternate & Renewable Energy Sources	3
HVA 144 Introduction to HVAC Systems	3
EET 120 Introduction to D.C. & A.C. Circuits	3
TOTAL	11

SECOND QUARTER

CAT 163 Weatherization Training	3
HVA 160 Basics of Heating & Heating Systems	3
HVA 184 Basics of Cooling & Cooling Systems	3
PHY 100 Introduction to Physics	4
TOTAL	13

THIRD QUARTER

CAT 160 Introduction to Energy Management Principles	4
CAT 260 Architectural Energy Analysis	3
HVA 162 HVAC Loads & Distribution for Small Buildings	4
TOTAL	11

Exercise Specialist

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIO	107	Human Biology	5
ENG	111	English Composition I	3
PED	106	Weight Training	1
PED	154	Aerobic Conditioning	1
PED	200	First Aid & Safety	2
PED	250	Introduction to Exercise Science	3
			3
TOTAL			15
SECOND QUARTER			
ENG	112	English Composition II	3
PED	193	Physical Fitness Evaluation	3
PED	234	Concepts of Total Fitness	3
PED	236	Personal & Community Health	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
			3
TOTAL			15
THIRD QUARTER			
COM	211	Effective Public Speaking	3
DIT	111	Nutrition for a Healthy Lifestyle	3
PED	239	Athletic Injuries	3
PED	271	Certification Exam Preparatory Course	3
PED	272	Methods of Teaching Strength Training	2
		or	
	273	Methods of Teaching Group Fitness	
			2
TOTAL			14

Expanded Functions for Dental Auxiliaries

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
DEH	104	Dental Anatomy for Dental Auxiliaries	2
DEH	247	Expanded Functions for Dental Auxiliary I	5
DEH	248	Expanded Functions for Dental Auxiliary II	6
DEH	249	Expanded Functions for Dental Auxiliary III	6
			6
TOTAL			19

Short Term

Description

Sinclair's 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.

Program Prerequisites

DEV 064 Fundamentals of Reading
DEV 075 Fundamentals of English

Type of Degree or Certificate

Short Term Certificate

Program Code ESS.STC

44 Total Credit Hours

Career Opportunities

This certificate is designed to provide students with the knowledge and skills for employment in the fitness and exercise industry. Students will be trained scientifically with the goal of being able to administer basic fitness assessments and health risk appraisals. Students will also be trained to communicate current information on exercise, nutrition and wellness.

SHORT TERM

Short Term

Description

The Expanded Functions for Dental Auxiliaries program is designed to prepare Certified Dental Assistants or Licensed Dental Hygienists to take the Expanded Functions for the Dental Auxiliary (EFDA) board examination administered by the Commission on Dental Testing in Ohio and to provide quality restorative patient care. This course includes 180 hours of instruction, progressing from the preclinical laboratory activities to clinical experience.

This course is offered ONLY to Licensed Dental Hygienists and Certified Dental Assistants. Proof of current licensure/certification must be submitted with application.

Instruction includes lecture/demonstration and laboratory activities. Didactic instruction includes review of tooth morphology, instrumentation and ergonomic principles, properties and manipulation of dental restorative materials, and techniques and procedures for restoring teeth with amalgam and tooth colored direct restorations.

Type of Degree or Certificate

Short Term Certificate

Program Code DEHSC.STC

19 Total Credit Hours

Short Term

Description

Facilities management is the practice of coordinating elements within the work environment so that people and equipment can perform their intended work functions. It involves principles of engineering, management, and financing. This program includes real estate acquisition, interior space planning, exterior and interior building repairs and renovations, telecommunication installations, personnel evaluations and building security. A facility manager must have a broad based education in technical, business, and supervisory related courses. Possible employers include schools, hospitals, manufacturing plants, and government offices.

Type of Degree or Certificate

Short Term Certificate

Program Code FCMG.STC

41 Total Credit Hours

Career Opportunities

Possible employers include schools, hospitals, manufacturing plants, and government offices.

Facilities Management*

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
COM	206 Interpersonal Communication	3
FST	116 Fire Protections Systems I	3
ETD	198 Personal Computer Applications for Engineering Technology	2
MAN	205 Principles of Management	3
—	Facilities Management Program Elective	3
TOTAL		14
SECOND QUARTER		
MAN	210 Introduction to Project Management	3
HVA	144 Introduction to HVAC Systems	3
OPT	206 Value Analysis	3
RES	221 Property Management	3
—	Facilities Management Program Elective	3
TOTAL		15
THIRD QUARTER		
CAT	207 Architectural Building Codes	3
CJS	130 Homeland Security Administration	3
MAN	225 Human Relations & Organizational Behavior	3
—	Facilities Management Program Elective	3
TOTAL		12

*See an academic advisor to determine program electives.

Family Advocate

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
SOC	111 General Sociology I	3
BIS	101 Personal Computer Keyboarding	2 - 3
	160 Introduction to Word, PowerPoint, & Excel	—
TOTAL		5 - 6
SECOND QUARTER		
SOC	112 General Sociology II	3
SWK	206 Social Work as a Profession	4
TOTAL		7
THIRD QUARTER		
SWK	211 Basic Practice Theory I	3
SOC	115 Today's Changing Family	4
TOTAL		7
FOURTH QUARTER		
SWK	212 Basic Practice Theory II	4
TOTAL		4

Short Term

Description

This certificate offers in-depth, competency based, task-specific training for Head Start family specialists, family service specialists, and family workers who provide the support services needed by families to enhance the quality of family life. Courses 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; and aid in the development of beginning computer skills.

Type of Degree or Certificate

Short Term Certificate

Program Code FAMA.STC

23-24 Total Credit Hours

208 Academic Advising Center, Building 11, (937) 512-3700

Fast Track Entrepreneur

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	201	Introduction to Supervision	3
MAN	110	Introduction to International Business	3
MAN	105	Introduction to Business	3
			<u>9</u>
TOTAL			9
SECOND QUARTER			
MRK	220	Small Business Marketing	3
ENT	240	Small Business Finance	3
ENT	260	Business Plan Development	5
			<u>11</u>
TOTAL			11

Fast Track Programmer Analyst Enterprise Specialization

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	210	Computer Systems Analysis	3
CIS	233	C++ Programming I	4
CIS	112	Object Oriented Concepts	3
			<u>10</u>
TOTAL			10
SECOND QUARTER			
CIS	265	Database Management Systems	3
CIS	234	C++ Programming II	4
CIS	280	Java Programming I	4
			<u>11</u>
TOTAL			11
THIRD QUARTER			
CIS	285	Web Application Development with Java	4
CIS	236	C++ Programming with Data Structures	4
COM	225	Small Group Communication	3
			<u>11</u>
TOTAL			11

Short Term

Description

This certificate will allow students to gain knowledge in the areas of small business management: planning, evaluating, operating, financing, and marketing the business concept. Emphasis is on developing a complete business plan that addresses all functional areas of the business operation. Potential investors and creditors rely heavily on the well prepared business plan as well as the knowledge of the entrepreneur, and this Fast Track certificate is meant to meet that requirement.

Type of Degree or Certificate

Short Term Certificate

Program Code FTE.STC

20 Total Credit Hours

SHORT TERM

Short Term

Description

This certificate is designed to provide an individual with state of the art programming skills. It is designed for experienced programmers or selected individuals wishing to make a career change into the Information Technology field. The certificate will focus on the latest programming languages, database theory, object oriented concepts and team building. Students have the option to concentrate on enterprise development or web development technologies.

Type of Degree or Certificate

Short Term Certificate

Program Code FTPA1.STC

32 Total Credit Hours

Short Term

Description

This certificate is designed to provide an individual with state of the art programming skills. It is designed for experienced programmers or selected individuals wishing to make a career change into the Information Technology field. The certificate will focus on the latest programming languages, database theory, object oriented concepts and team building. Students have the option to concentrate on enterprise development or web development technologies.

Type of Degree or Certificate

Short Term Certificate

Program Code FTPA2.STC

30 Total Credit Hours

Fast Track Programmer Analyst Web Development Specialization

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
CIS 210	Computer Systems Analysis	3
CIS 233	C++ Programming I	4
CIS 112	Object Oriented Concepts	3
TOTAL		10
SECOND QUARTER		
CIS 234	C++ Programming II	4
CIS 265	Database Management Systems	3
CIS 280	Java Programming I	4
TOTAL		11
THIRD QUARTER		
CIS 130	Introduction to Web Development	3
CIS 284	Client/Server Web Tools Using ASP.NET	3
COM 225	Small Group Communication	3
TOTAL		9

Fire Department Company Officer

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
FST 251	Fire Officer Level I	8
TOTAL		8
SECOND QUARTER		
FST 252	Fire Officer Level II	4
TOTAL		4

Short Term

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.

Program Prerequisites

FST 181 Firefighter I

or

FST 192 Firefighter I Transition

and

Approval of chairperson

and

Three years experience as a certified firefighter

Type of Degree or Certificate

Short Term Certificate

Program Code FCO.STC

12 Total Credit Hours

Fire Department Executive Officer

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
FST	253	Fire Officer Level III	4
			4
TOTAL			4
SECOND QUARTER			
FST	254	Fire Officer Level IV	4
			4
TOTAL			4

Ford Maintenance & Light Repair

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
AUT	124	Electrical/Electronic Systems Level I	5
AUT	165	Automotive Brake System	5
			10
TOTAL			10
SECOND QUARTER			
AUT	210	Steering, Suspension & Alignment	5
AUT	146	Automotive Heating & Air Conditioning	5
			10
TOTAL			10
THIRD QUARTER			
AUT	125	Electrical/Electronic Systems II	7
			7
TOTAL			7

Short Term

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 Prerequisites

FST 181 Firefighter I
and
FST 252 Fire Officer Level II
or
FST 192 Firefighter I Transition
and
Approval of chairperson
and
Five years experience as a certified Level II firefighter.

Type of Degree or Certificate

Short Term Certificate

Program Code FEO.STC

8 Total Credit Hours

SHORT TERM

Short Term

Description

This short term technical certificate prepares service technicians to work in Ford dealerships. Students will be trained to service Ford vehicles in the areas of brakes, steering/suspension, air conditioning and electrical/electronic systems. Apprenticeships at Ford dealerships are not required to participate in this program but job opportunities are available for those that would like to work full or part time. Graduates receive Ford Service Technician Specialty Training credentials from Ford Motor Corporation. Students desiring to continue their education can do so by completing the requirements for the associate degree in comprehensive automotive technology program.

Program Prerequisites

Approval of chairperson

Type of Degree or Certificate

Short Term Certificate

Program Code FMLR.STC

27 Total Credit Hours

Short Term

Description

General Education is essential to the development of professionalism. General Education is a process whereby lifelong learners grow and expand their breadth of knowledge. It is through this process that a student gains competence to achieve independent intellectual inquiry. In addition to developing professionalism, General Education provides foundational skills necessary for successful living in the ever changing global environment. The following content is designed to assist in developing skills in communication, human diversity, scientific inquiry, critical thinking and judgment required to perform the responsibilities of an entry level professional. Students completing this certificate are fulfilling the American Society of Radiologic Technologists requirement for Post Secondary General Education.

Program Prerequisites

DEV 110 Foundations of Essay Writing and
DEV 108 Introduction to Algebra

Type of Degree or Certificate

Short Term Certificate

Program Code GEC.STC

15 Total Credit Hours

General Education

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
ENG	111 English Composition I	3
MAT	106 Allied Health Mathematics	4
COM	206 Interpersonal Communication	3
—	— Elective*	5
TOTAL		15

*Choose from the following list:

ALH	104	Allied Health Informatics
ART	101	Introduction to Art
AST	111/117	Introduction to Astronomy
AST	112/118	The Solar System
AST	113/119	Stars, Galaxies & Cosmology
BIO	101	Body Structure & Function
BIS	160	Introduction to Word, PowerPoint & Excel
COM	211	Effective Public Speaking
COM	225	Small Group Communication
ECO	216	Principles of Macroeconomics
ECO	218	Principles of Microeconomics
ENG	112	English Composition II
ENG	113	English Composition III
HIS	101	U.S. History (1607-1815)
HIS	102	U.S. History (1815-1919)
HIS	103	U.S. History (1919-Present)
HUM	125	The Human Image
HUM	130	Humanity & the Challenge of Technology
PLS	101	American Federal Government I
PLS	102	American Federal Government II
PSY	121	General Psychology I
PSY	122	General Psychology II
PSY	217	Abnormal Psychology
SOC	111	General Sociology I
SOC	112	General Sociology II
SOC	145	Comparing Cultures
THE	105	Theatre Appreciation
THE	201	History of Theatre I
THE	202	History of Theatre II

HVAC Apprentice

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
HVA 101 Level 1-A Core Curriculum	<u>3.5</u>
TOTAL	3.5
SECOND QUARTER	
HVA 102 HVAC Level 1-B	<u>3.5</u>
TOTAL	3.5
THIRD QUARTER	
HVA 103 HVAC Level 2-A	<u>3.5</u>
TOTAL	3.5
FOURTH QUARTER	
HVA 104 HVAC Level 2-B	<u>3.5</u>
TOTAL	3.5
FIFTH QUARTER	
HVA 201 HVAC Level 3-A	<u>3.5</u>
TOTAL	3.5
SIXTH QUARTER	
HVA 202 HVAC Level 3-B	<u>3.5</u>
TOTAL	3.5
SEVENTH QUARTER	
HVA 203 HVAC Level 4-A	<u>3.5</u>
TOTAL	3.5
EIGHTH QUARTER	
HVA 204 HVAC Level 4-B	<u>3.5</u>
TOTAL	3.5

Short Term

Description

This program provides students with an increasingly technical base of knowledge in heating, ventilation and air conditioning as practiced at the trade level. The program consists of eight classes taken over a four-year period.

Program Prerequisite

Approval of chairperson

Type of Degree or Certificate

Short Term Certificate

Program Code HVAAS.STC

28 Total Credit Hours

Career Opportunities

Students who complete this certificate may move into journeyman status in the HVAC installation industry.

Apprenticeship programs are administered by outside programs and may have additional entry requirements. However, any Sinclair student can take these courses without admission to the apprenticeship program.

Short Term

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 systems. The hands-on component uses the types of equipment actually installed in the field.

Type of Degree or Certificate

Short Term Certificate

Program Code LCHS.STC

44 Total Credit Hours

Career Opportunities

This certificate emphasizes skills needed to be service and installation technicians. However, graduates may move into sales, lab technician, or many other careers.

HVAC Light Commercial & Residential Service

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
HVA 140	HVAC Installation Techniques	3
INT 141	Applied Shop Mathematics I	3
EET 119	Basic Electrical Circuits and Controls	4
HVA 144	Introduction to HVAC Systems	3
HVA 162	HVAC Loads & Distribution for Small Buildings	4
TOTAL		17
SECOND QUARTER		
COM 206	Interpersonal Communication	3
HVA 160	Basics of Heating and Heating Systems	3
HVA 180	Boilers in HVAC Systems	3
HVA 184	Basics of Cooling & Cooling Systems	3
TOTAL		12
THIRD QUARTER		
HVA 177	Testing, Adjusting & Balancing in HVAC Systems	3
HVA 190	HVAC Mechanical Troubleshooting	3
HVA 194	HVAC Electrical Troubleshooting	3
HVA 141	HVAC Installation Practices	2
EET 139	Electrical Machinery	4
TOTAL		15

HVAC Plumber/ Pipefitter Journeyman

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
HVA 231	Stationary Engineering	4
TOTAL		4
SECOND QUARTER		
HVA 232	Electricity & Refrigerants	4
TOTAL		4
THIRD QUARTER		
HVA 233	Compressors	4
TOTAL		4
FOURTH QUARTER		
HVA 234	Chillers	4
TOTAL		4
FIFTH QUARTER		
HVA 235	Testing, Adjusting & Balancing P/P	4
TOTAL		4
SIXTH QUARTER		
HVA 236	Heating & Cooling Controls	4
TOTAL		4

SHORT TERM

Short Term

Description

Three-year program of course work for HVAC technicians in the plumber/pipefitter union to meet requirements for their journeyman rating. Courses are taught at the Union hall and are only open to members of the plumber/pipefitter union.

Prerequisite

Courses and program restricted to members of Plumbers, Pipefitters, and Refrigeration Workers Local 162.

Type of Degree or Certificate

Short Term Certificate

Program Code PPJC.STC

24 Total Credit Hours

Help Desk Analyst

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	107	Introduction to Operating Systems	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
		or	
	161	Intermediate Word, PowerPoint, & Excel	
COM	206	Interpersonal Communication	3
BIS	201	Customer Service	3
CIS	111	Introduction to Problem Solving & Computer Programming	4
		TOTAL	16
SECOND QUARTER			
BIS	M31	Introduction to Access	1
BIS	M32	Intermediate Access	1
CIS	162	Troubleshooting Desktop Applications on a Microsoft Windows Operating System	3
CIS	164	Introduction to User Support	3
COM	287	Effective Listening	3
MAN	210	Introduction to Project Management	3
		TOTAL	14
THIRD QUARTER			
CIS	264	A+ Certification IT Technician	4
CIS	230	Computer Networks	3
CIS	238	P.C. Hardware Troubleshooting	4
CIS	166	User Support Tools & Techniques	3
		TOTAL	14

Short Term

Description

The Help Desk Analyst certificate is designed to prepare students for entry level positions that provide technical support, assistance, hardware and software troubleshooting, system maintenance and training and documentation to computer users. This certificate includes general knowledge of computer hardware, operating systems, software and network operation, and specific skills in troubleshooting, problem solving and customer service. Common job titles include User Support Specialist, Customer Support Representative, Software Trainer, P.C. Technician and Help Desk Technician/Analyst. Course work in this program helps prepare students for help desk industry certification exams.

Type of Degree or Certificate

Short Term Certificate

Program Code HD.STC

44 Total Credit Hours

Career Opportunities

Common job titles include User Support Specialist, Customer Support Representative, Software Trainer, P.C. Technician and Help Desk Technician/Analyst.

SHORT TERM

Short Term

Description

This short term certificate prepares students for a growing market of career opportunities available in Homeland Security and related fields; industrial and retail security officers, security in the health care and hospitality industries, airport security, security programs for educational institutions, applied industrial risk management, hazardous waste operations, etc. Additionally, this program will provide students with an overview of homeland security practices, policies, and programs in homeland security.

Type of Degree or Certificate

Short Term Certificate

Program Code CJHS.STC

43 Total Credit Hours

Homeland Security

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CJS	101	Introduction to Criminal Justice Science	3
CJS	102	Constitutional Law	3
CJS	110	Interrogation, Documentation & Testimony	3
CJS	130	Homeland Security Administration	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
TOTAL			15
SECOND QUARTER			
CJS	105	Criminal Law	3
CJS	111	Criminal Justice Ethics & Professionalism	3
CJS	155	Homeland Security Issues	3
EMS	105	First Responder	3
OPT	211	Applied Industrial Risk Management	3
TOTAL			15
THIRD QUARTER			
ETD	251	OSHA 1910.120 Hazardous Waste Operations	5
PED	200	First Aid & Safety	2
CJS	205	Criminal Investigation	3
CJS	209	Computer Crime	3
TOTAL			13

Human Resource Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	205	Principles of Management	3
COM	235	Principles of Interviewing	3
TOTAL			6
SECOND QUARTER			
MAN	240	Human Resource Management	5
MAN	225	Human Relations & Organizational Behavior	3
FIN	260	Employee Benefits	3
TOTAL			11

Short Term

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 employee motivation as well as the major functional areas of Human Resource Management. Also addresses human resources applications in benefits, training and development, recruitment and selection, compensation, performance planning, discipline and labor relations.

Contemporary approach to human resource management using a diagnostic model of internal and external influences. The case method applied to contemporary human resource managements concepts will be employed to understand concepts such as methods of communication, motivation, performance reviews and other personnel issues to achieve a productive and efficient work climate.

Type of Degree or Certificate

Short Term Certificate

Program Code HRMT.STC

17 Total Credit Hours

216 Academic Advising Center, Building 11, (937) 512-3700

Industrial Fire Protection Technician

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
FST	116	Fire Protections Systems I	3
FST	194	Fire Brigade Training	3
FST	204	Water Suppression Systems	4
ETD	251	OSHA 1910.120 Hazardous Waste Operations	5
SRM	230	Occupational Safety & Health	3
TOTAL			18

Industrial Maintenance Technician

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
EET	119	Basic Electrical Circuits & Controls	4
EGR	100	Fundamental Mechanical Skills	3
EGR	128	Robotics in CIM Systems	3
ETD	128	Introduction to Design Engineering Symbology	3
TOTAL			13
SECOND QUARTER			
EET	139	Electrical Machinery	4
EET	166	Industrial Machine Wiring & Standards	3
EGR	144	Sensors	3
EET	281	Programmable Logic Controllers	3
TOTAL			13
THIRD QUARTER			
EGR	210	Human-Machine Interfaces (HMIs)	3
EGR	217	Fluid Power & Control	4
EGR	231	Introduction to Troubleshooting of Automated Systems	3
EET	282	Advanced Programmable Logic Controller	3
TOTAL			13

Short Term

Description

This certificate provides the knowledge and skills required for the design, installation, operation and maintenance of automated sprinkler, fire detection, alarm and suppression systems. It also provides instruction and hands-on experience in extinguishing fires in their incipient stage, functioning as a member of an industrial fire brigade and working in a hazardous waste site. This certificate includes the issuance of an OSHA 30-hour card for General Industry Safety and a 40-hour card for Hazardous Waste Operations.

Type of Degree or Certificate

Short Term Certificate

Program Code IFPT.STC

18 Total Credit Hours

SHORT TERM

Short Term

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.

Type of Degree or Certificate

Short Term Certificate

Program Code INDMT.STC

39 Total Credit Hours

Career Opportunities

This certificate will provide the necessary background to perform industrial maintenance operations on a wide range of electro-mechanical equipment.

Short Term

Description

The Industrial Robot Technician certificate provides the knowledge and skill required to meet the needs of industries incorporating robotic equipment within their production facilities.

Type of Degree or Certificate

Short Term Certificate

Program Code IRT.STC

41 Total Credit Hours

Career Opportunities

This certificate program will provide the education necessary to operate and program industrial robots, diagnose system faults, and perform maintenance necessary to return faulty equipment to service.

Industrial Robot Technician

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
EET	119	Basic Electrical Circuits & Controls	4
EGR	100	Fundamental Mechanical Skills	3
EGR	128	Robotics in CIM Systems	3
EGR	161	Pbasic & Stamp	3
			<u>3</u>
TOTAL			13
SECOND QUARTER			
EET	166	Industrial Machine Wiring & Standards	3
EGR	144	Sensors	3
EGR	250	Robot Mechanical Unit Repair	3
EGR	252	Teach Pendant Robot Programming	3
EET	281	Programmable Logic Controllers	3
			<u>3</u>
TOTAL			15
THIRD QUARTER			
EGR	217	Fluid Power & Control	4
EGR	220	Machine Vision	3
EGR	231	Introduction to Troubleshooting of Automated Systems	3
EGR	251	Robot Controller Diagnostics	3
			<u>3</u>
TOTAL			13

Infant/Toddler Education

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ECE	101	Introduction to Early Childhood Education	3
ECE	104	Prenatal Life & Birth	3
ECE	106	Childhood Nutrition, Health, & Safety	3
ECE	120	Observing Young Children	3
ECE	150	The Young Child	4
ECE	111	Child Abuse Recognition & Prevention	1
			<u>1</u>
TOTAL			17
SECOND QUARTER			
ECE	135	Group Care for Infant & Toddler	3
ECE	117	Language & Literacy Experiences in Early Childhood	4
ECE	112	ECE First Aid	1
ECE	113	Communicable Diseases: Prevention & Recognition	1
ENG	111	English Composition I	3
			<u>3</u>
TOTAL			12
THIRD QUARTER			
		Social Science Elective	9
TOTAL			<u>9</u>

SHORT TERM

Short Term

Description

This program prepares individuals to work with infant and toddler children in a variety of education settings. Those individuals completing this certificate will meet state of Ohio Child Day Care Center requirements for child care staff training.

NOTE: Internship is a working experience involving infants and toddlers in a group setting. It must be approved as a valid learning experience by the instructor. Department criteria regarding internships must be met.

Type of Degree or Certificate

Short Term Certificate

Program Code ITES.STC

38 Total Credit Hours

Information Systems Security

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
CIS 238	P.C. Hardware Troubleshooting	4
CIS 230	Computer Networks	3
	TOTAL	7
SECOND QUARTER		
CIS 206	Network Security I	3
CIS 272	Microsoft Windows Server Operating System	4
	TOTAL	7
THIRD QUARTER		
CIS 207	Network Security II	3
CIS 253	Securing a Windows Network Environment	4
	TOTAL	7

Short Term

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 Committee on National Security Systems (CNSS), an agency of the United States Government, to fully meet the CNSS 4011 standard. Students completing the courses outlined here will receive the 4011 Certificate jointly issued by Sinclair Community College and the CNSS.

Type of Degree or Certificate

Short Term Certificate

Program Code ISSC.STC

21 Total Credit Hours

SHORT TERM

Law Enforcement

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 this program.

Course & Title		Credit Hours
FIRST QUARTER		
CJS 101	Introduction to Criminal Justice Science	3
CJS 102	Constitutional Law	3
PED 234	Concepts of Total Fitness	3
BIS 160	Introduction to Word, PowerPoint, & Excel	3
	TOTAL	12
SECOND QUARTER		
CJS 105	Criminal Law	3
CJS 170	Community-Based Policing	3
CJS 111	Criminal Justice Ethics & Professionalism	3
CJS 110	Interrogation, Documentation & Testimony	3
CJS 215	Introduction to Forensic Science	3
	TOTAL	15
THIRD QUARTER		
CJS 104	Criminal Evidence and Procedures	3
CJS 125	Police Organization and Administration	3
CJS 140	Human Relations & Cultural Diversity	3
SPA 161	Conversational Spanish for Criminal Justice	3
PED 105	Physical Fitness	1
	or	
154	Aerobic Conditioning	
	or	
164	Cardio Sculpt	
	TOTAL	13

Short Term

Description

This short term certificate prepares students with the foundations of knowledge and prepares the learner for future training and education in the field of law enforcement. The certificate enhances the law enforcement professional skills and knowledge. It may assist the student in performing well in future civil service examinations for employment or promotion.

Type of Degree or Certificate

Short Term Certificate

Program Code CJLES.STC

40 Total Credit Hours

Short Term

Description

The purpose 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. This certificate provides a manufacturing specific background in organizations, industrial supervision, improvement techniques, quality, safety, teamwork, and cost analysis. In addition, an elective provides the student an opportunity to customize the program according to their individual needs and interests.

Type of Degree or Certificate

Short Term Certificate

Program Code MM.STC

22 Total Credit Hours

Career Opportunities

The purpose 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.

Manufacturing Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
OPT	101	Introduction to Operations	3
OPT	125	Introduction to World Class Operations	3
OPT	126	Supervision & Team Leadership	3
OPT	198	Excel for Engineering Technology	2
OPT	209	Operations Cost Analysis	3
OPT	251	Supply Chain Operations and Logistics	5
MAN	105	Introduction to Business	3
TOTAL			22

Measurement & Calibration

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
OPT	100	Tooling & Machining Metrology	2
MAT	101	Elementary Algebra	4
ETD	198	Personal Computer Applications for Engineering Technology	2
ETD	128	Introduction to Design Engineering Symbology	3
TOTAL			11
SECOND QUARTER			
OPT	101	Introduction to Operations	3
OPT	120	Process Metrology	3
MAT	131	Technical Mathematics I	5
TOTAL			11
THIRD QUARTER			
OPT	113	Coordinate Measurement	3
OPT	201	Statistical Process Control	3
TOTAL			6
FOURTH QUARTER			
OPT	217	Measurement & Calibration	3
OPT	266	Quality Technician Certification Review	3
TOTAL			6

Short Term

Description

This short term certificate provides both theory and practice in measuring parts and processes, analyzing the result and determining the forms of error that contribute to the uncertainty of the measurements. A good measurement system is an underlying requirement for improving quality, throughput, and waste problems. This certificate focuses on calibration and dimensional measurements, including coordinate measurements. Pressure, temperature, and mass are also covered. This certificate provides sufficient background to pass the ASQ certified calibration technician exam. The courses in this short-term certificate apply directly to the Operations Technology degree.

Type of Degree or Certificate

Short Term Certificate

Program Code MTCAL.STC

34 Total Credit Hours

Mechanical Maintenance

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ETD	160	Mechanics for Skilled Trades	3
ETD	161	Advanced Mechanics for Skilled Trades	3
ETD	165	Industrial Hydraulics I	3
ETD	166	Industrial Hydraulics II	3
ETD	167	Industrial Hydraulics III	3
TOTAL			15

Short Term

Description

This program is intended for mechanical maintenance personnel who desire to improve their troubleshooting skills. This is a hands-on approach that examines how machines operate, with special concentration on power hydraulics, hydraulic circuits, and control of hydraulic circuits. The program emphasizes the proper techniques for troubleshooting, maintenance and rebuild.

Type of Degree or Certificate

Short Term Certificate

Program Code METMM.STC

15 Total Credit Hours

SHORT TERM

Medical Coding & Billing Specialist

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIO	107	Human Biology	5
ALH	104	Allied Health Informatics	2
HIM	121	Basic Medical Terminology	3
TOTAL			10
SECOND QUARTER			
HIM	122	Specialized Medical Terminology	3
HIM	260	ICD-9-CM Medical Office Coding	3
HIM	261	CPT Medical Office Coding	3
ALH	103	Introduction to Health Care Delivery	3
TOTAL			12
THIRD QUARTER			
HIM	262	Advanced Medical Office Coding	4
MAS	111	Medical Billing I	4
TOTAL			8

Short Term

Description

This certificate provides students with a core set of medical office skills in medical office coding and billing. Upon completion of the certificate, a student will be able to read and interpret medical documentation, apply coding classification systems and regulatory rules in completing billing forms, understand revenue cycle management in the physician office, demonstrate personal behaviors, attitudes and values consistent with a health care professional, demonstrate critical thinking and problem solving, and demonstrate informational literacy.

Type of Degree or Certificate

Short Term Certificate

Program Code MCBS.STC

30 Total Credit Hours

Short Term

Description

The Medical Office Receptionist program 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 and entry-level billing. The program is designed to develop knowledge and understanding of medical language and documentation, as well as entry-level medical billing. Upon completion of the curriculum, students receive a short-term technical certificate from Sinclair Community College.

Program Prerequisites

DEV 065 Academic Reading
and
DEV 075 Foundations of Paragraph
Writing
and
DEV 085 Basic Mathematics II

Type of Degree or Certificate

Short Term Certificate

Program Code MOR.STC

28 Total Credit Hours

Medical Office Receptionist

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 this program.

Course & Title

FIRST QUARTER

MAS	103	Medical Law & Ethics	2
ALH	103	Introduction to Health Care Delivery	3
HIM	121	Basic Medical Terminology	3
			<u>8</u>
TOTAL			8

SECOND QUARTER

MAS	102	Medical Office Accounting	3
ALH	104	Allied Health Informatics	2
HIM	122	Specialized Medical Terminology	3
ENG	131	Business Communications I	3
			<u>11</u>
TOTAL			11

THIRD QUARTER

MAS	105	Medical Office Management	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
ENG	132	Business Communications II	3
			<u>9</u>
TOTAL			9

Multimedia

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 this program.

Course & Title

FIRST QUARTER

VIS	106	Design Basics: 2-D	3
VIS	108	Typography	3
VIS	114	Interactive Digital Theory	3
VIS	110	Design Lab Orientation	1
			<u>10</u>
TOTAL			10

SECOND QUARTER

VIS	147	Digital Imaging	3
VIS	146	Digital Illustration	3
VIS	115	Digital Video	3
			<u>9</u>
TOTAL			9

THIRD QUARTER

VIS	117	Web Page Design	3
VIS	116	Digital Animation	3
			<u>6</u>
TOTAL			6

FOURTH QUARTER

VIS	118	Web Page Design II	3
			<u>3</u>
TOTAL			3

SHORT TERM

Short Term

Description

The Multimedia certificate program provides an introduction to the fundamentals skills, techniques and software used to create a variety of interactive components of multimedia. The course work includes digital sound, digital video development, 2D and 3D animations, and multimedia authoring.

Type of Degree or Certificate

Short Term Certificate

Program Code MLM.STC

28 Total Credit Hours

Network Engineering Associate

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	241	Cisco Networking Fundamentals	7
			TOTAL
			<u>7</u>
SECOND QUARTER			
CIS	242	Cisco Router Fundamentals	7
			TOTAL
			<u>7</u>
THIRD QUARTER			
CIS	243	Cisco Routing in LANs	7
			TOTAL
			<u>7</u>
FOURTH QUARTER			
CIS	244	Cisco Routing in WANs	7
			TOTAL
			<u>7</u>

Ohio Real Estate Broker

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
RES	201	Real Estate Principles & Practices	4
RES	202	Real Estate Law	4
RES	203	Real Estate Finance	2
RES	204	Real Estate Appraisal for Realtors	2
MAN	205	Principles of Management	3
			TOTAL
			<u>15</u>
SECOND QUARTER			
FIN	215	Corporation Finance	3
LAW	101	Business Law I	4
MAN	225	Human Relations & Organizational Behavior	3
ECO	216	Principles of Macroeconomics	4
			TOTAL
			<u>14</u>

Short Term

Description

This certificate program will provide the student with state-of-the-art networking skills and is taught via the Cisco Networking Academy Curriculum, teaching 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, programming and troubleshooting corporate network infrastructure. Included in this one-year program are networking theory, OSI model, networking media, physical and logical design, programming, installing, maintaining and troubleshooting networking equipment, designing and implementing IP schemas, the basics of all current internal routing protocols, beginning security information and safety.

Type of Degree or Certificate

Short Term Certificate

Program Code NEA.STC

28 Total Credit Hours

SHORT TERM

Short Term

Description

This certificate is designed for the person who already has the equivalent of a two-year degree, who meets the experience requirement of the state Division of Real Estate, but lacks course work in economics, corporation finance, human resource management, and business law. The real estate courses (RES) meets the educational requirement of 120 seat-hours for persons to be licensed to sell real estate in Ohio, and many students will have already completed these pre-license courses. All other courses in this certificate satisfy other portions of the state requirements to be a broker. In addition to the equivalent of two-year degree and experience as a sales agent, the state requires course work in economics (ECO 216) corporation finance (FIN 215), human resources management (MAN 225), and business law (LAW 101) to become licensed as a broker.

Type of Degree or Certificate

Short Term Certificate

Program Code RESB.STC

29 Total Credit Hours

Short Term

Description

This certificate is designed for the person who is interested in a career in real estate sales. The course work meets the educational requirement of 120 seat-hours for persons to sit for the Ohio real estate license exam. Forty hours of Real Estate Principles and Practices (RES 201), forty hours of Real Estate Law (RES 202), twenty hours of Real Estate Finance (RES 203) and twenty hours of Real Estate Appraisal (RES 204) are the requirements of the Ohio Division of Real Estate to sit for the Ohio real estate license exam.

Type of Degree or Certificate

Short Term Certificate

Program Code RESS.STC

12 Total Credit Hours

Short Term

Description

SHORT TERM

This program prepares individuals to perform the technical and specialized skills of a pharmacy technician within retail and mail order settings, hospital pharmacies, nursing homes and home health care sites. The program is designed to develop knowledge and understanding of basic pharmacology, maintenance of patient records, drug-product preparation and distribution, and recordkeeping. A portion of this program will involve on-site internships at participating pharmacies. Upon completion of the program students may take the Pharmacy Tech Board Examination I.

Type of Degree or Certificate

Short Term Certificate

Program Code PHT.STC

40-42 Total Credit Hours

Career Opportunities

Employment prospects for the pharmacy technicians are excellent in the Miami Valley and throughout the nation. Job opportunities are available in the following areas: retail and mail order settings, hospital pharmacies, nursing homes and home health care settings.

Ohio Real Estate Sales Associate

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 this program.

Course & Title

FIRST QUARTER

Course & Title	Credit Hours
RES 201 Real Estate Principles & Practices	4
RES 202 Real Estate Law	4
RES 203 Real Estate Finance	2
RES 204 Real Estate Appraisal for Realtors	2
TOTAL	12

Pharmacy Technician

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 this program.

Course & Title

FIRST QUARTER

Course & Title	Credit Hours
ALH 122 Pharmacy Technician I	5
HIM 121 Basic Medical Terminology	3
ALH 103 Introduction to Health Care Delivery	3
BIO 107 Human Biology	4-5
121 Human Anatomy & Physiology I	
141 Principles of Anatomy & Physiology I	
TOTAL	15-16

SECOND QUARTER

ALH 123 Pharmacy Technician II	5
ALH 142 Fundamentals of Disease Processes	4
BIS 101 Personal Computer Keyboarding	2-3
160 Introduction to Word, PowerPoint, & Excel	
MAT 101 Elementary Algebra	4
106 Allied Health Mathematics	
TOTAL	15-16

THIRD QUARTER

ALH 124 Pharmacy Technician III	5
ALH 104 Allied Health Informatics	2
ENG 111 English Composition I	3
131 Business Communications I	
TOTAL	10

Photographic Technology

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ART	233	Art of the Modern World	3
CHE	141	College Chemistry I	4
MAT	105	Business Mathematics	4
ART	161	Photography I	4
ART	162	Photography II	4
ART	163	Photography III	4
ART	170	Non-Silver Photography	4
ART	171	Studio Photography	4
ART	175	Computer Photography I	3
ART	194	Photography Portfolio I	1
ART	265	Color Photography I	4
ART	266	Color Photography II	4
ART	294	Photography Portfolio Development II	1
TOTAL			44

Plumbing Apprenticeship

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
HVA	101	Level 1-A Core Curriculum	3.5
TOTAL			3.5
SECOND QUARTER			
HVA	102	HVAC Level 1-B	3.5
TOTAL			3.5
THIRD QUARTER			
HVA	103	HVAC Level 2-A	3.5
TOTAL			3.5
FOURTH QUARTER			
HVA	104	HVAC Level 2-B	3.5
TOTAL			3.5
FIFTH QUARTER			
HVA	201	HVAC Level 3-A	3.5
TOTAL			3.5
SIXTH QUARTER			
HVA	202	HVAC Level 3-B	3.5
TOTAL			3.5
SEVENTH QUARTER			
HVA	203	HVAC Level 4-A	3.5
TOTAL			3.5
EIGHTH QUARTER			
HVA	204	HVAC Level 4-B	3.5
TOTAL			3.5

Short Term

Description

This certificate is designed for the serious photographer or student who desires to find a job in the photo studio/photo 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 techniques, and how to operate both manual 35 mm and digital cameras. Basic computer imaging techniques and photographic restoration will also be covered. The completion of the certificate will ensure that the student has a well rounded knowledge of photographic techniques and applications.

Type of Degree or Certificate

Short Term Certificate

Program Code PHOT.STC

44 Total Credit Hours

SHORT TERM

Short Term

Description

This program presents students with an increasingly technical base of knowledge in plumbing as practiced at the trade level. The program consists of eight classes taken over a four-year period.

Prerequisite

Approval of chairperson

Type of Degree or Certificate

Short Term Certificate

Program Code PLBAS.STC

28 Total Credit Hours

Career Opportunities

Students who complete this certificate may move into journeyman status in the plumbing industry.

Apprenticeship programs are administered by outside programs and may have additional entry requirements. However, any Sinclair student can take these courses without admission to the apprenticeship program.

Short Term

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 1998 survey by the National Association of Colleges and Employers showed clearly the importance of communication skills in the work place. When asked of employers what characteristics they seek in job candidates, interpersonal skills topped the list, with teamwork skills and communication skills followed immediately behind.

Type of Degree or Certificate

Short Term Certificate

Program Code COM.STC

27 Total Credit Hours

Professional Communication

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 this program.

Course & Title

FIRST QUARTER

Course & Title			Credit Hours
COM	201	Introduction to Mass Communication	3
COM	206	Interpersonal Communication	3
COM	211	Effective Public Speaking	3
COM	212	Advanced Public Speaking	3
COM	220	Introduction to Communication Theory	3
COM	225	Small Group Communication	3
COM	227	Principles of Persuasion	3
COM	230	Non-verbal Communication	3
COM	235	Principles of Interviewing	3
COM	245	Intercultural Communication	3
COM	265	Communication & Conflict	3
COM	285	Organizational Communication	3
COM	286	Public Relations Principles	3
COM	287	Effective Listening	3
COM	290	Introduction to Broadcasting	3
COM	295	Independent Study in Communication	1 - 3

Students select nine courses from the list above to total 27 hours.

Short Term

Description

Training for full-time, part-time and volunteer firefighters to apply skills needed for public fire protection. Understand the importance of teamwork and coordination in dealing with fire and hazardous material incidents. Apply fire suppression skills and rescue techniques.

Program Prerequisite

Approval of chairperson

Type of Degree or Certificate

Short Term Certificate

Program Code PFC.STC

16 Total Credit Hours

Professional Firefighter

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 this program.

Course & Title

FIRST QUARTER

FST	181	Firefighter I	8
			<hr/>
TOTAL			8

SECOND QUARTER

FST	193	Firefighter II Transition	8
			<hr/>
TOTAL			8

Rescue Technician

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
FST	169	Rapid Intervention Team	2
FST	171	Introduction to Technical Rescue	3
FST	173	Rope Rescue	3
			<u>8</u>
TOTAL			8
SECOND QUARTER			
	—	Fire Science Technology Elective	4 - 9
TOTAL			4 - 9

Short Term

Description

Training for all emergency responders, urban search and rescue teams, fire, law enforcement, and emergency medical services to understand the role of rescue technician; demonstrate basics of victim search and rescue; understand principles of applied physics related to removal of victims; demonstrate safety and survival techniques; and demonstrate correct, safe, and effective state of the art rescue equipment. Students must be working in the field to qualify for this program.

Type of Degree or Certificate

Short Term Certificate

Program Code RT.STC

12-17 Total Credit Hours

SHORT TERM

Security for the Networking Professional

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
CIS	206	Network Security I	3
CIS	253	Securing a Windows Network Environment	4
			<u>7</u>
TOTAL			7
SECOND QUARTER			
CIS	207	Network Security II	3
CIS	255	Securing a Unix/Linux Operating System	4
			<u>7</u>
TOTAL			7

Short Term

Description

This certificate is designed for the networking professional or student who has completed the Network Manager track or the Network Engineer track in the CIS program. The certificate focuses on the technical skills necessary to assess security risks to existing networks. Students will learn to establish an information security plan and policy as well as learn to install and configure various security measures such as intrusion detection, data encryption, and other methods needed to decrease vulnerability.

Type of Degree or Certificate

Short Term Certificate

Program Code SNP.STC

14 Total Credit Hours

Short Term

Description

This program presents students with an increasingly technical base of knowledge in sheet metal technology as practiced by sheetmetal workers at the trade level. The program consists of eight classes taken over a four-year period.

Apprenticeship programs are administered by outside programs and may have additional entry requirements. However, any Sinclair student can take these courses without admission to the apprenticeship program.

Prerequisite

Approval of chairperson

Type of Degree or Certificate

Short Term Certificate

Program Code SHAS.STC

28 Total Credit Hours

Career Opportunities

Students who complete this certificate may move into journeyman status in the sheetmetal industry.

Sheetmetal Apprentice

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
HVA 101 Level 1-A Core Curriculum	3.5
TOTAL	3.5
SECOND QUARTER	
HVA 102 HVAC Level 1-B	3.5
TOTAL	3.5
THIRD QUARTER	
HVA 103 HVAC Level 2-A	3.5
TOTAL	3.5
FOURTH QUARTER	
HVA 104 HVAC Level 2-B	3.5
TOTAL	3.5
FIFTH QUARTER	
HVA 201 HVAC Level 3-A	3.5
TOTAL	3.5
SIXTH QUARTER	
HVA 202 HVAC Level 3-B	3.5
TOTAL	3.5
SEVENTH QUARTER	
HVA 203 HVAC Level 4-A	3.5
TOTAL	3.5
EIGHTH QUARTER	
HVA 204 HVAC Level 4-B	3.5
TOTAL	3.5

Social Service

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
COM 211 Effective Public Speaking	3
SOC 111 General Sociology I	3
TOTAL	6
SECOND QUARTER	
COM 286 Public Relations Principles	3
SOC 205 Social Problems	4
SOC 215 Cultural Diversity	4
TOTAL	11
THIRD QUARTER	
SOC 130 Family Violence	3
SWK 206 Social Work as a Profession	4
MHT 140 Child & Adolescent Mental Health	3
TOTAL	10
FOURTH QUARTER	
SOC 297 Special Topics in Sociology	3
TOTAL	3

Short Term

Description

This certificate provides the tools needed for volunteers and volunteer leaders related to non-profit organizations and human service agencies 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.

Type of Degree or Certificate

Short Term Certificate

Program Code SOCS.STC

30 Total Credit Hours

Software Application for the Professional

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	105	Computer Concepts	3
BIS	M35	Microsoft Access	2
BIS	M45	Microsoft Excel	2
BIS	M55	Microsoft PowerPoint	2
BIS	M75	The Internet	3
BIS	M85	Microsoft Word	2
TOTAL			14
SECOND QUARTER			
BIS	M25	Desktop Publishing	2
BIS	M36	Advanced/Expert Access	3
BIS	M46	Advanced/Expert Excel	3
BIS	M86	Advanced/Expert Word	2
BIS	172	Integrated Solutions	2
TOTAL			12

Supply Chain Management

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
MAN	241	Introduction to Supply Chain Management	3
MAN	106	Introduction to RFID	2
MAN	205	Principles of Management	3
TOTAL			8
SECOND QUARTER			
MAN	242	Advanced Supply Chain Management (SCM)	3
MAN	244	Negotiation Techniques	3
OPT	251	Supply Chain Operations & Logistics	5 - 6
or			
MAN	248	DoD Acquisition Logistics Fundamentals and	
	247	DoD Systems Acquisition Management	
TOTAL			11 - 12

Short Term

Description

This certificate provides office workers, managers, professionals, and those interested in acquiring knowledge for personal use the opportunity to develop and refine their skills in a variety of current software common in today's work environments. Software applications included are word processing, spreadsheet, database, business presentations, desktop publishing, and Internet browser.

Type of Degree or Certificate

Short Term Certificate

Program Code SA.STC

26 Total Credit Hours

SHORT TERM

Short Term

Description

This short term certificate provides the opportunity to develop and refine specialized Supply Chain Management (SCM) knowledge and skills. This study involves consideration and application of processes to develop coordinated supplier-to-consumer 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.

Type of Degree or Certificate

Short Term Certificate

Program Code SCMS.STC

19-20 Total Credit Hours

Short Term

Description

The Tax Practitioner certificate prepares students for work in the tax preparation field. As Federal tax law changes and grows more complex, more people seek professional tax preparation assistance. Tax preparers may work for companies or work as entrepreneurs in their own businesses. The Tax Practitioner certificate covers both Federal, state and local tax law. Actual tax preparation for clients will take place through service learning providing valuable practical experience. The certificate also prepares interested students for the Enrolled Agents Exam of the Internal Revenue Service.

Type of Degree or Certificate

Short Term Certificate

Program Code TAXP.STC

28 Total Credit Hours

Career Opportunities

Tax preparers may work for companies or as entrepreneurs in their own businesses.

Tax Practitioner

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
ACC	121	Introduction to Financial Accounting	5
ACC	221	Federal Taxes I	3
BIS	160	Introduction to Word, PowerPoint, & Excel	3
TOTAL			11
SECOND QUARTER			
ACC	122	Introduction to Managerial Accounting	5
ACC	222	Federal Taxes II	3
ACC	225	Professional Tax Preparation	3
TOTAL			11
THIRD QUARTER			
ACC	125	Personal Computer Applications in Accounting	3
ACC	223	Advanced Taxation	3
TOTAL			6

Tissue Banking Technologist

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
HIM	121	Basic Medical Terminology	3
SUT	100	Introduction to Tissue Banking	5
TOTAL			8
SECOND QUARTER			
MAT	106	Allied Health Mathematics	4
ENG	131	Business Communications I	3
SUT	101	Tissue Banking I	5
TOTAL			12
THIRD QUARTER			
SUT	201	Tissue Banking II	8
SUT	202	Tissue Bank Certification Review	4
TOTAL			12

Short Term

Description

Completion of this three quarter 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 will gain basic knowledge of human anatomy, medical terminology, sterile technique, surgical recovery and processing techniques, ethics, and regulatory standards. Students will also be eligible to take the national CTBS (certified tissue banking specialist) exam upon program completion.

Program Prerequisite

BIO 107 Human Biology

Type of Degree or Certificate

Short Term Certificate

Program Code TBT.STC

32 Total Credit Hours

Web Programming

Java Track

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
CIS 136 Introduction to XHTML	3
CIS 137 Introduction to XHTML/JavaScript	4
CIS 130 Introduction to Web Development	3
CIS 111 Introduction to Problem Solving & Computer Programming	4
TOTAL	14
SECOND QUARTER	
CIS 131 Intermediate Web Development	3
CIS 280 Java Programming I	4
CIS 265 Database Management Systems	3
TOTAL	10
THIRD QUARTER	
CIS 223 Extensible Markup Language	3
CIS 224 Web Server Administration & Security	4
CIS 285 Web Application Development with Java	4
TOTAL	11

Web Programming

Visual Basic Track

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 this program.

Course & Title	Credit Hours
FIRST QUARTER	
CIS 136 Introduction to XHTML	3
CIS 137 Introduction to XHTML/JavaScript	4
CIS 130 Introduction to Web Development	3
CIS 111 Introduction to Problem Solving & Computer Programming	4
TOTAL	14
SECOND QUARTER	
CIS 131 Intermediate Web Development	3
CIS 147 Visual Basic Programming I	4
CIS 265 Database Management Systems	3
TOTAL	10
THIRD QUARTER	
CIS 224 Web Server Administration & Security	4
CIS 223 Extensible Markup Language	3
CIS 284 Client/Server Web Tools Using ASP.NET	3
TOTAL	10

Short Term

Description

The Web Programming certificate is designed to provide an individual with state-of-the-art web application development skills. It focuses on designing, writing and deploying web applications using the latest technologies. It is designed for experienced programmers to update their skills and for individuals wishing to make a career change into the Information Technology field. The certificate will focus on web application development in a client/server networked environment.

Type of Degree or Certificate

Short Term Certificate

Program Code WW2.STC

35 Total Credit Hours

SHORT TERM

Short Term

Description

The Web Programming certificate is designed to provide an individual with state-of-the-art web application development skills. It focuses on designing, writing and deploying web applications using the latest technologies. It is designed for experienced programmers to update their skills and for individuals wishing to make a career change into the Information Technology field. The certificate will focus on web application development in a client/server networked environment.

Type of Degree or Certificate

Short Term Certificate

Program Code WW1.STC

34 Total Credit Hours



SHORT TERM



Individualized Programs

2012
Semesters
sinclair.edu/semesters

Associate of Individualized Study (93 Total Credit Hours)

The Associate of Individualized Study (A.I.S.) 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. The student may focus specifically on education for individual development and enrichment or may design a curriculum which allows for employment or continuation into selected four-year degree programs. Students are assisted in the degree planning process by a faculty committee which represents the various areas of study incorporated into the degree. Interested students should contact the A.I.S. coordinator, Dr. Linda Pastore, (937) 512-2347.

Interdisciplinary Component

A minimum of 45 quarter hours from two distinct areas of study.

General Education

English	First of sequence	3 hours
English	Second of sequence	3 hours
Communication	Elective	3 hours
Mathematics	100 level or above	3 hours
Social Science	Elective	3 hours
Computer Literacy	Elective	2-3 hours
Humanities	Elective	3 hours

Experience Based Education

EBE 130	Degree Planning Seminar	1 hour
EBE 278	A.T.S./A.I.S. Capstone	3 hours
SCC 101	Student Success Experience	2 hours

Total Experience Based Education (EBE)

A minimum of 6 quarter hours.

Related Electives

A minimum of 21 hours.

A minimum of 93 total hours required to earn the A.I.S. degree.

Associate of Technical Study (93 Total Credit Hours)

The Associate of Technical Study (A.T.S.) 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. Interested students should contact the A.T.S. coordinator, Dr. Linda Pastore, (937) 512-2347.

Technical Education

A minimum of 45 quarter hours incorporating articulated credit or combining no more than two distinct areas of study.

General Education

English	First of sequence	3 hours
English	Second of sequence	3 hours
Communication	Elective	3 hours
Mathematics	100 level or above	3 hours
Social Science	Elective	3 hours
Computer Literacy	Elective	2-3 hours
Humanities	Elective	3 hours

Experience Based Education

EBE 130	Degree Planning Seminar	1 hour
EBE 278	A.T.S./A.I.S. Capstone	3 hours
SCC 101	Student Success Experience	2 hours

Total Experience Based Education (EBE)

A minimum of 6 quarter hours

Related Electives

A minimum of 21 hours

A minimum of 93 total hours required to earn the A.T.S. degree.

Advanced Technical Intelligence

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
SCC	101	Student Success Experience	2
ENG	111	English Composition I	3
ETD	198	Personal Computer Applications for Engineering Technology	2
MAT	131	Technical Mathematics I	5
SME	121	Introduction to Intelligence Community	3
TOTAL			15
SECOND QUARTER			
ENG	112	English Composition II	3
MAT	132	Technical Mathematics II	5
OPT	198	Excel for Engineering Technology	2
AVT	119	Aviation Meteorology	3
SME	122	Fundamentals of Remote Sensing in Intelligence	3
TOTAL			16
THIRD QUARTER			
ENG	113	English Composition III	3
GEO	102	Human Geography	3
COM	206	Interpersonal Communication	3
PHY	141	College Physics I	4
SME	201	Introduction to Spectral Sensing with Applications in Intelligence	3
TOTAL			16
FOURTH QUARTER			
CHE	151	General Chemistry I	5
PHI	207	Logic	4
PHY	104	Sound, Light & Modern Physics	4
SME	202	Introduction to Radar for Measurement & Signal Intelligence (MASINT)	3
TOTAL			16
FIFTH QUARTER			
GEO	201	World Regional Geography I	3
PHY	143	College Physics III	4
EGR	144	Sensors	3
SME	211	Introduction to Overhead Persistent Non-Imaging Infrared (OPIR)	3
SME	212	MASINT Fundamentals	3
TOTAL			16
SIXTH QUARTER			
AVT	297	Special Topics in Aviation Technology	3
HIS	219	Survey of the Middle East	3
PLS	201	International Relations	4
EET	278	Electronics Project Capstone	4
TOTAL			14

Individualized Program

Description

Advanced Technical Intelligence degree will prepare graduates to work in the defense related industry with background in Advanced Geospatial Intelligence (AGI) and Measurement and Signature Intelligence (MASINT). It is also designed to meet the needs of individuals desiring to change career paths within the industry and government.

Program Prerequisites

Approval of chairperson and U.S. citizenship.

Type of Degree or Certificate

Associate of Technical Studies

Program Code ATI.ATS

93 Total Credit Hours

Individualized Program

Description

Protecting the nation's computers and networks from terrorist and criminals has become increasingly important in today's volatile times. This associate of technical studies prepares students for careers in areas of network security, criminal investigation and computer forensics. This curriculum covers networks, computer hardware, operating systems, network security, computer forensics and computer crime, law and criminal evidence and procedures. Students will need to pass a criminal records check with both the Bureau of Criminal Investigation and the FBI prior to enrolling in CIS 208. See CIS 208 and the CIS website for more details.

Program Prerequisites

BIS 105 and Approval of Chairperson

Type of Degree or Certificate

Associate of Technical Studies

Program Code CYSE.ATS

102 Total Credit Hours

Cyber Security & Computer Forensics

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 this program.

Course & Title			Credit Hours
FIRST QUARTER			
BIS	160	Introduction to Word, PowerPoint, & Excel	3
CIS	107	Introduction to Operating Systems	3
MAT	116	College Algebra	5
CJS	111	Criminal Justice Ethics & Professionalism	3
SCC	101	Student Success Experience	2
TOTAL			16
SECOND QUARTER			
CIS	225	A+ Certification Essentials Operating Systems	3
MAT	122	Statistics I	4
CIS	230	Computer Networks	3
CJS	104	Criminal Evidence & Procedures	3
ENG	111	English Composition I	3
TOTAL			16
THIRD QUARTER			
CIS	111	Introduction to Problem Solving & Computer Programming	4
CIS	264	A+ Certification IT Technician	4
CIS	271	Administering a Microsoft Windows Client Operating System	4
ENG	112	English Composition II	3
		Arts & Humanities Elective	3
TOTAL			18
FOURTH QUARTER			
CIS	206	Network Security I	3
CIS	210	Computer Systems Analysis	3
CJS	105	Criminal Law	3
COM	206	Interpersonal Communication	3
CIS	265	Database Management Systems	3
MAN	247	DoD Systems Acquisition Management	3
TOTAL			18
FIFTH QUARTER			
CJS	209	Computer Crime	3
CIS	207	Network Security II	3
CIS	231	Introduction to Linux +	3
ECO	218	Principles of Microeconomics	4
CIS	208	Introduction to Computer Forensics	4
TOTAL			17
SIXTH QUARTER			
CIS	232	Intermediate Linux	3
MRK	201	Marketing I	3
ACC	121	Introduction to Financial Accounting	5
MAN	248	DoD Acquisition Logistics Fundamentals	3
CJS	295	Criminal Justice Science Seminar	3
TOTAL			17



Specialized Courses

2012
Semesters
sinclair.edu/semesters

Specialized Courses

Description

Prerequisites:

DEV 065 Developmental Reading
 DEV 075 Fundamentals of English
 Approval of department

Type of Degree or Certificate

Specialized Course

24 Total Credit Hours

Basic Police Officer Training

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 this program.

Course & Title		Credit Hours
CJS 280	Basic Police Officer Training I	12
CJS 281	Basic Police Officer Training II	12
TOTAL		24

CJS 280: Training required by the State of Ohio for prospective police officers. This course includes one-half of the required training in order to be eligible for certification to perform law enforcement duties. The academy provides the necessary content and training for individuals to become certified peace officers in the State of Ohio. All law enforcement officers in the state must successfully complete an academy prior to performing the functions of a peace officer. 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 nearly 2,000 graduates in more than 175 law enforcement agencies in Ohio. Entrance into the basic peace officer academy is a competitive process and not all applicants are accepted. The academy consists of nearly 700 hours of instruction spaced over two consecutive quarters 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 this program. At the conclusion of 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. The basic peace officer academy is offered in Winter and Summer sessions. The application period for the Winter Academy is conducted during the Fall quarter. The application period for the Summer

Academy is conducted in the Spring quarter. Please contact the Academy for more details on this program. The basic peace officer academy prepares graduates for entry level peace officer/police positions. The basic curriculum follows the required content and instructional standards set by the Ohio Peace Officer Training Commission. This training is mandated by the State of Ohio Attorney General for all Ohio law enforcement officers. This course is the first half of the required training in order to be eligible for certification as an Ohio Peace Officer, capable of performing law enforcement duties. The second half of training MUST be taken the following quarter to complete the course. NOTE: Training included in CJS 280 and 281 are a combined minimum of 585 classroom hours and require mandatory attendance. Prospective students must understand the commitment required for the training. Attendance at all training sessions is mandatory - this course requires a substantial commitment of time and commitment to complete.

CJS 281: Preparation for entry level peace officer/police positions. Curriculum follows the required content and instructional standards set by the Ohio Peace Officer Training Commission. This course includes one-half of the required training in order to be eligible for certification as an Ohio Peace Officer to perform law enforcement duties. This program provides the necessary content and training for individuals to become certified peace officers in the state State of Ohio.

Nurse Aide Training

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 this program.

Course & Title

ALH 120 Nurse Aide Training

Credit Hours

6

Specialized Courses

Description

The Nurse Aide Training (NAT) program prepares the student to become a nurse aide in Ohio's long term care facilities. The program is balanced between classroom and clinical skills training and provides a meaningful, practical skill development opportunity. At the conclusion of the NAT program, the nurse aide will receive a certificate and be eligible to take the required written and skills state certification test.

Prerequisites

DEV 065 Developmental Reading
DEV 075 Fundamentals of English
DEV 085 Basic Mathematics II or equivalent

Type of Degree or Certificate

Specialized Course

6 Total Credit Hours

SPECIALIZED



SPECIALIZED



Course Descriptions

2012
Semesters
sinclair.edu/semesters

Courses

Courses are listed alphabetically by course number and then by course followed by the credit hours each course offers.

There is a brief description of each course followed by any prerequisite requirements. If there are no prerequisites listed, there are none required for the course.

Lab information is usually noted. An "R" following the course title indicates the course may be repeated for additional credit.

Academic Foundations (DEV)	Heating, Ventilating, Air Conditioning & Refrigeration (HVA)
Accounting (ACC)	History (HIS)
African-American Studies (AFR)	Hospitality Management (HMT)
Allied Health (ALH)	Humanities (HUM)
American Sign Language (ASL)	Interior Design (IND)
Art (ART)	Japanese (JPN)
Arts & Sciences Education (ASE)	Journalism (JOU)
Astronomy (AST)	Law (LAW)
Automotive Technology (AUT)	Literature (LIT)
Aviation Technology (AVT)	Management (MAN)
Biology (BIO)	Management of Volunteer Programs (VOL)
Biotechnology (BTN)	Marketing (MRK)
Business Information Systems (BIS)	Mathematics (MAT)
Business (BUS)	Medical Assistant Technology (MAS)
Career Planning (CAP)	Mental Health Technology (MHT)
Chemistry (CHE)	Music (MUS)
Chinese (CHN)	Nursing (NSG)
Civil, Architectural Technology (CAT)	Occupational Therapy Assistant (OTA)
Communication (COM)	Operations Technology (OPT)
Computer Aided Manufacturing (INT)	Paralegal (PAR)
Computer Information Systems (CIS)	Philosophy (PHI)
Criminal Justice Science (CJS)	Physical Education (PED)
Dance (DAN)	Physical Therapist Assistant (PTA)
Dental Hygiene (DEH)	Physics (PHY)
Dietetics Technology (DIT)	Political Science (PLS)
Early Childhood Education (ECE)	Psychology (PSY)
Economics (ECO)	Radiologic Technology (RAT)
Education (EDU)	Real Estate (RES)
Electronics Engineering Technology (EET)	Religious Studies (REL)
Emergency Medical Services (EMS)	Respiratory Care (RET)
Engineering (EGR)	Russian (RUS)
Engineering Technology Design (ETD)	Sinclair Student Success Experience (SCC)
English (ENG)	Science, Mathematics & Engineering (SME)
English as a Second Language (ESL)	Social Work (SWK)
Entrepreneurship (ENT)	Sociology (SOC)
Experience Based Education (EBE)	Spanish (SPA)
Extended Learning (EXL)	Surgical Technology (SUT)
Financial Management (FIN)	Theatre (THE)
Fire Science Technology (FST)	Visual Communications (VIS)
French (FRE)	
Geography (GEO)	
Geology (GLG)	
German (GER)	
Health Information Management (HIM)	

Academic Foundations (DEV)

See DEV page 264

Accounting (ACC)

121 Introduction to Financial Accounting 5 Cr. Hrs.

Fundamentals of financial accounting and their application to journals, ledgers, and financial statements.

Prerequisite(s): DEV 065 and DEV 084

122 Introduction to Managerial Accounting 5 Cr. Hrs.

Application of managerial accounting concepts and techniques to problems in manufacturing accounting and service firms.

Prerequisite(s): ACC 121

125 Personal Computer Applications in Accounting 3 Cr. Hrs.

Fundamentals of personal computer applications in accounting utilizing spreadsheet software.

Prerequisite(s): ACC 122 and BIS 160

201 Intermediate Accounting I 3 Cr. Hrs.

Accounting theory and practice relating to financial statement preparation and select asset accounts such as cash.

Prerequisite(s): ACC 122 and ACC 125

202 Intermediate Accounting II 3 Cr. Hrs.

Accounting theory and practice relating to selected asset and liability accounts such as plant assets and current liabilities.

Prerequisite(s): ACC 201

203 Intermediate Accounting III 3 Cr. Hrs.

Accounting theory and practice relating to financial reporting for corporate accounting issues, investments, leases, and revenue recognition.

Prerequisite(s): ACC 202

210 Advanced Accounting 3 Cr. Hrs.

Accounting theory and practice relating to decentralized businesses, corporate consolidations, state and local governmental organizations and partnerships.

Prerequisite(s): ACC 203

211 Cost Accounting I 3 Cr. Hrs.

Accounting principles for job order and process cost accounting systems.

Prerequisite(s): ACC 122 and ACC 125

212 Cost Accounting II 3 Cr. Hrs.

Managerial cost control through budgets, distribution costs, direct costs, and breakeven analysis.

Prerequisite(s): ACC 211

216 Payroll Accounting: Theory & Practice 3 Cr. Hrs.

Payroll preparation theory and dealing with payroll law and regulations, tax compliance, control procedures and payroll specific decision making as it affects profitability.

Prerequisite(s): ACC 121

221 Federal Taxes I 3 Cr. Hrs.

Beginning course in federal income taxation.

222 Federal Taxes II 3 Cr. Hrs.

Continuation of ACC 221 with emphasis on corporate income taxation.

Prerequisite(s): ACC 221

223 Advanced Taxation 3 Cr. Hrs.

Advanced federal tax law concepts including installment sales, capital gains and losses, federal excise tax, corporate tax provisions and fiduciary income tax returns.

Prerequisite(s): ACC 221 and ACC 222

225 Professional Tax Preparation 3 Cr. Hrs.

Practical federal, state and local income tax preparation experience through service learning, including tax form completion for a variety of clients using tax software. Tax law applications and professional accounting ethics. Service learning required through the Voluntary Income Tax Assistance (VITA) program.

Prerequisite(s): ACC 221

235 Auditing Theory & Practice 3 Cr. Hrs.

Auditing principles, standards, and procedures employed by the internal auditor and the independent public accountant.

Prerequisite(s): ACC 201

240 Microcomputer Accounting Systems 3 Cr. Hrs.

Hands-on microcomputer experience with an integrated software program.

Prerequisite(s): ACC 122 and ACC 125

270 Accounting Internship R 1 - 9 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.

295 Accounting Seminar 3 Cr. Hrs.

Application of accounting theory to forms and procedures of an accounting practice.

Prerequisite(s): ACC 201

297 Special Topics in ACC R 0.5 - 6 Cr. Hrs.

Provides opportunities to receive credit for special interest topics within the discipline. Brief description of topics will be given and prerequisites identified when course is offered. Some lab time outside of class may be required.

African-American Studies (AFR)

111 African-American Studies I 3 Cr. Hrs.

A practical introductory course for those interested in immersing themselves into the origins, relevance and scope of African-American Studies.

112 African-American Studies II 3 Cr. Hrs.

Leadership and community development in the U.S. and Southern Africa. Course compares and contrasts Southern African and African-American leadership and community development issues using an Afro-centric theory called Kawaida (African traditions and reason). Introduction to leadership and community organizing concepts and skills needed for personal and community development.

121 Basic Swahili I 3 Cr. Hrs.

Introduction to Swahili with emphasis on developing basic listening, speaking, reading, and writing skills as well as conversation on everyday topics and familiarity with Swahili culture.

122 Basic Swahili II 3 Cr. Hrs.

Continuation of Basic Swahili I, AFR 121, incorporating more advanced work to further develop listening, speaking, reading, and writing skills, emphasizing conversation on everyday topics and familiarity with Swahili culture.

Prerequisite(s): AFR 121

297 Special Topics in African-American Studies R 1 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Allied Health (ALH)

103 Introduction to Health Care Delivery 3 Cr. Hrs.

Orientation to the health care delivery system including history, economics, medical/legal issues, professionalism, ethics, and wellness concepts. The development of health care team skills including critical thinking and problem solving strategies, customer relations and multicultural health care perspectives will be presented.

104 Allied Health Informatics 2 Cr. Hrs.

Orientation to the use of technology in the health care delivery system including: hardware, software, user interfaces, telecommunications and networks, and health management information systems (HMIS). One lecture, two lab hours per week.

106 Introduction to Basic Health Care Practice 2 Cr. Hrs.

Orientation to safe and effective basic health care practice including patient assessment and documentation, infection control, body mechanics, oxygen delivery, and environmental safety considerations. One lecture, two lab hours per week.

107 Introduction to Electrocardiography 3 Cr. Hrs.

Principles of electrocardiography including equipment operation, recording and troubleshooting, as well as fundamental principles of cardiovascular physiology and basic EKG interpretation. Two lecture, two lab hours per week.

108 Lab for ALH 107

Laboratory must be taken with ALH 107.

111 Clinical Phlebotomy 3 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. Two lecture, three lab hours per week.

113 Venipuncture for Health Care Providers 1 Cr. Hr.

Introduction to the fundamental clinical methods and practices of phlebotomy, including basic hematology, venipuncture techniques, routine processing, and special testing procedures. Two lab hours per week.

Prerequisite(s): BIO 107 or BIO 121 or BIO 141

115 Specimen Processing 3 Cr. Hrs.

Theory and application of lab safety, universal precautions, specimen collection, quality assurance and other techniques fundamental to specimen processing for a clinical laboratory. Two lecture, three lab hours per week.

Prerequisite(s): BIO 107

120 Nurse Aide Training 6 Cr. Hrs.

Seventy-eight clock hours of nurse aide training and competency evaluation required by the State of Ohio to be eligible to take the state certification test. Nursing related services for patients or residents in a long term care facility. Five lecture, one lab, 2.5 clinical hours per week.

Prerequisite(s): DEV 065 and DEV 075 and DEV 085 and approval of division advisor

122 Pharmacy Technician I 5 Cr. Hrs.

Scope of pharmacy practice including legal aspects of drug dispensing and specific role of pharmacy technicians. Scientific terminology and dosage calculations essential for pharmacy technicians.

Prerequisite(s): DEV 085 or equivalent

123 Pharmacy Technician II 5 Cr. Hrs.

Scope of pharmacy practice including handling of infectious and hazardous waste, interpersonal skills, and beginning pharmacology and dose calculations.

Prerequisite(s): ALH 122

124 Pharmacy Technician III 5 Cr. Hrs.

Scope of pharmacy practice including sterile compounding, non-sterile compounding, inventory control, beginning pharmacology, and pharmaceutical calculations. On site clinical experiences in all pharmacy practices. Three lecture, two clinical hours per week.

Prerequisite(s): ALH 123

130 Electrocardiography for the Health Care Provider R 1 Cr. Hr.

Principles of electrocardiography including equipment operation, recording and troubleshooting. Two lab hours per week.

Prerequisite(s): BIO 107 or equivalent

137 Clinical Phlebotomy Practice 3 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 capillary punctures on adult and pediatric patients. One hours lecture and ten unpaid practicum hours per week.

Prerequisite(s): ALH 111 and approval of coordinator

140 Basic Life Support Training 1 Cr. Hr.

Theory and techniques of Basic Life Support as established by the American Heart Association. One-half lecture, one-half lab hours per week.

141 Emergency Cardiac Care (ACLS) 2 Cr. Hrs.

Management of cardiovascular emergencies, including the American Heart Association's curriculum in Advanced Cardiac Life Support. One lecture and four lab hours per week for seven weeks.

Prerequisite(s): Approval of chairperson. Open only to ALH students in their final quarter of training, or licensed health care professions and completion of ALH 140 or current BLS certification at health care provider level

142 Fundamentals of Disease Processes 4 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. Three lecture, two lab hours per week.

Prerequisite(s): BIO 107 or BIO 122 or BIO 143

144 American Heart Association Heartsaver First Aid 1 Cr. Hr.

First aid and CPR are presented in an easy to understand, short format. Students with little or no medical background can learn how to control bleeding, start a stopped heart, and save a life.

201 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 107 or BIO 122

202 Alzheimer's Disease: Understanding & Management 3 Cr. Hrs.

Alzheimer's Disease: In-depth look at disease process, diagnosis process, communication techniques, management of activities of daily living and behavior, developing activity programs, working with families/family impact, evaluating community resources.

210 Introduction to Community Health Advocacy 3 Cr. Hrs.

Students will be introduced to community health concepts, resources, and skills related to the role and responsibilities of a Community Health Advocate locally and nationally. Special emphasis will be placed on factors to consider when working in community based settings; characteristics of health models and plans; impact of culture and socioeconomic status on individual's health, communication; barriers to health care services; and related community resources.

219 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; primarily intended for students in health professions, but may be of interest to those majoring in biological sciences.
Prerequisite(s): BIO 143 or BIO 211 or equivalent

220 Pathophysiology 4 Cr. Hrs.
Study of human disease using a system approach emphasizing abnormal physiological processes that result in the signs and symptoms of each disorder.
Prerequisite(s): BIO 107 or BIO 211 or BIO 141 or BIO 121

297 Special Topics in Allied Health R 1 - 6 Cr. Hrs.
Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Art (ART)

101 Introduction to Art 3 Cr. Hrs.
Emphasis on the language of art, exposure to many different art forms and formulative ideas about what is viewed.

102 Art Appreciation: Art Media 3 Cr. Hrs.
Exploration of art through specific media including painting, sculpture, and architecture. Analysis and evaluation through class discussion and written assignments.

106 Fine Art Sampler 4 Cr. Hrs.
Creativity enhancement for the non-art major. Studio experience in drawing, design fundamentals and three-dimensional processes, including clay. Two lecture, four lab hours per week.

107 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.

108 Design Basics: Color 3 Cr. Hrs.
Color theory applied to utilizing design principles and color psychology emphasizing the Josef Albers color theories.

109 Elements of Composition 3 Cr. Hrs.
The study of composition and visual elements in a studio setting with emphasis on hands-on learning.

111 Art 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.

112 Art Drawing II 3 Cr. Hrs.
Traditional as well as contemporary approaches to mixed media drawing with an emphasis on ink; still life objects and the human form as subjects for exploration. Prerequisite(s): ART 111

113 Art Drawing III 3 Cr. Hrs.
Foundation drawing emphasizing color theory through the use of color drawing media.
Prerequisite(s): ART 112 or VIS 109

121 Painting I 4 Cr. Hrs.
Studio painting, basic color principles with emphasis on color, form, and space in compositional design. Two lecture, four lab hours per week.
Prerequisite(s): ART 111

122 Painting II 4 Cr. Hrs.
Personal expression with instruction in classical as well as modern techniques; complex problems in color and composition. Two lecture, four lab hours per week.
Prerequisite(s): ART 121

123 Painting III 4 Cr. Hrs.
Contemporary areas relative to medium and technique; the painting process as a means of communication; integration of 20th century concepts. Two lecture, four lab hours per week.
Prerequisite(s): ART 122

125 African Art 3 Cr. Hrs.
Introduction to symbolic and aesthetic elements of African art and its influence on modern art styles.

131 Sculpture I 3 Cr. Hrs.
First of a three-course sequence; introducing methods of sculpture with clay, paper, and other materials for constructing three-dimensional art work.

132 Sculpture II 4 Cr. Hrs.
Increasingly complex visual problems using more sophisticated surface treatments; design problems using the figure; doing an architectural piece in modular units. Includes woodworking shop projects. Two lecture, four lab hours per week.
Prerequisite(s): ART 131

133 Sculpture III 4 Cr. Hrs.
Personal development and expression of style; participation in critiques and discussion; projects involve integration of materials and an environmental piece. Two lecture, four lab hours per week.
Prerequisite(s): ART 132

136 Introduction to Virtual Sculpture 3 Cr. Hrs.
The study of sculpture using NURBS (non-uniform rational B-splines) modeling. Emphasis on translating forms curves surfaces and solids into accurately modeled sculptures on the computer.

141 Ceramic Art I 4 Cr. Hrs.
Materials and processes of ceramic art for the beginning student; handbuilding and glazing demonstrated through a variety of functional and sculptural projects. Two lecture, four lab hours per week.

142 Ceramic Art II 4 Cr. Hrs.
Introduction of the potter's wheel, with an emphasis on functional pottery; experimentation with various glazing techniques. Two lecture, four lab hours per week.
Prerequisite(s): ART 141

143 Ceramic Art III 4 Cr. Hrs.
Focus on personal development and expression in pursuing individual projects; contemporary issues in clay. Two lecture, four lab hours per week.
Prerequisite(s): ART 142

146 Video Production 4 Cr. Hrs.
Mechanics and techniques of video camera operation, including editing with emphasis on the planning needed for translating this electronic media format into an art form through a series of assignments. Two lecture, four lab hours per week.

151 Art as Therapy I 3 Cr. Hrs.
Art in the therapeutic process utilizing exploration of art media, basic art therapy techniques, and art-related diagnostic tools. (Also offered as MHT 151; students may enroll in either course but not both.)
Prerequisite(s): DEV 065 and DEV 110

161 Photography I 4 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. Two lecture, four lab hours per week.

162 Photography II 4 Cr. Hrs.
Intermediate course in black and white photography. Further introduction and application of the tools and techniques of the photographic art. Students to supply own adjustable camera (35mm or 120), film and print paper, retouching supplies, and photo mounting supplies. Two lecture, four lab hours per week.
Prerequisite(s): ART 161

163 Photography III 4 Cr. Hrs.

Advanced photographic techniques. Specialized darkroom techniques, special purpose films and processes are explored. Students to supply own adjustable camera (35mm or 120 or 4x5), film and print paper, retouching supplies, and dry mounting agents. Two lecture, four lab hours per week.

Prerequisite(s): ART 162

164 Photo Restoration 3 Cr. Hrs.

The Photo Restoration course is designed for students in the Photographic Technology certificate program. In this course students will learn manual and computerized methods of restoring photographs.

Prerequisite(s): ART 161

170 Non-Silver Photography 4 Cr. Hrs.

Principle and theories of non-silver chemical processes used for print production including gum, cyanotype, and Van Dyke Brown printing. Two lecture, four lab hours per week.

Prerequisite(s): ART 161

171 Studio Photography 4 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. Two lecture, four lab hours per week.

Prerequisite(s): ART 161

175 Computer Photography I 3 Cr. Hrs.

Techniques for transforming photographic images through use of computers and digital cameras. Use of a computer to create high tech fine art images.

Prerequisite(s): ART 161

176 Computer Photography II 3 Cr. Hrs.

Advanced computer software to create fine art in the digital medium. Advanced Photoshop techniques including layers, color correction, masking and special effects.

Prerequisite(s): ART 175

194 Photography Portfolio I R 1 Cr. Hr.

One-to-one instruction regarding the student's photography portfolio, establishing ground work for remaining courses. Instructor meets once each week to review the student's portfolio and its progression. Suggestions for direction and improvement will be given in regard to image content, critical theory and final presentation. This required course should be taken after completing the first four photography courses, halfway through the program. Students failing to pass the course will be dropped from the program. Failure to take and pass this course will make the student ineligible for the Photography certificate.

Prerequisite(s): 12 credit hours in the photography certificate program: ART 161, 162, 163, 170, 171, 175, 265, declared Photography certificate major

195 Portfolio Development in Fine Arts 1 Cr. Hr.

Mechanics and techniques of preparing slides of art work; matting and framing of art work; artist resume writing and overall presentation needed for development of portfolio.

Prerequisite(s): 45 total hours earned, 21 of which must be in ART

211 Advanced Drawing I 4 Cr. Hrs.

Personal expression developed through a variety of 2-D media, cubistic techniques, gestural and figure studies.

Prerequisite(s): ART 113

212 Advanced Drawing II 4 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.

Prerequisite(s): ART 211

213 Advanced Drawing III 4 Cr. Hrs.

Emphasis on the technical process and the language of drawing; a variety of media and techniques focusing on personal expression.

Prerequisite(s): ART 212

216 Life Drawing & Anatomy I 4 Cr. Hrs.

Figure drawing with a foundation in anatomical study. Emphasis on proportion as well as design. Two lecture, four lab hours per week.

Prerequisite(s): ART 111

217 Life Drawing & Anatomy II 4 Cr. Hrs.

Advanced with a foundation in anatomical study. Continued development of design and proportion with an application towards mood and content. One lecture, four lab hours per week.

Prerequisite(s): ART 216

218 Life Drawing & Anatomy III 4 Cr. Hrs.

Advanced figure drawing with a foundation in anatomical study. Emphasis on proportion and scale. Development of content and design through collage aesthetic. Two lecture, four lab hours per week.

Prerequisite(s): ART 217

221 Advanced Painting I 4 Cr. Hrs.

Creative possibilities through color and imagery. Especially designed for Fine Art University Parallel majors. Two lecture, four lab hours per week.

Prerequisite(s): ART 123

222 Advanced Painting II 4 Cr. Hrs.

The visual phenomenon of color as a communication vehicle; develops independence in the studio process; begin work for exhibition. Two lecture, four lab hours per week.

Prerequisite(s): ART 221

223 Advanced Painting III 4 Cr. Hrs.

Develops independence and freedom of expression; critique and discussion of new trends; research and analysis of color, form imagery, and design. Two lecture, four lab hours per week.

Prerequisite(s): ART 222

231 Art of the Ancient World 3 Cr. Hrs.

Art history from early cave paintings to the period of Byzantine and Islamic Art.

232 Art of the Medieval & Renaissance Worlds 3 Cr. Hrs.

Art history of the early Medieval period through the High Renaissance period.

233 Art of the Modern World 3 Cr. Hrs.

Art history from the periods of Mannerism and Late Renaissance to the Twentieth Century.

235 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.

236 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.

237 American Art History 3 Cr. Hrs.

An overview of the history of art in the United States, placed within the larger historical context.

241 Advanced Ceramic Art I 4 Cr. Hrs.

Introducing porcelain clay and glazing techniques; development of personal style, extending to experimentation in low fire clay and glazes. Two lecture, four lab hours per week.

Prerequisite(s): ART 143

242 Advanced Ceramic Art II 4 Cr. Hrs.

Exploration of personal style, extending to experimentation in low fire clay and glazes. Two lecture, four lab hours per week.

Prerequisite(s): ART 241

243 Advanced Ceramic Art III 4 Cr. Hrs.

Specialization and research in one area, presentation of research, development of personal style. Two lecture, four lab hours per week.

Prerequisite(s): ART 242

251 Advanced Sculpture 4 Cr. Hrs.

Selection of an area of research with formulation of goals that develop personal expression and style. Two lecture, four lab hours per week.

Prerequisite(s): ART 133

265 Color Photography I 4 Cr. Hrs.

An introduction to the technique of color photography and processing. The color negative process will be explored. Student to supply own adjustable camera (35mm or 120), films and paper, polarizing filter and specified conversion filters.

Prerequisite(s): ART 161

266 Color Photography II 4 Cr. Hrs.

An intermediate course in color photography. Various camera and darkroom techniques will be employed to enhance the print. Student to supply own adjustable camera (35mm or 120), film and paper. Two lecture, four lab hours per week.

Prerequisite(s): ART 265

267 Color Photography III 4 Cr. Hrs.

The advanced photographic course. Creative darkroom and camera techniques will be explored. Portfolio to be produced. Student to supply own adjustable camera (35mm or 120), film and paper. Two lecture, four lab hours per week.

Prerequisite(s): ART 266

269 Printmaking 4 Cr. Hrs.

Examines the philosophy, history, and techniques of multiple image preparation as well as woodcut and intaglio processes. Two lecture, four lab hours per week.

Prerequisite(s): ART 111

**270 Fine Arts Internship R
1 - 12 Cr. Hrs.**

Practicum providing the student with experience organizing and hanging of art exhibits, assisting in studios, understanding slide cataloging, or completing a specific project with the permission of the Art department chairperson.

294 Photography Portfolio Development II 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 technical certificate.

Prerequisite(s): 28 hours of Photography courses and/or taken during final term of study. Photography certificate major

295 Pre-graduation Exhibition 1 Cr. Hr.

Graduating Fine Art majors will present their work in a formal gallery exhibition followed by an oral discussion with a panel consisting of the student's faculty advisor, the gallery coordinator, and the department chairperson. The panel will evaluate the quality of the student's presentation and demonstrated technical competence. Students are responsible for the presentation and installation of their artwork.

**297 Special Topics in Art R
0.5 - 6 Cr. Hrs.**

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops, or customized training.

Arts & Science Education (ASE)

145 Foundations in Problem Solving & Scientific Literacy 4 Cr. Hrs.

Philosophical and experiential understanding of the constructivist, cooperative classroom environment acquired through introductory hands-on inquiry experiences with the context of fundamental, unifying science themes and core concepts. Three lecture, three lab hours per week.

Prerequisite(s): MAT 102 or sufficient score on placement test

American Sign Language (ASL)

101 Orientation to Deafness 3 Cr. Hrs.

History and culture of the Deaf and sign language with an introduction to collectivist and individualist cultures. Includes the structure of the hearing mechanism and the types and causes of hearing loss; effects of hearing loss on the individual and the family.

102 Interpreting For Deaf I 3 Cr. Hrs.

An overview of the legislation affecting the education and legal rights of Deaf individuals. Examination of the history of interpreting; the terminology of the field; the ethics of interpreting; the interpreting process and the national certification of interpreters.

Prerequisite(s): ASL 101 or ASL 228

103 Interpreting for Deaf II 3 Cr. Hrs.

An introduction to specialized areas of interpreting, including the role and ethics of the interpreter in various settings. Specialized interpreting techniques for serving Deaf-Blind and oral Deaf populations. Introduction to theatrical, mental health, education, and legal interpreting.

Prerequisite(s): ASL 102

111 Beginning American Sign Language I 3 Cr. Hrs.

Introductory course in American Sign Language (ASL) emphasizing conversational skills. Includes basic sentence structure of ASL, fingerspelling and numbers. Classroom work stresses practice of conversational ASL, both expressive and receptive; also, introduces to the American Deaf Culture.

112 Beginning American Sign Language II 3 Cr. Hrs.

A continuing study of ASL, building on the conversational skills presented in the introductory course of American Sign Language, including additional types of sentence structure. Practice of conversational ASL, both expressive and receptive and the continuing study of American Deaf culture.

Prerequisite(s): ASL 111

113 Beginning American Sign Language III 3 Cr. Hrs.

A continuing study of ASL, increasing the conversational skills presented in the introductory courses of American Sign Language. Includes additional types of sentence structure in ASL. Expressive and receptive skill building is emphasized in classroom work. Further study of American Deaf culture.

Prerequisite(s): ASL 112

116 Community Resources for the Deaf 3 Cr. Hrs.

An overview of service accessibility for Deaf, hard-of-hearing and Deaf-Blind consumers, including mental health, drug and alcohol treatment and prevention, health care, housing, transportation, and employment. Also includes agency referral process, eligibility process for services, and funding sources.

190 American Sign Language Workshop R 0.5 - 6 Cr. Hrs.

An overview of current topics in the field of American Sign Language Interpreting for the Deaf.

201 Interpreting I 4 Cr. Hrs.

Introduction to the principles and techniques of interpreting between English and American Sign Language (ASL) as both target and source languages. Classroom activities and testing include basic interpreting role plays. Also includes English idioms and cognitive processing techniques.

Prerequisite(s): ASL 229

202 Interpreting II 4 Cr. Hrs.

Further development and competency demonstration of the basic principles and techniques of the interpreting process between English and American Sign Language (ASL), including interpreting of idiomatic cultural expressions and accommodating linguistic variation in the interpreting process. Introduction of team interpreting process and continued acquisition of cognitive processing techniques.

Prerequisite(s): ASL 201

203 Interpreting III 4 Cr. Hrs.

Advanced principles and techniques of the interpreting process. Classroom activities and testing include role plays incorporating advanced techniques and principles.

Prerequisite(s): ASL 202

204 Interpreting IV 4 Cr. Hrs.

Development and demonstration of further mastery of advanced interpreting principles and techniques. Platform interpreting, team interpreting, and applications of the code of ethics to interpreting situations.

Prerequisite(s): ASL 203

207 Role of Interpreter 3 Cr. Hrs.

Role of the interpreter in a variety of interpreting situations, including one-to-one interpreting and voice-to-sign interpreting, student performances, instructor critique and feedback.

Prerequisite(s): ASL 102 and ASL 229

211 Medical/Technical/Legal Interpreting 4 Cr. Hrs.

A study of interpreting in medical, mental health, educational, employment and legal settings and terminology/signs unique to each. Practice and performance of the vocabulary used in these settings.

Prerequisite(s): ASL 103 and ASL 231

212 Specialized Interpreting 4 Cr. Hrs.

Introduction to American Sign Language vocabulary related to sexual behavior/sexual abuse and drug use/abuse. Designed to increase student's comfort and skill level for interpreting medical, substance abuse treatment, counseling, and legal settings.

Prerequisite(s): ASL 232

228 Intermediate American Sign Language I 4 Cr. Hrs.

The first intermediate course in the study of American Sign Language (ASL). Includes increasing the conversational skills, additional types of sentences and discourse structure. Continued development of expressive and receptive skills. Study of relevant issues within the American Deaf culture.

Prerequisite(s): ASL 113

229 Intermediate American Sign Language II 4 Cr. Hrs.

The second intermediate course in American Sign Language (ASL) focusing on upper level grammatical features and functions. Development of receptive and productive capabilities of these upper level features. Discussion of Deafness as a culture and a community and the role of American Sign Language in the community. Introduction to the interpreting process.

Prerequisite(s): ASL 228 and ENG 111

230 Intermediate American Sign Language III 4 Cr. Hrs.

The third intermediate course in American Sign Language (ASL) with further mastery of upper level grammatical features and functions. Continued development of both receptive and expressive abilities. Development of basic interpreting skills through classroom activities. Additional discussion regarding Deaf culture characteristics.

Prerequisite(s): ASL 229

231 Advanced American Sign Language I 4 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 230

232 Advanced American Sign Language II 4 Cr. Hrs.

The second advanced course in the study of American Sign Language (ASL). The course focuses on student's receptive and productive mastery of using multiple grammatical features, narrative and explanatory discourse, and targeted vocabulary. Principles of self-assessment of both productive and receptive abilities introduced.

Prerequisite(s): ASL 231

233 Advanced American Sign Language III 4 Cr. Hrs.

The third advanced course in the study of ASL. Designed to achieve fluency of most basic and complex grammatical features of ASL. Activities include incorporating into sign production the necessary adjustments for registers, emotive components, and cultural background.

Prerequisite(s): ASL 232

236 Transliterating 4 Cr. Hrs.

A preparatory course for the Registry for the Interpreters for the Deaf Certificate of Transliteration exam. The Signing Exact English System of manually coded English is introduced, and conceptual accuracy is stressed for educational interpreting.

Prerequisite(s): ASL 230

261 ASL Practicum I 3 Cr. Hrs.

The first of three practicum courses. Students are required to complete 100 clock hours of practical experience in order to develop knowledge and skills in the professional field. Students must also attend weekly seminar meetings. Two lecture, seven practicum hours per week.

Prerequisite(s): ASL 103 and ASL 201 and ASL 203 and ASL 230

262 ASL Practicum II 3 Cr. Hrs.

The second of three practicum courses. Students are required to complete 100 clock hours of practical experience. Students will be given increased responsibility under the supervision of a qualified mentor. Students will attend weekly seminar meeting. Two lecture, seven practicum hours per week.

Prerequisite(s): ASL 261 and ASL 236

263 ASL Practicum III 3 Cr. Hrs.

Third and final practicum placement. Continuation of 100 clock hours. Students prepare for local agency evaluations and educational interpreter licensure. Students also will attend weekly seminar meetings. Two lecture, seven practicum hours per week.

Prerequisite(s): ASL 262

Astronomy (AST)

101 Survey of Astronomy 4 Cr. Hrs.

A survey of the solar system, galaxies, stellar evolution, recently discovered phenomena and cosmology. Three lecture, three lab hours (AST 107) per week.

Prerequisite(s): DEV 108 or equivalent score on mathematics skills assessment

107 Lab for AST 101

Laboratory must be taken with AST 101.

111 Introduction to Astronomy 3 Cr. Hrs.

Patterns and movements of heavenly bodies; history of astronomy; gravity, light, and matter; various types of telescopes. Students may not receive credit for both AST 111 and AST 101 (previously 114). Optional laboratory AST 117. Students wishing to take AST 111 to satisfy a general science credit for a program or degree at Sinclair, or to transfer to another institution, must also sign up for a section of the AST 117 lab.

Prerequisite(s): DEV 108, equivalent score on mathematics skills assessment.

112 The Solar System 3 Cr. Hrs.

Planets and their moons; atmosphere of the Sun; origins of the solar system; asteroids, comets, meteoroids; space exploration. Optional laboratory AST 118. Students wishing to take AST 112 to satisfy a general science credit for a program or degree at Sinclair, or to transfer to another institution, must also sign up for a section of AST 118 lab.

Prerequisite(s): AST 111

113 Stars, Galaxies, & Cosmology 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. Optional AST 119 lab. Students wishing to take AST 113 to satisfy a general science credit for a program or degree at Sinclair, or to transfer to another institution, must also sign up for a section of the AST 119 lab.

Prerequisite(s): AST 111

117 Introduction to Astronomy Lab 1 Cr. Hr.

Lab and field activities to supplement AST 111. Three lab hours per week.

118 Solar System Lab 1 Cr. Hr.

Lab and field activities to supplement AST 112. Three lab hours per week.

119 Stars, Galaxies, & Cosmology Lab 1 Cr. Hr.

Lab and field activities to supplement AST 113. Three lab hours per week.

297 Special Topics in Astronomy R 1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in astronomy. Objectives will vary with the particular content area.

Automotive Technology (AUT)

100 Basic Automotive Systems 3 Cr. Hrs.

Language of automotive systems and major automotive functions. Students will change oil and lubricate own car, perform safety check, ignition tune up, and brake inspection, service cooling system, and evaluate used cars. Basic hand tools required. One lecture, four lab hours per week.

102 Introduction to Automotive Service R 0.1 - 3 Cr. Hrs.

Work assignment practices necessary for beginning service technician, including tools and tool usage; paint finesse and touch-up; correcting water leaks, wind noise, rattles; oil changes and tire balancing; parts, service, new and used cars prep. Eye protection required.

108 Engine Systems 0.1 - 5 Cr. Hrs.

Engine operation, nomenclature, measurements and tolerances, including service and overhaul procedures of cooling, lubrication, and valve train systems (basic engine machining practices). Basic hand tools required. Three lecture, four lab hours per week.

111 Automotive Management 3 Cr. Hrs.

Introduction to an automotive service department as it pertains to management. Skill development for operating an automotive business, including service consulting, service management and communication practices. Instruction in federal, state and local regulations for operating a service department.

115 Engine Performance I 0.1 - 7 Cr. Hrs.

Operation and service of fuel injection (including computer control) and fuel delivery system, emission control systems and engine fuels. Operation of "On Board Diagnostic" systems. Basic hand tools required. Three lecture, eight lab hours per week.

124 Electrical/Electronic Systems Level I 5 Cr. Hrs.

Basic electricity, Ohm's Law, voltage drops, digital meter usage, schematics, batteries, starting and charging system operation, diagnosis of wire repair procedures and service. Three lecture, four lab hours per week.

125 Electrical/Electronic Systems II R 0.1 - 7 Cr. Hrs.

Advanced automotive electrical/electronic systems covering strategy based diagnostic procedures for troubleshooting lighting, instrumentation, body controls and other accessory circuits. Air bags theory is discussed along with respective testing and diagnostic procedures. New trends in electrical/electronic technology will be introduced, example - hybrid vehicles. Introduce module communication data bus systems. Ignition system operations are discussed for example: distributorless and coil-on-plug. Three lecture, eight lab hours per week.

Prerequisite(s): AUT 124

142 Manual Transmissions & Drive Line 0.1 - 5 Cr. Hrs.

Theory and operation of manual transmission, clutch, transaxle, drive shaft, universal joint, rear axle, limited slip differential and axle shaft, diagnosis, and repair. Basic hand tools required. Three lecture, four lab hours per week.

146 Automotive Heating & Air Conditioning 0.1 - 5 Cr. Hrs.

Theory and operation of automotive heating and air conditioning systems. Includes lab activity in diagnosis and repair procedures. Basic hand tools required. Three lecture, four lab hours per week.

165 Automotive Brake System 0.1 - 5 Cr. Hrs.

Theory and operation of hydraulic braking systems; drum brake, disc brake, and power assist diagnosis and service. Basic hand tools required. Three lecture, four lab hours per week.

210 Steering, Suspension & Alignment 0.1 - 5 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 required. Three lecture, four lab hours per week.

215 Automotive Service Operations 10 Cr. Hrs.

Actual experience in the laboratory with diagnosis repair, use of manuals and records, customer relations, safety, communications, supervision and delegation of work. Automotive service facility and operation consideration. Basic hand tools required. Five lecture, 15 lab hours per week.

Prerequisite(s): Approval of chairperson

221 High Performance Engine Blocks & Rotating Assemblies 7 Cr. Hrs.

Measurement and tolerances, diagnosis, disassembly, and machining of engine blocks for high-performance applications. Race preparation and balancing of internal components. Theory and discussion of choices for high-performance rotating assembly parts such as pistons, connecting rods, bearings and camshafts. Three lecture, eight lab hours per week.
Prerequisite(s): AUT 108 or approval of instructor

222 High Performance Cylinder Heads & Valve Train 7 Cr. Hrs.

Measurement and tolerance, disassembly and machining of cylinder heads. Head flow development and race preparation. Valve train theory and design for high-performance use. Complete cylinder head blueprinting. Three lecture, eight lab hours per week.

Prerequisite(s): AUT 108 or approval of instructor

223 High Performance Engine Assembly & Dynamometer Testing 7 Cr. Hrs.

Precision engine assembly using blueprinting techniques. Set-up and testing on superflow engine dyno for performance and durability. Familiarization with dyno procedures and software. Three lecture, eight lab hours per week.

Prerequisite(s): AUT 108 or approval of instructor

224 High Performance Induction Systems 7 Cr. Hrs.

Performance rebuilding and tuning of carburetors. Operation and performance applications of electronic fuel injection, nitrous oxide injection, ignition systems, intake manifolds, and superchargers. Evaluation, testing and tuning using a flow bench, engine dynamometer and or chassis dynamometer. Three lecture, eight lab hours per week.

Prerequisite(s): AUT 115 or approval of chairperson

226 Introduction to High Performance Fabrication 7 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. Three lecture, eight lab hours per week.

241 Automatic Transmissions R 0.1 - 7 Cr. Hrs.

Theory and operation of automatic transmissions and transaxles; includes lab experience in diagnostics and overhaul. Basic hand tools required. Three lecture, eight lab hours per week.

245 Engine Performance II R 0.1 - 7 Cr. Hrs.

Advanced diagnostics and repair with engine, ignition, fuel, emission and cooling systems; advanced computer controlled fuel system diagnosis and repair. Basic hand tools required. Three lecture, eight lab hours per week.

Prerequisite(s): AUT 115

270 Automotive Internship R 1 - 12 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.

297 Special Topics in Automotive Technology R 0.3 - 7 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses (such as special seminars) as well as additional topic concentration within the discipline. May serve as AUT elective.

Prerequisite(s): Approval of chairperson

Aviation Technology (AVT)

102 Orientation to In-Flight Services 3 Cr. Hrs.

Overview of the duties and responsibilities of flight attendant duties, uniforms and appearance, in-flight service procedures, safety briefing announcements, customer service skills, airline terminology, airline schedules, airport identifiers, airline flight attendant interview techniques.

105 Orientation to Aviation 3 Cr. Hrs.

Overview of aviation career specialties required for successful operation of the national airspace system. 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 065 or ENG 111 or ENG 121 or ENG 131 and DEV 085

106 Position & Warning Systems 2 Cr. Hrs.

How to operate, inspect, repair and service different indicating systems. Landing gear, speed, configuration, anti-skid, and other remote indicating systems also included. One lecture, two lab hours per week.

107 Fuel Systems 3 Cr. Hrs.

Inspection, operational checkout and repair of fuel system components, fuel tanks, fuel transfer and dumping, fuel indicating systems, fuel temperature indicating, fuel heating, proper leak checking of fuel manifolds, and proper servicing. Two lecture, two lab hours per week.

108 Ice & Rain/Fire Protection 2 Cr. Hrs.

Different types of aircraft ice and rain protection and removal systems including the study of fire protection systems, indicating systems and carbon monoxide detectors. One lecture, two lab hours per week.

109 Composites For Aircraft 4 Cr. Hrs.

Construction, inspection, and repair of different types of composite materials for aircraft, including Kevlar, graphite, fiberglass, and ceramics. Uni-directional, bi-directional, and multi-directional fabric weaves; use and safe handling of resins, epoxy, and different types of aircraft fillers; and repair of honeycomb and fiberglass aircraft parts. Also includes vacuum bagging, inspection and finishing of composites. Three lecture, two lab hours per week.

110 Ground School/Private Pilot 5 Cr. Hrs.

Preparation for the Private Pilot Knowledge test. Includes all topics required by Federal Aviation Regulations 61.105(b)(1-13); e.g., airplane systems, aerodynamics, regulations, meteorology, navigation, communications and the flight environment.

112 Performance Calculations 2 Cr. Hrs.

Aviation maintenance performance calculations including determining areas and volumes of various geometrical shapes, performing of algebraic operations, extracting roots and raise numbers to a given power, interpreting various horsepower and other performance charts. One and one half lecture, one lab hour per week.

113 Drawings for Aviation Maintenance R 4 Cr. Hrs.

Knowledge and skill development in using aircraft drawings and graphs of different types; includes symbols for drawings and electrical schematics, drawing repairs, and alterations to industry standards. One and one-half lecture hours, five lab hours per week.

114 Fluids & Gasses 2 Cr. Hrs.

Provides the aviation mechanic with an in-depth study of aerodynamics, pressure, gas laws, light, vibration and sound, heat and temperature, stress and strain, force and motion, work and power, energy, and weight, and mass, and matter. One lecture, two lab hours per week.

115 Ground Operations & Servicing 3 Cr. Hrs.

Engine starting, engine operation, ground towing and movement of aircraft, taxiing, identify ground operations hazards, hand and radio signals, safety on the flight line, safety in the shop environment, ice protection, jacking and hoisting. One lecture, four lab hours per week.

116 Regulations & Documentation 5 Cr. Hrs.

Provides the aviation mechanic with critical knowledge necessary in the following areas: mechanics privileges, FAA regulations regarding aircraft record entries, maintenance publications, all repair manuals, wiring diagrams, structural repair manuals, corrective action entries in aircraft records, and inspection reports. Human factors in aviation maintenance is covered with the intention of stopping accidents. Four lecture, two lab hours per week.

117 Fluid Lines & Fittings 3 Cr. Hrs.

Tube bending, cutting and flaring, MS flare less fittings, repair of rigid fluid lines, identification of fluid lines, fabrication of hose lines both high and low pressure, pipe fittings, and universal or bulkhead fittings. One lecture, four lab hours per week.

118 Weight & Balance 4 Cr. Hrs.

Theory of aircraft weight and balance including documentation, weighing the aircraft, locating the center of gravity, adverse loaded center of gravity checks, large aircraft weight and balance computations, determination of ballast needs.

119 Aviation Meteorology 3 Cr. Hrs.

Meteorology for aviators including micro and macro weather systems, solar geometry, atmospheric moisture, wind and pressure systems, cyclonic activity, aviation web resources, and flight service station guidance.

121 Assembly & Rigging 5 Cr. Hrs.

Proper adjustment of cables and torque tubes, proper alignment of primary and secondary control surfaces, proper inspection and alignment of landing gear and the associated controls, correct alignment of all structures in both fixed wing and rotary aircraft. Two lecture, six lab hours per week.

122 Engine Ignition & Starting I 4 Cr. Hrs.

Inspection, repair and overhaul of magnetos; removal and installation of magnetos; inspection and repair of ignition wiring and harness; starter overhaul and installation. Two lecture, four lab hours per week.

124 Private Pilot Flight 4 Cr. Hrs.

Provides hands-on flight training in a combination of aircraft and simulators. Flight hours logged in this course are qualified by the FAA for credit toward this and more advanced pilot ratings.

125 Developments in Aviation 3 Cr. Hrs.

Provides pilots and other aviation professionals with an in-depth understanding of how aviation technology has evolved from the invention of the airplane to today's sophisticated jet aircraft and their equally sophisticated flight systems.

126 Reciprocating Engines I 5 Cr. Hrs.

Reciprocating engine removal, engine requirements for operation, various engine configurations, firing orders, inspections, critical engine parts measurements, use of overhaul manual for dimensions. Two lecture, six lab hours per week.

127 Lubrication 5 Cr. Hrs.

Functions of the lubrication system, reciprocating engine oils, turbine engine oils, lubrication system components, turbine engine lubrication systems, servicing and spectrometric oil analysis, wet and dry sump systems, oil viscosity index, oil screen and filter inspection, and hazardous material concerns of oil. Four lecture, three lab hours per week.

128 Instruments & Fire Protection 3 Cr. Hrs.

Troubleshooting of electrical wiring and connections on instruments, legal repairs allowed on instruments by A & P mechanics, different types of fire protection systems, different extinguishing agents used, auxiliary power units use, inspection, operation, removal and replacement of units requiring servicing and troubleshooting, and a discussion of unducted fan engines. Two lecture, two lab hours per week.

129 Propellers 5 Cr. Hrs.

Inspection, removal and installation, repair and dressing of propellers. Installation, pitch and angle of attack, forces on a propeller, wood propellers, fixed pitch metal propellers, controllable pitch adjustment and systems, constant-speed propellers, feathering systems, governor systems, reversing systems, propeller auxiliary systems, over speed systems, composite blades, and storage of propellers. Four lecture, two lab hours per week.

131 Electrical Aviation Maintenance 5 Cr. Hrs.

Electrons, direction of electrical flow, production of electricity, Ohm's law, direct current, alternating current, batteries, electrical circuit components, solid state devices, integrated circuits, electrical load circuits, electrical power circuits, and changing chemical to electrical energy associated with aviation maintenance. Three lecture, four lab hours per week.

132 Electrical Systems I 4 Cr. Hrs.

Electrical distribution, controls, switches, devices, and transformers. Use of electrical measuring devices in troubleshooting and repairing wires, and terminal ends. Two lecture, four lab hours per week.

133 Instrument Systems 2 Cr. Hrs.

Mechanical and electronic flight control systems inspection, operation, troubleshooting, and repair. Legal repairs allowed on instruments including: speed, altitude, temperature, pressure, and positioning gauges; including how to perform a pitot/static system check. One lecture, two lab hours per week.

134 Communication/Navigation Systems 2 Cr. Hrs.

Inspection, operation, checking, and servicing communication/navigation systems and components including the passenger address, static discharger devices, VOR/ILS/MB, radar beacon transponders, flight management computers and GPWS, antennas, and electronic equipment installations. One lecture, two lab hours per week.

135 Materials & Processes 6 Cr. Hrs.

Selection and proper use of non-destructive inspection, basic heat treatments, identification and selection of correct aircraft hardware, inspection of welds, and precision measurements. Three lecture, six lab hours per week.

136 Sheet Metal I 4 Cr. Hrs.

Identification, 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 lecture, six lab hours per week.

137 Aircraft Structural Welding 2 Cr. Hrs.

Structural welding including soldering, brazing, gas-welding, and arc-welding, fabrication of tubular structures, soldering stainless steel, welding stainless steel, aluminum, magnesium, and titanium. One lecture, two lab hours per week.

138 Engine Fuel & Fuel Metering
5 Cr. Hrs.

Fuel system components for turbine and reciprocating engines, carburetor adjustment and overhaul, installation and removal of carburetors, repair fuel metering components, repair and installation of fuel system components, inspection, adjustment, and servicing of engine fuel metering system components. Four lecture, three lab hours per week.

139 Induction/Exhaust/Cooling 4 Cr. Hrs.

Powerplant ice protection, reciprocating engine induction system, superchargers, turbochargers, heat exchangers, turbine engine inlet designs, exhaust system inspection, repairs, removals, installations, and thrust reversers. Two lecture, four lab hours per week.

140 Introduction to Business Aviation: Opportunities, Processes & Jobs
3 Cr. Hrs.

Corporate business aviation management principles, business aviation administration, analysis and processes, types of business aircraft, corporate business aviation flight department operations, on-demand aircraft services, corporate business aviation effectiveness.

141 Principles of Aviation Leadership
3 Cr. Hrs.

Strategic planning in business aviation operations, relationship between 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.

143 Aircraft Maintenance 3 Cr. Hrs.

Introduction to aircraft maintenance for airframe and powerplant mechanics. Topics covered include overall aircraft systems and theory, aircraft configurations, airframe materials and construction techniques, modes of failure, preventive and predictive maintenance, tolerances, and proper use of tools. One lecture, four lab hours per week.

146 Introduction to Airline Operations
3 Cr. Hrs.

Introduction to the basic structure of an airline, including the functions of the operational control center, airline marketing, maintenance control, fleet planning and scheduling, dispatch flight release, airline operating certificates and specifications, weight and balance forms, passenger seating arrangements and load manifests. Overview of the Federal Aviation Regulations and the Federal Aviation Administration (FAA), including the structure, background, and operation of the current FAA regulations.

148 Airline Crew Emergency Management
5 Cr. Hrs.

Federal Aviation Regulations Part 121.417 Emergency Training and Emergency Situations, including use of certain items of emergency equipment, such as fire extinguishers, life vests, oxygen bottles, and first aid equipment. Focuses on flight crew member duties and responsibilities, crew coordination, aircraft fires, first aid equipment, basic first aid, ground evacuation, ditching, aircraft decompression, crew member incapacitation and basic survival tactics. Knowledge of special material handling and Flight Attendant Security techniques.

150 Crew Resource Management
2 Cr. Hrs.

Awareness of human factors issues as they affect normal and abnormal flight operations, with emphasis on teamwork training, behavior identification, communications processes and decision behaviors, conflict resolution, skills inventory, workload management and situational awareness.

151 Crew Survival & Rescue Techniques
4 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.

157 Aircraft Performance I 3 Cr. Hrs.

This course will enable students to learn the concepts of basic jet performance, aircraft operating performance data, weight and balance computations, center of gravity computations, weight shifts, takeoff, enroute and landing performance, terrain clearance /driftdown performance, operational applications regarding Notices to Airmen (NOTAMs), communications, regulatory requirements and abnormal and emergency operating procedures.

Prerequisite(s): AVT 119

158 Aircraft Performance II 3 Cr. Hrs.

Advance aircraft performance calculations including enroute, holding, descent and landing, weight and balance and alternate flight planning methods.

Prerequisite(s): AVT 119

159 CRJ Aircraft Systems 2 Cr. Hrs.

Provides students with a general understanding of Canadair Regional Jet aircraft systems, minimum equipment list, configuration deviation list, and applications to aircraft dispatch requirements.

Prerequisite(s): Approval of department

165 Flight Physiology 1 Cr. Hr.

In-depth aeromedical information on the causes, symptoms, prevention and treatment of flight environment disorders. Fatigue, circadian rhythm, diet, hypoxia, carbon monoxide poisoning, hyperventilation, altitude effects, spatial disorientation, visual illusions and psychological factors are included as they relate to pilot performance and survival effectiveness.

166 Practical Dispatch Applications
4 Cr. Hrs.

In-depth coverage of joint Aircraft Dispatcher/Pilot responsibilities and dispatch functions including communications, operational control, fuel planning, abnormal and emergency situations, weather, NOTAMs (Notices to Airmen), and airport facilities as they relate to flight planning.

Prerequisite(s): AVT 119, AVT 146, AVT 150, AVT 157, AVT 158, AVT 167 and AVT 246 AND approval of department AND students must have taken the FAA Aircraft Dispatcher Knowledge Test and received a passing score of at least 70% prior to enrolling in this course.

167 IFR Navigation & Planning
4 Cr. Hrs.

Provides students with an in-depth understanding of the study of the earth, time reference and location, chart reading, National Airspace Plan, navigation systems, airborne navigation instruments, instrument approach procedures, aeronautical publications including NOTAMs, and special navigation operations including North Atlantic, Pacific and global differences.

Prerequisite(s): AVT 119 and AVT 246

168 Aircraft Dispatcher Oral Preparation 2 Cr. Hrs.

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 119, AVT 146, AVT 150, AVT 157, AVT 158, AVT 167 and AVT 246 AND approval of department AND students must have taken the FAA Aircraft Dispatcher Knowledge Test and received a passing score of at least 70% prior to enrolling in this course.

170 Instrument Pilot Ground School
5 Cr. Hrs.

Basic non-visual reference education leading to the FAA instrument written examination. Topics include flight by reference to instruments, theory of instrument operations, air traffic control, standard instrument departures (DPs), standard instrument arrivals (STARs), runway lighting configurations, RVR, minimum meteorological conditions, federal aviation regulations (FARs), and approaches. The lab component includes all of these areas in practice on the Elite PCATD. Four lecture, two lab hours per week.

Prerequisite(s): AVT 110 and approval of chairperson and student must have successfully passed the FAA Private Pilot knowledge exam.

205 Aviation Management 3 Cr. Hrs.

Provides pilots and other aviation professionals with an in-depth knowledge of management, marketing, and finance principles within the complex regulatory framework of the aviation field.

206 Aerodynamics 3 Cr. Hrs.

Provides pilots and other aviation professionals with instruction on flight dynamics. Applies basic fluid theory to aerodynamic surfaces and provides in-depth instruction on the concepts of lift coefficient, drag, stall, icing, turbulence, flaps, spoilers, center of lift, chord, span, and aspect ratios.

Prerequisite(s): PHY 201, PHY 131 or PHY 141 or permission of chairperson/instructor

211 Advanced Navigation Science
3 Cr. Hrs.

Provides pilots and other aviation professionals with in-depth knowledge of the advanced navigation systems used in commercial aviation operations.

Prerequisite(s): AVT 110

213 Corrosion Control 4 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 of windshields and windows, paint removal and protection of bare metal surfaces. Two lecture, four lab hours per week.

214 Cabin Atmosphere Control Systems
3 Cr. Hrs.

Inspection, operation, troubleshooting, repair, and service of the following items: heating, cooling, air conditioning, pressurization, air cycle machines, and gaseous oxygen systems. Two lecture, two lab hours per week.

217 Hydraulics & Pneumatics Systems
3 Cr. Hrs.

Aviation maintenance hydraulic systems operation, troubleshooting, fluid identification and safety precautions, seals, filters, and valves. Pneumatics systems operation, high pressure compressed air use and safety; valves, lines, electrical servos, identification marks for seals, lines, and fittings. One lecture, four hours lab per week.

218 Landing Gear 4 Cr. Hrs.

Inspection, system check out, removal, overhaul of the landing gear and retraction systems, oleo shock struts, steering systems, wheels, brakes, tires and tubes. Two lecture, four hours lab per week.

219 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 and trimming of engines. Three lecture, two lab hours per week.

222 Engine Ignition & Starting II
3 Cr. Hrs.

Pneumatic starters and generators, turbine engine starting systems, exciter boxes and leads, removal, inspection, cleaning, and installation of spark plugs, and igniter's for turbine engines. Two lecture, two lab hours per week.

224 Instrument Pilot Flight 4 Cr. Hrs.

Provides pilots in the Professional Pilot option with the flight training necessary to pass the Federal Aviation Administration (FAA) practical test requirements for the Instrument rating.

226 Reciprocating Engines II 5 Cr. Hrs.

Dimensional inspection of internal parts, non-destructive inspection of engine parts, superchargers and turbochargers, engine overhaul rebuilding, propeller reduction gear system, and engine installation. Two lecture, six lab hours per week.

227 Fabric & Wood Structures 3 Cr. Hrs.

Wood structures and fabric coverings including identification of types of wood structures, inspection of wood structures, defects in wood structures, and repair of wood structures for aviation maintenance. Also, fabric selection, fiberglass coverings, inspection and testing of fabric and fiberglass covering. Two lecture, two lab hours per week.

229 Aircraft Finishes 3 Cr. Hrs.

Identification letters and numbers, selecting proper aircraft finishes, inspection before applying finishes, inspection of applied finishes, application of different finishes, identification of defects in and below finishes. One lecture, four lab hours per week.

231 Engine Electrical 4 Cr. Hrs.

Identification and repair of wiring using wiring diagrams and standard practices manuals, installation of A.C. and D.C. generators, alternators, wiring, controls, relays, switches, indicators, temperature sensors, circuit breakers, and fuses. Three lecture, two lab hours per week.

232 Electrical Systems II 3 Cr. Hrs.

Troubleshooting load limiting devices, inspections, checking and repairing wiring in compliance with manufacturers' maintenance manuals, integrated speed drive generators, and auxiliary power unit electrical connections. Two lecture, two hours lab per week.

234 Reciprocating Engines III 3 Cr. Hrs.

Engine part inspection and measurement, engine assembly, engine installation in aircraft, accessory installation, installation of baffle material around engine, magneto installation and correct timing, engine electrical troubleshooting, and engine troubleshooting. One lecture, four lab hours per week.

236 Sheet Metal II 3 Cr. Hrs.

Removal and installation of windows, doors, and furnishings. Repair of composites, fiberglass and bonded structures; inspection of bonded structures, and laminated surfaces. Two lecture, two lab hours per week.

237 Airframe Inspections 2 Cr. Hrs.

Inspecting an airframe and its components for compliance with regulations, manufacturers' manuals, and operation instructions for compliance with airworthiness standards. One lecture, two lab hours per week.

239 Powerplant Inspections 2 Cr. Hrs.

Perform inspections including conformity, one hundred hour, preflight, and annual. Compression check, lubrication, ignition, fuel, induction, exhaust, turbocharger, cooling, engine electrical repair of wiring and connectors, electronic inspection of engines, turbine engine sections, hot section inspections, foreign object damage, turbine engine over speed, propellers, and engine accessories. One lecture, two lab hours per week.

240 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 programming of Flight Management Systems (FMS), supervisory control, and Crew Resource Management (CRM), are among the topics that this course will address.

Prerequisite(s): DEV 065 or ENG 111 or ENG 121 or ENG 131 and DEV 085

241 Blind Flying Hazards 2 Cr. Hrs.

Provides pilots and other aviation professionals with an understanding of spatial disorientation and the hazards of blind flying. Through a laboratory using the General Aviation Trainer (GAT II) simulator, students will experience the effects of various types of spatial disorientation and learn to deal with them. One lecture, two lab hours per week.

242 Aircraft Accident Investigation 3 Cr. Hrs.

Provides pilots and other aviation professionals with knowledge of the techniques used by accident investigators to identify causes of accidents. Case studies of aircraft accidents will be explored and discussed. The results of poor decision making and judgment will be understood and avoided.

Prerequisite(s): DEV 065 or ENG 111 or ENG 121 or ENG 131 and DEV 085

245 Aviation Law 3 Cr. Hrs.

Provides pilots and other aviation professionals with a working knowledge of the legal system and important legal concepts as they pertain to aviation. The legal aspects of aircraft ownership, rental, insurance, and liability will be explained.

Prerequisite(s): DEV 065 or ENG 111 or ENG 121 or ENG 131 and DEV 085

246 Air Traffic Control Communications 3 Cr. Hrs.

Approach, missed approach, departure and vectoring language and procedures. Includes role-playing through a wide variety of flight scenarios in order to build confidence in the pilot.

247 Flight Mechanics 3 Cr. Hrs.

Provides pilots and other aviation professionals with instruction on flight control systems; performance prediction to include range, endurance, maneuvering, and take-off and landing; and static and dynamic stability and control.

Prerequisite(s): AVT 206

250 Commercial Pilot Ground School 4 Cr. Hrs.

Constant speed propellers, advanced fuel systems, retractable landing gear systems, complex maneuvers, and high altitude operations of complex and high performance aircraft.

Prerequisite(s): AVT 110 and AVT 170 and approval of chairperson and student must have successfully passed the FAA Private Pilot knowledge exam.

251 PCATD Lab 2 Cr. Hrs.

Provides pilots with access to Sinclair's Personal Computer Aviation Training Device (PCATD) flight simulator lab. Course emphasizes maintaining flight proficiency on the instrument skills required for advanced ratings in the Professional Pilot program. Students must complete a minimum of 10 simulator hours to successfully complete the course. Four lab hours per week.

254 GAT II Instruction R 2 Cr. Hrs.

Provides pilots with individual instruction using Sinclair's General Aviation Trainer (GAT II) full motion flight simulator. Course emphasizes instrument skills and spatial disorientation scenarios. Lessons are tailored to meet the student's specific training needs. This course requires a \$350 lab fee.

Prerequisite(s): AVT 170, approval of department

255 Multi-Engine Pilot Ground School 4 Cr. Hrs.

Advanced aircraft systems, fuel management, engine failures, asymmetric thrust, and advanced weight and balance calculations required to operate multi-engine aircraft.

257 Flight Laboratory 1 Cr. Hr.

Provides aviation pilots in the Professional Pilot option with the pilot in command experience necessary to progress toward Federal Aviation Administration (FAA) advanced certificates and ratings. Three lab hours per week.

Prerequisite(s): Permission of chairperson

258 Flight Instructor Ground School 4 Cr. Hrs.

Includes ground training in instructional methods, including learning processes, lesson planning, and student evaluation processes. Aeronautical training includes the teaching of aviation concepts and principles from beginning pilot to multi-engine pilot, but not instrument-rated pilots.

Prerequisite(s): AVT 110 and AVT 170 and AVT 250 and approval of chairperson and student must have successfully passed the FAA Private Pilot knowledge exam.

263 Commercial Pilot Flight 4 Cr. Hrs.

Provides pilots in the Professional Pilot option with the flight training necessary to pass the Federal Aviation Administration (FAA) practical test requirements for the Commercial Pilot certificate.

266 Multi-Engine Pilot Flight 4 Cr. Hrs.

Provides pilots in the Professional Pilot option with the flight training necessary to pass the Federal Aviation Administration (FAA) practical test requirements for the Multi-Engine rating.

269 Flight Instructor Flight Course 4 Cr. Hrs.

Provides pilots in the Professional Pilot option with the flight training necessary to pass the FAA end-of-course test requirements for the Certified Flight Instructor (CFI) certificate.

270 Aviation Internship R 1 - 12 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): Department chairperson's signature

275 Instrument Instructor Ground School 2 Cr. Hrs.

Ground training in instructional methods for Certified Flight Instructors (CFI) to support qualification as CFII (Certified Flight Instructor, Instrument). Also includes instrument technology and procedures to VFR (Visual Flight Rules) for IFR (Instrument Flight Rules) pilot upgrades.

277 Instrument Flight Instructor Flight 4 Cr. Hrs.

Hands-on training in an aircraft and/or simulator to develop the knowledge and skills required to become a Certified Flight Instructor, Instrument (CFII) and to complete the certification process by successfully passing all stage checks, examinations, and/or end-of-course tests.

285 Multi-Engine Instructor Ground School 2 Cr. Hrs.

Ground training in instructional methods for Certified Flight Instructors (CFI) to attain qualification as Multi-Engine Flight Instructors (MEI), including the legal, operational and technical aspects of multi-engine flight.

286 Multi-Engine Instructor Flight
4 Cr. Hrs.

Flight training in instructional methods for Certified Flight Instructors (CFI) to qualify them as Multi-Engine Flight Instructors (MEI). The MEI's teach the legal, operational and technical aspects of multi-engine flight.

297 Special Topics in Aviation Technology R 1 - 6 Cr. Hrs.

Varied content offerings of special interest to the discipline but not covered within existing courses; may be scheduled in a classroom/seminar or other non-traditional manner.

Biology (BIO)

101 Body Structure & Function 4 Cr. Hrs.

Basic Anatomy & Physiology background for ancillary medical personnel emphasizing basic principles of the structure and function of the human body.

104 HIV/AIDS 3 Cr. Hrs.

Balanced view of the biological, medical, social, and legal issues associated with HIV disease and AIDS.

107 Human Biology 5 Cr. Hrs.

Survey of structure and function of the human body. Four lecture, two lab hours (BIO 108) per week.

Prerequisite(s): DEV 065 and DEV 075 and DEV 085 or equivalent

108 Lab for BIO 107

Laboratory must be taken with BIO 107.

111 General Biology I 4 Cr. Hrs.

Basic chemistry, cytology, cell energetics, cell reproduction. Three lecture and two lab hours (BIO 117) per week.

Prerequisite(s): DEV 065

112 General Biology II 4 Cr. Hrs.

Transmission and molecular genetics, gene regulation, microevolution, speciation. Three lecture, two lab hours (BIO 118) per week.

Prerequisite(s): BIO 111

113 General Biology III 4 Cr. Hrs.

Population genetics, evolution, biological diversity, and ecology. Three lecture and two lab hours (BIO 119) per week.

Prerequisite(s): BIO 112

117 Lab for BIO 111

Laboratory must be taken with BIO 111.

118 Lab for BIO 112

Laboratory must be taken with BIO 112.

119 Lab for BIO 113

Laboratory must be taken with BIO 113.

121 Human Anatomy & Physiology I
5 Cr. Hrs.

Structure and function of cells, tissues, the integument, skeletal, muscular, and nervous systems. Emphasis on structural relationships. Four lecture, two lab hours (BIO 127) per week.

Prerequisite(s): DEV 075 and DEV 085 and DEV 065

122 Human Anatomy & Physiology II
5 Cr. Hrs.

Continuation of BIO 121. Structure and function of the cardiovascular, lymphatic, immune, respiratory, digestive, urinary system, and reproductive systems. Four lecture, two lab hours (BIO 128) per week.

Prerequisite(s): BIO 121

125 Cardiopulmonary Anatomy & Physiology 5 Cr. Hrs.

Advance study of adult lung, heart, and renal Anatomy & Physiology including: ventilation, pulmonary mechanics, diffusion, gas transport, cardiac function and pulmonary perfusion, acid-base balance and interpretation with emphasis on patient scenarios.

Prerequisite(s): BIO 107

127 Lab for BIO 121

Laboratory must be taken with BIO 121.

128 Lab for BIO 122

Laboratory must be taken with BIO 122.

141 Principles of Anatomy & Physiology I 4 Cr. Hrs.

Structure and function of the human body with an emphasis on introductory terminology, biochemistry, cytology, digestion, metabolism, nutrition, arthrology, skeletal and integumentary systems. Three lecture, two lab hours (BIO 147) per week.

Prerequisite(s): DEV 065, DEV 075, DEV 085 and CHE 117 or 120 or equivalent

142 Principles of Anatomy & Physiology II 4 Cr. Hrs.

Continuation of BIO 141/147, Principles of Anatomy & Physiology I, with an emphasis on the human muscular, nervous, endocrine and reproductive systems. Three lecture, two lab hours (BIO 148) per week.

Prerequisite(s): BIO 141 or BIO 121

143 Principles of Anatomy & Physiology III 4 Cr. Hrs.

Continuation of BIO 142/148, Principles of Anatomy & Physiology II, with an emphasis on cardiovascular, lymphatic, immune, respiratory, urinary systems, and water, electrolyte, and acid/base balance. Three lecture, two lab hours (BIO 149) per week.

Prerequisite(s): BIO 142

147 Lab for BIO 141

Laboratory must be taken with BIO 141.

148 Lab for BIO 142

Laboratory must be taken with BIO 142.

149 Lab for BIO 143

Laboratory must be taken with BIO 143.

171 Principles of Biology I 5 Cr. Hrs.

First course in a university parallel sequence for biology and science majors. Topics include the scientific method, basic chemical and biochemical foundations, cell biology, cell respiration, photosynthesis, cell reproduction, and Mendelian and chromosomal genetics. Three lecture hours, six lab hours per week.

Prerequisite(s): DEV 065 and DEV 075, MAT 101 or equivalent

172 Principles of Biology II 5 Cr. Hrs.

The second course in a university parallel sequence for biology and science majors. Topics include DNA structure and replication, protein synthesis, microbial genetics, eukaryotic gene regulation, DNA technology, developmental genetics, Darwinian evolution, population genetics (microevolution), speciation (macroevolution), phylogeny and systematics. Three lecture hours, six lab hours per week.

Prerequisite(s): BIO 171

173 Principles of Biology III 5 Cr. Hrs.

A continuation of BIO 172. Topics covered include Origin of Life, prokaryotes, protists, plant diversity and evolution, fungi, invertebrates, vertebrate evolution, human evolution, animal reproduction, behavioral ecology, conservation biology. Three lecture hours, six lab hours per week.

Prerequisite: BIO 172 or equivalent

205 Microbiology 4 Cr. Hrs.

Morphology and physiology of microorganisms and selected human parasites, mechanisms of disease production, host responses, spread of infectious diseases. Three lecture, three lab hours (BIO 206) per week.

Prerequisite(s): BIO 107 or BIO 111 or BIO 115 or BIO 121 or BIO 141 or BIO 161 or BIO 211 or CHE 117 or CHE 122

206 Lab for BIO 205

Laboratory must be taken with BIO 205.

211 Human Physiology 5 Cr. Hrs.

Essentials of human physiology for nursing students in the LPN Fast Track Program who have had an Anatomy & Physiology course in LPN school; therefore, this course substitutes for the departmental Anatomy & Physiology sequence (BIO 141, 142, & 143). Other students who have completed one of the course prerequisites may take this course to gain a background in the functioning of the human body at a more advanced level. Four lecture, three lab hours (BIO 212) per week.

Prerequisite(s): BIO 107 or BIO 112 or BIO 121 or BIO 141 or permission of instructor

212 Lab for BIO 211

Laboratory must be taken with BIO 211.

222 Evolution 3 Cr. Hrs.

Emphasis on Charles Darwin, speciation, fossils, radiometric dating, natural selection, mutations, macroevolution, mass extinctions, coevolution, sexual reproduction, human evolution, religious issues.

225 Ecology 4 Cr. Hrs.

Basic concepts in ecology and application to current environmental issues. Focuses on terrestrial and aquatic communities, species diversity, succession, population dynamics (ecological efficiency), conservation of natural resources, field experiences, data collection, analysis of environment. Three lecture, three lab hours (BIO 226) per week.

226 Lab for BIO 225

Laboratory must be taken with BIO 225.

235 Genetics 5 Cr. Hrs.

Fundamental principles, concepts, and techniques of genetics. Classical/transmission genetics, molecular genetics, population genetics, quantitative genetics, and the impact of genetics on technology and society. The laboratory will emphasize basic methods of genetic research and analysis. Four lecture, three lab hours (BIO 236) per week.

Prerequisite(s): BIO 113 or BIO 173 or BIO 143 and MAT 116

236 Lab for BIO 235

Laboratory must be taken with BIO 235.

245 Concepts in Biology 5 Cr. Hrs.

Basic concepts and applications of biology, including basic needs of living things, growth and development, structure and function of organisms including cells, tissues, organs; basic heredity, basic botany, ecological principles and environmental education. Applications use an inquiry learning environment which emphasizes science process skills integrated with mathematics. Early childhood education majors only. Does not satisfy biology requirement for middle childhood education majors. Four lecture, three lab hours per week.

Prerequisite(s): CHE 245 and PHY 245

270 Biology Internship R 1 - 12 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.

297 Special Topics in Biology R 1 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses, workshops, and special interest topics in biology.

Business Information Systems (BIS)

101 Personal Computer Keyboarding 2 Cr. Hrs.

Development of "touch" keyboarding using word processing software on a personal computer; development of competency on the ten-key pad; minimum of 20 wpm expected. Out-of-class lab work required.

102 Document Formatting 2 Cr. Hrs.

Introduction to word processing software and continued development of personal computer skills; format and produce reports, letters, memos, multiple-column tables, and other business documents; minimum speed of 35 wpm expected. Out-of-class lab work required. Prerequisite(s): BIS 101 and BIS 160 or BIS M85

103 Advanced Document Formatting/Skillbuilding 4 Cr. Hrs.

Use of personal computer word processing software to produce correctly formatted letters and memos, complicated tables, reports, and other business documents; minimum of 50 WPM expected. Out-of-class lab work required.

Prerequisite(s): BIS 102 and BIS 161 or BIS M85

104 Introduction to P.C. Usage 3 Cr. Hrs.

This hands-on class focuses on the components of a personal computer, including an introduction to the Windows graphic user interface, use of the mouse and understanding icons, buttons, and menus. Also includes creating directories, copying and moving files, and changing and enhancing desktop features. Introduction to application software and the World Wide Web. Elementary P.C. assignments require lab time outside of class.

105 Computer Concepts 3 Cr. Hrs.

Introduces students to personal computers, software, peripheral devices, and other current and developing hardware and software elements within the home or office setting. History, equipment, programming concepts, information media and literature of computer information systems in business and industry are introduced. Elementary P.C. assignments require lab time outside of class.

109 Keyboarding Speed/Accuracy Development 4 Cr. Hrs.

Development of increased personal computer keyboarding speed and accuracy through proper diagnostic testing and corrective procedures.

114 Records Management & Electronic Files 3 Cr. Hrs.

Introduction to the methods of appropriately saving, naming, and managing files for paper based and electronic storage and retrieval. Also includes alphabetic filing, numeric, alpha/numeric, and other classification systems in addition to about archive creation and confidentiality, choosing equipment and supplies. Backups, disaster planning/recovery programs, and the life cycle of recorded media will be covered. Emerging technologies within electronic records storage and retention will be included.

116 Medical Office Procedures 4 Cr. Hrs.

Basic principles of the office support staff/secretarial, bookkeeping duties, and responsibilities pertinent to the medical office and health care agencies.

Prerequisite(s): BIS 102 and HIM 121

160 Introduction to Word, PowerPoint, & Excel 3 Cr. Hrs.

Fundamental concepts and applications of Microsoft Word, PowerPoint, and Excel. Not for BIS majors. Assumes experience with computers and Microsoft Windows. Keyboarding skills necessary. Out-of class work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

161 Intermediate Word, PowerPoint, & Excel 3 Cr. Hrs.

Intermediate concepts and applications of Microsoft Word, PowerPoint, and Excel. Assumes experience with Microsoft Word, PowerPoint, Excel, and Microsoft Windows. Keyboarding skills necessary. Out-of-class lab work required.

Prerequisite(s): BIS 160

172 Integrated Solutions 2 Cr. Hrs.

Integration of the Microsoft Office Suite (Word, PowerPoint, Excel, and Access) with exercises to acquaint students with how the individual applications in Microsoft can work individually and together to solve business problems. Assumes experience with basic MS Office packages, computers, and Microsoft Windows. Keyboarding skills necessary. Out-of-class lab work required.

Prerequisite(s): BIS M35 and BIS M45 and BIS M55 and BIS M85 or BIS 161 and BIS M35

201 Customer Service 3 Cr. Hrs.

Introduction to the basic concepts of customer service. Topics include customer service telephone skills, face-to-face communication, confidentiality, professional attitude when dealing with clients/customers, decision making, time management, problem solving, and dealing with difficult situations. Attention to detail will be emphasized.

202 Advanced Customer Service Concepts 3 Cr. Hrs.

This course will introduce students to the electronic application of customer service. Topics to be covered will include the use of emerging technology within the customer service setting, quality tools and tracking, phone-based customer service, and scenarios/cases.

Prerequisite(s): BIS 201

215 Office Applications Practicum/Seminar 4 Cr. Hrs.

This course will simulate a work environment where students are expected to practice professional work behavior and ethics, and to employ critical thinking skills to solve simulated business problems and accomplish work-related tasks.

Prerequisite(s): BIS 161 and BIS M35 or BIS M35, BIS M45, BIS M55, and BIS M85; and 80 credit hours and approval of department.

220 Computer Applications for the Medical Office 4 Cr. Hrs.

Entry level skills for computer based management of a medical office emphasizing software for patient records, billing and collections, daily financial transactions, insurance processing, and the production of routine reports and summaries. Out-of-class lab work required.

Prerequisite(s): BIS 102 and BIS 116

251 Medical Transcription I 4 Cr. Hrs.

Transcription of medical/surgical reports on a personal computer with word processing software into an accurate and acceptable format using medical terminology.

Prerequisite(s): ENG 199 and BIS 102 and HIM 122

252 Medical Transcription II 4 Cr. Hrs.

Continuing emphasis on precision of transcription and personal computer word processing skills in preparation of complex medical reports. Second of a two-course sequence.

Prerequisite(s): BIS 251

270 Business Information Systems Internship 3 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

297 Special Topics in Business Information Systems R 0.5 - 6 Cr. Hrs.

Provides opportunity to receive credit for new and non-traditional courses within developing technology and career related courses/opportunities, or service learning courses/activities, including special interest topics, workshops or customized training.

M25 Desktop Publishing 2 Cr. Hrs.

Desktop publishing for office applications using Microsoft Publisher software for creation of proposals, flyers, newsletters, and web pages using styles and other special features; keyboarding skills necessary; out-of-class lab work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding, and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

M35 Microsoft Access 2 Cr. Hrs.

Introductory and intermediate database features of Microsoft Access. Skills and activities used to create databases and tables, enter and update data, display and print records, create forms and queries, and create reports, including subforms, updating forms and report designs. Assumes experience with computers and Microsoft Windows. Keyboarding skills necessary. Out-of-class lab work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding, and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

M36 Advanced/Expert Access 3 Cr. Hrs.

Advanced and expert level features of Microsoft Access: managing and analyzing database objects, creating, running, and troubleshooting macros; creating modules using Visual Basic; managing databases through backup procedures, synchronization, and security techniques including user level permissions, password protection and data encryption. Also includes exporting Microsoft Access objects to other programs, defining relationships and join properties, creating action queries, advanced reports, and basic data access pages.

Prerequisite(s): BIS M35

M45 Microsoft Excel 2 Cr. Hrs.

Spreadsheet applications emphasizing planning, creating, printing, and saving workbooks, entering data into worksheets, using formulas and functions, enhancing spreadsheets using formatting and style features, and creating and enhancing charts. Assumes experience with Microsoft Windows. Keyboarding skills necessary. Out-of-class lab work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding, and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

M46 Advanced/Expert Excel 3 Cr. Hrs.

Advanced and expert level Excel skills, including analyzing list data, generating reports and charts with enhancements, mapping data, What-if Analysis, collaboration and workbook distribution, templates, styles, and macros, as well as incorporating worksheets in other applications and linking worksheets to the Internet.

Prerequisite(s): BIS M45

M55 Microsoft PowerPoint 2 Cr. Hrs.

Presentation, creation, and enhancement using formatting features, animation, movies and sounds, and various delivery methods. Assumes experience with computer and Microsoft Windows. Keyboarding skills necessary. Out-of-class lab work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding, and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

M75 The Internet 3 Cr. Hrs.

Navigation through the Internet and the World Wide Web with intermediate and advanced applications, including information retrieval, file transfer, file modification, online service utilization, e-mail attachments, basic web page building, electronic commerce, and Internet security issues. Internet terminology, concepts, and applications. Assumes experience with computers and Microsoft windows. Keyboarding skills necessary. Out-of-class lab work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding, and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

M85 Microsoft Word 2 Cr. Hrs.

Fundamental and intermediate concepts and applications of Microsoft Word for professional and/or personal use. Commonly used commands and strategies for formatting, editing, and revising text. Keyboarding skills necessary and assumes experience with computers and Microsoft Windows. Out-of-class lab work required.

Prerequisite(s): If students are not familiar with basic computer concepts, keyboarding, and Windows file management, they may want to consider successfully completing BIS 101 and BIS 104 before attempting this course.

M86 Advanced/Expert Word 2 Cr. Hrs.

Advanced and expert concepts and applications of Microsoft Word for professional and/or personal use emphasizing creating and using forms; creating and working with master documents and subdocuments; tracking changes; working with comments; and creating an index, table of contents, and a table of figures.

Prerequisite(s): BIS M85

Biotechnology (BTN)**110 Biotechnology & Bioethics 3 Cr. Hrs.**

Historical perspective of the development of biotechnology, introduction to terminology and fields of study, recent advances in biotechnology, their implications and applications; discussion of current issues in bioethics.

120 Laboratory Safety & Regulatory Compliance 3 Cr. Hrs.

Overview of laboratory safety procedures and precautions, biosafety, radiation safety, compliance standards of regulatory agencies. Also includes current Good Laboratory Practice (cGLP) and current Good Manufacturing Practice (cGMP).

Prerequisite(s): Restricted to majors

130 Biological Reagents Preparation 4 Cr. Hrs.

Overview of chemical grades of reagents used in biological research, review of guidelines for safe storage of chemicals, emphasis on chemical formulas, including molarity, molality, normality; preparation of various reagents and media for biological applications, use of sterile techniques in reagent preparation. Two lecture, four lab hours (BTN 131) per week.

Prerequisite(s): BTN 120 and CHE 151 and restricted to majors

131 Lab for BTN 130

Laboratory must be taken with BTN 130.

140 Cell Culture 3 Cr. Hrs.

Historical overview of the development of cell culture, introduction to sterile techniques used in cell and tissue culture, use of laminar flow hoods, in vitro maintenance and propagation of mammalian cells, cell counting, cell viability tests, cryopreservation and recovery of cell lines. Two lecture, three lab hours (BTN 141) per week.

Prerequisite(s): BIO 111 and BTN 130 and restricted to majors

141 Lab for BTN 140

Laboratory must be taken with BTN 140.

201 Biotechnology Careers 2 Cr. Hrs.

The biotechnology job market, resumes, interviewing, essential work place skills including public speaking, professionalism in the work place, and small group interactions.

210 Protein Purification & Analysis 6 Cr. Hrs.

Introduction to purification methods – bulk fractionation, size-exclusion, ion-exchange and affinity chromatography; equipment, buffers, assays used; principles of protein quantification and analysis; precautions taken to avoid proteolysis, loss of activity; purification strategy, calculation of yield, enrichment, purity. Three lecture, six lab hours (BTN 211) per week.

Prerequisite(s): BIO 112 and CHE 122 and BTN 130, restricted to majors

211 Lab for BTN 210

Laboratory must be taken with BTN 210.

220 Microbiology & Fermentation Methods 4 Cr. Hrs.

Introduction to microbiology, metabolism and genetics of microorganisms, food and water microbiology, use of microbes in biotechnology, principles of fermentation, batch vs. continuous cultures, use of bioreactors for large scale propagation. Two lecture, four lab hours (BTN 221) per week.

Prerequisite(s): BIO 112 and CHE 122 and BTN 130, restricted to majors

221 Lab for BTN 220

Laboratory must be taken with BTN 220.

230 Molecular Biology Techniques 6 Cr. Hrs.

Structure of nucleic acids, DNA replication mechanisms, DNA cloning, genetic engineering techniques, use of plasmids and viruses as vectors, nucleic acid analysis by electrophoresis, Southern and Northern hybridization, DNA amplification and sequencing. Three lecture, six lab hours (BTN 231) per week.

Prerequisite(s): BIO 112 and CHE 122 and BTN 130, restricted to majors

231 Lab for BTN 230

Laboratory must be taken with BTN 230.

235 HPLC Methods 2 Cr. Hrs.

Introduction to high performance liquid chromatography (HPLC) instrumentation and application. Overview of HPLC terminology, fundamentals of the different types of chromatography, and sample preparation; includes establishing parameters for chromatographic separations.

Prerequisite(s): BTN 210, restricted to majors

240 Bioinformatics 3 Cr. Hrs.

Introduction to public domain DNA sequence databases, use of software and internet resources for database searching, use of database information in sequence comparisons, sequence alignment, structure prediction, gene prediction, and genome analysis. Two lecture, two lab hours (BTN 241) per week.

Prerequisite(s): BIO 113 and BTN 210 and BTN 230 and BIS 160 or equivalent

241 Lab for BTN 240

Laboratory must be taken with BTN 240.

270 Biotechnology Internship R 3 - 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

297 Special Topics in Biotechnology R 1 - 3 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses, workshops, and special interest topics in Biotechnology.

Prerequisite(s): Instructor's signature

Business (BUS)

270 Business Internship R 1 - 6 Cr. Hrs.

Application of classroom skills and competencies to career related work site activities related to academic program. Development of learning objectives linking classroom learning with responsibilities at the job site, preparation of a final report and/or project as agreed upon with internship instructor, and evaluation on site by work site supervisor. Academic credit is earned for the learning that occurs as a result of working, not for actual work done on the job. Students already working in their career field may apply to use a current job to meet internship requirements; learning objectives must reflect new and/or expanded responsibilities or special projects at the work site during the current academic term.

Prerequisite(s): Approval of chairperson

Career Planning (CAP)

105 Career Selection 2 Cr. Hrs.

Exploration of personal and career goals, examination of occupational trends and options. Practical experience with resume development and interviewing techniques.

Civil Architectural Technology (CAT)

101 Architectural Drafting 3 Cr. Hrs.

Develop proficiency with manual drafting instruments and skill in lettering and drawing techniques, architectural problem solving by using orthographic, isometric, and oblique pictorial techniques. Two lecture, two lab hours per week.

102 Architectural Detail Drafting 3 Cr. Hrs.

Develop proficiency in manual drafting of architectural residential elevations, sections, section details, along with stair, door and window details. Two lecture, two lab hours per week.

Prerequisite(s): CAT 101

105 Residential Construction Methods & Materials 4 Cr. Hrs.

Construction materials and methods for residential buildings. Emphasis on processes and techniques. Understanding of blueprint reading of architectural drawings. Two lecture, four lab hours per week.

106 Commercial Construction Methods & Materials 3 Cr. Hrs.

Project delivery options, construction and contract documents preparation. Materials and methods of construction for commercial buildings. Foundation systems, structural systems, cladding, roofing, windows, doors and finishes. Two lecture, two lab hours per week.

107 Construction Methods & Materials 6 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. Four lecture, four lab hours per week.

110 Introduction to Civil & Architectural Technology 3 Cr. Hrs.

An introduction to career fields of Architectural and Civil Engineering Technology.

121 Civil Construction Blueprints & Drafting 2 Cr. Hrs.

Understanding civil and construction blueprints by sketching and drafting. One lecture, two lab hours per week.

Prerequisite(s): MAT 101 or MAT 192 or equivalent math score

123 Basic Construction Surveying 4 Cr. Hrs.

Introduction to the use of surveying equipment with appropriate math concepts. Automatic levels, laser levels, and total stations will be used in practical surveying projects. Two lecture, four lab hours per week.

Prerequisite(s): CAT 121 or CCT 103

131 Properties of Construction Materials 3 Cr. Hrs.

Properties of basic construction materials examined through laboratory analysis. Emphasis on how properties of materials affect their use in the construction industry. One lecture, four lab hours per week.

Prerequisite(s): DEV 108

138 Architectural Blueprint Reading 3 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. Two lecture, two lab hours per week.

Prerequisite(s): DEV 085 and DEV 110

139 Mechanical Systems Blueprint Reading 2 Cr. Hrs.

Reading blueprints of commercial buildings; emphasizing plumbing, electrical, HVAC, and fire protection systems. One lecture, two lab hours per week.

Prerequisite(s): DEV 064 and DEV 108 and DEV 110 or DEV 130

145 Introduction to OSHA Construction Standards 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.

151 Portland Cement Concrete 4 Cr. Hrs.

Introduction to the craft of working with concrete with strong emphasis on hands-on learning exercises. Two lecture, six lab hours per week.

153 Introduction to Construction Craft Skills 4 Cr. Hrs.

An orientation to construction trades through hands-on projects in major construction trades. Two lecture, six lab hours per week.

154 Structural Framing Systems I 4 Cr. Hrs.

Advanced technical training in wood and light gauge steel framing systems. Two lecture, six lab hours per week.

Prerequisite(s): CAT 153

155 Structural Framing Systems II 4 Cr. Hrs.

Further study of wood frame construction with emphasis on exterior wall finishing and roof construction. Two lecture, six lab hours per week.

Prerequisite(s): CAT 154

156 Interior & Exterior Finishes 4 Cr. Hrs.

An orientation to interior and exterior finishes on frame construction. Two lecture, six lab hours per week.

157 Residential Electrical Systems 4 Cr. Hrs.

Basic safety procedures, use of power and hand tools, electrical circuit theory and basics of residential wiring observing the National Electric Code. Two lecture, six lab hours per week.

159 Excavation Equipment & Operations 4 Cr. Hrs.

An introduction to the operation and management of motorized construction and excavation equipment. Two lecture, six lab hours per week.

Prerequisite(s): CAT 145

160 Introduction to Energy Management Principles 4 Cr. Hrs.

This course introduces the principles of energy management and provides an overview of the energy industry. The history of energy production and costs, the dynamics of worldwide energy consumption and growth, the principle methods by which energy is used, and its environmental and financial impacts and consequences are covered. Objectives and components of an effective energy management program are discussed.

161 Solar Photovoltaic Design & Installation 4 Cr. Hrs.

This course covers components of solar PV systems and the sizing of PV systems and components. Designed to prepare the student to take the NABCEP PV Entry Level Exam. Three lecture, two lab hours per week.

Prerequisite(s): CAT 145

162 Solar Thermal Design & Installation 4 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 NABCEP North American Board of Certified Energy Practitioners (NABCEP) solar thermal installer examination but does not provide all of the materials needed to complete the certification examination. Three lecture, two lab hours per week.

Prerequisite(s): CAT 145

163 Weatherization Training 3 Cr. Hrs.

The Weatherization certification course will give the student the in-depth knowledge necessary to perform energy assessments of single or multifamily dwellings by identifying weatherization issues. The course covers the operation of equipment; blower door, duct blaster, infrared camera, combustion analyzer, and heat transfer principles and fundamental building science theories. Two lecture, two lab hours per week.

181 Construction Techniques I R 4 Cr. Hrs.

Basic safety, hand and power tools, wood building materials and fasteners, and framing systems. Two lecture, six lab hours per week.

Prerequisite(s): Approval of chairperson

182 Construction Techniques II R 4 Cr. Hrs.

Construction of concrete structures including forming, placing and finishing. Two lecture, six lab hours per week.

Prerequisite(s): Approval of chairperson

183 Construction Techniques III R 4 Cr. Hrs.

Exterior and interior finishing of frame structures including roofing materials, siding, drywall, stairs, doors and trim. Two lecture, six lab hours per week.

Prerequisite(s): Approval of chairperson

184 Construction Techniques IV R 4 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. Two lecture, six lab hours per week.

Prerequisite(s): Approval of chairperson

199 Architectural 2-D Drafting 3 Cr. Hrs.

Study and application of advanced drawing using computer graphic systems. Major emphasis on 2-D commands and page layout. Two lecture, two lab hours per week.

Prerequisite(s): ETD 199 and CAT 101 or CAT 138 or CAT 139

201 Introduction to Revit Architecture 3 Cr. Hrs.

Study and application of advanced drawing using AutoDesk Revit. Major emphasis on Building Information Modeling (BIM) theory, along with construction of residential and commercial building models. Two lecture, two lab hours per week.

Prerequisite(s): CAT 101 or CAT 138 and ETD 199

202 Introduction to Revit MEP 3 Cr. Hrs.

Study and application of advanced drawing using AutoDesk Revit MEP. Major emphasis on Building Information Modeling (BIM) theory along with construction of MEP systems. Two lecture, two lab hours per week.

Prerequisite(s): CAT 101 or CAT 138 or CAT 139 and ETD 199

207 Architectural Building Codes 3 Cr. Hrs.

Building permit process and definition of buildings as required in the Ohio Building Code. Emphasis on use groups, construction classification, exit requirements and fire resistance requirements. Develop graphics of proper code assemblies of wall/roof/floor materials. Identify and apply minimum materials standards to construction standards and develop installation details. Two lecture, two lab hours per week.

Prerequisite(s): CAT 106

212 Mechanical Systems Design & Drawing with CAD R 4 Cr. Hrs.

Designing and drawing of plumbing, heating and air conditioning, electrical and lighting systems with CAD. Two lecture, four lab hours per week.

Prerequisite(s): CAT 199 or CAT 201 or CAT 202

216 Construction Estimating 4 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 lecture, four lab hours per week.

Prerequisite(s): ETD 198 and CAT 101 and CAT 105 or CAT 138

221 Topographic Surveying & Geomatics 4 Cr. Hrs.

Utilization of surveying equipment and CAD software to perform field data collection and adjustments and produce base drawings. Two lecture, four lab hours per week.

Prerequisite(s): CAT 123 and CAT 199

227 Introduction to GIS & GPS 3 Cr. Hrs.

An introduction to Geographic Information Systems (GIS) used in the land and utility record keeping systems using Global Positioning Systems (GPS) to gather data. Two lecture, two lab hours per week.

Prerequisite(s): CAT 123 and CAT 199

229 Advanced Construction Surveying 3 Cr. Hrs.

Solving complex surveying problems for construction layout of buildings, sites and roads using appropriate mathematical calculations and surveying equipment. Two lecture, two lab hours per week.

Prerequisite(s): MAT 132 and CAT 221

231 OSHA Construction Standards 3 Cr. Hrs.

Rules, interpretations, record keeping and standards required by OSHA (29CFR Part 1926) for the construction industry to ensure employees a safe, healthful work place. Successful completion of this course provides the "30 Hour OSHA Construction Safety Card." Two lecture, two lab hours per week.

240 Residential Design with CAD 4 Cr. Hrs.

First of a two-course sequence using computers for architectural design and drafting architectural file structure, manipulation of architectural symbols, menu commands, and text conventions used to generate architectural plans. Two lecture, four lab hours per week.

Prerequisite(s): CAT 102 and CAT 199

241 Commercial Design with CAD**4 Cr. Hrs.**

Design studio for a commercial structure. Students will develop and document their own design and produce a set of construction documents for the project. Two lecture, four lab hours per week.

Prerequisite(s): CAT 207 and CAT 240 and CAT 201 or CAT 199

245 Soil Mechanics**4 Cr. Hrs.**

Theories of soil mechanics including soil classifications, sampling and testing methods, stress distribution, shearing resistance and strength of soils. Two lecture, four lab hours per week.

Prerequisite(s): CAT 131 and ETD 198 and ETD 213

252 Construction Law & Specifications**3 Cr. Hrs.**

Examination of legal principles in the area of contracts, specifications, and personnel issues connected to construction. Two lecture, two lab hours per week.

Prerequisite(s): CAT 105 and CAT 106 and CAT 207

255 Engineering Technology Project Management**4 Cr. Hrs.**

Practical planning and control of 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 techniques using computer based software. Two lecture, four lab hours per week.

Prerequisite(s): ETD 198 and CAT 216 or ETD 101

260 Architectural Energy Analysis**3 Cr. Hrs.**

Critical examination of energy consumption in building, both residential and commercial, for the purpose of identifying energy conservation opportunities. Two lecture, two lab hours per week.

Prerequisite(s): CAT 139 or CAT 199 or CAT 201 or CAT 202 and PHY 100 or PHY 131 or PHY 141

261 Electrical Lighting & Motors**3 Cr. Hrs.**

The course covers components of lighting systems, control strategies, current technologies and electric motors. Energy efficiency opportunities and environmental impacts are identified and analyzed. Two lecture, three lab hours per week.

Prerequisite(s): PHY 100 AND EET 120

262 Energy Control Strategies**3 Cr. Hrs.**

The course examines different control strategies used to regulate or control energy-consuming equipment in buildings, including heating, cooling, ventilating and lighting systems. Two lecture, three lab hours per week.

Prerequisite(s): PHY 100, EET 120, HVA 160, AND HVA 184

263 Commercial & Industrial Assessment**4 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. Three lecture, two lab hours per week.

Prerequisite(s): PHY 100, EET 120, HVA 160, AND HVA 184

265 LEED Green Associate Exam Preparation**4 Cr. Hrs.**

This course helps prepare the student for the first of the LEED AP exams, LEED Green Associate Exam and meets the requirement of the student having involvement on a LEED-register 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 AP Green Associate Exam.

270 Civil Architectural Internship R**1 - 12 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.

278 Civil Architectural Capstone**4 Cr. Hrs.**

Assessment of achievement by Civil Architectural Technology students in attaining program outcomes by completing a project demonstrating principles and practices of the major. Teamwork on projects will be emphasized. One lecture, six lab hours per week.

Prerequisite(s): Approval of chairperson

297 Civil Architectural Special Topics R**1 - 6 Cr. Hrs.**

Varied content offerings of special interest to the discipline but not covered within existing courses; may be scheduled in a classroom/seminar setting or in a non-traditional format.

Prerequisite(s): Permission of instructor

Chemistry (CHE)**116 Introduction to Scientific****Glassblowing R****1 Cr. Hr.**

Basic operations used in scientific glassblowing emphasizing design, construction, and repair of simple scientific apparatus. Three lab hours per week.

120 Introduction to Chemistry**4 Cr. Hrs.**

Surveys chemistry for allied health, non-science and elementary education majors. Atomic theory, periodic law, chemical bonding, nomenclature, basic chemical calculations, states of matter, solutions, acids and bases, and nuclear chemistry. Three lecture; two lab hours per week (CHE 126).

Prerequisite(s): DEV 085

121 Introduction to Organic Chemistry**4 Cr. Hrs.**

An introduction to alkanes, alkenes, alkynes, aromatic hydrocarbons, alkyl halides, aldehydes, ketones, alcohols, ethers, amides, carboxylic acids, amines, esters, stereoisomerism, polymers, and compounds containing phosphorous and sulfur. Three lecture, three lab hours (CHE 127) per week.

Prerequisite(s): CHE 120

122 Introduction to Biochemistry**4 Cr. Hrs.**

Introduces organic functional groups, nomenclature, carbohydrates, lipids, proteins, enzymes, metabolism of carbohydrates, lipids and proteins, heredity and protein synthesis, vitamins and hormones, chemistry of body fluids. Three lecture, three lab hours (CHE 128) per week.

Prerequisite(s): CHE 120

126 Lab for CHE 120

Laboratory must be taken with CHE 120.

127 Lab for CHE 121

Laboratory must be taken with CHE 121.

128 Lab for CHE 122

Laboratory must be taken with CHE 122.

131 Technical Chemistry I**4 Cr. Hrs.**

An applied chemistry course for students in Engineering Technology. Topics considered include atomic structure, elements, compounds, the periodic table, chemical bonding, nomenclature, chemical reactions, chemical calculations, the states of matter, equilibria, acids and bases, oxidation reduction reactions, electrochemistry, and elementary organic chemistry. Three lecture, three lab hours (CHE 137) per week.

Prerequisite(s): MAT 102 or MAT 103

134 Environmental Analytical Chemistry 4 Cr. Hrs.

Field data acquisition techniques; separation techniques, volumetric techniques, gravimetric techniques, gas and high pressure chromatographic techniques, atomic absorption techniques of analysis; and statistical methods using EPA protocols. Two lecture, six lab hours per week.

Prerequisite(s): CHE 121

137 Lab for CHE 131

Laboratory must be taken with CHE 131.

139 Lab for CHE 134

Laboratory must be taken with CHE 134.

141 College Chemistry I 4 Cr. Hrs.

A university parallel course in chemistry for the non-science major. Atomic theory, the periodic law, chemical bonding, kinetics and equilibrium, nuclear chemistry and energy. Three lecture hours, two lab hours (CHE 147) per week.

Prerequisite(s): DEV 085

142 College Chemistry II 4 Cr. Hrs.

A continuation of CHE 141. Acids and bases, oxidation and reduction, sources of inorganic materials, organic chemistry and industrial applications, polymer chemistry, and biochemistry. Three lecture hours, two lab hours (CHE 148) per week.

Prerequisite(s): CHE 141 or CHE 120 or CHE 151

143 College Chemistry III 4 Cr. Hrs.

A continuation of CHE 142. The chemistry of water, the atmosphere, agriculture, nutrition, medicine, household chemistry, transportation chemistry, and the chemistry of imaging. Three lecture, two lab hours (CHE 149) per week.

Prerequisite(s): CHE 142

147 Lab for CHE 141

Laboratory must be taken with CHE 141.

148 Lab for CHE 142

Laboratory must be taken with CHE 142.

149 Lab for CHE 143

Laboratory must be taken with CHE 143.

151 General Chemistry I 5 Cr. Hrs.

A university parallel course in chemistry for science and engineering majors. Atomic theory, periodic law, chemical bonding, nomenclature, stoichiometry, and elementary organic chemistry. Four lecture, three lab hours (CHE 157) per week.

Prerequisite(s): MAT 102 or MAT 131

152 General Chemistry II 5 Cr. Hrs.

A continuation of CHE 151. Emphasis is placed on the study of ideal and non-ideal states of matter: gases, solids, liquids, solutions and colloids, thermodynamics, kinetics and basic equilibria. Four lecture, three lab hours (CHE 158) per week.

Prerequisite(s): CHE 151 and MAT 116 or MAT 132

153 General Chemistry III 5 Cr. Hrs.

A continuation of CHE 152. An in-depth study of applied equilibria, pH, electrochemistry, and nuclear chemistry. The descriptive chemistry of selected elements is discussed and a chemically oriented industry is toured. In addition to the above topics, qualitative analysis, gas chromatography, and visible IR and atomic absorption spectroscopy are studied in the laboratory. Three lecture, six lab hours (CHE 159) per week.

Prerequisite(s): CHE 152

157 Lab for CHE 151

Laboratory must be taken with CHE 151.

158 Lab for CHE 152

Laboratory must be taken with CHE 152.

159 Lab for CHE 153

Laboratory must be taken with CHE 153.

201 Organic Chemistry I 5 Cr. Hrs.

Alkanes, stereochemistry, alkyl halides, organometallic compounds, alcohols, ethers, and epoxides. Four lecture, three lab hours (CHE 207) per week.

Prerequisite(s): CHE 153

202 Organic Chemistry II 5 Cr. Hrs.

Alkenes, alkynes, aromatic hydrocarbons, aldehydes, ketones, carboxylic acids, and spectroscopic methods of organic analysis. Four lecture, three lab hours (CHE 208) per week.

Prerequisite(s): CHE 201

203 Organic Chemistry III 5 Cr. Hrs.

Derivatives of carboxylic acids, enolates, carbanions, amines, polycyclic and heterocyclic aromatic compounds, pericyclic reactions, polymers, composite materials, and biochemistry. Four lecture, three lab hours (CHE 209) per week.

Prerequisite(s): CHE 202

207 Lab for CHE 201

Laboratory must be taken with CHE 201.

208 Lab for CHE 202

Laboratory must be taken with CHE 202.

209 Lab for CHE 203

Laboratory must be taken with CHE 203.

211 Analytical Chemistry I 4 Cr. Hrs.

Traditional techniques of chemical analysis including gravimetric, volumetric, precipitation and selected topics in spectroscopy and electrochemistry. Two lecture, six lab hours (CHE 217) per week.

Prerequisite(s): CHE 143 or CHE 153

212 Analytical Chemistry II 4 Cr. Hrs.

Traditional instrumental analysis including: colorimetry, infrared, ultra-violet, visible, atomic absorption and various chromatographic methods. Two lecture, six lab hours (CHE 218) per week. Primarily for the associate degree student.

Prerequisite(s): CHE 211

217 Lab for CHE 211

Laboratory must be taken with CHE 211.

218 Lab for CHE 212

Laboratory must be taken with CHE 212.

245 Concepts in Chemistry 5 Cr. Hrs.

Basic concepts and applications including matter, physical states and changes, periodicity, compounds and bonding, chemical changes, solutions and electrolytes, acids and bases, oxidation and reduction, and organic chemistry. Applications use an inquiry learning environment which emphasizes science process skills integrated with mathematics. Early childhood education majors only. Does not satisfy chemistry requirement for middle childhood education majors. Four lecture, three lab hours per week.

Prerequisite(s): ASE 145 and MAT 142 or MAT 110 or equivalent

**270 Chemistry Internship R
2 - 12 Cr. Hrs.**

The internship is designed to support a variety of experiential learning needs. Adult learners with extensive learning from prior experience may receive acknowledgment of that learning with internship credit upon submission of a portfolio to an evaluation committee. Younger students with limited experience will participate in selected non-classroom experiences with relationship to their educational needs. Students already working full or part time may apply to use that experience in fulfillment of the internship requirement. For the latter two types of students, learning outcomes are established and related reports and/or projects are submitted each term.

297 Special Topics in Chemistry R 1 - 6 Cr. Hrs.

To provide opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline; objectives will vary with the particular content area. Course is repeatable as topics change.

Chinese (CHN)

100 Conversational Chinese 3 Cr. Hrs.

Basic conversational skills through situational dialogues and command of the phonic pinyin system and essential idiomatic expressions. Mastery of written Chinese characters is not required.

105 Conversational Chinese II 3 Cr. Hrs.

Advanced conversational skills through situational dialogues and idiomatic expressions within complex cultural settings. Mastery of written Chinese characters is not required.

Prerequisite(s): CHN 100

297 Special Topics in Chinese R 1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline.

Computer Information Systems (CIS)

100 CIS Student Orientation for Success 2 Cr. Hrs.

An introduction to the Computer Information Systems (CIS) department and the career field of Information Technology (IT), and a thoughtful examination of legitimate use of information found on the Internet including practical application of ethical questions and issues regarding computer and Internet use. Emphasis on the development of practical knowledge, skills and information needed to assist learners in the attainment of IT career goals and developing responsible actions for using computers and the Internet.

101 Computer Networks & Security 3 Cr. Hrs.

Information and skills needed to setup and provide minimum security for a personal and/or home office network. Includes detailed instructions on how to plan and set up home networks; router set up and programming (wired and wireless) are also addressed. This course prepares students for more advanced topics in securing business networks.

Prerequisite(s): BIS 105

107 Introduction to Operating Systems 3 Cr. Hrs.

Introduction to the current Windows desktop operating system Administrative Tools and various Control Panel applets used to manage Windows. Beginning and intermediate operating system commands as executed from a command prompt on a Windows system. An assessment of basic computer concepts, keyboarding, and mouse skills will be done upon entering the course. Students should possess keyboarding, mouse skills, and complete all Developmental Studies courses (DEV) prior to enrolling in this course. Recommend BIS 105 (or equivalent). Intended for CIS majors.

111 Introduction to Problem Solving & Computer Programming 4 Cr. Hrs.

Introduction to logical problem solving techniques used in programming. The course focuses on developing problem solving and program design abilities. Topics covered include problem solving, fundamentals of data concepts, structured design involving sequence, selection and repetition structures using both flowcharts and pseudocode, and application of the program development process: design, code, and test. Recommended Prerequisite: BIS 105 or equivalent.

Prerequisite(s): MAT 101 or equivalent with a grade of "C" or better

112 Object Oriented Concepts 3 Cr. Hrs.

Introduction to software development using object oriented analysis and design (OOA&D). This methodology expresses solutions in terms of objects: self-contained entities composed of data and operations on that data. Classes, objects, encapsulation, inheritance, and polymorphism concepts will be presented. Various OOA&D tools and models including Unified Modeling Language (UML) will be introduced. Students will apply OO skills to some introductory programming solutions using Visual Basic. MS Visio will be used to create OOD documentation under UML standards.

Prerequisite(s): CIS 111

130 Introduction to Web Development 3 Cr. Hrs.

Introductory study of the web design and development process. Students will use web authoring software to create, edit and update web pages. Emphasis is on creating web pages for a business environment.

Prerequisite(s): BIS M75

131 Intermediate Web Development 3 Cr. Hrs.

This course focuses on the design principles for information Web sites with a focus on the end user. Key web standards will be used, such as XHTML and CSS. Students will create and publish several Web sites and present those sites for critique of the class.

Prerequisite(s): CIS 130

134 Web Animation 3 Cr. Hrs.

Course is an introduction to the Adobe Flash application. Create tweened animation, work with vector graphics, adding audio and video, and an introduction to ActionScript scripting language.

Prerequisite(s): CIS 130

137 Introduction to XHTML/JavaScript 4 Cr. Hrs.

The course covers the introduction to Extensible HyperText Markup Language (XHTML) and JavaScript programming language. XHTML is involved in creating documents for distribution on the World Wide Web. The standard XHTML tags will be covered, including basic formatting, headers, body attributes, page layout, links, tables, forms, and style sheets. JavaScript programming language is used to create dynamic, interactive effects on web pages. Standard programming language concepts will be covered including variables, branching, looping, functions and parameter passing. Projects include pop-up windows, scrolling messages, validating forms and cookies.

147 Visual Basic Programming I 4 Cr. Hrs.

Development and implementation of event driven, object oriented programs for graphical user interfaces within the Windows environment using the Visual Basic programming language. Learning outcomes include: using the Visual Basic .NET development environment, implementation of fundamental Visual Basic control objects and an introduction to ADO controls; use of selection and repetition programming structures, manipulating data obtained through user input, sequential files, and arrays; implementation of modular programming through use of sub and function procedures; string data manipulation through VB properties, methods and statements; how to set up and print formal business reports; an introduction to setting up classes of objects in the implementation of object oriented design; and an introduction to the development and implementation of user interfaces to a database.

Prerequisite(s): CIS 111 and CIS 112

162 Troubleshooting Desktop Applications on a Microsoft Windows Operating System
3 Cr. Hrs.

Introduction to troubleshooting and problem solving techniques for Microsoft Office. Review of the major components of the complete Office package. Real-world cases help the students to develop critical thinking skills in evaluating needed computer support while focusing on avoiding or preventing software problems. The students work with integration of networks and web as used in the software.

Prerequisite(s): BIS 160

164 Introduction to User Support
3 Cr. Hrs.

Introduction to the skills and abilities required to provide technical support and assistance to computer users. Emphasis is on customer service, problem solving and communication skills (needs analysis, troubleshooting and interaction with users). Topics include service concepts, skill sets, career paths, strategies to provide technical support and operations of the help desk and user support industry.

Prerequisite(s): CIS 107

166 User Support Tools & Techniques
3 Cr. Hrs.

An in-depth look into the business processes for user support, including processes and procedures for using help desk tools and technologies to determine and resolve typical help desk and user support problems.

Prerequisite(s): CIS 164

200 Fundamentals of Programming a Firewall
4 Cr. Hrs.

Information and skills needed to program a state-of-the-art firewall to secure a small office and/or home office network. Includes detailed instructions in the planning, setup, and programming of small Cisco IOS-based PIX firewalls; also prepares students for more advanced topics in securing branch and corporate office networks. Other manufacturers or models may be used in lieu of the PIX 501.

Prerequisite(s): CIS 242 or equivalent

201 Wireless Network Administrator
4 Cr. Hrs.

Planning, installing and maintaining a wireless network. Included will be topics necessary for the successful completion of both vendor neutral and vendor specific wireless certifications.

Prerequisite(s): CIS 230 or CIS 241

206 Network Security I 3 Cr. Hrs.

A current overview of both network and Internet based security practices and conventions. Includes planning, implementing, and managing network security. Through an exploration of security technologies, vulnerability assessment and attack methods, this course addresses how to minimize potential security risks. Preparation will also be given for the Security+ certification.

Prerequisite(s): CIS 107 and CIS 230 or CIS 241. Equivalent knowledge such as TCP/IP networks and network operating systems

207 Network Security II 3 Cr. Hrs.

An advanced course in network and Internet based security practices and conventions. Includes advanced level planning, implementing, and managing network security. Also includes detailed study of security risks and responses. Preparation will also be given for the Security+ certification.

Prerequisite(s): CIS 206, working knowledge of TCP/IP networks and other network operating systems

208 Introduction to Computer Forensics 4 Cr. Hrs.

Computer forensics is the study of obtaining and analyzing evidence/information for use as evidence in civil, criminal or administrative cases. Includes data acquisition, processing of crime and incident scenes, forensic tools, network, operating systems, and e-mail forensics. A criminal records check must be completed prior to enrolling in CIS 208; no exceptions will be made. See the CIS Web site for more information. The fee for the criminal records check is \$65.

Prerequisite(s): CIS 207, CIS 230, and CIS 264 and approval of chairperson

210 Computer Systems Analysis
3 Cr. Hrs.

Introduction to the systems development life cycle and the four-phase model (planning, analysis, design and implementation) common to all information system projects. Emphasis on requirements gathering, methodology, modeling and skills related to specifications, design and documentation.

Prerequisite(s): CIS 111

212 Windows Application Infrastructure 4 Cr. Hrs.

This course will consider the critical aspects of the administration of an application infrastructure in a Windows network including the deployment and maintenance of servers to provide highly available storage, images for future installations and virtual environments for hardware efficiency. Managing servers providing terminal services, load balancing and a robust network infrastructure for file, mail, web and other services will be considered. Emphasis will be given to providing appropriate levels of security and authentication throughout this environment.

Prerequisite(s): CIS 273 and CIS 274

213 Windows Server Enterprise Administrator 4 Cr. Hrs.

This course prepares a student to manage a Windows Server network in a large enterprise environment and to prepare for the current Microsoft certification exam on this topic. Specific areas addressed in this course include planning network and application services; designing identity and access management components; and designing for business continuity and high availability services.

Prerequisite(s): CIS 273 and CIS 274

214 Windows Server Administrator 4 Cr. Hrs.

This course prepares a student to function as a server administrator; to be responsible for the operations and day-to-day management of an infrastructure of servers for an enterprise organization; and, to prepare for the current Microsoft certification exam on this topic. Specific areas addressed in this course include managing the server operating system; managing file and directory services; providing software distribution and updates; profiling and monitoring assigned servers and troubleshooting.

Prerequisite(s): CIS 273 and CIS 274

223 Extensible Markup Language
3 Cr. Hrs.

Introduction to the Extensible Markup Language (XML) for data exchange and document publishing. topics including Extensible Style Sheet Language (XSL), Document Type Definitions (DTD), Document Object Model (DOM), and Simple Application Programming Interface for XML (SAX). Students will apply their knowledge by creating a simple e-commerce application.

Prerequisite(s): CIS 111, CIS 265 and CIS 137

224 Web Server Administration & Security 4 Cr. Hrs.

Introduction to the technical skills needed to install, configure and maintain a secure web server. Topics include web directories and permissions, user accounts and documents, client and server security, secure online transactions, and intrusion detection and recovery.

Prerequisite(s): CIS 131 or CIS 141 or CIS 143 or CIS 144 or CIS 284 or CIS 285

225 A+ Certification Essentials: Operating Systems 3 Cr. Hrs.

Introduction to theoretical and practical concepts related to modern, personal computer (P.C.) operating systems. Includes functions and characteristics of current operating systems in common use. Lab projects will be assigned.

Prerequisite(s): CIS 107

230 Computer Networks 3 Cr. Hrs.

Fundamentals of network and data communication including protocols, hardware, software, and local and area wide networks with emphasis on network analysis, design, management, and applications; balances technical aspects of both data communications and managerial issues by incorporating current models such as the seven-layer Open Systems Interconnection (OSI) and Systems Network Architecture (SNA).

Prerequisite(s): CIS 107

231 Introduction to Linux + 3 Cr. Hrs.

Linux operating system installation, management, administrative and troubleshooting techniques for beginning and intermediate students. Both the command line interface, with commonly used instructions, and a graphical interface will be used to manage and administer the Linux system. This course is the first of two courses which will prepare students for the CompTIA Linux + exam.

Prerequisite(s): CIS 230

232 Intermediate Linux 3 Cr. Hrs.

Intermediate study of the Linux Operating System including writing and debugging shell procedures, pipes and interprocess communications, and command lists. Assignments require lab time outside of class.

Prerequisite(s): CIS 107 and CIS 231

233 C++ Programming I 4 Cr. Hrs.

Introduction to the C++ programming language, building on prior introduction to programming studies. Topics include C++ syntax with its constructs, data types, logic and repetition structures, input/output methods, one-dimensional arrays, structures, and classes.

Prerequisite(s): CIS 111

234 C++ Programming II 4 Cr. Hrs.

This course builds on the foundation of C++ studies covered in CIS 233. Introduction to object based and object oriented programming using C++, including data encapsulation and methods (abstract data type - classes), class objects, constructors, destructors, operator overloading, inheritance, friends, virtual functions. Concepts addressed include searching-sorting, n-dimensional arrays, vectors, and pointers; programming assignments require additional time outside of class.

Prerequisite(s): CIS 233

236 C++ Programming with Data Structures 4 Cr. Hrs.

This course builds on the foundation of C++ studies covered in CIS 233, introduction to object based and object oriented programming using C++, and/or CIS 281, Java Programming II. In this course, students will learn object based and object oriented programming using C++, including data encapsulation and methods (abstract data type - classes), class objects, constructors, destructors, operator overloading, inheritance, basic data structures including recursions, lists, stacks, queues, trees, and concepts addressed include searching-sorting, n-dimensional arrays, vectors, and pointers.

Prerequisite(s): CIS 233 or CIS 281

238 P.C. Hardware Troubleshooting 4 Cr. Hrs.

Installing, configuring, maintaining and troubleshooting microcomputer hardware and software including CPU, storage devices, add-on boards and adapters, video displays, printers and communication devices, operating systems, and diagnostic software programs.

Prerequisite(s): CIS 107

241 Cisco Networking Fundamentals 7 Cr. Hrs.

First course in the four-course Cisco Certified Networking Associate (CCNA) sequence. Foundation skills needed for the mastering of the basic concepts of networking in an Internet/Intranet networking environment. Includes both hardware and software installation and management.

Prerequisite(s): CIS 107

242 Cisco Router Fundamentals 7 Cr. Hrs.

Second course in four-course sequence, building on the concepts of the Cisco Networking Fundamentals course (CIS241). Adds the fundamental concepts of router configuration and management, and basic router hardware and software components. Additional assignments will require lab time outside of class.

Prerequisite(s): CIS 241

243 Cisco Routing in LANs 7 Cr. Hrs.

Third course in four-course sequence, building on the concepts of previous courses. Topics include advanced router configurations, LAN switching theory, VLANs, advanced LAN and LAN switched design, Novell IPX, and threaded case studies. Additional assignments will require lab time outside of class.

Prerequisite(s): CIS 242

244 Cisco Routing in WANs 7 Cr. Hrs.

Fourth course in a four-course sequence, building on the concepts of previous courses. Topics include WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, Network troubleshooting, and threaded case studies. Additional review and practice for the Cisco Certified Network Associate exam. Additional assignments will require lab time outside of class.

Prerequisite(s): CIS 243

251 php Web Programming 3 Cr. Hrs.

php Web programming language and php Web applications. Includes php program development by individuals and teams to modify and create larger php web applications as well as publishing and testing php programs and applications on a live web server.

Prerequisite(s): CIS 136 and CIS 233 and CIS 265

253 Securing a Windows Network Environment 4 Cr. Hrs.

Provides students with the knowledge and skills to successfully plan, implement, and troubleshoot security for a Microsoft Windows network using the current version of the Microsoft Server operating system. Includes implementing baseline security; managing software updates through service packs and updates; securing local and remote network access; managing a Public Key Infrastructure (PKI); monitoring and responding to security incidents. Prepares students for the industry standard certification exam. Assignments require lab time outside of the classroom.

Prerequisite(s): CIS 271 and CIS 272 or equivalent knowledge

255 Securing a Unix/Linux Operating System 4 Cr. Hrs.

Introduction to the most common tools used to protect a UNIX/Linux Operating System environment from unauthorized use. In addition, the course provides an overview of vulnerable areas related to network security.

Prerequisite(s): CIS 232 or equivalent knowledge

257 Microsoft Internet Security & Acceleration (ISA) Server 4 Cr. Hrs.

Planning, implementing, installing and troubleshooting the current version of the Microsoft Windows firewall product (Internet Security and Acceleration Server). Various topologies, installation, configuration, and ISA hosting are also addressed. Prepares students for the industry-standard certification exam related to this product. Assignments require lab time outside of the classroom.

Prerequisite(s): CIS 272

259 Designing Security for Windows Networks 4 Cr. Hrs.

Conceptual, logical and physical design of a network security infrastructure; includes analyzing business and technical requirements. Prevention, detection and isolation of various threats. Design of a public key infrastructure using Certificate Services; strategies for secure user authentication; operating system software update methods; security of data transmission using IPSec policies and virtual private networks (VPNs); securing wireless communication; and specific security requirements for various enterprise services, e.g., web, database and mail servers.

Prerequisite(s): CIS 272 and CIS 273 and CIS 274 and CIS 253

261 C# Programming 4 Cr. Hrs.

Windows applications development using the C# programming language. Emphasis will be placed on creating graphical user interfaces and interaction with relational databases.

Prerequisite(s): CIS 233

264 A+ Certification IT Technician 4 Cr. Hrs.

Installing, configuring, upgrading, maintaining and troubleshooting microcomputer hardware and software including CPU, storage devices, add-in boards and adapters, video displays, printers and communication devices. This course will prepare students for the CompTIA A+ Certification Exam. A+ Certification is a testing program sponsored by the Computing Technology Industry Association (CompTIA) that certifies the competency of service technicians in the computer industry.

Prerequisite(s): CIS 225

265 Database Management Systems 3 Cr. Hrs.

Introduction to database systems. Discussion of data base environments, design, planning and implementation 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): CIS 111 or BIS M35

268 Introduction to Oracle: SQL & PL/SQL 3 Cr. Hrs.

Introduction to Oracle DBMS in a client/server environment. The course covers SQL and PL/SQL programming languages. Students are taught to create and maintain database objects and to store, retrieve and manipulate data. Students learn to create PL/SQL blocks of application code that can be shared by multiple forms, reports and data management applications.

Prerequisite(s): CIS 265 or CIS 266

269 Data Analytics Theory & Solutions 4 Cr. Hrs.

An introduction to business intelligence, data analysis, data warehousing and data mining theory and tools. Students will have the ability to understand 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 265 and MAT 122

270 CIS Internship R 1 - 9 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): CIS 107 and CIS 111, approval of chairperson or approval of coordinator

271 Administering a Microsoft Windows Client Operating System 4 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 107 and CIS 230

272 Microsoft Windows Server Operating System 4 Cr. Hrs.

Intermediate and advanced aspects of the administration and support functions of a Windows Server administrator. Outcomes include installation and setup of the current Windows Server operating system, setup and administer a client server network and in-depth knowledge of the current Windows Server operating system. Prepares students for the industry certification exam. Assignments require lab time outside of class.

Prerequisite(s): CIS 107 and CIS 230

273 Configuring a Windows Network Infrastructure 4 Cr. Hrs.

Intermediate and advanced aspects of the administration and support functions of a Windows network infrastructure using the current Windows Server operating system. Focus on the ability to install, manage, monitor, configure, and troubleshoot name resolution (DNS), Internet Protocol (IP) addressing and services (DHCP), network access file and print services, network protocols, and IP routing in a Windows network. Prepares students for the industry certification exam. Assignments require lab time outside of class.

Prerequisite(s): CIS 271 and CIS 272

274 Windows Directory Services Administration 4 Cr. Hrs.

Provides students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Active Directory® infrastructure using the current version of the Microsoft Server operating system. The course focuses on a Windows directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies. Prepares students for the industry standard certification exam. Assignments require lab time outside of the classroom.

Prerequisite(s): CIS 271 and CIS 272

275 Designing Windows Active Directory & Network Infrastructure 4 Cr. Hrs.

Intermediate and advanced aspects of the design and support functions of Windows Active Directory (AD) Services and Network Infrastructure. Focus is on the ability to design and analyze Directory Services architecture and Network Services requirements. Prepares students for the industry certification exam. Assignments require lab outside of classroom.

Prerequisite(s): CIS 273 and CIS 274

277 Planning a Windows Network Infrastructure 4 Cr. Hrs.

The analysis of existing and planned business models and their implications for a network design is presented. Fault tolerance and redundancy are discussed as important design objectives. Major elements of a network infrastructure are examined in detail including network topology; routing; Internet Protocol (IP) addressing; name resolution services; virtual private networks (VPNs); and remote access. Heavy emphasis on planning a network design using the current Windows Server operating system. Prepares students for the industry certification exam.

Prerequisite(s): CIS 272 and CIS 273

278 CIS Capstone 4 Cr. Hrs.

Assessment of skills and competencies by CIS 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 quarter prior to graduation. Three lecture, two lab hours per week.

Prerequisite(s): CIS 243 or CIS 264 or CIS 273 and CIS 274 or CIS 137 or CIS 280 and CIS 233

279 Microsoft SQL Server Administration 4 Cr. Hrs.

Provides skills and resources needed to install, configure and administer MS SQL Server. Outcomes include installation and setup of the MS SQL Server; setup and administration of a client server database and an in-depth knowledge of the MS SQL Server Database Application and its application interfaces and client tools. This course also prepares students for the Microsoft certification exam.

Prerequisite(s): CIS 272

280 Java Programming I 4 Cr. Hrs.

The course covers the basics of Java programming and object oriented software. Objects, attributes, and methods in Java are covered. The basics of programming structures are covered: selection, looping and arrays.

Prerequisite(s): CIS 111 and CIS 112

281 Java Programming II 4 Cr. Hrs.

A continuation of the Java Programming I course, delving more deeply into the basics of Java programming and object oriented software. Classes, object families, menus, graphics, sound, the AWT, streams, files, data structures and utility classes, threads, and networking.

Prerequisite(s): CIS 280

284 Client/Server Web Tools Using ASP.NET 3 Cr. Hrs.

This course provides a complete overview of ASP.NET for professional developers who know a .NET language such as C# or VB. Along with the fundamentals of how ASP.NET works; students will learn how to architect secure sites, how to use ASP.NET in conjunction with relational database products like SQL Server, and how to use performance enhancing techniques like caching. Students will use Visual Studio as a design tool. Past experience with web development is helpful, but not required.

285 Web Application Development with Java 4 Cr. Hrs.

Designing, writing and deploying web-based n-tier applications using Java related technologies. Topics include: HTML, JavaScript, cookies, session variables, Java Servlets, JavaServer Pages, JDBC, Java Beans and XML Extensive lab exercises reinforce course topics. Students will design, create and deploy a small e-business Web site.

Prerequisite(s): CIS 280 or CIS 283 and CIS 265

297 Special Topics in Computer Information Systems R 0.5 - 7 Cr. Hrs.

Provides opportunities to receive credit for special interest topics within the discipline. Brief description of topics will be given and prerequisites identified when course is offered. Some lab time outside of class may be required.

Criminal Justice (CJS)**080 Private Security Training Academy R 6 Cr. Hrs.**

This course is open to all students who wish to attain an Ohio Peace Officer Training Academy certificate of completion from the Ohio Attorney General's Office. The course consists of 132 hours of both academic and physical training, but does not have a firearms certification component. At the conclusion of training, students are required to take a final exam administered by the Attorney General's Office to receive a certificate of completion.

101 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 064 and DEV 074

102 Constitutional Law 3 Cr. Hrs.

Survey of federal and state constitutional law. Emphasis on the Bill of Rights and the Fourth, Sixth, Eighth and Fourteenth Amendments. Key federal and state statutes and their interpretations are reviewed, with particular attention to due process, equal protection and administrative law.

Prerequisite(s): DEV 065 and DEV 110 or DEV 130

104 Criminal Evidence & Procedures 3 Cr. Hrs.

Procedures of criminal justice professionals in criminal investigation, evidence collection, prosecution, testimony and trial. Legal and ethical guidelines and restrictions for professionals at each stage of the criminal justice process. Overview of court systems and procedures.

Prerequisite(s): DEV 065 and DEV 110 or DEV 130

105 Criminal Law 3 Cr. Hrs.

Basic principles of criminal law, including federal and state statutes. Analysis of types and levels of offenses; common defense, prosecution and sentencing processes. Preparation of case materials, court procedures, and case disposition.

Prerequisite(s): DEV 065 and DEV 110

106 Transition Skills 3 Cr. Hrs.

This course will address the process of community re-entry from a personal, social, and occupational perspective by engaging the incarcerated offender in the process of building a personal portfolio that includes career and financial goals, a professional resume, the job search process, a personal budget, a savings and investment plan, and access to community resource information.

110 Interrogation, Documentation & Testimony 3 Cr. Hrs.

Development of communication skills applicable to criminal justice professions. Emphasis on interviewing, interrogation, and documentation of evidence through reports and oral testimony.

Prerequisite(s): DEV 110 or DEV 130 and DEV 065

111 Criminal Justice Ethics & Professionalism 3 Cr. Hrs.

Examination of the legal and ethical obligations of professionals in law enforcement, the courts, corrections, and private security. Analysis of actions of individuals and organizations within the criminal justice system against accepted standards for ethical and legal professional practice.

Prerequisite(s): DEV 110 or DEV 130 and DEV 065 equivalent

125 Police Organization & Administration 3 Cr. Hrs.

Management of law enforcement agencies, including operational units such as investigations, patrol, internal affairs and traffic enforcement. Principles of organization, staffing, budgeting, controlling, training, and planning are discussed. Examination of approaches to leadership and management in a law enforcement context.

Prerequisite(s): DEV 110 and DEV 065 or DEV 130 or equivalent

130 Homeland Security Administration 3 Cr. Hrs.

Contemporary security issues in public and private spaces including risk analysis, critical incident management, inter-agency cooperation, specialized security fields, intelligence gathering and litigation. Students will explore a broad range of career opportunities in this field.

Prerequisite(s): DEV 065 and DEV 075

140 Human Relations & Cultural Diversity 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.

Prerequisite(s): DEV 065 and DEV 075

145 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 110 or DEV 130 and DEV 065 or equivalent

155 Homeland Security Issues 3 Cr. Hrs.

Overview of Homeland Security threats, statutes and resources. The role of law enforcement officers as first responders, with emphasis on interagency cooperation.

Prerequisite(s): DEV 065 and DEV 075

165 Corrections Administration & Operations 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.

Prerequisite(s): DEV 065 and DEV 110

170 Community Based Policing 3 Cr. Hrs.

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.

Prerequisite(s): DEV 065 and DEV 075

197 Corrections Full Service Jails/Basic Correction Officer Academy 6 Cr. Hrs.

Training required by the State of Ohio for corrections officers to attain certification for performing corrections officer functions. This course is not open to the general student population. Only individuals currently working as corrections officers for a law enforcement agency and sponsored by the agency may attend this course. The program consists of 136 hours of both academic and physical training but does not have a firearms component. At the conclusion of training, students are required to take a final exam administered by the Ohio Attorney General's Office to receive a certificate of completion. This program is offered each term.

Prerequisite(s): Approval of coordinator

200 Mediation & Conflict Resolution 3 Cr. Hrs.

Strategies for mediation, conflict resolution and critical incident management for law enforcement and corrections personnel, including hostage negotiation and circumstances that contribute to and prevent conflict in community and institutional settings.

Prerequisite(s): DEV 065 and DEV 075

205 Criminal Investigation 3 Cr. Hrs.

Survey of the 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, criminalistics, and crime scene reconstruction. Skills for investigating major crimes, including homicide, robbery, theft, arson and sexual offenses.

Prerequisite(s): DEV 110 or DEV 130 and DEV 065

209 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 065 and DEV 075

210 Youthful Offenders & The Law 3 Cr. Hrs.

Overview of the history, organization and jurisdiction of Juvenile Justice agencies. Detention, evaluation, and sentencing procedures, including rights of youthful offenders. Current trends in rehabilitation of youthful offenders and denoting particular attention to the youthful offender within the State of Ohio.

Prerequisite(s): DEV 110 or DEV 130 and DEV 065 or equivalent

215 Introduction to Forensic Science 3 Cr. Hrs.

Physical evidence collection, identification, and preservation, and the crime laboratory capabilities and limitations.

Prerequisite(s): DEV 110 or DEV 130 and DEV 065 or equivalent

226 Contemporary Practices in Corrections 3 Cr. Hrs.

Examination of best practices in the field of corrections, including state and federal programs for institutional and community settings.

Prerequisite(s): DEV 065 and DEV 110

265 Criminal Justice Research 3 Cr. Hrs.

Overview of basic social science research methods as applied to the criminal justice profession. Research design, types of research and data analysis will be covered, along with ethical, legal and political implications of research and data analysis in criminal justice.

Prerequisite(s): ENG 111, DEV 110 or DEV 130 and DEV 085 and DEV 065 and CJS 101

270 Criminal Justice Science Internship I 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.

Prerequisite(s): DEV 065 and DEV 110, approval of chairperson

271 Criminal Justice Science Internship II 3 Cr. Hrs.

Opportunity for additional observation and participation in a Criminal Justice agency. A continuation of CJS 270.

Prerequisite(s): DEV 065 and DEV 110, approval of chairperson

280 Basic Peace Officer Training I 12 Cr. Hrs.

Training required by the State of Ohio for prospective police officers. This course includes one-half of the required training in order to be eligible for certification to perform law enforcement duties.

Prerequisite(s): DEV 065 and DEV 075, approval of department

281 Basic Peace Officer Training II
12 Cr. Hrs.

Preparation for entry level peace officer/police positions. Curriculum follows the required content and instructional standards set by the Ohio Peace Officer Training Commission.

Prerequisite(s): DEV 065 and DEV 075, approval of coordinator

295 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 and service learning. Attention to preparation for employment in the field of criminal justice.

Prerequisite(s): DEV 065 and DEV 110, approval of chairperson

297 Special Topics in Criminal Justice Science R
1 - 6 Cr. Hrs.

Current issues and trends in the field of criminal justice. Topics are offered throughout the academic year on a variety of subjects and in response to emerging trends and requests from professionals in the field.

Communication (COM)**201 Introduction to Mass Communication**
3 Cr. Hrs.

History, practices, and functions of the press, television, radio, film, advertising, digital media and public relations. Investigates mass media's influence on modern society. An extensive examination of media theory and social effects is at the heart of the course.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

206 Interpersonal Communication
3 Cr. Hrs.

This course focuses on the development of effective verbal and non-verbal interactions between two people, stressing better methods of initiating and maintaining effective communication with and understanding of others through learning and applying interpersonal communication theory.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

211 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.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

212 Advanced Public Speaking
3 Cr. Hrs.

Speech composition with emphasis on research and factors important to delivery in securing a desired audience response. Presentations recorded for analysis.

Prerequisite(s): COM 211

220 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, the media, as well as culture and diversity.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

225 Small Group Communication
3 Cr. Hrs.

Focusing on development of effective small group decision making and leadership skills, and 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 065 and DEV 110 or any college level English course

227 Principles of Persuasion 3 Cr. Hrs.

Examination of political and product campaigns, social movements, and elements of popular culture that contain messages designed to influence the general population; emphasis upon the use and development of persuasive appeals.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

230 Non-verbal Communication
3 Cr. Hrs.

Development of effective non-verbal communication skills for the successful communicator, stressing better methods of expressing oneself and understanding others through the learning of the non-verbal theory, Impression Management.

Prerequisite(s): COM 206 or COM 225

235 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 problem solving, appraisal, informational, and employment interviews.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

245 Intercultural Communication
3 Cr. Hrs.

Analysis of issues associated with communicating across cultures, including study of communication norms, characteristic of major contemporary cultures and emphasizing effective cross-cultural communication in interpersonal and organizational contexts.

Prerequisite(s): DEV 065 and DEV 110 or any college level English course

265 Communication & Conflict
3 Cr. Hrs.

A systematic examination of the theoretical factors that contribute to the entire conflict process with a major focus on the role of how the communicative process affects the conflict event. Special attention will be given to the critical analysis of participant behavior during selected conflict events.

Prerequisite(s): DEV 065 and DEV 110 and COM 206 or any college level English course

270 Communication Internship R
1 - 12 Cr. Hrs.

Students earn credits 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.

Prerequisite(s): Approval of chairperson and restricted to majors and 12 hours of completed COM courses

278 Communication Capstone 1 Cr. Hr.

Demonstration of communication skills and competencies through the development of a communication skills portfolio; independent activity under the direction of a Communication faculty.

Prerequisite(s): COM 206 and COM 211, and COM 225, or COM 220; and one other COM or JOU class and restricted to majors and approval of chairperson

285 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): COM 206

286 Public Relations Principles 3 Cr. Hrs.

Theories, principles, and skills of public relations in organizations and in society, integrating organizational communication and management practices.

287 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 065 and DEV 110 or any college level English course

290 Introduction to Broadcasting 3 Cr. Hrs.

Survey of the history, current issues, and trends of commercial and public broadcasting, including government regulations, and philosophy, structure and general operation of the broadcasting industry.

295 Independent Study in Communication R 1 - 3 Cr. Hrs.

Independent exploration of issues, problems and/or areas of special interest in the field of communication under the direction of the Communication faculty. Open only to second year students. May be repeated but not to exceed three (3) credit hours.

297 Special Topics in Communication R 1 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Dance (DAN)**105 Beginning Dance R** 1 Cr. Hr.

Basic movement classes for students with no previous dance experience. Class work consists of placement exercises, combinations to improve flexibility, and movements common to ballet and modern dance. Two lab hours per week.

107 Jazz Workout R 1 Cr. Hr.

Basic jazz combinations for the non-dancer performed to popular and jazz music, designed to strengthen and stretch the body by developing correct alignment. Two lab hours per week.

146 Middle Eastern Dance Performance R 1 Cr. Hr.

Performance opportunity for students of Middle Eastern Dance. Students learn and develop their own choreographies and perform as an ensemble in a public performance. Two lab hours per week.

Prerequisite(s): DAN 262

155 Dance History 3 Cr. Hrs.

Historical development of dance from earliest beginnings to the Renaissance birth of ballet to the twentieth century emergence of modern dance.

157 Dance Appreciation 3 Cr. Hrs.

Introduction to dance from non-performing perspective focusing on its many artistic, theatrical and social forms relating to culture, other arts and the humanities.

162 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. Two lab hours per week.

172 Ballet I 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 lecture, two lab hours per week.

173 Modern Dance I R 3 Cr. Hrs.

Basic fundamentals and theory of modern dance for beginning students. Class work consists of floor exercises, combination of movements and basic steps.

174 Jazz I R 3 Cr. Hrs.

Basic fundamentals of jazz techniques. Class work consists of warm-up exercises, isolations and basic movements. Two lecture, two lab hours per week.

175 Tap Dance I R 3 Cr. Hrs.

Basic fundamentals of tap technique. Class work consists of warm-up exercises, isolations and basic movements. Two lecture, two lab hours per week.

262 Intermediate Middle Eastern Dance R 1 Cr. Hr.

Combinations and layering of Middle Eastern Dance technique. Class work consists of floor work, veil work, zills, combining movements with rhythm and movement across the space.

Prerequisite(s): DAN 162

272 Ballet II R 3 Cr. Hrs.

Intermediate ballet level. Working knowledge of basic barre and center work required.

Prerequisite(s): DAN 172

273 Modern Dance II R 3 Cr. Hrs.

Intermediate modern level. Working knowledge of modern dance technique required. Two lecture, two lab hours per week.

Prerequisite(s): DAN 173

274 Jazz II R 3 Cr. Hrs.

Intermediate jazz dance level stressing techniques and styles needed for musical theatre performance. Two lecture, two lab hours per week.

Prerequisite(s): DAN 174

275 Tap Dance II R 3 Cr. Hrs.

Intermediate tap level stressing tap turns, rhythmic combinations and styles needed for musical theatre performance. Two lecture, two lab hours per week.

Prerequisite(s): DAN 175

297 Special Topics in Dance R 1 - 3 Cr. Hrs.

Varied content offerings of special interest to the discipline but not covered within existing courses; may be scheduled in a classroom/seminar setting or in a non-traditional format.

Dental Hygiene (DEH)**100 Lab for DEH 101**

Laboratory must be taken with DEH 101.

101 Dental Anatomy 2 Cr. Hrs.

Morphology and function of permanent and primary dentition including root morphology, dentition periods, eruption patterns, numbering systems and occlusion and malocclusion within and between the dental arches.

Prerequisite(s): Admission into the Dental Hygiene program

103 Head & Neck Anatomy 3 Cr. Hrs.

Gross anatomy of the head and neck region including the oral cavity. Two lecture, two lab hours per week.

Prerequisite(s): BIO 141 and BIO 142 and acceptance into Dental Hygiene program

104 Dental Anatomy for Dental Auxiliaries 2 Cr. Hrs.

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 deciduous dentition. The course is open to all dental professionals, but it is a mandatory prerequisite for acceptance into Expanded Function for Dental Auxiliaries (EFDA). The course will include lecture/hands-on identification of all anatomical tooth structures, divisions of teeth, eruption schedule, occlusion and other identifying factors.

Prerequisite(s): Acceptance into the EFDA program

105 Introduction to Dental Hygiene
2 Cr. Hrs.

This course provides students with historical, professional, legal and ethical aspects of the dental hygiene profession, and includes preventive dental health concepts; infection control; and related health and safety, commonly known as exposure control.

Prerequisite(s): BIO 141, BIO 142 and DEH 120 and ALH 104

106 Nutrition & Oral Health **2 Cr. Hrs.**

Basic nutrition principles in dental hygiene care, including principles of nutrition, application of basic nutrition principles through the lifespan, nutritional aspects of oral health and disease, systemic disease and nutrition status, and nutrition assessment and counseling for the dental hygiene client.

Prerequisite(s): BIO 141, BIO 142, CHE 122 and BIO 143

109 LAB FOR DEH 103

Laboratory must be taken with DEH 103.

111 Pre-clinical Dental Hygiene I
4 Cr. Hrs.

Scientific principles of dental hygiene with emphasis on data collection, client assessment, oral health education, and basic instrumentation. Practice of infection control standards and regulations are an integral component. Two lecture, six lab hours per week.

Prerequisite(s): DEH 103 and DEH 105

112 Pre-clinical Dental Hygiene II
4 Cr. Hrs.

Scientific principles of dental hygiene practice with emphasis on care planning and periodontal instrumentation. Two lecture, six lab hours per week.

Prerequisite(s): DEH 111

113 Clinical Dental Hygiene I **4 Cr. Hrs.**

Skill developments focusing on the practitioner's ability to assess, diagnose, plan, implement, and evaluate dental hygiene care. Emphasis is placed on preventive and child patient care. One lecture, two clinic hours per week.

Prerequisite(s): DEH 112 and DEH 106 and DEH 220

117 Lab for DEH 111

Laboratory must be taken with DEH 111.

118 Lab for DEH 112

Laboratory must be taken with DEH 112.

119 Lab for DEH 113

Laboratory must be taken with DEH 113.

120 Introduction to Dental Terminology **1 Cr. Hr.**

Orientation to terms related specifically to the science of dentistry to prepare students for the dental hygiene program. The method of presentation includes a "sounds like" pronunciation system along with definitions and relationships of words to other similar dental terms.

Prerequisite(s): Completion of any required DEV courses (if applicable)

125 Dental Materials **3 Cr. Hrs.**

General knowledge, proper manipulation and use of various dental materials used in the dental practice setting and how to educate and inform patients about materials used for their dental care. Two lecture, two lab hours per week.

Prerequisite(s): DEH 113

126 Lab for DEH 125

Laboratory must be taken with DEH 125.

135 Dental Radiology **4 Cr. Hrs.**

Scientific principles of radiation and radiographic production in dental practice. Three lecture, three lab hours per week.

Prerequisite(s): DEH 103 and DEH 155

136 Lab for DEH 135

Laboratory must be taken with DEH 135.

155 Oral Pathology & Embryology
3 Cr. Hrs.

Development, microscopic anatomy and pathogenesis of congenital/acquired abnormalities of oral and para-oral tissues. Embryogenesis of head and neck tissues and dental structures is offered where applicable for selected conditions. Two lecture, two lab hours per week.

Prerequisite(s): DEH 103

156 Dental Hygiene Research Project
1 Cr. Hr.

Prepare a scientific literature review of a health care related topic with relevance to the clinical practice of dental hygiene.

Prerequisite(s): ALH 104 and DEH 157

157 Research Methodology **2 Cr. Hrs.**

Overview of statistical terminology and notations needed for dental hygiene research and literature review.

Prerequisite(s): DEH 103 and DEH 105

165 Computer Applications in Dentistry **1 Cr. Hr.**

Eaglesoft Dental Software acquaints students to dental office applications. Orientation to the use of technology in the dental office delivery system including developing and editing patient information systems, care management, scheduling procedures, insurance claims, custom route slips, productivity and financial analysis. Also includes restorative charting, perio charting, clinical exam, medical history, treatment planning and managing progress notes. Understanding and applying HIPPA regulations as they pertain to the dental field are presented.

Prerequisite(s): ALH 104 and restricted to DEH majors

170 Radiology for Dental Auxiliaries
3 Cr. Hrs.

Standard diagnostic radiologic procedures that contribute to high quality dental care. Topics include radiation physics, radiation biology, radiation hygiene, safety measures for the operator and the patient. Also includes imaging receptors such as conventional film, phosphor plates, and charged coupled devices. Student practice of intraoral and extraoral techniques, basic interpretation skills, including proper film mounting and discriminating between restorative materials and identifying basic dental anatomy. Overall quality assurance, including darkroom operations and maintenance, proper documentation, duplication and confidentiality of dental records are also covered. Two lecture, two lab hours per week.

171 Lab for DEH 170

This laboratory must be taken with DEH 170. Content will include the need for safety measures. Conventional film, phosphor plates, and charged coupled devices will be used as students practice bite-wings, periapicals, and panoramic imaging. Basic skills for film mounting, darkroom operations, documentation, duplication and confidentiality of dental records will be covered.

210 Drug Therapy in Dentistry **2 Cr. Hrs.**

Overview of conventional drug classes with emphasis on actions, effects and indications for dental practice.

Prerequisite(s): DEH 113 and DEH 215

211 Clinical Dental Hygiene II **5 Cr. Hrs.**

Skill developments focusing on the practitioner's ability to assess, diagnose, plan, implement, and evaluate dental hygiene care. Emphasis is placed on caring for children and with disabilities, nutritional counseling, adjunctive therapies, and case presentation. Two lecture, four clinical hours per week.

Prerequisite(s): DEH 113

212 Clinical Dental Hygiene III 5 Cr. Hrs.

Skill developments focusing on the practitioner's ability to assess, diagnose, plan, implement, and evaluate dental hygiene care in various settings. Emphasis is placed on oral health care throughout the life cycle, special needs patient care, and case presentation. Two lecture, four clinical hours per week.

Prerequisite(s): DEH 211

213 Clinical Dental Hygiene IV 5 Cr. Hrs.

Skill developments focusing on the practitioner's ability to assess, diagnose, plan, implement, and evaluate dental hygiene care in various settings. Emphasis is placed on advanced dental hygiene procedures and smoking cessation program development. Two lecture, four clinical hours per week.

Prerequisite(s): DEH 212

215 Periodontics I 2 Cr. Hrs.

A study of periodontal disease including its etiology, pathogenesis, diagnosis and treatment. The content is designed to supplement pre-clinical and clinical course work from DEH 111, DEH 112, and DEH 113.

Prerequisite(s): DEH 112 and ALH 220

217 Clinical for DEH 211

Clinical must be taken with DEH 211.

218 Clinical for DEH 212

Clinical must be taken with DEH 212.

219 Clinical for DEH 213

Clinical must be taken with DEH 213.

220 Medical Emergencies in the Dental Office 2 Cr. Hrs.

Principles of first aid and the management of medical emergencies in dental practice settings. One lecture, two lab hours per week. ALH 220 must be taken either prior to or concurrently with this course.

Prerequisite(s): DEH 103 and certification in American Heart Association Health Care Provider BLS

221 Lab for DEH 220

Laboratory must be taken with DEH 220.

235 Community Dental Health I 3 Cr. Hrs.

Introduction to public health concepts, principles and practices in oral health promotion and disease prevention. Students will be introduced to their roles as community health educators through didactic and experiential learning opportunities.

Prerequisite(s): DEH 113 and DEH 215

236 Community Dental Health II 2 Cr. Hrs.

Principles of public health practice will be emphasized using community outreach processes, e.g., service learning, for community health promotion and disease prevention activities.

Prerequisite(s): DEH 235

247 Expanded Functions for Dental Auxiliary I 5 Cr. Hrs.

Introduction to the scientific principles of restorative dentistry. Topics include nomenclature, ergonomics, isolation of the operating site, instrumentation, pulp protection, matrix and wedge techniques, occlusion, finishing and polishing of amalgam restorations and ethical and legal responsibilities for the EFDA. Fundamental concepts of Class I, II, III, V simple and complex amalgam restoration placement and techniques are presented. Three lecture, four lab hours per week.

Prerequisite(s): DEH 101 and DEH 103 or DEH 104 and acceptance into the Expanded Functions Auxiliary short term certificate program

248 Expanded Functions for Dental Auxiliary II 6 Cr. Hrs.

This course is the second in a three-part series to scientific principles of restorative dentistry for the Expanded Functions Dental Auxiliary. Greater emphasis on topics covered in DEH 247 are explored. Fundamental concepts of Class I, II, III, IV & V provide an overview of the composite restoration technique and rationale. Topics include enamel and dentin adhesion, polymerization and light theory, color, history and types of composite materials, tooth preparation prior to resin placement, matrices and armamentarium, techniques, and dental sealants. Three lecture, four lab hours per week.

Prerequisite(s): DEH 247

249 Expanded Functions for Dental Auxiliary III 6 Cr. Hrs.

Mastery of clinical application of placing amalgam and composite restorations. Preparation and review for the Expanded Function for Dental Auxiliary Ohio State Board Exam for certification in Ohio. Three lecture, four lab hours per week.

Prerequisite(s): DEH 148, DEH 249

250 Periodontics II 2 Cr. Hrs.

A continuation of the study of periodontology; emphasis on non-surgical periodontal therapy and supportive periodontal therapy. Parameters and guidelines for patient care; analysis of current literature; and overview of surgical periodontal therapy, including dental implants.

Prerequisite(s): DEH 215 or licensed dental hygienist

253 Pain Control in Dentistry 2 Cr. Hrs.

Anatomy, physiology, pharmacology and administration of local anesthesia and nitrous oxide sedation and the indications, limitations and precautions associated with the use of these agents.

Prerequisite(s): DEH 210

254 Lab for DEH 253

Laboratory must be taken with DEH 253.

255 Dental Hygiene Practice 2 Cr. Hrs.

This course is designed to prepare student dental hygienists for transition to dental hygiene practice. Emphasis will be placed on current issues in dental hygiene including resume and/or portfolio development; interviewing strategies and practice setting selection; legal and ethical issues; professional development for lifelong learning; and organized dental hygiene.

Prerequisite(s): DEH 212

257 Lab for DEH 247

Laboratory must be taken with DEH 247.

258 Lab for DEH 248

Laboratory must be taken with DEH 248.

259 Lab for DEH 249

Lab to accompany DEH 249.

Academic Foundations (DEV)

064 Fundamentals of Reading 4 Cr. Hrs.

Develop reading skills with an emphasis on strategies to acquire vocabulary, recognition of main ideas and supporting details, general comprehension of paragraphs and articles, and oral and written summaries.

Prerequisite(s): Placement test score and requires advisor's signature

065 Academic Reading 4 Cr. Hrs.

Through individual and collaborative activities, course will prepare students for college level reading and will introduce basic critical reading and thinking strategies and a variety of study skills that promote student development and achievement.

Prerequisite(s): DEV 064 or placement scores

075 Foundations of Paragraph Writing 4 Cr. Hrs.

Introduction to basic paragraph writing (topic sentence, body sentences, concluding sentence) and the principles of correct grammar, usage, punctuation, and mechanics.

Prerequisite(s): DEV 074, or placement scores

084 Basic Mathematics I 4 Cr. Hrs.

Provides instruction in basic arithmetic for whole numbers, fractions and decimals with the goal of developing computational skills, number sense, and problem solving skills. Prepares students for further study in mathematics by employing effective study strategies and a variety of teaching/learning experiences.

Prerequisite(s): Placement test score

085 Basic Mathematics II 4 Cr. Hrs.

Review of basic arithmetic skills in whole numbers, decimals, and fractions with emphasis on problem solving situations. Instruction into the meaning and use of percentages, ratios, proportions, and measurements. Brief introduction into signed numbers.

Prerequisite(s): DEV 084 or satisfactory score on placement test

108 Introduction to Algebra 4 Cr. Hrs.

Introduction to beginning algebra concepts including operations with rational numbers, identifying and combining like terms, solving one-variable linear equations/inequalities, and laws of exponents. Additional topics include the recognition of simple algebraic patterns and the study and use of some basic geometric formulas.

Prerequisite(s): DEV 085 or equivalent placement test score

110 Foundations of Essay Writing 4 Cr. Hrs.

Introduction to the fundamentals of essay writing, including the stages of the composing process: pre-writing, drafting, and revising; introduction to planning, outlining, editing, and proofreading of the essay. Review of the grammatical principles governing correctness and effectiveness of expression in the use of the parts of speech, phrases and clauses, sentence structure, and paragraph organization.

Prerequisite(s): DEV 063 and DEV 075 or placement score

130 Foundations of Critical Reading & Writing 4 Cr. Hrs.

Development of basic reading, writing, and research skills. Introduction to summarizing, paraphrasing, and quoting in order to develop the reading and writing connection in the literary analysis, argument, and research papers. Review of grammar, basic essay writing, revising, and editing techniques. Emphasis is placed on reflective and analytical thinking.

Prerequisite(s): DEV 075 and DEV 064 placement and/or instructor recommendation

Dietetics Technology (DIT)

108 Introduction to Food & Nutrition 3 Cr. Hrs.

An overview of basic nutrition principles and meal management with consideration to food choices as they relate to nutrition and health.

109 Introduction to Dietetics 2 Cr. Hrs.

A survey of the dietetics field with emphasis on the role of the dietetic technician in practice; includes an introduction to the field experience, field trips, professional meeting attendance and guest speakers.

111 Nutrition for a Healthy Lifestyle 3 Cr. Hrs.

Overview of basic diet planning principles, with emphasis on healthy food choices and disease prevention. Includes fad diets, herb and supplemental strategies, and issues of supplements as ergogenic aids; effective use of nutrition information from professional organizations and reliable sources; and personal responsibility.

112 Medical Terminology for DIT 2 Cr. Hrs.

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.

129 Human Nutrition 5 Cr. Hrs.

Principles of nutrition with emphasis on the functions of the nutrients, their digestion, absorption metabolism and interrelationships, including food economics.

Prerequisite(s): Permission of department chairperson

135 Nutrition in the Life Cycle 4 Cr. Hrs.

Nutritional needs from conception to maturity, including the physiological, psychological and sociological factors during the life cycle. Three lecture and two hours of weekly directed practice.

Prerequisite(s): DIT 129 or approval of chairperson

137 Food Sanitation & Safety 3 Cr. Hrs.

In-depth study of food sanitation and safety, including food microbiology, food-borne illnesses and gastroenteric outbreaks. Emphasis on correct sanitary practices including the Hazard Analysis Critical Control Point (HACCP) to ensure quality in food procurement, storage, preparation, service, and disposal.

140 Nutrition & Total Wellness R 2 Cr. Hrs.

Provides a balanced wellness program of weight and behavior management that incorporates food patterns, market strategies, menus, exercise, and behavior modification techniques, including thoughts and feelings about food, exercise, and "dieting."

143 Healthy Cooking 2 Cr. Hrs.

An exploration of the basic principles of nutrition, food selection, meal preparation, recipe modifications/substitutions that promote healthy eating and disease prevention. Menu planning and sanitation principles will be incorporated. One lecture, two lab hours per week.

200 Dining Assistant 1 Cr. Hr.

Practical skill development in feeding techniques and working with the elderly. The program is designed to ensure that dining assistants have a basic understanding of the nutritional needs of the residents, communications and interactions involving the residents and staff, and behavior challenges and safety procedures.

203 Medical Nutrition Therapy for Dietary Managers 4 Cr. Hrs.

Introductory course for nutrition care personnel in health care institutions. Overview of nutrition, diet therapy and menu planning. Exploration of diseases that require medical nutrition therapy, concepts of therapeutic diets, and how these relate to body systems.

Prerequisite(s): DEV 065 and DEV 084

204 Practicum for DIT 203 3 Cr. Hrs.

A hands-on course related to food preferences, basic nutrition principles, medical nutrition therapy, nutrition screening, documentation, care plans, and continuous quality improvement programs. Six hours lab per week; lab is conducted at an approved site.

Prerequisite(s): DEV 065 and DEV 084

208 Advanced Food Preparation & International Cuisine 2 Cr. Hrs.

Identification of basic baking and production principles of classical soups, secondary sauces, meats, poultry, and fish. Exploration of ingredients, flavor profiles, and preparation techniques of international cuisines.

Prerequisite(s): HMT 112 and HMT 113 or approval of chairperson

209 Laboratory for DIT 208 2 Cr. Hrs.
Laboratory component of DIT 208; addresses production of classical soups, secondary sauces, meat, fish and poultry, as well as basic baking principles. Ingredients and flavor profiles of international cuisine and preparation techniques.
Prerequisite(s): HMT 112 and HMT 113 or approval of chairperson

216 Food Preparation & Dietary Service 4 Cr. Hrs.
Food preparation in institutions including quantity cooking principles, recipe standardization, equipment layout/design and menu planning. Four lecture hours.
Prerequisite(s): HMT 112 and HMT 113 or approval of chairperson

218 Directed Practice for DIT 216 3 Cr. Hrs.
A hands-on course related to food preparation in institutions including quantity cooking principles, recipe standardization, equipment layout/design, modified texture and therapeutic menu planning, and food safety and sanitation. Six hours at directed practice site per week.
Prerequisite(s): HMT 112 and HMT 113 or approval of chairperson

219 Laboratory for DIT 216 1 Cr. Hr.
This laboratory component of the DIT 216 course addresses modified and therapeutic food preparation including terminology, definitions used, and the scientific principles involved in preparing these food products. The course is a continuation of the sensory evaluation of food, use of kitchen equipment, and application of food safety and sanitation principles. Two lab hours per week.
Prerequisite(s): HMT 112 and HMT 113 or approval of chairperson

221 Medical Nutrition Therapy I 3 Cr. Hrs.
Medical nutrition therapy for diabetes mellitus and physiologic stress; including modified texture/therapeutic feeding strategies and enteral/parenteral/IV feeding routes. Incorporates the nutrition care process with emphasis on nutritional assessments, minimum data sets, resident assessment protocols and care plans.
Prerequisite(s): DIT 135 or permission of department chairperson

222 Medical Nutrition Therapy II 3 Cr. Hrs.
Medical nutrition therapy including diet writing for the diseases of the heart and blood vessels; gastrointestinal tract; gallbladder; pancreas; kidney and liver.
Prerequisite(s): DIT 221 or permission of department chairperson

223 Medical Nutrition Therapy III 3 Cr. Hrs.
This is a capstone course for the medical nutrition therapy series. This course includes medical nutrition therapy for cancer and AIDS, and review modules for tube feeding, diabetes, severe stress, cardiovascular disease, upper and lower gastrointestinal disorders, gallbladder and pancreatic disorders, liver and renal disease. Case studies and critical thinking exercises have been incorporated addressing the diseases covered in the medical nutrition therapy series.
Prerequisite(s): DIT 222 or permission of department chairperson

224 Community Nutrition 3 Cr. Hrs.
Food and nutrition issues related to families and special needs groups living in defined geographic areas. Directed practice includes participation in and evaluation of community nutrition programs that provide access to food sources; food and nutrition education; and health related care. One lecture and four hours directed practice.
Prerequisite(s): Approval of chairperson and restricted to majors

225 Educational Methods & Materials 3 Cr. Hrs.
Teaching/learning methods and materials that maximize the role of the educators including technology, the use and care of media resources, equipment, print and non-print materials.

226 Dietetics Directed Practice I 4 Cr. Hrs.
Prerequisite(s): DIT 135 or approval of chairperson DIT 221 must be completed before or taken concurrently with DIT 226.

227 Dietetics Directed Practice II 4 Cr. Hrs.
Medical nutrition therapy for diseases of the heart and blood vessels, gastrointestinal tract, liver, and kidney. The eight hour per week clinical experience includes: diet writing, nutritional screenings, nutrition education, the nutrition care process incorporating comprehensive nutritional assessments and nutrition diagnosis, minimum data sets, resident assessment protocols, and care plans.
Prerequisite(s): DIT 221 and DIT 226 or approval of chairperson

228 Dietetics Directed Practice III 3 Cr. Hrs.
Clinical experience related to topics in DIT 223 including diet writing, patient interviews, nutritional assessments/protocols, care plans, minimum data sets and counseling. Six hours per week.
Prerequisite(s): DIT 222 and DIT 227 or approval of chairperson

236 Dietary Organization & Management 4 Cr. Hrs.
Management principles and practice for the dietary/food service supervisors; planning, staffing, directing, controlling, and budgeting functions as well as labor relations.
Prerequisite(s): DIT 216 and DIT 218 and DIT 219 or approval of chairperson

237 Directed Practice for DIT 236 3 Cr. Hrs.
Management principles and practice for the dietary/food service supervisors; planning, staffing, directing, controlling and budgeting functions as well as labor relations. Six hours of clinical laboratory experience per week.
Prerequisite(s): DIT 216 and DIT 218 and DIT 219 or approval of chairperson

240 Food & Culture 2 Cr. Hrs.
Explore the relationship between food and culture, including geography, religion, mores, and life cycle rituals. Discuss the world cuisines and development of Asia, Middle East, Africa, Europe, Mediterranean, and the Americas.

255 Dietetics Seminar 2 Cr. Hrs.
Capstone review to prepare students for national comprehensive dietetic technology examination and employment. Review of the following domains; Food and Nutrition, Food Service System & Sanitation, and Management. Also includes the job market, resume writing, interviewing skills, recent developments in nutritional care, nutrition research, legislation and challenges related to dietetics.
Prerequisite(s): Permission of department chairperson

260 Credentialing Exam Review R 1 Cr. Hr.
This course will review medical nutrition therapy, food safety and sanitation, food service systems and human resource management. It will prepare students planning to sit for the American Dietetic Association Commission on Registration as well as the Dietary Managers Association credentialing examinations.
Prerequisite(s): DIT 255 or approval of chairperson

297 Special Topics In Nutrition R 0.5 - 6 Cr. Hrs.
Topics and trends in nutrition and dietetics for personal enrichment and continuing education.

Experience Based Education (EBE)

100 Prior Learning Portfolio Development 3 Cr. Hrs.

A course to help students prepare a portfolio describing and documenting their learning from experience. Upon completion, the portfolio is evaluated and college credit is awarded to the extent the learning is college equivalent.

130 A.T.S./A.I.S. Degree Planning Seminar 1 Cr. Hr.

Development of the individual plan of study to be followed for successful completion of the A.T.S./A.I.S. degrees, involving curriculum design and career and life/work planning. Open only to A.T.S./A.I.S. students.

Prerequisite(s): Approval of coordinator

278 A.T.S./A.I.S. Capstone 3 Cr. Hrs.

Pre-graduation seminar which will focus on reflective learning, assessment of degree program goals, and documentation of mastery in subject areas used in A.T.S./A.I.S. degree.

Prerequisite(s): EBE 130, approval of coordinator

297 Special Topics in Experience Based Education R 0.5 - 10 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Early Childhood Education (ECE)

101 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 early childhood programs and career options. Center participation required.

Prerequisite(s): DEV 065 and DEV 075 or equivalent

104 Prenatal Life & Birth 3 Cr. Hrs.

Foundations of prenatal development progressing from conception through birth.

106 Childhood Nutrition, Health, & Safety 3 Cr. Hrs.

Nutritional, health and safety needs of the young child. Developing and implementing routines and activities in early education and care settings. Ohio Child Day Care Laws and Rules. Center observation required.

Prerequisite(s): DEV 065 and DEV 075 and DEV 085 or equivalent

111 Child Abuse Recognition & Prevention 1 Cr. Hr.

Fulfills criteria for child abuse recognition and prevention training requirements established by the Ohio Administrative Code (Chapter 5101), including indicators, reporting, interagency information sharing, familiar support, day care issues.

112 ECE First Aid 1 Cr. Hr.

Recognition and emergency management of first aid in early care and learning center setting; fulfills criteria established by the Ohio Administrative Code (Chapter 5101).

113 Communicable Diseases: Prevention & Recognition 1 Cr. Hr.

Fulfills criteria for prevention, recognition, and management of communicable diseases training established by the Ohio Administrative Code (Chapter 5101), including prevention and transmission, hygiene, signs/symptoms, protection of early childhood professionals.

117 Language & Literacy Experiences in Early Childhood 4 Cr. Hrs.

Language and literacy development in young children. Supporting family literacy, assessing the young child's language and literacy development, locating professional resources, and planning curriculum to facilitate the individual development of language and literacy in young children.

Prerequisite(s): DEV 065, DEV 075 or equivalent score on placement test

118 Math & Science Experiences in Early Childhood 4 Cr. Hrs.

Creating a developmentally appropriate math and science curriculum for preschool children following guidelines and standards established by the major professional organizations and the Ohio Department of Education Early Learning Content Standards for Mathematics and Science.

Prerequisite(s): ECE 120 and SOC 215 and ENG 112

119 Creative Experiences in Early Childhood 4 Cr. Hrs.

The developmental characteristics of young children in art, music, and movement. Planning curriculum to facilitate the individual development of creativity in young children. Establishing the link between art, movement, and music to other disciplines.

Prerequisite(s): ECE 120 and SOC 215 and ENG 112

120 Observing Young Children 3 Cr. Hrs.

Observing and recording the behaviors of young children in early childhood settings utilizing authentic assessment techniques. Center observations required.

Prerequisite(s): ECE 101, ECE 106, ECE 150 and ENG 111

135 Group Care for Infant & Toddler 3 Cr. Hrs.

Programming for the infant/toddler early care and educational setting. Criteria for establishing and maintaining a safe and healthy learning environment, developmentally appropriate infant/toddler activities, and improving basic skills of infant/toddler care. Field participation required.

145 Guidance of Young Children 3 Cr. Hrs.

Guidance and problem solving strategies used by early childhood professionals to help young children develop positive social and emotional skills. Practical application of guidance and problem solving techniques. Center observation required.

Prerequisite(s): DEV 075 and DEV 065 or equivalent

146 The Challenging Child 3 Cr. Hrs.

An overview of children's behavior identified by practitioners as challenging; development of an operational definition of challenging behaviors; causes, techniques and interventions to address challenging behaviors.

Prerequisite(s): ECE 145, ECE 120

150 The Young Child 4 Cr. Hrs.

Promoting positive growth of infants, toddlers, and preschoolers. Impact of the learning environment including family, community and culture on the child's development

Prerequisite(s): DEV 065, DEV 075 or equivalent

160 Teaching Techniques in ECE 3 Cr. Hrs.

Planning quality learning experiences and environments for young children. National and state curriculum standards. Factors influencing curriculum development in early childhood education

Prerequisite(s): ECE 117 and ECE 118 and ECE 119 and ECE 229

190 Early Childhood Education Workshop R 0.5 - 6 Cr. Hrs.

Workshops offered on and off campus for persons in, and interested in, the field of Early Childhood. Workshops will be planned, scheduled, and offered throughout the academic year in a variety of subject areas and for varying lengths of time.

208 Inclusion: Principles & Practices 4 Cr. Hrs.

Orientation to philosophical, historical and legal foundations of inclusion of learners with special needs including learning characteristics, use of appropriate instructional and behavioral strategies in safe and healthy settings. Role as team member in effective collaboration.

Prerequisite(s): ECE 120 and ENG 112

215 Building Family & Community Relationships 3 Cr. Hrs.

Family dynamics, family development and culturally responsive practices in early childhood education. Creating respectful reciprocal relationships with family and community resources. Supporting and communicating with families.

Prerequisite(s): SOC 115 and ECE 229

216 Integrating Social Studies into the Early Childhood Curriculum 3 Cr. Hrs.

Integrating social studies into the early childhood curriculum using a variety of domains, projects, materials and activities. Key knowledge and social studies concepts developmentally appropriate for young children. State of Ohio Department of Education Early Learning Content Standards for Social Studies.

Prerequisite(s): ECE 120 and SOC 215 and ENG 112

225 Administration of Child Care Centers 4 Cr. Hrs.

Major aspects of developing a program of early education and care including licensing laws, program development, personnel management, staff and program assessment, marketing and advocacy.

226 Activities for Young Children 2 Cr. Hrs.

Characteristics of developmentally appropriate activities for preschool children. Teaching skills and interaction techniques for implementing activities. Practical ideas for supporting the Ohio Department of Education Early Learning Content Standards. Development and utilization of materials for activities. Center participation required.

228 School Age Child Care 3 Cr. Hrs.

Developmentally appropriate care and educational programming for school age children. Operation and scheduling for a school age child care program. Unique characteristics of school age children.

229 Principles & Practices of Interaction 3 Cr. Hrs.

Selected interaction techniques used by early childhood professionals to support children's physical, social, emotional, aesthetic, language, and cognitive development. Observation of teacher-child interactions within a play setting.

Prerequisite(s): SOC 215, ECE 120, COM 206, or COM 211, ENG 112

275 Internship R 1 - 4 Cr. Hrs.

Utilizes students' experience while working with young children. Learning outcomes related to principles and theories of early childhood education. An advisor is assigned to work with the student and monitor the internship experience.

280 Student Teaching I 6 Cr. Hrs.

Supervised student teaching experience in the Sinclair Community College Early Childhood Education Center. Written application required one term in advance.

Prerequisite(s): ECE 160, SOC 115, ENG 113

281 Student Teaching II 7 Cr. Hrs.

Supervised student teaching experience in an assigned early childhood program. Development of teaching portfolio. Written application required one term in advance.

Prerequisite(s): ECE 280

295 Special Topics in Early Childhood Education R 1 - 5 Cr. Hrs.

Provides opportunities to offer special interest content within the discipline as well as receive credit for instruction delivered in a non-traditional format.

Economics (ECO)**105 General Economics 3 Cr. Hrs.**

The basic concepts, principles, terminology, and philosophy of economics from both the social and political viewpoint for the non-business student.

216 Principles of Macroeconomics 4 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.

Prerequisite(s): DEV 108

218 Principles of Microeconomics 4 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.

Prerequisite(s): DEV 108

297 Special Topics in Economics R 0.5 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Education (EDU)

100 Foundations of Education 4 Cr. Hrs.

Introduction to education as a profession and a potential career. Candidates will explore themes, utilize readings, investigate current issues, interview and observe professionals in the field of teacher education to explore the purposes of schools in society. Candidates will produce carefully considered reflections in order to review the knowledge, skills, dispositions and performances necessary for an individual to become an effective teacher.

Prerequisite(s): DEV 065 and DEV 075 or equivalent evidenced by skills assessment

103 Educational Technology 4 Cr. Hrs.

Required course for students transferring to four-year institutions within the field of education. Effective identification, location, evaluation, design, preparation and efficient use of educational technology as instructional resources in the classroom related to principles of learning and teaching, including legal and ethical use. Students develop increased classroom communication abilities through lectures, discussions, modeling, laboratory experiences and completion of a comprehensive project. It is recommended that this course be taken early in the student's program of specialized study.

105 Introduction to Exceptionalities 4 Cr. Hrs.

Survey of developmental characteristics of persons with and without exceptionalities. Introduction to foundations, theory, legal issues, intervention strategies and service delivery models for working with exceptional individuals in educational, community, residential and work settings.

Electronics Engineering Technology (EET)

114 Basic Electronic Measurements 4 Cr. Hrs.

Scientific and engineering notation, electrical components and quantities and units, metric prefixes, voltage, current and resistance, resistor color code, Ohm's law, electric energy and power. Breadboarding and circuit building. Measurement techniques, types of error in measurement, use of measuring instruments: digital multimeter, function generator, D.C. power supplies, analog oscilloscopes, function generators and frequency counter. This course requires time outside the normal class time. To ensure student success, it is recommended that this course be taken in the same term as SCC 101. Two lecture, four lab hours per week.

Prerequisite(s): DEV 108

116 Electronics Schematics & Layout 4 Cr. Hrs.

Basic computer literacy skills with applications for electronic drafting and circuit simulation using Multisim and Ultiboard software, electronic symbols, schematic diagrams, printed circuit board layout, design, and assembly. Three lecture, two lab hours per week.

119 Basic Electrical Circuits & Controls 4 Cr. Hrs.

Principles of direct and alternating current circuits, diodes and transistors, digital logic, electric motors and control, electrical test equipment. Three lecture, two lab hours per week.

Prerequisite(s): DEV 108 or INT 141 or INT 142 or INT 143

120 Introduction to D.C. & A.C. Circuits 3 Cr. Hrs.

Introductory concepts to D.C. and A.C. circuits including current, voltage, resistance, power, series and parallel circuits, capacitance, inductance, A.C. signals, magnetic circuits, transformers and three phase power. Two lecture, two lab hours per week.

Prerequisite(s): DEV 108 or INT 141 or INT 142 or INT 143

131 Digital Logic & Circuits 4 Cr. Hrs.

Number systems, codes, logic gates and ICs, Boolean algebra, Demorgan's Theorem and logic simplification, exclusive-OR circuits and applications, arithmetic circuits, combinational logic circuits, PLD programming. Three lecture, two lab hours per week.

Prerequisite(s): EET 114 and EET 116

139 Electrical Machinery 4 Cr. Hrs.

Basic principle, theory, operation and characteristics of common D.C. and A.C. machinery. Three lecture, two lab hours per week.

Prerequisite(s): EET 119

150 D.C. Circuits 4 Cr. Hrs.

Series, Parallel and Series-Parallel Circuit analysis, Voltage Dividers, Kirchoff's Laws, Ladder Networks, Wheatstone Bridge; Thevenin's, Norton's and Superposition Theorems, Voltage and Current Sources; Nodal and Mesh Analysis; Capacitors, Inductors and their behavior under D.C. conditions. Three lecture, two lab hours per week.

Prerequisite(s): EET 114 and MAT 101 or equivalent

155 A.C. Circuits 4 Cr. Hrs.

This course provides the student with the knowledge, understanding, applications and the how to analyze A.C. circuits. The essential outcomes the student will experience are 1) sinusoidal wave properties, 2) complex numbers and phasors, behavior of transformers, 4) the steady-state behavior of RC, RL, and RLC circuits under A.C. conditions, 5) analysis of basic filter circuits, 6) superposition, Thevenin's, and Norton's theorems under A.C. conditions, and 7) three-phase and/or poly-phase systems. Three lecture, two lab hours per week.

Prerequisite(s): EET 105 or EET 150

156 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 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 lecture, two lab hours per week.

157 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 lecture, two lab hours per week.

Prerequisite(s): EET 131 OR MAN 106

158 Satellite Tool Kit 3 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.

Prerequisite(s): Approval of department

159 Programming for Electronics Technology 3 Cr. Hrs.

Computer solutions of engineering problems, using LabVIEW graphical language, front panel and diagram windows, controls and indicators, wiring steps and Sub Virtual Instruments, loops and conditional statements, data display, arrays and clusters, data acquisition hardware and driver software, instrument control and data analysis for problem solving involving physical principles and engineering applications. Programming assignments require lab time outside of class. Two lecture, two lab hours per week.

Prerequisite(s): EET 131 or EET 231

164 P.C. Assembly 3 Cr. Hrs.

This course is an introduction to various hardware components of the modern computer. Students will learn to identify and install the major hardware components of a personal computer. These components include power supplies, motherboards, CPUs, graphics cards, network cards, CD and DVD drives, hard drives, and alternative storage devices. Two lecture, two lab hours per week.

166 Industrial Machine Wiring & Standards 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. One lecture, four lab hours per week.

Prerequisite(s): EET 119

181 Electrical Construction I R 4 - 8 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. Two lecture, six lab hours per week.

182 Electrical Construction II R 4 - 8 Cr. Hrs.

Alternating current theory, motors, grounding, conduit bending, conductor installation, NEC for cables, terminations and splices, electrical single and three phase installation, circuit breakers and fuses, contactors and relays. Two lecture, six lab hours per week.

Prerequisite(s): EET 181

183 Electrical Construction III R 4 - 8 Cr. Hrs.

Load calculations for branch circuits, over-current protection, wiring devices, distribution equipment, transformers, calculations for motor circuits; motor maintenance and controls; and basics of HVAC systems. Two lecture, six lab hours per week.

Prerequisite(s): EET 182

184 Electrical Construction IV R 4 - 8 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. Two lecture, six lab hours per week.

Prerequisite(s): EET 183

197 Tech Prep Seminar 1 - 4 Cr. Hrs.

A review course for electronics tech prep freshman students covering D.C. circuits, A.C. circuits, discrete electronics.

198 Digital Technology 3 Cr. Hrs.

Electrical fundamentals, introduction to basics of digital logic and circuits, digital systems, basic digital circuit design. Two lecture, two lab hours per week.

201 Semiconductor Devices & Circuits 4 Cr. Hrs.

A study of electronic devices (Diodes, BJTs, FETs) and their characteristics, D.C. biasing, amplifier basics and characteristics. Three lecture, two lab hours per week.

Prerequisite(s): EET 155

202 Electronics II 3 Cr. Hrs.

Field-effect transistors, large signal amplifiers, A.C. equivalent circuits, class A-, B- and C- amplifiers, amplifier frequency response, power amplifiers and troubleshooting techniques. Two lecture, two lab hours per week.

Prerequisite(s): EET 201

207 Linear Integrated Circuits 4 Cr. Hrs.

Introduction to operational amplifiers and their applications as basic amplifiers, comparators, signal generators, active filters and for instrumentation; integrated circuit timers (555), three-pin integrated circuit regulators, voltage controlled oscillators, phase lock loops and their applications. Three lecture, two lab hours per week.

Prerequisite(s): EET 201

251 Digital Systems I 4 Cr. Hrs.

Flip-Flops, counters, shift-registers, adders and subtractors, multiplexers and demultiplexers, encoders/decoders, integrated circuit technologies. Three lecture, two lab hours per week.

Prerequisite(s): EET 231 or EET 131

252 Digital Systems II 4 Cr. Hrs.

Arithmetic Logic Units, memory devices, parallel and serial input-output devices. Analog-to-digital converters, digital-to-analog converters, communication protocols, keyboard decoders and CRT displays. Three lecture, two lab hours per week.

Prerequisite(s): EET 251

256 Introduction to Fuel Cells 3 Cr. Hrs.

Review of the historical significance of early development of fuel cells covering the last five decades: proton exchange membrane fuel cell (PEM), solid oxide fuel cell (SOFC), alkaline fuel cell (AFC), phosphoric acid fuel cell (PAFC), molten carbonate fuel cell (MCFC), direct methanol fuel cell (DMFC), current state of the art fuel cell technology; overview of associated technologies necessary for effective fuel cell development; use and applications of methanol, DMFC technology; analysis of various fuel cell technologies. Two lecture, two lab hours per week.

261 Microprocessor/Microcontroller Systems 4 Cr. Hrs.

Introduction to the fundamentals of microprocessor/microcontroller hardware and software design, starting out with hardware/software analysis and culminating with a design project. Emphasis will be placed on numerical concepts, programming skills and system architecture. Programming assignments will require lab time outside of class. Three lecture, two lab hours per week.

Prerequisite(s): EET 131 or EET 231

262 Microprocessor Applications**4 Cr. Hrs.**

Introduce fundamental concepts and tools used for programming in machine language the microprocessors and micro-controllers. Focuses on an 8-bit architecture that can be used as a foundation for many other types of microprocessors and applications. Encompasses the following aspects of microprocessor design: internal architecture, hardware, and assembly programming, number systems other than base 10 and flowcharting. Three lecture, two lab hours per week.

*Prerequisite(s): EET 261***264 P.C. Troubleshooting & Repair I****3 Cr. Hrs.**

Familiarization of circuits, components, malfunctions, and systematic troubleshooting on a P.C.-type microcomputer, including hands-on experience necessary to become proficient in the repair of microcomputers as well as skills in software and hardware diagnostics. Two lecture, two lab hours per week.

*Prerequisite(s): EET 164 and ETD 198***265 P.C. Troubleshooting & Repair II****3 Cr. Hrs.**

Installation of basic computer operating systems (OS), network hardware topologies, computer peripherals and accessories; identification and resolution of basic computer troubleshooting issues with hardware and relevant software diagnostics.

*Prerequisite(s): EET 264***270 EET Internship R 1 - 12 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.

271 Alternative Operating Systems & Applications**3 Cr. Hrs.**

This course will explore the use of alternative operating systems (e.g., Apple, Linux) for computer systems. Students will be introduced to these operating systems and install them on personal computers. How these alternative operating systems integrate with existing Windows software platforms will also be covered.

*Prerequisite(s): EET 164***272 P.C. Based Engineering Systems****3 Cr. Hrs.**

Students will install, use, and troubleshoot personal computer peripherals and related applications software associated with engineering technology applications. This includes external expansion devices, imaging equipment, PDAs, wireless devices, and programmable controllers.

*Prerequisite(s): EET 271***278 Electronics Project Capstone****4 Cr. Hrs.**

Review of electrical circuits, analog and digital electronics, microprocessors; design, fabrication and testing of an electronics project including schematics, wiring diagrams, printed circuit board layout and fabrication; brief presentation and demonstration of working prototype. Two lecture, four lab hours per week.

*Prerequisite(s): EET 131 or EET 231 and EET 261***281 Programmable Logic Controllers****3 Cr. Hrs.**

Recall the history of control systems and PLCs, explain and describe the use of number systems, demonstrate use of ladder logic programming devices, employ ladder logic in control circuit design, address to control I/O modules, demonstrate the use of relays, contacts, coils, timers, counters and I/O forcing. Two lecture, two lab hours per week.

*Prerequisite(s): EET 119 or EET 131 or EET 198 or EET 231 or EER 136***282 Advanced Programmable Logic Controller****3 Cr. Hrs.**

Demonstrate the use of ladder logic programming devices and to address control I/O modules; demonstrate the use of sequencers and fundamental PLC programming of comparators, block transfers and data transfer in PLC networks. Two lecture, two lab hours per week.

*Prerequisite(s): EET 281***283 Fundamentals of Lasers 3 Cr. Hrs.**

This course prepares the student for a career in photonics as an electronics laser technician. The student will be able to describe the dual nature of light, the electromagnetic spectrum, properties of electromagnetic waves, reflection, refraction, index of refraction, diffraction and interference. Most importantly the student will know the safety procedures that must be followed when working in laser/optics laboratories. Two lecture, two lab hours per week.

*Prerequisite(s): MAT 131***297 Special Topics in Electronics Engineering Technology R****1 - 8 Cr. Hrs.**

Provides opportunities to receive credit for special interest topics within the discipline. Brief description of the topics will be given and prerequisites identified when offered. Lab time will be part of some content.

*Prerequisite(s): Permission of chairperson***Engineering (EGR)****100 Fundamental Mechanical Skills****3 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; introduction to basic rigging techniques used for moving heavy industrial equipment. One lecture, four lab hours per week.

128 Robotics in CIM Systems 3 Cr. Hrs.

This course serves as an introduction to automated systems. The basics of sensors, 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 lecture, four lab hours per week.

144 Sensors**3 Cr. Hrs.**

Introduction to basic sensors used in Computer Integrated Manufacturing (CIM) systems. Theory of operation, wiring, installation, testing and troubleshooting sensors & circuits, proximity switches, limit switches; ultrasonic, laser, photo-reflective, pressure, and temperature sensors, and applications. Two lecture, two lab hours per week.

*Prerequisite(s): EET 119***161 Pbasic & Stamp****3 Cr. Hrs.**

Pbasic is a simple but versatile programming language used for position and motion control of small scale remotely controlled robotics and other autonomous motion controlled, smart mechanisms utilizing the basic stamp PLD. Two lecture, two lab hours per week.

210 Human-Machine Interfaces (HMIs)**3 Cr. Hrs.**

The basics of Human-Machine Interfaces (HMIs) with emphasis on creating and customizing displays, creating and configuring interactive controls, creating and modifying tags, configuring alarms and security, adding animation, creating data logs, and configuring messages. Two lecture, two lab hours per week.

Prerequisite(s): EET 281

215 Control Systems 3 Cr. Hrs.

Introduction to modern control theory as applied to industrial robotics mechanical unit positioning, accuracy, repeatability, control techniques, with initial focus on three phase electric motors, utilizing various forms of positioning and speed control; pulse width modulation; feedback systems; control techniques for variable speed motors and drive systems; analysis techniques using Laplace transforms; troubleshooting techniques. Two lecture, two lab hours per week.

Prerequisite(s): EET 139 and EET 198 and MAT 132

217 Fluid Power & Control 4 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 PLC control of fluid power components. Three lecture, two lab hours per week.

Prerequisite(s): EGR 128 and EGR 144 and EET 281

220 Machine Vision 3 Cr. Hrs.

Analysis of various methods of utilizing vision systems in industrial applications to focus on; hardware, frame grabber board, memory allocation, software development, system troubleshooting and repair and the following application areas; part identification and inspection, part orientation, range finding and image analysis techniques. Two lecture, two lab hours per week.

Prerequisite(s): EGR 252

231 Introduction to Troubleshooting of Automated Systems 3 Cr. Hrs.

Concept of troubleshooting and its importance in manufacturing systems. Basic troubleshooting philosophies, flow-chart examination, simple electrical and mechanical troubleshooting. Two lecture, two lab hours per week.

Prerequisite(s): EGR 128 and EET 166

232 Advanced Troubleshooting of Automated Systems 3 Cr. Hrs.

Complex problems experienced in automation systems, building on Introduction to Troubleshooting of Automated Systems (EGR 231). Techniques for troubleshooting systems containing sensors, PLCs, robots, HMIs, and other common automation equipment. Fault determination using troubleshooting software to monitor the performance of small automated systems. Two lecture, two lab hours per week.

Prerequisite(s): EGR 231 and EET 282 and EGR 210

244 Automation & Control Devices**3 Cr. Hrs.**

How to wire, connect, test, program, and interface industrial control devices, peripheral sensors, and computer controlled systems found in Computer Integrated Manufacturing (CIM), Flexible Manufacturing (FM) and robotic work-cells. Includes message displays; touch screen I/O devices, barcode readers, sensors; hall effect devices, reed relay, set point modules, micro Programmable Logic Controllers, visual and audio awareness devices; robotic input and output systems. Two lecture, two lab hours per week.

Prerequisite(s): EET 282 and EGR 252

250 Robot Mechanical Unit Repair**3 Cr. Hrs.**

This course instructs the student in mechanical teardown. It includes removal and replacement of belts with recalibration through the computer controller. Two lecture, two lab hours per week.

251 Robot Controller Diagnostics**3 Cr. Hrs.**

Teaches the student theory of controller operation, function of power input and supply units, command and feedback signals and troubleshooting and diagnostics. Two lecture, two lab hours per week.

Prerequisite(s): EGR 252

252 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 off-line programming software. Programs, tested using Fanuc Robots, will be written for motion control, input/output activation, and palletizing. Two lecture, two lab hours per week.

Prerequisite(s): EGR 128 and EGR 161

255 Industrial Networking 3 Cr. Hrs.

Covers the fundamental industrial automated machine and robot data communication techniques and telemetry used for cell control; data transmission, hardware/software networking protocols; serial, parallel, modulation techniques, multiplexing, optical, radio frequency and selected networking software. Two lecture, two lab hours per week.

Prerequisite(s): EGR 210 and EET 282

256 Automated Data Acquisition Systems**3 Cr. Hrs.**

Application of data acquisition technologies; bar coding, image recognition, optical character recognition, CCD camera images, laser scanning, voice recognition, and radio frequency and microwave transponders; data capture techniques at the site of event

with direct transmission to a computer/storage system for processing data. Two lecture, two lab hours per week.

Prerequisite(s): EGR 261 and EGR 252

261 Engineering Problem Solving Using "C" 4 Cr. Hrs.

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 lecture, two lab hours per week.

Prerequisite(s): MAT 131

262 Advanced C++ Programming Engineering Applications 4 Cr. Hrs.

Solve representative engineering problems using advanced C and C++ commands, with a focus on: writing in object oriented style, computer control of input/output port control, stand-alone executable code, library linking for various applications. Three lecture, two lab hours per week.

Prerequisite(s): EGR 261

270 Engineering Internship R 1 - 12 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.

278 Automated Manufacturing Project 3 Cr. Hrs.

Performance based review of the major components of the Electromechanical Engineering Technology associate degree program, with emphasis on robot 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 preventive maintenance. Additional focus on graphics, word processing, analytical and simulation tools, assembly, testing, troubleshooting and repair of a functional robot workcell. One lecture, four lab hours per week.

Prerequisite(s): EGR 210 and EGR 220 and EGR 232 and EGR 252 and EGR 255 and EET 282

297 Special Topics in Engineering Technology R 1 - 6 Cr. Hrs.

Varied content offerings of special interest to the discipline but not covered within existing courses; may be scheduled in a classroom/seminar or other non-traditional manner.

Prerequisite(s): Permission of department chairperson

Emergency Medical Services (EMS)

105 First Responder 3 Cr. Hrs.

Designed for the lay person, this course presents skills and solutions related to medical emergencies without the use of advanced medical equipment. Police, safety officers, medical response team members, anyone who may have to begin care of the sick and injured while on the job would benefit from this course. Two and one-half lecture, one-half lab hours per week. ODPS Accreditation #326

117 EMT-Basic Theory & Practice I & II 10 Cr. Hrs.

Caring for sick and injured people, handling emergency situations, and developing self confidence are the areas important within this course. It meets the current standards of National Standard Curriculum of EMT-Basic as well as Basic Life Support. At the end of this course, successful students will be eligible to sit for Ohio certification testing as an EMT-B (Basic). Eight lecture, four lab hours per week. ODPS Accreditation #326
Prerequisite(s): DEV 065 and DEV 075 must be at least 18 years old

118 Lab for EMS 117

Laboratory must be taken with EMS 117. ODPS Accreditation #326

120 EMT-Basic Refresher 2.5 Cr. Hrs.

Ohio EMS Board approved content. Includes key content from National Standard Training Curriculum for EMT-Basics for National Registry recertification. Emphasis on assessment and initial basic management of the critically ill and injured patient including medical and traumatic emergencies. Two lecture and one lab hour per week. ODPS Accreditation #326
Prerequisite(s): Current certification as EMT-Basic

135 EMT-Paramedic I: Introduction to ALS Care 9 Cr. Hrs.

Following the 1998 National Standard Curriculum for EMT-Paramedics, this course will cover general Anatomy & Physiology, patient assessment, basic and advanced airway management, pharmacology and pathophysiology. Six lecture, four lab, ten clinical hours per week. ODPS Accreditation #326
Prerequisite(s): Approval of chairperson, and Ohio State EMT-Basic Certification

136 EMT-Paramedic II: Cardiovascular Emergencies 9 Cr. Hrs.

Following the 1998 National Standard Curriculum for EMT-Paramedics, emphasis on general Anatomy & Physiology of the cardiovascular system, assessment, management and evaluation of the cardiac patient. Six lecture, four lab, ten clinical hours per week. ODPS Accreditation #326
Prerequisite(s): EMS 135 and approval of chairperson

137 EMT-Paramedic III: Pediatric & Trauma Emergencies 9 Cr. Hrs.

Following the 1998 National Standard Curriculum for EMT-Paramedics, emphasis on assessment, management and evaluation of the pediatric, obstetric, and or trauma patient. Six lecture, four lab, ten clinical hours per week. ODPS Accreditation #326
Prerequisite(s): EMS 136 and approval of chairperson

138 EMT-Paramedic IV: The Medical Patient 9 Cr. Hrs.

Following the 1998 National Standard Curriculum for EMT-Paramedics, emphasis on care and management of the medical patient focusing on hematology, endocrine, gastroenterology, allergic reactions, renal emergencies, gerontology, toxicology and behavioral emergencies. Six lecture, four lab, ten clinical hours per week. ODPS Accreditation #326
Prerequisite(s): EMS 137 and approval of chairperson

139 EMT-Paramedic V: Integration 9 Cr. Hrs.

Following the 1998 National Standard Curriculum for EMT-Paramedics, emphasis on integrating skills from the preceding four terms. Other areas covered include mass casualty, EMS research, crime scene management, and ethics within EMS care. Six lecture, four lab, ten clinical hours per week. ODPS Accreditation #326
Prerequisite(s): EMS 138 and approval of chairperson

150 EMT-Paramedic Refresher 4 Cr. Hrs.

This course meets all Ohio state requirements as a paramedic recertification course. Designed for the practicing paramedic, EMS 150 places emphasis on assessment and initial management of the critically ill and injured patient including medical and traumatic emergencies and enhancing knowledge and skills. Three lecture, two lab hours per week. ODPS Accreditation #326
Prerequisite(s): Ohio state certification as an EMT-paramedic

201 EMS Management: Fundamentals 3 Cr. Hrs.

Foundational skills needed to manage an EMS department including public relations, policies and procedure creation, funding and finance resources, and EMS politics.
Prerequisite(s): ENG 111 and BIS 160

202 EMS Management: Medical Legal / CQI 3 Cr. Hrs.

Foundational skills needed to manage an EMS department including medical legal issues, medical command, protocol generation, and continuous quality improvement.
Prerequisite(s): ENG 111 and BIS 160

215 Human Body for the EMS Provider 3 Cr. Hrs.

Anatomy, physiology and pathophysiology of the human body for the practicing paramedic or foundational knowledge for the student entering the paramedic program. This information is essential to understand critical care medicine.
Prerequisite(s): DEV 065 and DEV 075 and DEV 085

220 Critical Care Paramedic I: Introduction to Critical Care 3 Cr. Hrs.

Out of hospital critical care medicine is a complex and challenging field. This introductory course provides the student with skills needed to manage patients with advanced monitoring / stabilizing technologies. This course is foundational for the remainder of the critical care curriculum. Two and one-half lecture, one lab hour per week.
Prerequisite(s): BIO 141 or EMS 215; and Paramedic Certification

221 Critical Care Paramedic II: Pharmacodynamics & Critical Care R 3 Cr. Hrs.

Critical Care Paramedic II is designed to provide the student with knowledge and skills in the management of high acuity patients. Complex pharmacology, laboratory value interpretation, advanced IV access, and management of patients in shock will be covered. At the successful completion of EMS 220, EMS 221, and EMS 222, students will obtain a certification as a Sinclair Community College Critical Care Paramedic. Two and one-half lecture, one lab hour per week.
Prerequisite(s): BIO 141 or EMS 215; and Paramedic Certification

222 Critical Care Paramedic III: Care of Specialty Patients R 3 Cr. Hrs.

Critical Care Paramedic III is designed to provide the student with knowledge and skills in the management of high acuity patients. Management of neonatal transports, high risk obstetric patients, and patients suffering from medical illnesses and traumatic injuries will be covered. At the successful completion of EMS 220, EMS 221, and EMS 222, students will obtain a certification as a Sinclair Community College Critical Care Paramedic. Two and one-half lecture, one lab hour per week.

Prerequisite(s): BIO 141 or EMS 215; and Paramedic Certification

230 Disaster Management for the Health Care Provider 3 Cr. Hrs.

Health care provider preparation and response to threats and emergencies related to disasters and terrorism, including the principles and challenges of disaster planning.

Prerequisite(s): Health care provider

English (ENG)**111 English Composition I 3 Cr. Hrs.**

Prewriting, drafting, revision, editing, audience awareness, controlling theme and thesis development through reflective, informational, and argumentative writing based on student's experience; critical reading skills.

Prerequisite(s): DEV 110 or DEV 130 and DEV 064 or equivalent

112 English Composition II 3 Cr. Hrs.

Further development of writing skills with emphasis on critical reading, reasoning, and argumentation; the research process and the research paper.

Prerequisite(s): ENG 111 and DEV 065 or other equivalent

113 English Composition III 3 Cr. Hrs.

Continuing development of expository writing skills with emphasis on critical writing. Study of literature provides material for student essays.

Prerequisite(s): ENG 112 or other equivalent

116 Advanced Vocabulary Building 3 Cr. Hrs.

Builds English vocabulary through the study of component parts in words; namely, Greek and Latin roots, prefixes and suffixes. Emphasis on words commonly encountered in higher education with emphasis on legal, medical, and scientific terminology.

Prerequisite(s): ENG 111

121 Technical Composition I 3 Cr. Hrs.

Composition skills and critical writing and reading for students in the technical fields, focusing on prewriting, drafting, revision, editing, and audience awareness through expository and analytical writing; introduction to the forms of technical writing and technical communication. This course is only offered as an independent study.

Prerequisite(s): DEV 110

122 Technical Composition II 3 Cr. Hrs.

Further development of critical writing and reading skills for students in the technical fields with emphasis on informal and formal report writing, including research and documentation techniques. This course is only offered as an independent study.

Prerequisite(s): ENG 121

131 Business Communications I 3 Cr. Hrs.

Focuses on four major types of business letters, emphasizing the use of correct grammar, punctuation, spelling and vocabulary. Course objectives are to write messages that make direct/persuasive requests, send good news and give bad news. The course also communicates about employment and how to write an effective resume and letter of application. Students learn to apply the writing process consisting of: prewriting strategies, planning, composing, revising, audience awareness and editing.

Prerequisite(s): DEV 110 or ENG 111

132 Business Communications II 3 Cr. Hrs.

Students learn principles and skills involved with writing informal and formal reports implementing library research and MLA documentation. Students also learn how to present an oral presentation using current technology. The objective of English 132 is for the student to apply longer, more complex means of business communication based on the principles learned in English 131. Specifically, this course will develop the student's ability to conduct business research and write effective informal and formal business reports based on critical independent thought.

Prerequisite(s): ENG 131

199 Text Editing 3 Cr. Hrs.

Strategies to achieve a clear, concise, cohesive, emphatic writing style; sentence structure; contemporary grammar and usage.

Prerequisite(s): ENG 111 and ENG 112 or ENG 131 and ENG 132

245 Introduction to Linguistics 3 Cr. Hrs.

The study of language, how it is described, acquired, and used, including the structure of language and its socio-cultural impact.

Prerequisite(s): ENG 112

247 The Art of Film R 3 Cr. Hrs.

Viewing, analyzing, writing about American and international films.

250 Personal Essay: Advanced Composition 3 Cr. Hrs.

Sophisticated techniques of expository writing and the refinement of style.

Prerequisite(s): ENG 112

255 Creative Writing: Poetry 3 Cr. Hrs.

Writing and critical reading of poetry. Manuscript form, publication, and market information.

256 Creative Writing: Fiction 3 Cr. Hrs.

Writing and critical reading of short stories. The various techniques of fiction writing, such as plot, character, dialogue, and conflict.

257 Freelance Writing 3 Cr. Hrs.

Freelance magazine, newspaper, and web-based article writing. Emphasizes generating, researching, developing non-fiction prose; presentations by professional writers in various fields.

258 Advanced Fiction Writing 3 Cr. Hrs.

Advanced study of traditional short story elements in a workshop setting; the mechanics of manuscript submission. Deep revision, experimenting with alternative fiction writing elements, giving oral readings of short stories.

Prerequisite(s): ENG 256

259 Writing the Novel 3 Cr. Hrs.

Study of traditional novel elements and the mechanics of manuscript submission in a workshop setting.

Prerequisite(s): ENG 256 or permission of instructor

260 Memoir Writing 3 Cr. Hrs.

Writing and reading of autobiographical essays in a workshop setting.

264 Advanced Poetry Writing 3 Cr. Hrs.

Advanced study of the elements of poetry including the mechanics of manuscript submission in a workshop setting.

Prerequisite(s): ENG 255 or permission of instructor

297 Special Topics in English R 1 - 6 Cr. Hrs.

Opportunity to study specialized rhetorical and linguistic topics such as stylistics, sentence combining, heuristics, history of English, dialects.

Entrepreneurship (ENT)

240 Small Business Finance 3 Cr. Hrs.

Identification and evaluation of the various sources available for funding a small business. Financial terminology; reading, preparing, and analyzing financial statements typical of a small entrepreneurial business; preparing and presenting a loan proposal to a financial institution. Also includes ways to overcome the typical financial obstacles encountered by entrepreneurs.

Prerequisite(s): MAN 105

260 Business Plan Development

5 Cr. Hrs.

Business concept evaluation and sound business plan development. Business concept strengths and weaknesses assessment, organizational structure planning, marketing plan research, data collection, and organization; preparation of financial projections; identification and evaluation of various resources available for funding a new or existing enterprise. Extensive writing expected and use of the Internet required. The successful student will leave the course with a complete and ready-to-use business plan document.

Prerequisite(s): MAN 105, MAN 201, ENT 240, and MRK 220

English as a Second Language (ESL)

040 Listening & Speaking I R

4 Cr. Hrs.

Through individual and collaborative activities, this course will introduce basic conversational skills to promote student development and achievement of listening and speaking skills needed for communication in the English language.

045 Listening & Speaking II R

4 Cr. Hrs.

Through individual and collaborative activities, this second level, more advanced course will build upon basic conversational skills to promote student development and achievement of listening and speaking skills needed for communication in the English language.

Prerequisite(s): ESL 040 or successful placement score

050 ESL Basic R

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.

070 ESL Intermediate R

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 050

090 ESL Advanced R

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 070

Engineering Technology Design (ETD)

100 Gateway to Technology 3 Cr. Hrs.

Overview of the field of technology and its related processes. Course activities include (1) Design and Modeling, (2) Magic of Electrons, (3) Science of Technology, and (4) Automation and Robotics. Two lecture, two lab hours per week.

101 Introduction to Engineering

Design with Inventor 3 Cr. Hrs.

An introductory course in design skills and tools utilizing 3-D parametric tools (Inventor) in the creation of design projects. Development of skills in Parametric Part creation, assembly modeling, and documentation of designs; additional topics in sketching, design for production, presentations and marketing. Two lecture, two lab hours per week.

Prerequisite(s): MAT 101 or MAT 192

102 Principles of Engineering 3 Cr. Hrs.

Development of student understanding of the engineering/engineering technology field. Through exploration of various technology systems and manufacturing processes, students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. Also includes concerns about social and political consequences of technological change. Two lecture, two lab hours per week.

Prerequisite(s): ETD 101 and MAT 131

105 Principles of Engineering Lab

3 Cr. Hrs.

In-depth laboratory exploration of the principles of engineering. Math, science, and technology are used in an engineering problem solving process. Nine lab hours per week.

110 Engineering Design & Development

3 Cr. Hrs.

An engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses; students also present progress reports, submit a final written report and defend solutions to a panel of outside reviewers. Two lecture, two lab hours per week.

Prerequisite(s): ETD 102 and EGR 128 and EET 198

118 Introduction to the Product Realization Process

1 Cr. Hr.

Processes for the formulating and substantiating ideas and concepts for the design of systems, components, and technical processes.

121 Ethics for Engineering Technology Professionals

2 Cr. Hrs.

Introduction 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 lecture, two lab hours per week.

128 Introduction to Design

Engineering Symbology 3 Cr. Hrs.

Training in the interpretation of engineering drawings. Includes principles of orthographic projection, drafting symbols, surface finish symbols, welding symbols, and geometric dimensioning and tolerancing symbols. Two lecture, two lab hours per week.

132 Metallurgy

2 Cr. Hrs.

Terminology, designations of metals and the relationship among the properties of metals, the environment, and heat treatment processes. Selecting and testing materials. One lecture hour, three lab hours per week.

Prerequisite(s): ETD 101 or PHY 131 or PHY 141 or CHE 120

133 Non-Metallic Materials 2 Cr. Hrs.

Factors related to the selection of non-metallic materials and the relationship between the nature of the materials and their properties. Thermoplastics, thermosetting, ceramics, composites and glasses are included. One lecture hour, three lab hours per week.

Prerequisite(s): ETD 101 or PHY 131 or PHY 141 or CHE 120 or CHE 151 or CHE 201

150 Environmental Assessment & Analysis 4 Cr. Hrs.

Sampling and analysis techniques for site characterization and assessment. Samplings 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 lecture, four lab hours per week.

Prerequisite(s): DEV 110 or DEV 130 and DEV 064 and DEV 108

155 Water Treatment Analysis 4 Cr. Hrs.

Examination of the basic concepts of water distribution and treatment from the hydrologic cycle, hydrogeology, aquifers and surface waters through treatment and distribution practices. Two lecture, four lab hours per week.

Prerequisite(s): DEV 110 or DEV 130 and DEV 064 and ETD 198 and MAT 131

160 Mechanics for Skilled Trades 3 Cr. Hrs.

Fundamentals of mechanics, including concepts of force, work, energy, stress, friction and basic properties of materials. Analysis of simple mechanical machines. Two lecture, two lab hours per week.

Prerequisite(s): DEV 108 or permission of instructor

161 Advanced Mechanics for Skilled Trades 3 Cr. Hrs.

Fundamentals of mechanics as applied to the actual hardware and equipment used in production environment. Two lecture, two lab hours per week.

Prerequisite(s): ETD 160

165 Industrial Hydraulics I 3 Cr. Hrs.

Basic principles of hydraulics, hydraulic fluids, reservoirs, pumps, cylinders, motors, piping, and accessories with application of hydraulic circuit layout and control including pressure, directional, and speed control, sequencing, flow division, and cushioning. Two lecture, two lab hours per week.

Prerequisite(s): MAT 101 or equivalent

166 Industrial Hydraulics II 3 Cr. Hrs.

This is the second course in the hydraulics sequence. It builds on the previous course with additional topics of actuators and controls. Two lecture, two lab hours per week.

Prerequisite(s): ETD 165

167 Industrial Hydraulics III 3 Cr. Hrs.

Principles and components of a hydraulic system with a focus on electrohydraulic systems, symbology, basic circuit layout and assembly of electrohydraulic systems. Two lecture, two lab hours per week.

Prerequisite(s): ETD 166

198 Personal Computer Applications for Engineering Technology 2 Cr. Hrs.

Applied computer tools to solve engineering technology problems emphasizing the integration of word processing, draw function, spreadsheets, databases, and engineering research skills using the Internet. Applications of an integrated approach to research papers, engineering technology analysis, technical laboratory reports and technical presentation. One lecture, two lab hours per week.

Prerequisite(s): DEV 064 and DEV 085

199 Introduction to Computer Aided Drafting Concepts 2 Cr. Hrs.

P.C. based computer aided drafting, including two-dimensional drawing, drawing layout and sizing, drawing and editing commands, drawing magnification, and drawing output using the latest release of AutoCAD. One lecture, two lab hours per week.

Prerequisite(s): ETD 198 or BIS 160. Students may take ETD 198 and ETD 199 concurrently.

211 Statics: Calculus Based 5 Cr. Hrs.

Vectorial treatment of forces and analysis of trusses, centroids, friction and moment of inertia. This calculus-based course is designed for Engineering Science university parallel students.

Prerequisite(s): MAT 203 and PHY 131

212 Dynamics: Calculus Based 5 Cr. Hrs.

Kinematics of particles and rigid bodies, acceleration, work-energy, impulse and momentum of particles and rigid bodies.

Prerequisite(s): ETD 211

213 Statics 4 Cr. Hrs.

Various types of force systems, analysis of trusses, friction, center of gravity and moments of inertia.

Prerequisite(s): MAT 132 and PHY 131 or MAT 116 and PHY 141

214 Dynamics with Kinematic Analysis 4 Cr. Hrs.

Kinematics and kinetics of rectilinear motion, curvilinear motion and rotation; plane motion, work, energy, power, impulse and momentum.

Prerequisite(s): ETD 213

222 Strength of Materials 4 Cr. Hrs.

Stress and deformations, torsions, shear and moments in beams, stresses in beams, beam deflections, combined stresses, and eccentric loading. Two lecture, four lab hours per week.

Prerequisite(s): ETD 213 or ETD 202

225 Introduction to Nanotechnology 3 Cr. Hrs.

General exposure to nanotechnology and its applications, including manufacturing, engineering, and material technologies. Introduction to the impacts of nanotechnology, current developments in the nano field, and discussion of the potential influence of nanotechnology on careers.

230 Introduction to Geometric Design & Tolerancing 3 Cr. Hrs.

Develop an understanding of the geometric dimensioning and tolerancing system, incorporating dimensioning of parts with respect to the function of the part. Two lecture, two lab hours per week.

Prerequisite(s): DRT 196 and INT 109 or ETD 128 and INT 109 or ETD 101 and ETD 128

231 Advanced Design Interpretation 3 Cr. Hrs.

An advanced course in Geometric Design and Tolerancing (GD&T) for experienced machinists.

Prerequisite(s): ETD 230 or permission of chairperson

238 Product Development & Testing 2 Cr. Hrs.

Designing for all factors that are desirable: safety, manufacturability, environment, durability, reliability, and maintainability. Analysis and assessment of the effectiveness of a design over its lifecycle through prototype testing and rapid prototyping.

Prerequisite(s): ETD 228

245 Machine Design 5 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. Four lecture, two lab hours per week.

Prerequisite(s): ETD 222 and PHY 131

251 OSHA 1910.120 Hazardous Waste Operations 5 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. Four lecture, three lab hours per week.

Prerequisite(s): DEV 064 and DEV 108, DEV 110 or DEV 130

252 OSHA 1910.120 Hazardous Waste Operations Refresher 1 Cr. Hr.

Provide classroom and practical application to assure the student has maintained pertinent knowledge, skills and information required to handle hazardous material/wastes emergencies. Required for entering and/or working on a hazardous waste site. Emphasis on personnel safety, site hazards, toxicology, personal protective equipment, decontamination, site characterization and site control.

255 Waste Management 4 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 lecture, four lab hours per week.

Prerequisite(s): CHE 151 and ENG 111 and ETD 198 and MAT 131

261 Advanced Analytical Tools for Engineering Technology 2 Cr. Hrs.

An 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 equations, and an introduction to problem solution using symbolic algebra and symbolic calculus. One-half lecture, three lab hours per week.

Prerequisite(s): ETD 198 and MAT 131 or MAT 201

270 Mechanical Engineering Technology Internship R 1 - 12 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.

278 Mechanical Engineering Technology Capstone 4 Cr. Hrs.

Assessment of achievement by Mechanical 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 lecture, six lab hours per week.

Prerequisite(s): Approval of chairperson

280 Advanced Computer Aided Drafting 3 Cr. Hrs.

Study and application of advanced drawing using computer graphic systems. Major emphasis on 2-D commands with an introduction to 3-D drawings. Two lecture, two lab hours per week.

Prerequisite(s): ETD 198 and ETD 199

284 Solidworks Basics 5 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. Two lecture, six lab hours per week.

Prerequisite(s): ETD 128

287 Solidedge Basics 5 Cr. Hrs.

A computer aided drafting course using Solid Edge 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. Two lecture, six lab hours per week.

Prerequisite(s): ETD 128

291 Unigraphics Basics 5 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. Two lecture, six lab hours per week.

Prerequisite(s): ETD 128

297 Special Topics in Engineering

Varied content offering of special interest to the discipline but not covered within existing courses; may be scheduled in a classroom/seminar setting or in non-traditional format. One to six lecture hours per week.

Extended Learning (EXL)**102 Spelling & Vocabulary 4 Cr. Hrs.**

Techniques for mastering spelling and expanding vocabulary, including the following topics and activities: dictionary and thesaurus use, phonetic transcription, connotation/denotation, context clues, euphemism, Greek and Latin roots, prefixes/suffixes, visual memory practice, and word games.

Prerequisite(s): DEV 074, DEV 064

Financial Management (FIN)**208 Sports Finance 3 Cr. Hrs.**

Aspects of collegiate and professional sports finance. Challenges, trends, economic impact, organizational structure, sources of funds, player payroll, operations management, financial management, ownership transfers, and taxation of sport enterprises will be covered.

215 Corporation Finance 3 Cr. Hrs.

Internal and external financing of a modern corporation. Finance and its relationship to the overall operation and management of the corporation. Financial analysis and planning; cash budgets, short- and long- term financing; and asset management.

Prerequisite(s): ACC 122

245 Personal Finance 3 Cr. Hrs.

Household budgeting, use of charge accounts, insurance and savings as investment. Buying and selling of securities.

246 Principles of Investment 3 Cr. Hrs.

For non-professional investors interested in expanding their knowledge and awareness of the stock market and its environment.

260 Employee Benefits 3 Cr. Hrs.

Exploration of the range of benefits available to employees through group plans in order to make students educated consumers and prepare them for employment in financial institutions. An examination of employee benefits in relationship to an employee's financial health.

French (FRE)**100 Introduction to French Conversation, Language, & Culture 3 Cr. Hrs.**

Basic introductory levels of speaking in conversational settings, using knowledge of French-speaking cultures. May not be taken for credit if the student has completed FRE 101 or any other first- or second-year French course.

101 Elementary French I 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing French. Language laboratory work is required.

102 Elementary French II 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing French. Language laboratory work is required.

Prerequisite(s): FRE 101

103 Elementary French III 4 Cr. Hrs.
Foundation for understanding, speaking, reading, and writing French. Language laboratory work is required.
Prerequisite(s): FRE 102

201 Intermediate French I 4 Cr. Hrs.
Reviews and extends basic principles of French through composition, oral presentations, and conversation, stressing fluency. Language laboratory work is required.
Prerequisite(s): FRE 103

202 Intermediate French II 4 Cr. Hrs.
Reviews and extends basic principles of French through composition, oral presentations, and conversation, stressing fluency. Language laboratory work is required.
Prerequisite(s): FRE 201

203 Intermediate French III 4 Cr. Hrs.
Reviews and extends basic principles of French through composition, oral presentations, and conversation, stressing fluency. Language laboratory work is required.
Prerequisite(s): FRE 202

297 Special Topics in French R
1 - 6 Cr. Hrs.
Provides opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline.

Fire Science Technology (FST)

101 Introduction to Fire Science 4 Cr. Hrs.
Principles of combustion, extinguishment, ventilation calculations, heat transfer, and the combustible properties of fuels; history of life and property loss by fire.

102 Fire Protection & Organization 4 Cr. Hrs.
The organization and function of public, governmental, and private sector fire protection agencies; applications of various insurance rate-making methods including the Insurance Service Office Fire Suppression Rating Schedule.

103 Fire Prevention Fundamentals, Codes & Ordinances 4 Cr. Hrs.
Interpretation and application of the Ohio Fire Code and the Life Safety Code (NFPA 101); enforcement of fire codes and statutes and the legal ramifications.

115 Fire Apparatus & Equipment 3 Cr. Hrs.
Construction, operation and maintenance of pumping engines, aerial ladder trucks and platforms, and specialized fire equipment. Two lecture, two lab hours per week.

116 Fire Protections Systems I 3 Cr. Hrs.
Principles of design, application, and operation of fire detection, alarm and suppression systems and portable fire extinguishers based on the applicable standards of the National Fire Codes. Two lecture, two lab hours per week.

117 Fire Protection Systems II 3 Cr. Hrs.
Design, installation and maintenance of fire detection systems and chemical fire suppression systems using appropriate national fire codes. Two lecture, two lab hours per week.
Prerequisite(s): FST 116

120 Fire Safety Inspector 6 Cr. Hrs.
Fire hazard identification; fire hazard abatement; fire inspection procedures; fire code compliance; public fire safety education; application of fire codes and standards and fire hazards associated with special material and equipment. Four lecture, four lab hours per week.
Prerequisite(s): Permission of chairperson

125 Fire Investigation Procedure 4 Cr. Hrs.
Techniques used to determine the point of origin and cause of a fire; methods and motives for fire setting; State of Ohio statutes on arson and related offenses and trial preparation and presentation.
Prerequisite(s): FST 101 or FST 181 or permission of chairperson

152 Technical Rescue Refresher 2 Cr. Hrs.
Practical application to assure that the student has maintained pertinent knowledge, skills and information required to handle technical rescue emergencies. Emphasis will be on personal safety, site hazards, personal protective equipment and incident management. One lecture, three lab hours per week.
Prerequisite(s): FST 171 and FST 179 or Level I Firefighter

169 Rapid Intervention Team 2 Cr. Hrs.
An examination of procedures, skills and techniques needed to operate as a member of a Rapid Intervention Team (RIT). Covered will be the fire scene factors involved in implementing a RIT. Completion of several practical exercises will be required. This course meets the requirements of the Rapid Intervention Team component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. One lecture, two lab hours per week.
Prerequisite(s): FST 171 and FST 179

171 Introduction to Technical Rescue 3 Cr. Hrs.
An overview of the National Fire Protection Association Technical Rescue Standards 1670 with emphasis on the role of technical rescue in emergency response, application of the physics concepts needed for technical rescue and the application of Incident Management System (IMS) within the framework of the rescue program.

172 Vehicle Rescue 2 Cr. Hrs.
An examination of procedures and skills involved in the extrication of a victim from a vehicle accident. Covered will be the proper use of a variety of rescue equipment and the Incident Management System requirements of vehicle rescue. Completion of several practical exercises will be required. This course meets the requirements of the vehicle rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. One lecture, two lab hours per week.
Prerequisite(s): FST 169 and FST 171 and FST 173 and FST 179

173 Rope Rescue 3 Cr. Hrs.
A detailed examination of the rescue procedures and techniques for victims involved in emergency situations that include high angles and/or great heights and distances. Completion of a series of practical exercises is required. This course meets the requirements of the rope rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. Two lecture, two lab hours per week.
Prerequisite(s): FST 169 and FST 171

174 Confined Space Rescue 3 Cr. Hrs.
A detailed examination of the removal of a victim from a confined space. Analyses of the hazards of confined spaces and below ground environments as well as the application of confined space rescue techniques are covered. Completion of a series of practical exercises is required. This course meets the requirements of the confined space rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. Two lecture, two lab hours per week.
Prerequisite(s): FST 169 and FST 171 and FST 173 and FST 179

175 Machine/Rigging Rescue 2 Cr. Hrs.

An examination of the extrication of a victim trapped from an accident involving heavy machinery. Covered will be the proper use of the appropriate rescue equipment, the Incident Management System requirements of machinery rescue and the disassembling of complex machines. Completion of a practical exercise is required. This course meets the requirements of the machine rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. One lecture, two lab hours per week.

Prerequisite(s): FST 169 and FST 171 and FST 172 and FST 173 and FST 179

176 Trench Rescue 2 Cr. Hrs.

Examination of the extrication of an individual trapped in a collapsed excavation trench. Covered will be the trench settings and environments, proper use of rescue tools and apparatus, proper shoring techniques, stabilization of the trench area and the incident management requirements of a trench rescue. Completion of a practical exercise is required. This course meets the requirements of the trench rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. One lecture, two lab hours per week.

Prerequisite(s): FST 169 and FST 171 and FST 172 and FST 173 and FST 179

177 Building Collapse Rescue 3 Cr. Hrs.

This course is a component of the Basic Emergency Rescue Technician program, which includes an examination of the rescue needs of victims trapped during a structural collapse. Assessing structural integrity, stabilizing structural members, proper use of rescue equipment during structural collapse rescue and the Incident Management System requirements during structural collapse operations are also included. Completion of a practical exercise is required. This course meets the requirements of the collapsed building rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. Two lecture, two lab hours per week.

Prerequisite(s): FST 169 and FST 171 and FST 172 and FST 173 and FST 176 and FST 179

178 Swift Water Rescue 3 Cr. Hrs.

An examination of the rescue needs of victims involved in water emergencies that are primarily on the surface of either a static or dynamic water body. Course will cover assessing water emergencies, weather considerations, rigging, water craft needs and limitations, victim removal and Incident Management Systems requirements. This course meets the requirements of the swift water rescue component of the National Fire Pro-

tection Association (NFPA) Standard on Technical Rescue Training 1670. Two lecture, two lab hours per week.

Prerequisite(s): FST 169 and FST 171 and FST 173 and FST 179

179 Victim Location, Operation Level 2 Cr. Hrs.

An examination of the procedures needed to locate missing individuals due to actions that might or might not be within their control. Includes fundamentals of search operations, search tactics and strategies and Incident Management Systems requirements. Completion of a practical exercise is required. This course meets the requirements of the victim rescue component of the National Fire Protection Association (NFPA) Standard on Technical Rescue Training 1670. One lecture, two lab hours per week.

Prerequisite(s): FST 171

180 Firefighter II 16 Cr. Hrs.

Basic, intermediate and advanced instruction in fire suppression, fire chemistry and behavior, rescue, firefighting tools, appliances and equipment, built-in fire suppression systems and firefighting safety, rescue and survival. Six lecture, 20 lab hours per week.

Prerequisite(s): Permission of chairperson

181 Firefighter I 8 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, rescue and survival. Three lecture, ten lab hours per week.

Prerequisite(s): Approval of coordinator

182 Advanced Firefighting Procedures 8 Cr. Hrs.

A refresher and refinement of professional fire suppression skills to include advanced instruction in fire suppression; fire chemistry and behavior; rescue; firefighting tools, appliances and equipment; built-in fire suppression systems and firefighting safety and survival. Three lecture, ten lab hours per week.

Prerequisite(s): FST 193 and approval of chairperson and two years firefighting experience and must have own SCBA and turn-out gear.

190 Pre-Firefighter Academy 2 Cr. Hrs.

Introductory course for those students desiring to become firefighters. Previews all aspects of firefighting including apparatus, gear, hazards, emergency medical service, technical and physical requirements and the structure of the fire service.

Prerequisite(s): Approval of department

191 Volunteer Firefighter 3 Cr. Hrs.

Basic instruction in fire suppression; fire chemistry and behavior; rescue; firefighting tools, appliances and equipment and firefighting safety and survival. One lecture, four lab hours per week.

Prerequisite(s): Approval of coordinator

192 Firefighter I Transition 5 Cr. Hrs.

Intermediate instruction in fire suppression; fire chemistry and behavior; rescue; firefighting tools, appliances and equipment; built-in fire suppression systems and firefighting safety, rescue and survival. Two lecture, six lab hours per week.

Prerequisite(s): FST 191 and approval of coordinator

193 Firefighter II Transition 8 Cr. Hrs.

Advanced instruction in fire suppression; fire chemistry and behavior; rescue; firefighting tools, appliances and equipment; built-in fire suppression systems and firefighting safety and survival. Three lecture, ten lab hours per week.

Prerequisite(s): FST 192 or FST 181

194 Fire Brigade Training 3 Cr. Hrs.

Basic instruction in extinguishing fire in the incipient stage. Instruction includes fire chemistry and behavior, rescue, operation of sprinkler systems and stand pipes and operation of fire extinguishers. This course meets the requirements of 29 CFR 1910 Subpart L, 1910.156 Fire Brigade. Two lecture, two lab hours per week.

201 Fire Hydraulics 5 Cr. Hrs.

Fundamental principles of water movement through pipe and fire hose; application of formulas to solve friction loss, flow rate, engine and nozzle pressures; evaluation of water supplies and sprinkler requirements. Four lecture, two lab hours per week.

Prerequisite(s): MAT 131 or MAT 116

202 Building Construction 4 Cr. Hrs.

Fundamentals of building construction; design and materials as fire protection features; hazards, venting, heating, air conditioning structures; demolition and evaluation considerations to high density areas with high fire hazard potential.

204 Water Suppression Systems 4 Cr. Hrs.

Code requirements for the design, installation and maintenance of automatic sprinkler systems, types of systems and their applications to fire protection. Three lecture, two lab hours per week.

Prerequisite(s): FST 201

209 Fire Service Instructor 6 Cr. Hrs.
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 National Fire Protection Association (NFPA) Standard 1041, Fire Service Instructor I. Five lecture, two lab hours per week.

Prerequisite(s): Five years experience as a firefighter and pass firefighter knowledge pre-test

218 Plans Review for Fire Safety 3 Cr. Hrs.

Role of a plans examiner and the part played in a fire protection environment; identification of code requirements; the analysis and abatement of building/fire code violations.

Prerequisite(s): CAT 207 or approval of chairperson

220 Fire Protection Systems Design 4 Cr. Hrs.

Design, installation and maintenance requirements for fire detection systems, chemical suppression systems, stand-pipe systems, foam systems, fire sprinkler systems; use of computer programs to perform hydraulic calculations and the use of appropriate national fire codes on sprinkler design. Three lecture, two lab hours per week.

Prerequisite(s): FST 116 or FST 204

251 Fire Officer Level I 8 Cr. Hrs.

Management, supervision, and leadership within the basic fire department functional unit of the fire company. This course meets the objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications Level I.

Prerequisite(s): FST 192

252 Fire Officer Level II 4 Cr. Hrs.

Management, supervision and leadership needed to manage and command multi-company situations are examined. This course meets the objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications Level II.

Prerequisite(s): FST 251

253 Fire Officer Level III 4 Cr. Hrs.

Administration of fire department operations and the management of facilities and resources needed to provide a public fire protection delivery system. This course meets the objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications, Fire Officer Level III.

Prerequisite(s): FST 252

254 Fire Officer Level IV 4 Cr. Hrs.

Assesses the public fire protection needs of a community including the planning, development, and implementation of a public fire protection delivery system. This course meets the objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications, Fire Officer Level IV.

Prerequisite(s): FST 253

270 Fire Science Technology Internship 1 - 12 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): Permission of chairperson

278 Fire Administration Capstone 4 Cr. Hrs.

Master planning, decision making, and problem solving in the public fire protection environment. A capstone course for the Fire Science Technology, Fire Administrative Option.

Prerequisite(s): Permission of chairperson

297 Special Topics in Fire Science Technology R 0.5 - 6 Cr. Hrs.

Varied content offerings of special interest to the Fire Science discipline. Brief descriptions of topics will be provided when the course is offered.

Geography (GEO)

101 Physical Geography 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; and current environmental issues such as global warming, ozone depletion, air and water pollution. Laboratory will include use of the Internet and various computer software. Three lecture, two lab hours per week.

102 Human Geography 3 Cr. Hrs.

Introduction to aspects of geography concerned with the efforts of humans to cope with their environment: population and settlement forms; utilization of resources; spatial distribution of language and religion; the influence of political systems on culture; and the origin and dispersal of cultural elements among the various world realms.

107 Introduction to GIS I 4 Cr. Hrs.

This course is the first in a two-part series of introduction to the basic theoretical as well as practical concepts of Geographic Information Systems. Students will learn the basics of ArcMap, ArcCatalog and explore how these applications interrelate in a complete GIS software system. Three lecture, two lab hours per week.

145 Introduction to Meteorology 4 Cr. Hrs.

Survey of major atmospheric elements such as temperature, pressure, moisture, and precipitation and the concepts of meteorology followed by weather analysis and forecasting. Through computer simulations, exploration and introduction to the formation and development of individual weather disturbances such as thunderstorms, tornadoes and hurricanes. Also included are impacts of human actions on the atmosphere. Laboratory exercises will combine the latest computerized software with in-class assignments. Three lecture and two lab hours per week.

146 Lab for GEO 145

Laboratory must be taken with GEO 145.

201 World Regional Geography I 3 Cr. Hrs.

An introduction to world regional geography, focusing on the developed regions of the world based on their human and physical characteristics and their economic and political organizations.

202 World Regional Geography II 3 Cr. Hrs.

An introduction to world regional geography, focusing on the developing regions of the world based on their human and physical characteristics and their economic and political organization.

204 Political Geography 3 Cr. Hrs.

This course will introduce students to the field of political geography and focus on the spatial characteristics of political phenomena; emphasis includes the evolution of state, nation, and nation-state as well as the global economy, uneven development, and power politics.

Prerequisite(s): GEO 102 or instructor signature

206 Appalachian Environment 3 Cr. Hrs.

Overview of the various cultural and geographic aspects of the rural and urban Appalachian region, including physiography and geology; migration and settlement patterns; historical development, cultural diffusion, population characteristics and economy.

207 Introduction to GIS II 4 Cr. Hrs.
This course is the second in a two-part series, which applies to Geographic Information System applications. This course covers the advanced application of GIS software and processes. Three lecture, two lab hours per week.
Prerequisite(s): GEO 107

208 Geography of the Middle East 4 Cr. Hrs.

This course will introduce students to the extremely complex and volatile region of the Middle East. The course will focus on the region's diverse environments, religions, languages, politics and its cultures.

209 Introduction to Cartography 4 Cr. Hrs.

This course is an introduction to the science and art of map making. The content of this class range 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. While the lecture part of this course will cover concepts and design principles of Cartography, laboratory exercises will provide hands-on experiences in using Adobe Photoshop and ArcGIS to design and produce a variety of thematic maps. Three lecture, two lab hours per week.

297 Special Topics in Geography R 1 - 6 Cr. Hrs.

To provide opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline; objectives will vary with the particular content area. Course is repeatable as topics change.

German (GER)

100 Conversational German 3 Cr. Hrs.
Understanding and speaking in conversational settings, using knowledge of German-speaking cultures. May not be taken for credit if the student has completed GER 101 or any other first- or second-year German course.

101 Elementary German I 4 Cr. Hrs.
Foundation for understanding, speaking, reading and writing German. Thirty minutes per week minimum of language laboratory work is required outside of class time.

102 Elementary German II 4 Cr. Hrs.
Foundation for understanding, speaking, reading and writing German. Language laboratory work may be required.
Prerequisite(s): GER 101

103 Elementary German III 4 Cr. Hrs.
Foundation for understanding, speaking, reading and writing German. Language laboratory work may be required.
Prerequisite(s): GER 102

201 Intermediate German I 4 Cr. Hrs.
In the second year of language study, students learn to understand the use of most tenses, moods and grammatical features and learn a variety of appropriate idiomatic expressions through readings on topics pertinent to German speakers.
Prerequisite(s): GER 103 or approval of coordinator

202 Intermediate German II 4 Cr. Hrs.
In the second year of language study, students learn to understand the use of most tenses, moods and grammatical features and learn a variety of appropriate idiomatic expressions through readings on topics pertinent to German speakers.
Prerequisite(s): GER 201 or approval of coordinator or by WEBCAPE administered on site

203 Intermediate German III 4 Cr. Hrs.
Reviews and extends basic principles through composition and conversation, stressing fluency. Language laboratory work may be required.
Prerequisite(s): GER 202 or instructor's approval

Geology (GLG)

141 General Geology I 4 Cr. Hrs.
Identification of rocks, minerals, their origin, destruction, recycling, surface processes of wind, water and ice in changing Earth's surface, plate tectonics; interior forces that cause earthquakes, volcanoes, mountain building. Three lecture, two lab hours (GLG 147) per week.
Corequisite(s): GLG 147 (lab)

142 General Geology II 4 Cr. Hrs.
The Earth in space, physical evolution of oceans, atmosphere and continents, origin of life and its evolution, physical and biological development of North American continent. Three lecture, two lab hours (GLG 148) per week.
Prerequisite(s): GLG 141 and GLG 147
Corequisite: GLG 148 (lab)

143 General Geology III 4 Cr. Hrs.
Use and misuse of resources, hazardous environments, engineering difficulties, waste disposal, pollution problems. Analysis of natural hazards; floods, volcanoes, earthquakes, mass wasting, subsidence, coastal threats and others. Consequences of human activities on the environment and on human populations; as well as mitigation and remediation strategies and processes. Three lecture, two lab (GLG 149) hours per week.
Prerequisite(s): GLG 147, GLG 141
Corequisite: GLG 149 (lab)

144 Geological Field Trips 4 Cr. Hrs.
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 and include, but are not limited to, direct observation, measurement and identification of minerals, rocks, fossils and features and the construction of stratigraphic columns. On-site study of rock formations, weathering characteristics, glaciation and natural resources. Use of observations to interpret and understand the processes involved in the building of the Appalachian Mountains and the geological development of Ohio. Three lecture, two lab hours per week.

Prerequisite(s): GLG 141, GLG 147 and GLG 142, GLG 148

147 Lab for GLG 141

Laboratory must be taken with GLG 141.

148 Lab for GLG 142

Laboratory must be taken with GLG 142.

149 Lab for GLG 143

Laboratory must be taken with GLG 143.

245 Concepts in Earth Science 5 Cr. Hrs.
Basic concepts and applications including properties of Earth materials, objects in the sky, and changes in the Earth and sky. Applications use an inquiry learning environment which emphasizes science process skills integrated with mathematics. Early and Middle Childhood Education majors only. Four lecture, three lab hours per week.
Prerequisite(s): ASE 145, MAT 110 or equivalent

270 Geology Internship R 2 - 12 Cr. Hrs.

The internship is designed to support a variety of experiential learning needs. Adult learners with extensive learning from prior experience may receive acknowledgment of that learning with internship credit upon submission of a portfolio to an evaluation committee. Younger students with limited experience will participate in selected non-classroom experiences with relationship to their educational needs. Students already working full or part time may apply to use that experience in fulfillment of the internship requirement. For the latter two types of students, learning outcomes are established and related reports and/or projects are submitted each term.

297 Special Topics in Geology R 1 - 6 Cr. Hrs.

To provide opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline; objectives will vary with the particular content area. Course is repeatable as topics change.

Health Information Management (HIM)

110 Health Information Processing I 3 Cr. Hrs.

Foundations of health information management and health care data including health care systems, the Health Information Management profession, patient and health care data, and data collection methodologies. Two lecture, two lab hours per week.

Prerequisite(s): Permission of chairperson

111 Health Information Processing II 3 Cr. Hrs.

Health care data management, including organization of HIM functions, data quality, access, and retention. Discussion of classification systems, clinical vocabularies and nomenclatures. Two lecture, two lab hours per week.

Prerequisite(s): HIM 110 and approval of chairperson

116 Lab for HIM 110

Laboratory must be taken with HIM 110.

118 Lab for HIM 111

Laboratory must be taken with HIM 111.

121 Basic Medical Terminology 3 Cr. Hrs.

Basic prefixes, roots, and suffixes; disease terminology including anatomic, diagnostic, symptomatic, eponymic terms and standard abbreviations of the basic body systems.

Prerequisite(s): DEV 065 or equivalent

122 Specialized Medical Terminology 3 Cr. Hrs.

Continuation of HIM 121 for students in Health Information Management and in other health related programs requiring expanded working knowledge and understanding of the language of medicine.

Prerequisite(s): HIM 121

135 Medicolegal Aspects of Health Care Records 3 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 HIPAA regulations.

Prerequisite(s): DEV 065 or equivalent

165 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): BIO 107 or BIO 121 or BIO 141 and HIM 121

178 HIM Intermediate Capstone 1 Cr. Hr.

Practical applications of competencies from the first-year HIM curriculum including projects, laboratory simulations and case studies. Completion of a mock credentialing examination required. Two lab hours per week.

Prerequisite(s): HIM 111 and HIM 135 and HIM 240 and HIM 265 and approval of chairperson

218 Cancer Registry 1 Cr. Hr.

Organization and operation of a hospital cancer registry under guidelines of the American College of Surgeons emphasizing case finding, accession, indexing, abstracting and follow-up of cancer data.

Prerequisite(s): HIM 111 and permission of chairperson

228 Clinical Abstracting 3 Cr. Hrs.

Introduction to clinical databases with emphasis on knowledge of abbreviations, laboratory tests, treatments, symptoms and drug therapies. Significant laboratory abstracting practice. Two lecture, two lab hours per week.

Prerequisite(s): ALH 142 and HIM 111 and HIM 165 and approval of chairperson

240 Hospital Ambulatory Coding 4 Cr. Hrs.

Theory and application of skills required to assign and sequence codes for hospital ambulatory services for reimbursement using the CPT and ICD-9-CM classification system. Three lecture, two lab hours per week.

Prerequisite(s): BIO 122 and HIM 260 and HIM 261 and approval of chairperson

241 Hospital Inpatient Coding 4 Cr. Hrs.

Theory and application of skills necessary to assign ICD-9-CM diagnosis and procedure codes to inpatient cases for reimbursement and research. Two lecture, four lab hours per week.

Prerequisite(s): HIM 265 and HIM 240 and approval of chairperson

244 Health Care Quality Improvement 3 Cr. Hrs.

Organization and use of data in health care quality improvement programs including quality assessment and monitoring, case management, risk management and credentialing under current external regulatory guidelines and accreditation requirements. Two lecture, two lab hours per week.

Prerequisite(s): HIM 111 and BIS M45 or BIS 161 and approval of chairperson

245 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 and leadership skills. Two lecture, two lab hours per week.

Prerequisite(s): HIM 111 and approval of chairperson

246 Health Care Information Systems 3 Cr. Hrs.

An in-depth look at the use of information systems technology in the health care delivery system. Includes electronic clinical information systems and health records, various health information system applications, information systems life cycle, and information security. Two lecture, two lab hours per week.

Prerequisite(s): HIM 110 and approval of chairperson

249 Health Care Statistics 2 Cr. Hrs.

Theory and application of health care statistics as related to data definitions and uses, mathematical review, statistical data collection, computation of statistical formulae and collection and reporting of vital statistics. One lecture, two lab hours per week.

Prerequisite(s): DEV 085 or equivalent

250 Professional Practice Experience I 1 Cr. Hr.

Practical application of health information management processes including filing, retrieval and qualitative and quantitative analysis of medical data as well as record completion by physicians and other allied health professionals. Five practicum hours per week.

Prerequisite(s): HIM 111 and approval of chairperson

251 Professional Practice Experience II
1 Cr. Hr.

Practical application of health information management processes including medicolegal release of medical information, patient registration, patient accounts, DRG coordination and assignment, ambulatory coding, flowcharting, generation of job procedures and optical disk scanning. Five practicum hours per week.

Prerequisite(s): HIM 250 and HIM 135 and HIM 240 and approval of chairperson

252 Professional Practice Experience III
2 Cr. Hrs.

Practical application and reinforcement of knowledge previously learned including statistical reporting, hospitalwide and HIM department quality assurance, utilization review, risk management and trauma, cardiac, burn and tumor registries. Ten hours per week in full term.

Prerequisite(s): HIM 241 and HIM 251 and approval of chairperson

260 ICD-9-CM Medical Office Coding
3 Cr. Hrs.

Introduction to principles and conventions for assigning ICD-9-CM codes to patient encounters for billing physician services. Students should possess proficiency in basic medical terminology. Additional out-of-class assignments required.

Prerequisite(s): HIM 121

261 CPT Medical Office Coding
3 Cr. Hrs.

Introduction to rules, regulations and principles for assigning CPT codes to patient encounters for billing physician services. Students should possess proficiency in basic medical terminology. Additional out-of-class assignments required.

Prerequisite(s): HIM 121

262 Advanced Medical Office Coding
4 Cr. Hrs.

Advanced theory and practice of ICD-9-CM and CPT coding for the medical office environment. Three lecture hours, two lab hours per week.

Prerequisite(s): HIM 122 and HIM 260 and HIM 261 and BIO 107 or BIO 122 or BIO 162

265 Health Care Data in Reimbursement
3 Cr. Hrs.

Organization of the health care delivery system including managed care and capitation. Theory and use of reimbursement systems such as DRGs, APCs and RBRVS. Discussion of data flow from admission to billing and analysis of casemix. Two lecture, two lab hours per week.

Prerequisite(s): HIM 110 and HIM 260 and HIM 261 and approval of chairperson

278 HIM Capstone **2 Cr. Hrs.**

Projects, oral and written presentations, case studies, and portfolio development incorporating the domains, subdomains and tasks for two-year HIM programs from the American Health Information Management Association. Completion of two mock accreditation exams. Four lab hours per week.

Prerequisite(s): HIM 251 and approval of chairperson

297 Special Topics in Health Information Management R
0.5 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics within the discipline.

History (HIS)**101 United States History (1607-1815)**
3 Cr. Hrs.

Development of the people of the United States in political, social, economic, and cultural areas.

102 United States History (1815-1919)
3 Cr. Hrs.

Development of the people of the United States in political, social, economic, and cultural areas.

103 United States History (1919-Present)
3 Cr. Hrs.

Development of the people of the United States in political, social, economic, and cultural areas.

105 African-American History 4 Cr. Hrs.

Contributions of African-Americans to the institutions and culture of the United States from 1619 to the present.

111 Western Civilization (0-1300)
3 Cr. Hrs.

Major trends in the development of Western culture, emphasizing political, economic, social, and cultural achievements.

112 Western Civilization (1300-1815)
3 Cr. Hrs.

Major trends in the development of Western culture, emphasizing political, economic, social, and cultural achievements.

113 Western Civilization (1815-present)
3 Cr. Hrs.

Major trends in the development of Western culture, emphasizing political, economic, social, and cultural achievements.

214 History of Southeast Asia 3 Cr. Hrs.

Survey of Indo-China, Indonesia, and the Philippines, with emphasis on economic, political, and religious evolution tracing ancient and colonial influences on modern nations of the area.

215 Survey of African History 3 Cr. Hrs.

Overview of the history of Africa from prehistoric times to the present from an Afrocentric perspective; special emphasis on twentieth century issues and problems.

216 Survey of Latin American History
3 Cr. Hrs.

Overview of Latin American history from prehistoric times to the present, tracing ancient and colonial influences on modern nations of the area.

217 Survey of East Asia 3 Cr. Hrs.

Survey of East Asia (China, Korea, and Japan) from earliest times to the present, with special emphasis on twentieth century issues and problems.

218 History of Ohio 3 Cr. Hrs.

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.

219 Survey of the Middle East
3 Cr. Hrs.

A survey of the Middle East concentrating on historical developments since the nineteenth 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.

297 Special Topics: History R
1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline.

Hospitality Management (HMT)

101 Dining/Kitchen Orientation 2 Cr. Hrs.

Knowledge and skill development of dining room and commercial kitchen proficiency. Through lecture and demonstration modules, students will attain skills in these two environments. One lecture, two lab hours per week.

Prerequisite(s): DEV 065 and DEV 085 and DEV 110

102 Kitchen Chemistry 3 Cr. Hrs.

An introduction to the applied chemistry of food and food preparation. Lecture demonstrations and take home projects will be used to illustrate course principles.

Prerequisite(s): DEV 065 and DEV 085 and DEV 110

105 Introduction to the Hospitality & Tourism Industry 3 Cr. Hrs.

An overview of the Hospitality and Tourism Industry that includes in-depth views of restaurants, catering, culinary, private clubs, bar & beverage, tourism, cruise lines, meeting/events planning, lodging, and the casino industry. Guest lecture presentations, field trips, career research, and industry personnel interviews provide students with real time examples of the skills and abilities necessary to compete in the world of Hospitality and Tourism.

Prerequisite(s): DEV 065, DEV 085, DEV 110 or equivalent

107 Sanitation & Safety 3 Cr. Hrs.

Food sanitation topics including food spoilage, microorganisms, food illnesses and outbreaks, and HACCP (Hazard Analysis Critical Control Point) controls, proper handling of equipment and personal hygiene.

Prerequisite(s): DEV 110, DEV 065 or equivalent

110 Menu Planning 2 Cr. Hrs.

Menu development and design to include facility design implications, equipment needs, efficiency in the kitchen and cost controls related to the hospitality industry.

Prerequisite(s): DEV 065 and DEV 085 and DEV 110

112 Food Principles & Basic Preparation 5 Cr. Hrs.

Introduces the scientific principles involved in food preparation including ingredient function, terminology, preparation and culinary techniques of soups, sauces, vegetables, fruits, grains, salads and farinaceous dishes. Course includes recipe conversion, product evaluation, and maintaining a safe and sanitary kitchen. Two lecture, six lab hours (HMT 113) per week.

Prerequisite(s): HMT 107 or DIT 137 and HMT 101

113 Lab for HMT 112

Laboratory must be taken with HMT 112.

114 Advanced Food Preparation 5 Cr. Hrs.

Introduction to basic baking principles; production of meats, poultry, seafood and sandwiches as well as breakfast cookery methods. Two lecture, six lab (HMT 115) hours per week.

Prerequisite(s): HMT 112 and HMT 113

115 Lab for HMT 114 R

Laboratory must be taken with HMT 114.

118 Artisan Breads I 5 Cr. Hrs.

Techniques for professional development and introduction to artisan yeast-raised products. Two lecture, six lab hours per week.

Prerequisite(s): HMT 208 and HMT 238

125 Bar Operations Management 3 Cr. Hrs.

The use, procurement, cost controls, security aspects and consumption regulation that pertain to alcoholic beverages used and sold in the hospitality industry. Knowledge of beers, wines and spirits, pairing food with drink and equipment needed for a bar operation.

Prerequisite(s): HMT 105

126 Baking I 5 Cr. Hrs.

The course covers basic ingredients, weights and measures, baking terminology, and formula calculations. Topics include yeast-raised products, quick breads, pastry dough, various cakes and cookies, and appropriate filling and finishing techniques. Upon completion, students should be able to prepare and evaluate baked products.

Prerequisite(s): HMT 102 and HMT 107

127 Lab for Baking I

This is a laboratory course to accompany HMT 126. Emphasis is placed on the practical experiences that enhance the materials and skills presented in HMT 102.

Prerequisite(s): HMT 102 and HMT 107

128 Cake Production & Decorating 5 Cr. Hrs.

Understanding of cake production methods, production of a variety of cakes, icings and decorating techniques in a commercial baking atmosphere culminating in an artistic display of a multi-tiered cake.

Prerequisite(s): HMT 114 and HMT 115

136 Front Office Operations 3 Cr. Hrs.

Information needs of lodging properties with food services; essential aspects of computer systems, such as hardware, software, and generic applications; computer based property management systems for both front and back office functions; hotel sales computer applications and yield management strategies; and computer based food and beverage management systems for both service oriented and management oriented functions.

Prerequisite(s): HMT 105

137 Hospitality Industry Computer Systems 3 Cr. Hrs.

Information needs of lodging properties with food services; essential aspects of computer systems, such as hardware, software, and generic applications; computer based property management systems for both front and back office functions; hotel sales computer applications and yield management strategies; and computer based food and beverage management systems for both service oriented and management oriented functions.

Prerequisite(s): HMT 105, BIS 160 or equivalent

138 Hotel & Lodging Operations Management 3 Cr. Hrs.

Examine the complex relationships between all hotel and lodging departments with a concentrated focus on hotel organization, guest services, human resources, operational efficiency, and revenue management.

Prerequisite(s): HMT 105, HMT 137 and approval of chairperson

139 Housekeeping Management 3 Cr. Hrs.

Overview of managing housekeeping operations including the tools used to systematically achieve the room standards expected by today's lodging guests; complexities, planning, organizing, budgeting, and technical experience involved with the position of executive housekeeper.

Prerequisite(s): HMT 105

140 Domestic Air 2 Cr. Hrs.

Study of the domestic airline industry, domestic airline and city codes, airline terminology, aircraft types, major references, reservations, ethics, and map locations of major North American airports.

Prerequisite(s): DEV 065, DEV 085, DEV 110 or equivalent

141 Destination Geography I 3 Cr. Hrs.

Tourist destinations in North America, Central and South America, the Caribbean and Bermuda, and the methods of selling these destinations.

142 Destination Geography II 3 Cr. Hrs.

Study of tourist destinations in Europe, Africa, the Middle East, Asia and the Pacific, and the methods of selling these destinations.

143 Reference & Reservations 4 Cr. Hrs.

Study of research and reservation processes for accommodations, car rentals, tours, rail transportation and cruises.

Prerequisite(s): HMT 105

144 International Travel 3 Cr. Hrs.

Survey of the international airline industry, including international airline codes, fares, ticketing, and foreign documentation requirements. Map location of major cities and airport codes in Europe, South America, Middle East, Africa, and South Pacific.

Prerequisite(s): HMT 105, HMT 140

145 Airline Computer I 3 Cr. Hrs.

Airline reservation system focusing on displaying availability, space confirmation, and passenger record building and modifying. Two lecture, two lab hours per week.

Prerequisite(s): HMT 105, HMT 140

146 Airline Computer II 3 Cr. Hrs.

Airline computer reservation system, including fare quotes and itinerary pricing; creating, modifying, and searching for applicable fares. Two lecture, two lab hours per week.

Prerequisite(s): HMT 145

150 Meeting & Event Planning I 3 Cr. Hrs.

Overview of meeting and event planning from pre-sale to completion.

151 Meeting & Event Planning II 3 Cr. Hrs.

Advanced study of meeting and event planning from pre-sale to completion.

Prerequisite(s): HMT 150

201 Food Service Equipment Design & Maintenance 3 Cr. Hrs.

Types of equipment used in the hospitality industry and maintenance performed. Layout of equipment in terms of efficiency and cost.

Prerequisite(s): HMT 105

206 Garde Manger 5 Cr. Hrs.

Preparation of force meats, sausages, pates, terrines, galantines, mousse, roulades, pate en croute, hors d'oeuvres and canapés as well as cold sauce production such as aspics and chaud froid sauces; development of skills necessary to produce a cold buffet utilizing vegetable carvings, ice carvings, platter layout, display and design. Two lecture, six lab hours per week.

Prerequisite(s): HMT 114 and HMT 115

207 Butchery & Fish Management 3 Cr. Hrs.

Identifying grades, cutting of meat and fish; techniques for wholesale purchase and distribution as well as sanitary storage and practical management of a larder department. One lecture, four lab hours per week.

Prerequisite(s): HMT 114 and HMT 115

208 Pastry & Confectionery 5 Cr. Hrs.

Theory and practice of pastry and confectionery for the hotel and restaurant industry; dessert menu planning; orientation and familiarization with patisserie environment; all basic pastry preparation, presentation and application to classical dessert making. Two lecture, six lab (HMT 238) hours per week.

Prerequisite(s): HMT 114 and HMT 115

209 Professional Cooking 5 Cr. Hrs.

Enhancement of chef skills by planning, coordinating and preparing of advanced professional menus; critical analysis of recipe preparation techniques and organizational skill abilities. Two lecture, six lab (HMT 239) hours per week.

Prerequisite(s): HMT 114, HMT 115, HMT 206, HMT 236, HMT 208, HMT 238, HMT 207, and HMT 237

215 Food & Labor Cost Controls 3 Cr. Hrs.

Basic methods used to control food, labor and operational costs in an average restaurant, bar and fast food operation. Financial statement analysis as a control, weekly usage sheets, inventories, control records, time card analysis, and sales slips.

Prerequisite(s): HMT 105 and ACC 121

218 Advanced Confectionery & Pastries 5 Cr. Hrs.

Advanced pastry and confectionery techniques including laminated doughs, candy making, plating techniques and introduction to sugar work. One lecture, eight lab hours per week.

Prerequisite(s): HMT 208 and HMT 238

223 Tourism for the Hospitality Industry 3 Cr. Hrs.

Problems, issues, and trends in the travel industry.

Prerequisite(s): HMT 105, HMT 141 and HMT 142

224 Advanced Airline Computer 2 Cr. Hrs.

Airline reservation system including hotel accommodations and cars. One lecture, two lab hours per week.

Prerequisite(s): HMT 146

225 Organization & Administration of Hospitality Industry 3 Cr. Hrs.

This course is designed to provide students with the principles of supervision as they apply specifically to the hospitality industry.

Prerequisite(s): MAN 205, HMT 105

226 Purchasing for the Hospitality Industry 3 Cr. Hrs.

Procurement techniques and product information on food, furniture, fixtures and equipment, with emphasis on purchasing as a managerial function.

Prerequisite(s): HMT 105

227 Marketing in the Hospitality & Tourism Industry 3 Cr. Hrs.

Organization of the marketing function in the hospitality and tourism industry; its role and responsibility in developing an integrated hospitality and tourism marketing program.

Prerequisite(s): HMT 105

230 Risk & Prevention Management 3 Cr. Hrs.

Security and loss prevention is a broad task of protecting people, guests, employees, and assets. Topics include security, key control, property access control, perimeter control, alarm systems, communication systems, lighting, closed circuit television, safe deposit boxes, inventory control, computer security, pre-employment screening, responsible service of alcoholic beverages, emergency procedures, and general safety procedures in the hospitality industry.

Prerequisite(s): HMT 105

236 Lab for HMT 206

Laboratory must be taken with HMT 206.

237 Lab for HMT 207 R

This is a corequisite laboratory course to be taken with HMT 207, Butchery and Fish Management. Includes hands-on learning associated with several varieties of meats and seafood; butchery and commercial kitchen considerations. Four lab hours per week.

238 Lab for HMT 208 R
Laboratory must be taken with HMT 208.

239 Lab for HMT 209 R
Laboratory must be taken with HMT 209.

291 Hospitality Management & Tourism Internship I R 3 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 chairperson

292 Hospitality Management & Tourism Internship II R 3 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): Completion of 30 credit hours toward the degree, approval of chairperson

293 Hospitality Management & Tourism Internship III R 3 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): Completion of 30 credit hours toward the degree, approval of chairperson

295 Hospitality Management & Tourism Seminar 3 Cr. Hrs.
This course provides graduating students with an overall review of the courses taken in Hospitality Management & Tourism program and their chosen career concentration in either Tourism, Meeting and Event Planning, Restaurant Management or Hotel Lodging.
Prerequisite(s): HMT 225 and MAN 205

297 Special Topics in Hospitality Industry R 1 - 5 Cr. Hrs.
Topics within the Hospitality or Culinary Arts programs not covered within existing courses; opportunities for non-traditional learning and continuing professional development in these areas.

Humanities (HUM)

125 The Human Image 3 Cr. Hrs.
Explores the nature and content of the humanities by examining and comparing our culture with 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.

130 Humanity & the Challenge of Technology 3 Cr. Hrs.
Explores the opportunities and challenges presented by the effects of new technologies, and explores the effects of technological development upon modern society.

131 The Search for Utopia 3 Cr. Hrs.
A survey of humanity's creative search for the ideal society with special emphasis on important concepts/beliefs that have changed the world.

135 Environmental Ethics 4 Cr. Hrs.
Overview of philosophical and ethical dimensions of the environmental crisis, such as environmental politics, animal rights, non-western views. Available for Honors credit.

140 Appalachian Folkways 3 Cr. Hrs.
Overview of the facets of folkways and folklore in the Appalachian region of the United States, including folk customs, material culture, performing folk arts, and oral literature.

141 Appalachia 3 Cr. Hrs.
An examination of various facets of life in Appalachia, including history, culture, economics, politics, education, and religion.

194 World & Community Issues 3 Cr. Hrs.
A discussion and study forum focused on broad humanities themes related to the Phi Theta Kappa study topics for the year in which the course is offered. Students select a research project or take on the task of recruiting a speaker; viewing and discussing the satellite seminar programs and community speakers; evaluating and critiquing each other's projects in class; contributing to class discussions; and making a project presentation at the end of the course.

195 Patterns of Leadership R 3 Cr. Hrs.
Examine and analyze leadership in its various dimensions; study and evaluate leaders in several elements and fields.

204 Religion in Appalachia 3 Cr. Hrs.
The role of Appalachian Mountain religion in rural and urban Appalachia and the intertwining of the Appalachian culture and religion. Also focuses on a variety of distinctive Appalachian regional religious traditions.

236 International Studies R 1 - 6 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.

255 People & Religion 3 Cr. Hrs.
Interdisciplinary investigation of the religious influences in the life of the individual and in society.

297 Special Topics: Humanities R 1 - 6 Cr. Hrs.
Provides opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline.

Heating, Ventilating, Air Conditioning & Refrigeration Engineering Technology (HVA)

101 Level 1-A Core Curriculum 3.5 Cr. Hrs.
Core curriculum in the apprenticeship program, including safety, basic math, hand and power tools, blueprint reading and rigging. One and one-half lecture, six lab hours per week.
Prerequisite(s): Approval of chairperson

102 HVAC Level 1-B 3.5 Cr. Hrs.
Beginning HVAC courses includes introduction to HVAC, piping practices, basic electricity, and introductions to cooling and heating. One and one-half lecture, six lab hours per week.
Prerequisite(s): HVA 101 and approval of chairperson

103 HVAC Level 2-A 3.5 Cr. Hrs.
Air distribution systems, furnaces, mechanical maintenance, electricity and electronics, and HVAC controls. One and one-half lecture, six lab hours per week.
Prerequisite(s): HVA 102 and approval of chairperson

104 HVAC Level 2-B 3.5 Cr. Hrs.

Fundamentals of heat pumps, compressors, metering devices and refrigerant management. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 103 and approval of chairperson

112 Sheetmetal Level 1-B 3.5 Cr. Hrs.

Basic sheetmetal topics, including fasteners, hangers, supports, insulation, installation of accessories, and basic fabrication. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 101 and approval of chairperson

113 Sheetmetal Level 2-A 3.5 Cr. Hrs.

Trade math, basic piping practices and fabrication using radial lines. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 112 and approval of chairperson

114 Sheetmetal Level 2-B 3.5 Cr. Hrs.

Blueprints and specifications, air properties and distribution, sheet metal duct fabrication standards, soldering and fabrication of fiberglass ductwork. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 113 and approval of chairperson

122 Plumbing Level 1-B 3.5 Cr. Hrs.

Plumbing profession, plumbing safety, piping, fittings, fixtures, plumbing drawings and plumbing math. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 101 and approval of chairperson

123 Plumbing Level 2-A 3.5 Cr. Hrs.

Reading commercial drawings, installing and treating DWV piping, installing roof, floor and area drains, pipe hangers and supports, and valves. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 122 and approval of chairperson

124 Plumbing Level 2-B 3.5 Cr. Hrs.

Installing, testing and servicing water supply piping, fixtures, valves, faucets, water heaters and fuel gas systems. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 123 and approval of chairperson

140 HVAC Installation Techniques**3 Cr. Hrs.**

Basic practices required for new installation and replacement of HVAC equipment including an introduction to sheet metal skills, copper and black pipe plumbing. Hands-on skills and code requirements will be stressed along with good safety practices. Two lecture, two lab hours per week.

Prerequisite(s): DEV 085 and DEV 064

141 HVAC Installation Practices**2 Cr. Hrs.**

Installation practices for residential and light commercial HVACR systems. Includes study of applicable codes, installation techniques, and installation of a complete residential HVACR system. Note: this course is scheduled to coincide with work on homes for Habitat for Humanity and requires 4-6 Saturday build days off campus in the local metropolitan area. One lecture, two lab hours per week.

Prerequisite(s): HVA 140

144 Introduction to HVAC Systems**3 Cr. Hrs.**

Basic concepts and theory of heating, ventilating, air conditioning and refrigeration systems, including basic use of required instruments to measure temperature, humidity, airflow and refrigerant pressures. Two lecture, two lab hours per week.

Prerequisite(s): DEV 108 or INT 141 and DEV 064

160 Basics of Heating & 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. Two lecture, two lab hours per week.

Prerequisite(s): HVA 144

162 HVAC Loads & Distribution for Small Buildings**4 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. Two lecture, four lab hours per week.

Prerequisite(s): DEV 108 or INT 141 and DEV 064

170 Air & Water Distribution Systems**5 Cr. Hrs.**

Theory and practice of fluid flow in HVAC distribution systems, including water system design and analysis, duct design and analysis, fan and pump selection, valve and damper selection, and evaluation of overall air and water system performance. Hand calculations and use of computer based design and analysis tools; selected hands-on laboratory studies reinforce basic principles; proper installation practices are also included. Three lecture, four lab hours per week.

Prerequisite(s): ETD 198 and MAT 101 or MAT 192 and HVA 144

174 Building Psychrometrics & Load Calculations**5 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 calculations and use of computer based design and analysis tools. Selected hands-on laboratory studies reinforce basic principles. Three lecture, four lab hours per week.

Prerequisite(s): ETD 198 and HVA 144 and MAT 101 or MAT 192

177 Testing, Adjusting & Balancing in HVAC Systems**3 Cr. Hrs.**

Theory and practice of testing, adjusting and balancing (TAB) air and water in HVAC systems. Includes practices, procedures, data collection and report preparation as may be required by a client. Course will include hands-on balancing using current available equipment. Two lecture, two lab hours per week.

Prerequisite(s): HVA 144 and HVA 162 or HVA 170

180 Boilers in HVAC Systems**3 Cr. Hrs.**

A comprehensive study of low pressure hot water/steam generation, including the fundamentals of heat generation in water based heating systems. Two lecture, two lab hours per week.

Prerequisite(s): HVA 144

184 Basics of Cooling & Cooling Systems**3 Cr. Hrs.**

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 and preparation for the EPA refrigerant handler's certification exam. Two lecture, two lab hours per week.

Prerequisite(s): HVA 144

186 Modern Refrigeration Practice**3 Cr. Hrs.**

Theoretical and practical basis for design and application of refrigeration systems, including cycle analysis, equipment and line sizing. Two lecture, two lab hours per week.

Prerequisite(s): MAT 101 or MAT 192 and HVA 184

190 HVAC Mechanical Troubleshooting**3 Cr. Hrs.**

Diagnostic methods of mechanical problem solving in heating and cooling systems. Other topics include common faults and how to avoid repair failures. Two lecture, two lab hours per week.

Prerequisite(s): HVA 160 and HVA 184

194 HVAC Electrical Troubleshooting 3 Cr. Hrs.

Diagnostic methods for solving electrical and control problems in heating and cooling systems. Two lecture, two lab hours per week.

Prerequisite(s): HVA 160 and HVA 184 and EET 119

201 HVAC Level 3-A 3.5 Cr. Hrs.

Basics of preventive and planned maintenance, electrical and electronic troubleshooting, and troubleshooting heating systems. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 104 and approval of chairperson

202 HVAC Level 3-B 3.5 Cr. Hrs.

Troubleshooting of cooling systems, heat pumps and accessories; commercial heating and cooling systems, air and water balance, steam systems and customer relations. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 201 and approval of chairperson

203 HVAC Level 4-A 3.5 Cr. Hrs.

Advanced blueprint reading, indoor air quality, energy conservation equipment, energy management systems and water treatment for HVAC systems. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 202 and approval of chairperson

204 HVAC Level 4-B 3.5 Cr. Hrs.

Start up and shutdown of HVAC systems, heating and cooling system design, and commercial and industrial refrigeration. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 203 and approval of chairperson

211 Sheetmetal 3-A 3.5 Cr. Hrs.

Field measuring and fittings, air systems, welding, brazing, cutting, refrigeration and airflow principles. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 114 and approval of chairperson

212 Sheetmetal Level 3-B 3.5 Cr. Hrs.

Comprehensive blueprint and specification reading, fabrication by triangulation, and architectural sheet metal. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 211 and approval of chairperson

213 Sheetmetal Level 4-A 3.5 Cr. Hrs.

Sheetmetal shop production and organization, air balance, louvers, dampers and access doors. One and one-half lecture, four lab hours per week.

Prerequisite(s): HVA 212 and approval of chairperson

214 Sheetmetal Level 4-B 3.5 Cr. Hrs.

Fume and exhaust system design, review of fabrication techniques, and introductory skills for the crew leader. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 213 and approval of chairperson

221 Plumbing Level 3-A 3.5 Cr. Hrs.

Sizing water supply piping, potable water supply treatment and backflow preventers. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 124 and approval of chairperson

222 Plumbing Level 3-B 3.5 Cr. Hrs.

Types of venting, sizing DWV and storm systems, sewage and sump pumps, corrosive resistant waste pipe and compressed air systems. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 221 and approval of chairperson

223 Plumbing Level 4-A 3.5 Cr. Hrs.

Sizing DWV and storm systems, private water supply systems, private waste disposal systems, locating buried water and sewer lines, and hydronic and solar heating systems. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 222 and approval of chairperson

224 Plumbing Level 4-B 3.5 Cr. Hrs.

Water supply treatment, swimming pools and hot tubs, compressed air, corrosive-resistant waste piping, and plumbing for mobile homes and mobile home parks. One and one-half lecture, six lab hours per week.

Prerequisite(s): HVA 223 and approval of chairperson

231 Stationary Engineering 4 Cr. Hrs.

Fundamentals of stationary engineering, including hydronic and steam boilers, burners, fuels, combustion, pumps and specialties. Course is restricted to members of Plumbers, Pipefitters and Refrigeration Workers Local 162. Three lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

232 Electricity & Refrigerants 4 Cr. Hrs.

Review of electrical principles as applied to HVAC systems, use of meters and schematics for electrical troubleshooting, current refrigerants and refrigerant oils, and refrigerant pipe sizing. Course is restricted to members of Plumbers, Pipefitters and Refrigeration Workers Local 162. Three lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

233 Compressors 4 Cr. Hrs.

Fundamentals of reciprocating, rotary, centrifugal, scroll and screw compressors and accessories. Course is restricted to members of Plumbers, Pipefitters and Refrigeration Workers Local 162. Three lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

234 Chillers 4 Cr. Hrs.

Application of reciprocating and centrifugal chillers to HVAC systems; includes chiller specialties, cooling towers and water conditioning. Course is restricted to members of Plumbers, Pipefitters and Refrigeration Workers Local 162. Three lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

235 Testing, Adjusting & Balancing P/P 4 Cr. Hrs.

Principles of air and water balance, including how to properly balance air handling units, fans, ducts and water systems. Course is restricted to members of Plumbers, Pipefitters and Refrigeration Workers Local 162. Three lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

236 Heating & Cooling Controls 4 Cr. Hrs.

Controls for HVAC systems, including heating and cooling controls as well as pneumatic and DDC systems. Course is restricted to members of Plumbers, Pipefitters and Refrigeration Workers Local 162. Three lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

240 Principles of Process Control 3 Cr. Hrs.

Basic theory and application of measurement, instrumentation, and control as applied to engineering processes including HVAC. Course will cover pneumatic and electronic instrumentation and control systems with an emphasis on control loop performance and tuning. Two lecture, two lab hours per week.

Prerequisite(s): EET 119 and ETD 198 and HVA 286 or HVA 170

243 Controls for Building HVAC Systems 3 Cr. Hrs.

Selection and application of control systems used in the heating and air conditioning of commercial and industrial applications.

Prerequisite(s): HVA 170 or HVA 286

250 Industrial Process Exhaust 3 Cr. Hrs.

The design and operation of ventilation systems for laboratory, kitchen and industrial process exhaust. Two lecture, two lab hours per week.

Prerequisite(s): HVA 170 or HVA 286

253 Advanced HVAC Applications**3 Cr. Hrs.**

Theory and techniques for design of heating, ventilation, and air conditioning systems for modern commercial and industrial buildings. Two lecture, two lab hours per week.

Prerequisite(s): HVA 170 and HVA 174

254 Advanced HVAC Applications II**3 Cr. Hrs.**

Energy efficiency and indoor environmental quality as applied to commercial and industrial HVAC systems, with emphasis on application of current standards. Two lecture, two lab hours per week.

Prerequisite(s): HVA 170 and HVA 174

270 HVACR Engineering Technology Internship R**1-12 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 chairperson

272 Mechanical Cost Estimating**3 Cr. Hrs.**

Estimating of materials, labor and equipment costs for HVACR systems. Focuses on different estimating techniques for doing various types of estimates, including budget estimates and detailed estimates for bid packages with a special emphasis on methods of estimating piping and ducting systems. Two lecture, two lab hours per week.

Prerequisite(s): CAT 138 or CAT 139 and HVA 144

276 Current Topics in Heating, Ventilating & Air Conditioning**3 Cr. Hrs.**

Identification and analysis of current issues in HVAC design, installation, operation or troubleshooting. Topics reflect relevant concerns and issues in the field. Two lecture, two lab hours per week.

Prerequisite(s): HVA 170 and HVA 174 or approval of chairperson

278 HVACR Applications Capstone Project**6 Cr. Hrs.**

Assessment of achievement by Mechanical Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practices of the major. Teamwork on projects will be emphasized. Four lecture, four lab hours per week.

Prerequisite(s): HVA 243 and HVA 253 and HVA 254

286 Fluid Mechanics**3 Cr. Hrs.**

Essentials of fluid properties, fluid statics, fluids in motion, flow measurements, and losses through flow in pipes. Two lecture, two lab hours per week.

Prerequisite(s): MAT 132 and ETD 213 and PHY 141 or PHY 131

288 Thermodynamics**4 Cr. Hrs.**

The laws and application of the principles of thermodynamics as they apply to internal combustion engines, steam cycles, and refrigeration.

Prerequisite(s): HVA 286 or PHY 142

297 Special Topics in HVACR**Technology R 1 - 6 Cr. Hrs.**

This course allows a student or group of students to study a topic of interest to the student(s) as approved by the instructors.

Prerequisite(s): Approval of chairperson

Interior Design (IND)**131 Interior Design I****3 Cr. Hrs.**

Design foundations exploring profession, principles, elements, and processes; space planning and furniture arrangement fundamentals with emphasis on design drawings and professional presentation form. Two lecture, four lab hours per week.

132 Interior Design II**3 Cr. Hrs.**

Data gathering, problem solving, psychological parameters of planning and selection of materials and furnishings; continuation of design, drawings, and processes. Two lecture, four lab hours per week.

Prerequisite(s): IND 131

133 Interior Design III**3 Cr. Hrs.**

Historical evolution of architectural design examining the extended environment, building systems and exterior styles, electrical and wiring plans; continuation of design drawings and processes. Two lecture, four lab hours per week.

Prerequisite(s): IND 132 and CAT 101

134 Interior Textiles & Materials**3 Cr. Hrs.**

Overview of specifications, relative costs and performance properties of materials used in interior design. Includes textiles.

Prerequisite(s): IND 131

135 Graphic Rendering**3 Cr. Hrs.**

Technique development to aid in the visualization of materials and colors in presentation drawings and three-dimensional interpretation of space.

Prerequisite(s): IND 132

231 Advanced Interior Design I**4 Cr. Hrs.**

Advanced issues in barrier-free/universal design. Study and application of construction types. Two lecture, four lab hours per week.

Prerequisite(s): IND 133 and CAT 102

232 Advanced Interior Design II**4 Cr. Hrs.**

Advanced issues in kitchen design and anthropometrics. Study and application of building systems. Advanced oral and visual presentation skills. Two lecture, four lab hours per week.

Prerequisite(s): IND 231

233 Advanced Interior Design III**3 Cr. Hrs.**

Introduction to interior design business practices, including cost estimating, contract writing, sales and communication techniques.

Prerequisite(s): IND 232

240 History of Furniture**3 Cr. Hrs.**

Examination of the stylistic development of domestic furniture and furnishings from classical times to the present.

Prerequisite(s): IND 133

Computer Aided Manufacturing (INT)**107 Principles of Manufacturing****4 Cr. Hrs.**

The study of manufactured products from the perspective of design, tooling, processing, communication, computer numerical control, machine elements, tool design and specifications. The course also examines problem solving and critical thinking in product development using both standard and automated communication methods.

109 Fundamentals of Tool & Manufacturing Processes**4 Cr. Hrs.**

Nomenclature, functions and capabilities of the machine shop and manufacturing processes. Three lecture, two lab hours per week.

111 Tool & Manufacturing Processes I**3 Cr. Hrs.**

An overview of steel making, heat treatment, safety and measurement equipment emphasizing tool and manufacturing processes through machine tool projects and development of process charts. This course emphasizes the use of the Engine Lathe. Two lecture, two lab hours per week.

112 Tool & Manufacturing Processes II
3 Cr. Hrs.

Knowledge of machine tool operations extended by utilizing various types of milling machines, drill presses, lathes and electrical discharge machining (EDM). Two lecture, two lab hours per week.

Prerequisite(s): INT 111

113 Fundamentals of CNC 3 Cr. Hrs.

Development of computer numerical control (CNC) programs for actual operations on the three-axis CNC equipment. Two lecture, two lab hours per week.

Prerequisite(s): INT 109 or INT 112

114 Jig & Fixture Design 3 Cr. Hrs.

Theory, principles, and drawing techniques for the design of jigs and fixtures. Two lecture, two lab hours per week.

Prerequisite(s): INT 109 and INT 107 or ETD 128

116 CNC Operations 3 Cr. Hrs.

Production operation of CNC machining centers and CNC lathes. Set up and operation of CNC machines in a production environment with emphasis placed on production troubleshooting, inspection, reporting, and process improvement. Two lecture, two lab hours per week.

131 Moldmaking Processes 3 Cr. Hrs.

Basic topics of moldmaking including material properties, injection, transfer and blow molding.

141 Applied Shop Mathematics I
3 Cr. Hrs.

Topics in arithmetic and algebra that relate durability with problems encountered in a metalworking training program.

Prerequisite(s): DEV 085

142 Applied Shop Mathematics II
3 Cr. Hrs.

Theory and applications of plane geometry encountered in the metalworking industry.

Prerequisite(s): INT 141

143 Applied Shop Mathematics III
3 Cr. Hrs.

Theory and application of trigonometry as applied to the metalworking industry: compound angles, tapers and measurement set ups.

Prerequisite(s): INT 142

145 Shop Floor Programming 3 Cr. Hrs.

Operation and programming of conversational controlled two-axis milling machines. Includes programming and manufacturing a variety of machined parts utilizing Protrak and Amilam two-axis CNC controls. Two lecture, two lab hours per week.

Prerequisite(s): INT 109 or INT 112 or approval of chairperson

161 Machine Operations Laboratory I
8 Cr. Hrs.

The student will be required to complete the following machine shop projects: T-slot cleaner, taper wedge, parallels, drift punch, center punch, edge finder, lathe and grinder, parallel clamp, non-twist clamp, 1-2-3 blocks, solid square, angle plate, and screw jack. Two lecture, eighteen lab hours per week.

162 Machine Operations Laboratory II
8 Cr. Hrs.

The student will be required to complete the following machine shop projects: surface gauge, magnetic parallels (2), V-block and clamp assembly, and double V-block and clamp assembly. Two lecture, eighteen lab hours per week.

Prerequisite(s): INT 161

163 Machine Operations Laboratory III
8 Cr. Hrs.

The student will be required to complete the following machine shop projects: sinebar, grinding vise, and other optional projects. Two lecture, eighteen lab hours per week.

Prerequisite(s): INT 162

165 Advanced Machine Operations Laboratory 4 Cr. Hrs.

In-depth study of machine tool practices in the areas of grinders, shapers, rotary tables, welding, electrical machining processes, precision layout practices, and inspection practices. A project relating to course topics is required. Three lecture, two lab hours per week.

Prerequisite(s): INT 109 or INT 112

204 Computer Numerical Control Lathe Programming 3 Cr. Hrs.

Computer Numerical Control lathe programming and machine tool operation. Two lecture, two lab hours per week.

Prerequisite(s): INT 113

211 Advanced Computer Numerical Control 3 Cr. Hrs.

Basics of CNC programming language, the programming format and CNC tools and equipment. Two lecture, two lab hours per week.

Prerequisite(s): INT 113

212 Computer Assisted Programming 3 Cr. Hrs.

Programming assignments and implementation with CNC equipment. Two lecture, two lab hours per week.

Prerequisite(s): INT 211

213 Computer Numerical Control Applications 4 Cr. Hrs.

Programming and operation of machines using single part and large volume production techniques with emphasis on workholding, rough machining, high precision machining, computer assisted programming, G-code programming,

and conversational programming; production of a variety of products. Three lecture, two lab hours per week.

Prerequisite(s): INT 212 and INT 204

225 Tool Design 3 Cr. Hrs.

Scientific principles involved in the design and use of tools used for material removal, press working, casting, joining and inspection processes. Two lecture, two lab hours per week.

Prerequisite(s): INT 114

226 Advanced Job Processing 3 Cr. Hrs.

Introduction to the planning of manufacturing for machined parts, from receipt of the order to shipped parts to the customer. Provides additional instruction and problem solving skills on how products are routed through a factory. Designed for toolmakers, machinists and CNC technicians. Two lecture, two lab hours per week.

Prerequisite(s): ETD 231 and department chairperson signature

227 Advanced CNC Mill Programming 3 Cr. Hrs.

Designed for toolmakers, machinists and Computer Numerical Control (CNC) technicians. This class introduces students to the concept of advanced CNC mill programming techniques. It also introduces the application of multi-axis machining procedures. Two lecture, two lab hours per week.

Prerequisite(s): ETD 231 and INT 226

228 Advanced CNC Milling 3 Cr. Hrs.

Designed for toolmakers, machinists and Computer Numerical Control (CNC) technicians. This class introduces students to the concept of advanced CNC mill applications and procedures. It also teaches advanced process refining, advanced set-up procedures, and in-process inspection. Two lecture, two lab hours per week.

Prerequisite(s): INT 226 and ETD 231 and department chairperson signature

270 Industrial Technology Internship R
1 - 12 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 chairperson

297 Special Topics in Tooling & Machining R 3 - 12 Cr. Hrs.

Provides opportunities to receive credit for special interest topics within the discipline. Brief description of the topics will be given and prerequisites identified when offered. Lab time will be part of some content.

Prerequisite(s): Permission of chairperson

Journalism (JOU)

101 Journalism I 3 Cr. Hrs.

The history, scope and functions of newspapers. Students will learn basic reporting skills, including how to interview, gather information and write news stories. Computer skills are required.

Prerequisite(s): ENG 111

102 Journalism II 3 Cr. Hrs.

Advanced reporting and news writing with emphasis in writing news, feature and sports articles. Students will report, write and submit articles for possible publication.

Prerequisite(s): JOU 101

203 Multimedia Journalism 3 Cr. Hrs.

Reporting and writing for online journalism with an emphasis on multi-element news stories. Audio interviews and individual web logs will be created.

Prerequisite(s): JOU 101

270 Journalism Internship R 1 - 12 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 chairperson

Japanese (JPN)

100 Conversational Japanese I 3 Cr. Hrs.

Develops conversational skills in Japanese by analyzing the basic pattern and structure of the language and by promoting mastery of basic vocabulary and idiomatic expressions. Intensive classroom discussion in Japanese is an integral part of the course.

105 Conversational Japanese II 3 Cr. Hrs.

Develops the conversational skills acquired in JPN 100 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 100

Law (LAW)

101 Business Law I 4 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, partnerships and corporations.

102 Business Law II 4 Cr. Hrs.

The American legal system as it relates to business transactions including the laws of commercial paper, secured transactions, agency, corporations, partnerships, bankruptcy, consumer rights, insurance, and crimes that affect businesses.

Prerequisite(s): LAW 101

103 Consumer Law 3 Cr. Hrs.

Review of state and federal consumer laws and how to enforce personal rights under the laws which regulate advertising, privacy, identity theft, debt collection, car repairs, lemon cars, warranties, purchasing and leasing a car, home improvement fraud, predatory lending, telemarketing, spam, Internet sales, and personal health care issues.

144 Domestic Civil Protection Orders 2 Cr. Hrs.

Basic understanding of domestic violence dynamics and working knowledge of Civil Protection Order (CPO) law and procedures. Includes working knowledge of the forms and orders required to put a CPO into effect and enforce it. Also includes societal barriers and justice system barriers that impede safety and justice for victims of domestic violence and their children.

297 Special Topics in Law R 0.5 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Literature (LIT)

201 Survey of English Literature (to 1660) 3 Cr. Hrs.

Chronological survey of major writers of English poetry, drama, and prose from the beginnings through 1660.

202 Survey of English Literature (1660-1832) 3 Cr. Hrs.

Chronological survey of major writers of English poetry, drama, and prose from the 1660 to 1832.

203 Survey of English Literature (1832-present) 3 Cr. Hrs.

Chronological survey of major writers of English poetry, drama, and prose from 1832 through the modern era.

205 Modern Short Story 3 Cr. Hrs.

Students analyze and synthesize pieces of world literature with regard to plot, theme, setting, dialogue and characterization. The stories recognize and explain the interaction between literature and various cultural domains (e.g. social, technological, political and economic). Students use literary devices such as: irony, satire and allegory to examine reading assignments. Educational objectives of the course ask students to participate in reading response questions, the Discussion Forum, essay exams, Asian, African and Latin American countries (showing psychological, sociological and philosophical influences), and literacy elements of the short story.

211 Survey of American Literature I (Colonial & Early 19th Century) 3 Cr. Hrs.

A chronological survey of notable American authors from the colonial to the Civil War eras.

212 Survey of American Literature II (Later 19th Century) 3 Cr. Hrs.

Notable American authors from the Civil War era to the 1920's.

213 Survey of American Literature III (20th Century) 3 Cr. Hrs.

Notable American authors from the 1920's until the present.

215 Introduction to Science Fiction Literature 3 Cr. Hrs.

Literary values, themes, and techniques of science fiction.

217 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.

219 Literature of Aviation 3 Cr. Hrs.

An analysis of five works of fiction and non-fiction that reflect both the technological and the humanistic impact of aviation in the twentieth century.

227 Introduction to Shakespeare 3 Cr. Hrs.

Drama as theatrical art and as interpretation of fundamental human experience. Studies Shakespearean tragedy, history, and comedy.

230 Great Books of the Western World 3 Cr. Hrs.

A chronological survey of the major literary works and periods of Western culture beginning with the Greeks and progressing through the Middle Ages, the Renaissance, Neo-Classicism and Enlightenment, Romanticism, Realism, and Modernism.

Prerequisite(s): ENG 113

233 Native American Literature from Myth to Momaday 3 Cr. Hrs.

Introduction to Native American literature providing an understanding of how traditional myth, song, legend and ceremony shape and inform the works of contemporary writers.

Prerequisite(s): ENG 111

234 Literature of Africa, Asia, & Latin American 3 Cr. Hrs.

Selected, thematic study of major literary works of Africa, Asia, and Latin America, emphasizing universal values and the commonality of experience.

236 African-American Literature 3 Cr. Hrs.

Overview of the African-American literary tradition with emphasis on early folk tales, the Harlem Renaissance, the Black Revolution and contemporary social expression.

238 Appalachian Literature 3 Cr. Hrs.

Literary themes of selected contemporary writers identified with the Appalachian United States.

240 Children's Literature 3 Cr. Hrs.

A study of the literary elements in children's literature and its value in society. Classic and contemporary works will be examined and award winning texts will be discussed.

Prerequisite(s): ENG 111

259 Introduction to Horror Fiction 3 Cr. Hrs.

Literary values, themes, and techniques of horror fiction.

267 Mythology in Literature 3 Cr. Hrs.

Analysis of relationship between myths and literature using selected Jungian archetypes to show how religion, culture, and folktales intertwine.

297 Special Topics in Literature R 1 - 6 Cr. Hrs.

Opportunity to receive credit for special literary topics such as mythology in literature, the family in literature, black literature, etc.

Management (MAN)**100 Shaping Smart Business Arrangements 2 Cr. Hrs.**

This course will help those new to the contracting field gain an understanding of the contracting environment as they develop professional skills needed for making business decisions. Various DoD mission areas and procurement alternatives for each area will be explored. This course is required for Level I DoD Contracting certification.

105 Introduction to Business 3 Cr. Hrs.

The American business system and basic principles of the free market system. Includes basic introduction of concepts of management, marketing, economics, and accounting and other important business principles.

106 Introduction to RFID 2 Cr. Hrs.

Overview of the technology of Radio Frequency Identification Devices (RFID). Applications, terminology and case studies discussed. Gaining hands-on and real-world experience is a focus of this course.

110 Introduction to International Business 3 Cr. Hrs.

The global dimensions of business; an overview of theories and institutions of trade, investment, and management emphasizing the managerial perspective on issues arising from international business and global operations.

123 Mission Support Planning 1.5 Cr. Hrs.

Mission support and planning strategies to develop contracting/acquisition alternatives. Federal Acquisition Regulation and the Defense Acquisition Supplements used throughout course work to evaluate sources of information and the impact of socioeconomic factors upon the acquisition process.

Prerequisite(s): MAN 100

124 Mission Planning Execution 1.5 Cr. Hrs.

Techniques and benefits of early industry involvement in shaping requirements, procedures for commercial and non-commercial acquisition and proper pricing analysis comparisons. Processes needed to conduct competitive acquisitions, process awards and handle protests before and after the contract award.

Prerequisite(s): MAN 123

125 Mission Performance Assessment 1.5 Cr. Hrs.

Identify and utilize proper performance metrics when evaluating contractor mission performance. Explore processes and assessment strategies to ensure successful mission completion, including price contract changes, dispute handling and contract close out methods.

Prerequisite(s): MAN 124

201 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 supervising.

205 Principles of Management 3 Cr. Hrs.

Basic management functions are analyzed through the various theories of management including the "Process School."

207 Total Quality Management 3 Cr. Hrs.

Introduction to a managerial environment in which the student practices providing the customer with exceptional value, developing cross-functional organizational systems, and developing methods for continuous improvement.

Prerequisite(s): MAN 105 or MAN 205

210 Introduction to Project Management 3 Cr. Hrs.

Basic project management concepts and activities are analyzed through the various theories of management functions and resources.

225 Human Relations & Organizational Behavior 3 Cr. Hrs.

Applications of modern psychological and organizational behavior principles in the leadership, training, and motivating of today's worker in modern work surroundings including quality of work life.

Prerequisite(s): MAN 205

240 Human Resource Management 3 Cr. Hrs.

Introduction to Personnel and Human Resource Management with an overview of environmental influences, job analysis, human resource planning, performance evaluations, compensation, training and development, discipline, labor unions and assessment. Focus will be given to the application of Human Resource Management concepts both within a large corporation and smaller organizations.

Prerequisite(s): MAN 205

241 Introduction to Supply Chain Management 3 Cr. Hrs.

Introduction to the basic elements of Supply Chain Management (SCM) and their impact on the effective operations of manufacturing, service, and government organizations in the private and public sectors. Key roles of purchasing and materials management as part of the distribution channel between suppliers and consumers, including the importance of integration of the purchasing, operations, and logistics functions.

242 Advanced Supply Chain Management 3 Cr. Hrs.

In-depth study of Supply Chain Management (SCM) functions and the application of effective SCM strategies and practices to achieve improved operations in manufacturing, service, and government organizations. Analysis of real-world SCM challenges, strategies, and techniques associated with materials requirements, supplier relations, purchasing, operations, and logistics management.

Prerequisite(s): MAT 116 or MAT 121 and MAN 241

244 Negotiation Techniques 3 Cr. Hrs.

Application of basic principles of negotiation techniques through the introduction and analysis of the negotiation process and through case studies. Accurate identification of requirements specifications, proposal analysis, and purchasing and contract negotiations with relevance to conciliation, compromise, and agreement in other business and personal life situations.

247 DoD Systems Acquisition Management 3 Cr. Hrs.

This course provides a broad overview of the DoD Systems Acquisition Management process, covering all phases of acquisition. It introduces the Joint Capabilities Integration and Development System (JCIDS) and resource allocation processes, the DoD 5000 Series documents governing the defense acquisition process, and current issues in systems acquisition management.

248 DoD Acquisition Logistics Fundamentals 3 Cr. Hrs.

Broad overview of the role of the DoD Acquisition Logistics process in systems acquisition life cycle and system engineering processes. Logistics relevant aspects of requirements identification, life cycle costing, integrated product and process development, sustainment logistics, supportability analysis, product support, contracting, and contractor support.

Prerequisite(s): MAN 247

255 Management Information Systems I 3 Cr. Hrs.

Management perspective of information systems activity from development through implementation.

Prerequisite(s): MAN 205 and MAT 116 or MAT 121

270 Management Internship R 3 - 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): BIS 160, MAN 205, MAT 122, MRK 201, and approval of chairperson.

279 Business Capstone 5 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): BIS 160 and MAN 205 and MAT 122 and MRK 201 and additional 9 hours of MAN/MRK courses.

297 Special Topics in Management R 0.5 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics within the discipline. Only six credit hours earned by Special Topics courses can apply toward an associate degree in Business.

Medical Assistant Technology (MAS)

101 Introduction to Medical Assisting 2 Cr. Hrs.

Overview of the health care industry, including organization of ambulatory care practice groups, solo practice offices, hospitals, professional organizations, and federal health care programs; health care delivery trends and issues; role of the medical assistant in different work environments.

102 Medical Office Accounting 3 Cr. Hrs.

Principles of bookkeeping, automated and manual patient financial accounting, collection techniques, employee payroll, banking procedures, medical supplies purchasing and inventory. Two lecture, two lab hours per week.

Prerequisite(s): ALH 104 or BIS 160

103 Medical Law & Ethics 2 Cr. Hrs.

Fundamentals of medical ethics and law in the medical office setting with special emphasis on patient confidentiality; physician-patient relationship; implied, verbal and written consent; professional liability; malpractice, contracts, statutory reports, medicolegal issues; ethical issues of modern health care.

Prerequisite(s): DEV 065 and DEV 075 or equivalent

104 Basic Clinical Assisting Procedures 4 Cr. Hrs.

Introduction to clinical assisting procedures in the medical office emphasizing patient preparation, medical history interviews, vital signs, positioning and draping, medical asepsis, assisting with physical exams, eye and ear assessment and procedures, and pediatric health fair. Two lecture, four lab hours per week.

Prerequisite(s): MAS 103 and HIM 122 and ALH 106 and restricted to majors

105 Medical Office Management 3 Cr. Hrs.

Administrative duties in a physician's office, including scheduling, monitoring patient appointments, outpatient procedures, hospital admissions, medical and office equipment maintenance, storing supplies and pharmaceuticals, hiring, evaluating and managing office personnel. Two lecture, two lab hours per week.

Prerequisite(s): MAS 102 and ENG 132 and restricted to majors

106 Medical Office Emergency Procedures 3 Cr. Hrs.

Techniques required for patient assessment and treatment during medical office emergencies; role of the medical assistant in urgent situations with the physician present and also during the physician's absence; application of accident prevention principles and maintenance of emergency equipment/supplies in the medical office. Two lecture, four lab hours per week.

Prerequisite(s): ALH 140 and MAS 104 and restricted to majors

111 Medical Billing I 4 Cr. Hrs.

The course is designed to introduce the student to the practice of medical billing. The student will be educated in the MediSoft Patient Accounting computer program, as well as a simulated work program to help experience the "real life" situations encountered by a medical person who does billing. Three lecture, three lab hours per week.

Prerequisite(s): HIM 260 and HIM 261

120 Health Unit Coordinator I 4 Cr. Hrs.

The role of the health unit coordinator as an allied health professional will be the focus of this course. A review of the history of the profession, the hospital environment, and management of the nursing unit will be covered.

Prerequisite(s): BIO 107 and BIO 108 and HIM 121

121 Health Unit Coordinator II 3 Cr. Hrs.

This course will reinforce the role of the professional health unit coordinator in the health care facility. Emphasis will be placed on the transcription of specific physician and nursing orders including medication, treatment, diagnostic, and therapeutic orders. In addition, there will be a required laboratory experience (20 hours) at a health care facility observing and working with an experienced health unit coordinator. Two lecture, two lab hours per week.

Prerequisite(s): MAS 120

172 Lab for MAS 102

Laboratory must be taken with MAS 102.

174 Lab for MAS 104

Laboratory must be taken with MAS 104.

175 Lab for MAS 105

Laboratory must be taken with MAS 105.

176 Lab for MAS 106

Laboratory must be taken with MAS 106.

201 Family Practice Clinical Assisting Procedures 3 Cr. Hrs.

Intermediate level clinical procedures performed in a family practice setting such as medical microbiology, minor office surgery, bandaging and dressing changes, administering therapeutic modalities, preparing and administering medications, pediatric immunizations and procedures, allergy procedures, and patient teaching. Two lecture, four lab hours per week.

Prerequisite(s): MAS 104 and MAT 106 and restricted to majors

202 Insurance & Patient Records 3 Cr. Hrs.

Fundamentals of private and public insurance programs, Workers' Compensation claims, Medicaid and Medicare claims; medical records administration, including creating, maintaining, protecting and preserviceing records. Two lecture, two lab hours per week.

Prerequisite(s): HIM 122 and HIM 260 and HIM 261 and ALH 104

203 Medical Assisting Directed Practice I 2 Cr. Hrs.

Introduction to the ambulatory care clinical setting involving structured observation and participation in the administrative and clinical aspects of patient care under the supervision of a licensed physician or certified medical assistant; assisting with patient preparation, physical examinations, scheduling appointments, bookkeeping tasks and medical transcription. One lecture, six clinical hours per week.

Prerequisite(s): MAS 104 and COM 206 and MAS 105 and ALH 140 and restricted to majors

204 Medical Assisting Directed Practice II 3 Cr. Hrs.

Intermediate experience in a physician's office involving structured observations and participation in the administrative and clinical aspects of patient care under the supervision of a licensed physician or certified medical assistant; assisting with minor office surgery, therapeutic modalities, administration of medications, insurance coding/claims, care of patient records and other office management skills. One lecture, ten clinical hours per week.

Prerequisite(s): MAS 203 and restricted to majors

205 Medical Assisting Directed Practice III 5 Cr. Hrs.

Advanced experience in a physician's office involving structured observations and participation in the administrative and clinical aspects of patient care under the supervision of a licensed physician; assisting with specialized clinical procedures, performing electrocardiograms, venipunctures and basic laboratory tests and advanced office management skills. One lecture, twenty clinical hours per week.

Prerequisite(s): MAS 204 and restricted to majors

206 Special Clinical Assisting Procedures 3 Cr. Hrs.

Techniques required to perform advanced/specialized procedures such as assisting with sigmoidoscopy, basic respiratory procedures, OB/GYN procedures, physical agents to promote tissue healing, and basic nutrition. Two lecture, four lab hours per week.

Prerequisite(s): MAS 201 and ALH 201

207 Medical Laboratory Procedures 3 Cr. Hrs.

Techniques required to perform laboratory procedures in a medical office, including collection of specimens for testing/transport, venipuncture, urinalysis, cultures, quality control, and laboratory safety. Two lecture, four lab hours per week.

Prerequisite(s): MAS 104 and ALH 142 and restricted to majors

208 Medical Assisting Seminar 2 Cr. Hrs.

Discussion of directed practice experiences; preparation for the American Association of Medical Assistants (AAMA) National Certification Examination through student presentations and discussion topics relative to the medical assisting profession.

Prerequisite(s): MAS 204 and restricted to majors

281 Lab for MAS 201

Laboratory must be taken with MAS 201.

282 Lab for MAS 202

Laboratory must be taken with MAS 202.

283 Lab for MAS 203

Laboratory must be taken with MAS 203.

284 Lab for MAS 204

Laboratory must be taken with MAS 204.

285 Lab for MAS 205

Laboratory must be taken with MAS 205.

286 Lab for MAS 206

Laboratory must be taken with MAS 206.

287 Lab for MAS 207

Laboratory must be taken with MAS 207.

297 Special Topics in Medical Assisting Technology R 0.5 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics within the discipline.

Mathematics (MAT)

Students needing to complete an elementary/intermediate algebra sequence should also consider MAT 191/192/193 as an alternative to the accelerated MAT 101/102 sequence. Successful completion of either sequence will allow students to register for either MAT 108 or 116.

101 Elementary Algebra 4 Cr. Hrs.

Brief review of pre-algebra skills; operations with polynomials and rational expressions; simplifying algebraic expressions; solving first degree equations and inequalities and second degree equations by factoring and applied problems; factoring polynomials; introduction to graphing.

Prerequisite(s): DEV 108 or satisfactory score on placement test

102 Intermediate Algebra 5 Cr. Hrs.

Factoring; operations with rational expressions, radical expressions and complex numbers; relations and functions; solving equations with rational expressions, equations with radical expressions, quadratic equations by completing the square and the quadratic formula, equations quadratic in form, systems of linear equations in two and three variables, applied problems, compound and absolute value inequalities, quadratic and rational inequalities; equations of lines; set operations; simplifying radical expressions; graphing lines and parabolas.

Prerequisite(s): Grade of "C" or better in MAT 101 or MAT 192 or satisfactory score on placement test

105 Business Mathematics 4 Cr. Hrs.

Arithmetic of decimals and fractions, percentages, checking accounts, taxes, insurance, payroll, trade pricing, retail pricing, simple and compound interest, promissory notes, annuities, loans and elementary statistics.

Prerequisite(s): Grade of "C" or better in DEV 085 or DEV 108 or MAT 101 or satisfactory score on placement test

106 Allied Health Mathematics**4 Cr. Hrs.**

Applications of fractions, decimals, and percentages, the metric system, the apothecary system, signed numbers, first-degree equations, literal equations, ratios and proportions, instrumentation, graphing and interpreting graphs, frequency distributions, central tendency, and scientific notation.

Prerequisite(s): Grade of "C" or better in DEV 085 or DEV 108 or MAT 101 or MAT 192 or qualifying score on mathematics placement test.

108 Math & the Modern World**3 Cr. Hrs.**

Applications of mathematics to modeling real-world problems from the behavioral, computational, managerial, and social sciences including graph theory, linear programming, probability, descriptive and inferential statistics, game theory, logical reasoning, and growth and decay.

Prerequisite(s): Grade of "D" or better in MAT 102 or MAT 193 or sufficiently high score on mathematics placement test.

109 Nursing Mathematics 3 Cr. Hrs.

Application of basic mathematics concepts to nursing situations, including fractions, decimals, percentages, measurement systems (metric, apothecary, household), intravenous drip rates, pediatric formulas, measurements of powders, capsules, liquids and tablets, reading and interpreting graphs.

Prerequisite(s): Acceptance into nursing program or permission of the mathematics department

116 College Algebra 5 Cr. Hrs.

Polynomial, rational, inverse, exponential and logarithmic functions and their graphs, roots of polynomial functions, conic sections, systems of equations, matrices and determinants, sequences and series. A scientific calculator is required. A graphing calculator is required in some sections.

Prerequisite(s): Grade of "C" or better in MAT 102 or MAT 193 or MAT 117 or equivalent or satisfactory score on mathematics placement test.

117 Trigonometry 4 Cr. Hrs.

Trigonometric functions of angles, solving right and oblique triangles, identities, vectors, trigonometric equations, radian measure, graphs of trigonometric functions, inverse trigonometric functions, and complex numbers. A scientific calculator is required.

Prerequisite(s): Grade of "C" or better in MAT 116 or equivalent or satisfactory score on mathematics placement test

121 Mathematics for Business Analysis**5 Cr. Hrs.**

Applications of mathematics to business analysis. Polynomials, fractional forms, exponents, radicals, equations and inequalities, graphs and functions, systems of equations, matrices, linear programming, permutations and combinations, simple and compound interest and annuities.

Prerequisite(s): Grade of "C" or better in MAT 101 or MAT 192 or MAT 102 or equivalent or satisfactory score on mathematics placement test.

122 Statistics I**4 Cr. Hrs.**

Statistical techniques and methodology. Graphical and tabular presentation of data, probability, parameters, statistical distributions, sampling, confidence intervals, and tests of hypotheses.

Prerequisite(s): Grade of "C" or better in MAT 116 or MAT 121 or satisfactory score on mathematics placement test

131 Technical Mathematics I 5 Cr. Hrs.

Accuracy and precision with approximate numbers, functions, graphs, right triangle trigonometry, systems of linear equations, factoring, rational expressions, quadratic equations. Scientific calculator required.

Prerequisite(s): Grade of "C" or better in MAT 101 or MAT 192 or equivalent or satisfactory score on mathematics placement test.

132 Technical Mathematics II 5 Cr. Hrs.

Trigonometric functions of angles, vectors, solving oblique triangles, graphs of trigonometric functions, complex numbers, exponential and logarithmic functions, systems of equations, and theory of equations. Scientific calculator required.

Prerequisite(s): Grade of "C" or better in MAT 131 or sufficient score on mathematics placement test

133 Technical Mathematics III 5 Cr. Hrs.

Conic sections, polar coordinates, derivatives of algebraic functions, applications of the derivative, integration, applications of integration. Scientific calculator required.

Prerequisite(s): Grade of "C" or better in MAT 132 or sufficient score on mathematics placement test

141 Numerical Concepts for Teachers 4 Cr. Hrs.

Introduction to the basic mathematical concepts of arithmetic and problem solving as appropriate for early and middle childhood teachers. An inquiry and activity based approach is used to explore problem solving, sets, functions, numeration systems, whole numbers, basic number theory, integers, rational numbers, and real numbers. Three lecture, two lab hours per week.

Prerequisite(s): Grade of "C" or better in MAT 102 or MAT 193 or equivalent or satisfactory score on mathematics placement test.

142 Algebra & Data Analysis for Teachers 4 Cr. Hrs.

Introduction to the concepts of using functions to model data; basic probability; and basic statistics as appropriate for early and middle childhood teachers. An inquiry and activity based approach is used to explore linear and quadratic functions, linear inequalities, modeling data with functions, probability concepts, descriptive statistics, and basic inferential statistics.

Prerequisite(s): Grade of "C" or better in MAT 141 and score of 90% or better on math proficiency test for teachers

143 Geometry & Measurement for Teachers 4 Cr. Hrs.

This course introduces the concepts of geometry and measurement as appropriate for early and middle childhood teachers. An inquiry and activity-based approach is used to explore basic two- and three-dimensional geometric concepts, basic geometric constructions, congruence, similarity, measurement, computing area and volume, symmetry, and transformations of two-dimensional figures. Three lecture, two lab hours per week.

Prerequisite(s): Grade of "C" or better in MAT 142 or grade of "C" or better in both MAT 110 and MAT 141

151 Introduction to Mathematical Modeling 3 Cr. Hrs.

Includes data analysis (linear and nonlinear methods), modeling with continuous functions, modeling with discrete mathematics (matrices and graph theory).

Prerequisite(s): "C" or better in MAT 116, MAT 117, MAT 201, MAT 202, MAT 203, MAT 204, MAT 215, MAT 216, or MAT 218 or sufficiently high score on Sinclair Community College Math placement test

191 Pre-College Algebra I 4 Cr. Hrs.

Order of operations, exponents, absolute values, properties of real numbers, operations with fractions, signed numbers and polynomials, simplifying algebraic expressions, solving first degree equa-

tions and inequalities, factoring, introduction to graphing.

Prerequisite(s): DEV 108 or satisfactory score on placement test

192 Pre-College Algebra II 4 Cr. Hrs.

Factoring; solving and applying quadratic equations, equations with rational expressions and linear systems of equations; operations with rational expressions; graphing lines; functions.

Prerequisite(s): Grade of "C" or better in MAT 101 or MAT 191

193 Pre College Algebra III 4 Cr. Hrs.

Systems of equations; compound, absolute value, quadratic and rational inequalities; radicals and fractional exponents; radical, quadratic and quadratic in form equations; parabolas.

Prerequisite(s): Grade of "C" or better in MAT 102 or MAT 192

201 Calculus & Analytic Geometry I 5 Cr. Hrs.

Cartesian coordinate system, functions, limits and continuity of functions, the derivative and its applications, the integral and the fundamental theorem of calculus. This is the first in a series of four courses.

Prerequisite(s): Satisfactory score on mathematics placement test or grade of "C" or better in MAT 117 or MAT 133

202 Calculus & Analytic Geometry II 5 Cr. Hrs.

The second in a series of four courses for science and engineering majors. Applications of the definite integral, derivatives and integrals involving exponential, logarithmic, trigonometric and hyperbolic functions and their inverses, techniques of integration, indeterminate forms, L'Hopital's Rule, improper integrals and conic sections.

Prerequisite(s): Satisfactory score on mathematics placement test or grade of "C" or better in MAT 201 or MAT 134

203 Calculus & Analytic Geometry III 5 Cr. Hrs.

The third in a series of four courses for science and engineering majors. Infinite sequences and series, Taylor series, parametric equations, polar coordinates, solid analytic geometry, vectors in the plane and in space, vector valued functions, arc length and curvature.

Prerequisite(s): Grade of "C" or better in MAT 202 or satisfactory score on mathematics placement test

204 Calculus & Analytic Geometry IV 5 Cr. Hrs.

This is the last in a series of four courses for science and engineering majors. Functions of several variables, partial derivatives with applications, multiple in-

tegrals with applications, line integrals, surface integrals, vector fields, Green's Theorem, the Divergence Theorem and Stokes's Theorem.

Prerequisite(s): Grade of "C" or better in one of the following: MAT 203 or MAT 215 or MAT 216 or satisfactory score on mathematics placement test.

215 Differential Equations 5 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): Grade of "C" or better in MAT 203 or satisfactory score on mathematics placement test.

216 Elements of Linear Algebra 4 Cr. Hrs.

Systems of linear equations, matrices, determinants, linear transformations, Euclidean n-space, coordinate vectors, abstract vector spaces, dimension and rank, eigenvalues, eigenvectors.

Prerequisite(s): Grade of "C" or better in MAT 203 or satisfactory score on mathematics placement test.

218 Calculus for Business & Economics 5 Cr. Hrs.

Functions and graphs, limits and continuity, the derivative, techniques of differentiation, applied problems in business and economics, exponential and logarithmic functions, techniques of integration, applications of integration.

Prerequisite(s): Grade of "C" or better in MAT 116 or MAT 117 or MAT 133 or MAT 134 or MAT 151 or MAT 201 or sufficiently high score on mathematics placement test

220 Statistics II 4 Cr. Hrs.

Statistical inferences including estimation, confidence intervals, and tests of hypotheses for means, standard deviation, and proportions; analysis of variance; regression analysis; chi-square; business applications. Students will develop a basic competency in using a computer spreadsheet to perform statistical calculations.

Prerequisite(s): Grade of "C" or better in MAT 122 or satisfactory grade on MAT 220 placement test

297 Special Topics in Mathematics R 0.5 - 6 Cr. Hrs.

Varied content offerings of special interest within the discipline, but not covered within existing courses.

Mental Health Technology (MHT)

101 Introduction to Mental Health Work R 3 Cr. Hrs.

History, vocabulary, current concepts concerning delivery of services. Roles for workers in the field. Necessary skills and values in the helping process. Ethical issues and concerns of beginning helpers.
Prerequisite(s): DEV 110

115 Social Case Work 3 Cr. Hrs.

Basic principles and skills for the professional helping relationship. Professional and multi-cultural issues in clinical practice. Case work problem solving model is emphasized.

Prerequisite(s): MHT 101, restricted to MHT majors

120 Chemically Dependent Women 1 Cr. Hr.

Needs and issues pertaining to chemically dependent women. Engaging women in the treatment process. Treatment techniques which foster recovery.

121 Chemically Dependent Families 1 Cr. Hr.

Effects of addiction on the family unit. Addiction's impact on family communication patterns, codependency, coping skills, and the process of family recovery.

122 Appalachian Issues in C.D. Treatment 1 Cr. Hr.

Chemical dependency treatment for Appalachian clients. Cultural influences which impede and promote treatment success.

123 Street Drug Actions 1 Cr. Hr.

Effect of street drugs on cognitive, affective and behavioral functioning as they impact the clinical treatment process.

124 Issues in Recovery from Addiction 1 Cr. Hr.

Factors contributing to relapse following chemical dependency treatment. Successful approaches to after care programming.

126 Introduction to Substance Related Disorders 4 Cr. Hrs.

Fundamentals of chemical dependency. Physical and mental effects of psychoactive drugs. Impact of addictive illness on the individual, family and society. Knowledge regarding: (a) the disease concept, (b) stigma and misunderstanding of addictive illness, (c) identification and assessment, (d) trends in treatment, and (e) the relapse process. Developing

empathy and personal insight into the inner life of persons with addictions. Challenging biases; identifying issues that may hinder work in the addictions field. Elements of professional / ethical behavior.

135 A & D Treatment for African- Americans 1 Cr. Hr.

Culturally sensitive approaches to treatment. Gaining accurate background information. Obstacles to forming therapeutic relationship. Impact of advertising, crime, racism on treatment effectiveness.

137 Adolescent Substance Abuse 1 Cr. Hr.

Treatment of adolescent substance use. Risk factors, prevalence, causation, interventions, resources.

139 Substance Abuse Prevention 1 Cr. Hr.

Theories, models, historical framework and terminology. Contemporary definition of prevention for both in-school and community based strategies and curricula. Assessment of risk and protective factors. Resources, funding, research and credentialing in Ohio.

140 Child & Adolescent Mental Health 3 Cr. Hrs.

Mental health and mental ill-health issues related to childhood and adolescence. Etiology, and treatment of emotional and behavioral problems of children and adolescents.

141 Treating Potentially Dangerous People 1 Cr. Hr.

Integrative, practical, and analytical approach to understanding the self in order to understand the client's perception of you as the helper. Understanding one's own socialization process relative to successfully addressing clients and treating potentially violent clients.

142 Client Analysis: Preventing & Responding to Violence During Treatment 1 Cr. Hr.

An integrative, practical, and analytical approach to understanding the client and stimuli that may evoke violence.

143 Issues in Professional Ethics R 1 Cr. Hr.

Application of ethical codes, laws and agency policies and procedures, focusing on a current issue in professional ethics in the helping professions. Review of professional ethics in relation to personal biases and opinions on the issues. Example issues include death with dignity, personal biases, religion and professional ethics, technology's application in the work place.

144 Counseling Strategies in Cases of Domestic Violence 1 Cr. Hr.

This course reviews best practices by advocates for victims of domestic violence including professional interventions, screening, treatment approaches, risk factors, crisis intervention strategies, diagnoses, and professional reporting duties. Special populations are considered.

146 Group Counseling in Chemical Dependency Treatment 1 Cr. Hr.

Overview of group counseling for clients and families affected by substance abuse/dependence. Group models and techniques as applied to the needs, culture, and readiness for change of the individual; client preparation and phases of CD group development; group leader traits; typical difficult group dynamics. Significant class time devoted to group counseling participation, practice and observation.

151 Art as Therapy I 3 Cr. Hrs.

Experiential discovery of personal creative processes using a variety of art media. (Also offered as ART 151; students may enroll in either course but not both.)

Prerequisite(s): DEV 065 and DEV 110

155 Basics of Activities Programming 3 Cr. Hrs.

First of a series of three courses following the 90-hour National Certification Council for Activity Professionals (NC-CAP) guidelines. Activity planning in long term care facilities; needs assessment, treatment modalities, professional role, documentation. Certificate awarded for completion of 90-hour Basic Activity Course.

156 Administration of Activities Programming 3 Cr. Hrs.

Second of a series of three courses following the 90-hour National Certification Council for Activity Professionals (NCCAP) guidelines. Leading an activity department in a long term care facility. Innovative and progressive techniques, continuation of topics from MHT 155.

Prerequisite(s): MHT 155

157 Issues in Activities Programming 3 Cr. Hrs.

Third of a series of three courses required for the 90-hour National Certification Council for Activity Professionals (NC-CAP) certificate. Skills and knowledge required for leading an activity department in a long term care facility. Use of innovative and progressive techniques. Continuation of topics from MHT 155 and MHT 156.

Prerequisite(s): MHT 156

201 Interviewing & Assessment**4 Cr. Hrs.**

Basic interviewing, active listening skills, behavioral observation, elements of the helping relationship, cultural influences, professional ethics and issues. Preparation for major clinical sequence. Three lecture, two lab hours per week.

Prerequisite(s): MHT 101 and ALH 103 and MHT 115

202 Practicum in Mental Health I**5 Cr. Hrs.**

Field work experience in mental health agencies. Case management, therapeutic relationships, supervised treatment planning and implementation. Case management with individual clients, group facilitation, reporting and recording. Four lecture, two lab hours per week.

Prerequisite(s): MHT 201

203 Practicum in Mental Health II**5 Cr. Hrs.**

Field work experience in mental health agencies. Case management, therapeutic relationships, supervised treatment planning and implementation. Case management with individual clients, group facilitation, reporting and recording. Four lecture, sixteen practicum hours per week.

Prerequisite(s): MHT 202

204 Practicum in Mental Health III**5 Cr. Hrs.**

Field work experience in mental health agencies. Case management, therapeutic relationships, supervised treatment planning and implementation. Case management with individual clients, group facilitation, reporting and recording. Four lecture, sixteen practicum hours per week.

Prerequisite(s): MHT 203

205 Psychosocial Interventions**3 Cr. Hrs.**

Acquiring and applying advanced clinical interventions and treatment modalities for various client populations.

Prerequisite(s): MHT 115 and PSY 217

206 Case Management**3 Cr. Hrs.**

Philosophy, knowledge and skill components for effective case management, including training content authorized by Ohio Department of Mental Health.

209 Treatment Planning**2 Cr. Hrs.**

Purpose and process of treatment planning and clinician's role. Writing measurable goals and objectives. Includes Ohio Department of Alcohol and Drug Addiction Services levels of treatment and client placement criteria.

211 Group Dynamics I**3 Cr. Hrs.**

Introduction to interpersonal dynamics in groups. Awareness of group leadership skills and personal issues affecting participation. Laboratory groups promote personal learning while providing experiential awareness of phases and issues of group development. Two lecture, two lab hours per week.

Prerequisite(s): MHT 115

212 Group Dynamics II**3 Cr. Hrs.**

History and development of group work, professional ethics, Yalom's curative factors, stages of group development, group composition, group norms, group resistance, effective leadership skills. Two lecture, two lab hours per week.

Prerequisite(s): MHT 211

213 Group Dynamics III**3 Cr. Hrs.**

Opportunities to practice process planning, group facilitation skills, and critical analysis of group processes. Two lecture, two lab hours per week.

Prerequisite(s): MHT 212

217 Lab for MHT 211

Laboratory must be taken with MHT 211.

218 Lab for MHT 212

Laboratory must be taken with MHT 212.

219 Lab for MHT 213

Laboratory must be taken with MHT 213.

235 Family Dynamics of Chemical Dependency**4 Cr. Hrs.**

Impact of chemical dependency on individual family members and overall family functioning, emphasizing the nature of co-dependency, its symptoms and treatment.

Prerequisite(s): MHT 126 or approval of chairperson

236 Assessment & Diagnosis of Chemical Dependency**4 Cr. Hrs.**

Holistic assessment and diagnosis of chemical dependency, skill development, use of and interpretation of assessment instruments. Use of current Diagnostic Statistical Manual (DSM) criteria.

Prerequisite(s): MHT 126 or approval of chairperson

237 Treatment Techniques in Chemical Dependency**4 Cr. Hrs.**

Contemporary holistic treatment methods. Models of treatment with individual, group, case management, intervention and family. Levels of care and stages of recovery. Ethical, legal and professional behaviors. Three lecture, two lab hours per week.

Prerequisite(s): MHT 126 and MHT 236 or permission of instructor

238 Ethical Issues in Behavioral Health Care**3 Cr. Hrs.**

Ethical responsibilities of practitioners in the human service field including chemical dependency counselor and social work assistants, covering the Federal Confidentiality Regulations, case law, codes of ethics, scope of practice, expectations of funding bodies and the demands of managed care.

239 Dual Diagnosis: Substance Abuse & Mental Illness**3 Cr. Hrs.**

Chemical addiction in the mentally ill client. Unique challenges, special needs, and effective assessment and treatment models for this dual diagnosed population.

Prerequisite(s): MHT 126 or approval of chairperson

245 Mental Health & the Family**4 Cr. Hrs.**

Underlying dynamics and interactional patterns in family functioning and the impact of family dysfunction on individuals. Methodologies of clinical intervention, highlighting issues and trends facing contemporary families.

Prerequisite(s): MHT 205 and ENG 112

261 Supervision in Social Services**1 Cr. Hr.**

This course reviews the role of, and the basic principles of, supervision both administratively and clinically. Laws and codes of ethics are discussed.

263 Experiential Techniques in Chemical Dependency Treatment**1 Cr. Hr.**

Introduces participants to the use of simple experiential techniques that enhance clients' personal involvement in the treatment process. Students practice hands-on techniques which help clients to personalize difficult concepts, such as denial or powerlessness. Students learn to "read" clients' unspoken communication and help them safely get in touch with thoughts and feelings. Students are challenged to develop a spontaneous "creative mind-set" for ethical, thoughtful, effective use of experiential approaches. Students learn how to develop experiential techniques in CD education groups to enhance client learning.

264 Motivational Interviewing**1 Cr. Hr.**

This course is designed to give the student an understanding of the fundamental concepts of Motivational Interviewing (MI) and how best to integrate them into one's counseling style. Students will be able to recognize how the client's level of motivation has a direct bearing on his or her willingness to change maladaptive behavior. Students will have an opportunity to use the MI techniques in class and evaluate their effectiveness.

265 Life Coaching 1 Cr. Hr.
Self-discovery and self-awareness through coaching techniques. Personal and professional goals setting. Selected exercises focus on strengths, vision and a personal mission statement.

296 Special Topics in Mental Health R
0.5 - 6 Cr. Hrs.

Opportunities to earn credit for workshops and short term courses on current topics in Mental Health and Human Services. Only nine hours earned by Special Topics may be applied toward an associate degree in Mental Health.

Marketing (MRK)

201 Marketing I 3 Cr. Hrs.

The economic and social impact of the "marketing concept" stressing a managerial approach. Environments (social, economic, legal, etc.) and their influence on consumer behavior and decisions of the marketing manager. Consumer sovereignty is stressed.

Prerequisite(s): ECO 218

202 Marketing II 3 Cr. Hrs.

The marketing mix provides the focal point for analysis and discussion. The management process is integrated with materials on distribution, product, marketing communication, and pricing.

Prerequisite(s): MRK 201

208 Sports Marketing 3 Cr. Hrs.

An introduction to the specialized field of sports and event marketing. Develops basic knowledge and understanding of sports and event marketing and highlights areas of consumer preference, segmentation, targeting, positioning and other critical strategic issues.

215 Advertising 3 Cr. Hrs.

The course emphasizes a part of the marketing mix involving 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.

220 Small Business Marketing
3 Cr. Hrs.

Essential marketing skills for entrepreneurial ventures, utilizing innovative marketing strategies. Analysis of marketing philosophies implemented by successful entrepreneurs, and preparation of a thorough marketing plan that can be used to launch or grow an entrepreneurial venture.

Prerequisite(s): MAN 105 and MRK 201

225 Sales Fundamentals 3 Cr. Hrs.

Basic principles of sales and development of techniques for satisfying consumer needs through thoughtful personal selling. Direct participation by the student in simulated sales situations.

230 International Marketing 3 Cr. Hrs.

Basic principles of international marketing and how to apply marketing techniques in a global market. Learning the importance of understanding cultures, languages, and traditions that may be different from their own and how to apply marketing strategies in a foreign market.

235 Marketing Research 3 Cr. Hrs.

Principles of marketing research as they apply to the decision making processes in management and marketing and the relationships between these processes.

Prerequisite(s): MRK 202

236 Consumer Behavior 3 Cr. Hrs.

For companies to compete effectively in today's competitive marketplace, managers and marketers must better understand consumers and their behaviors. This course gives students the tools to understand and analyze how and why consumers make purchase decisions. The student will be introduced to concepts of category of influences on consumer behavior, the consumer decision process, and why he or she, personally, makes purchase decisions.

245 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 mid-management perspective. A consumer centered approach to examining problems of various types and sizes of stores.

297 Special Topics in Marketing R
0.5 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics within the discipline. Only six credit hours earned by Special Topics courses can apply toward an associate degree in Business.

Prerequisite(s): Permission of instructor

Music (MUS)

105 Introduction to Music 3 Cr. Hrs.

Fundamentals of music theory including notation, rhythm, scales, intervals, and chords.

106 Vocal Diction I 2 Cr. Hrs.

Italian and English diction will be studied with emphasis on clarity, expressiveness, regard for correct pronunciation, and sound production as applied to singing and reading.

Prerequisite(s): Permission of instructor, Music major

107 Vocal Diction II 2 Cr. Hrs.

German diction will be studied with emphasis on the fundamentals of phonetics and sound production as applied to singing and reading. English will be continued.

Prerequisite(s): MUS 106

108 Vocal Diction III 2 Cr. Hrs.

French diction will be studied with emphasis on the fundamentals of phonetics and sound production as applied to singing and reading. German will be continued.

Prerequisite(s): MUS 107

111 Music Theory I 3 Cr. Hrs.

First level university parallel course. Notation, scales, modes, intervals, key, tonality, anatomy and organization of melody, harmonic anatomy, voice leading, ranges, transpositions.

Prerequisite(s): MUS 105

112 Music Theory II 3 Cr. Hrs.

Harmonic progression, modulation, resolution, harmonic function of seventh chords, history, types, inversions of secondary dominants.

Prerequisite(s): MUS 111

113 Music Theory III 3 Cr. Hrs.

Form-design-analysis: Binary, rounded binary/incipient ternary, ternary as surveyed from text, workbook, and anthology. Song form with trio, minuet-trio-minuet, suite, bar form, stollen, abgesang, lied. Secondary dominants applied.

Prerequisite(s): MUS 112

114 Women's Ensemble R 1 Cr. Hr.

The women's ensemble is for vocalists with experience in choral singing. This ensemble sings treble literature from all musical periods. This is a select group requiring appearance in public recital each term.

Prerequisite(s): Audition, permission of instructor

115 Music Appreciation 3 Cr. Hrs.

Basic parameters of music through a survey from Gregorian Chant to jazz and current rock styles focusing on melody, rhythm, harmony, and form.

116 Music Major Piano Class I 1 Cr. Hr.

Instruction in correct piano playing techniques. One lecture, one lab hour per week.

Prerequisite(s): MUS 105

117 Music Major Piano Class II 1 Cr. Hr.

Instruction in correct piano playing techniques and harmonizations. Appropriate piano repertoire is also studied. One lecture, one lab hour per week.

Prerequisite(s): MUS 116

118 Music Major Piano Class III 1 Cr. Hr.

Instruction in correct piano playing techniques, major and minor scales, chords. Appropriate piano repertoire is also studied. One lecture, one lab hour per week.

Prerequisite(s): MUS 117

119 Men's Ensemble R 1 Cr. Hr.

The men's ensemble is for vocalists with experience in choral singing. This ensemble sings literature written for male voices from all musical periods. This is a select group requiring appearance in public recital each term.

Prerequisite(s): Audition, permission of instructor

120 African-American Music/Gospel Choir R 1 Cr. Hr.

The performance and presentation of mixed choral literature from the African-American Spiritual and Gospel music tradition. The choir will present at least one concert per term.

Prerequisite(s): Permission of instructor, audition

121 Piano Class I 3 Cr. Hrs.

Correct techniques and basic music reading skills. Simple pieces and chords. No piano playing or musical experience required.

124 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.

Prerequisite(s): Permission of instructor

125 History of Rock/Pop 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.

126 Introduction to Sight Singing, Dictation, Ear Training 3 Cr. Hrs.

Fundamentals of sight singing, dictation, ear training including hearing and notating rhythm and melody.

127 Chamber Choir R 1 Cr. Hr.

The rehearsal, performance, and presentation of SATB (soprano, alto, tenor, bass) mixed choral music, representing all periods and styles. This course is for experienced choral singers. The choir will present at least one concert per term.

Prerequisite(s): Audition, permission of instructor

131 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, and Baroque eras.

132 Survey of Musical Styles II 3 Cr. Hrs.

The historical styles of Western music are explored in chronological sequence through an analysis of various musical compositions and musical forms from the Classical and early Romantic eras.

Prerequisite(s): MUS 131

133 Survey of Musical Styles III 3 Cr. Hrs.

The historical styles of Western music are explored in chronological sequence through an analysis of various musical compositions and musical forms from the late Romantic and Modern eras.

Prerequisite(s): MUS 132

139 Music Technology for Music Majors 1 Cr. Hr.

Introduction to the use and applications of computer based resources including Internet sites that support Music department course curricula: MacGamut software; Auralia, Musition and Musica Practica software; Cakewalk Home Studio 2004 with MIDI sequencing and audio editing; and Finale 2003 and Finale Workbook.

141 Singing & Dictation I 1 Cr. Hr.

Course units are divided among rhythm, harmony and melody. Vocal and aural skills are applied to meter and modality/tonality. One lecture, two lab hours per week.

Prerequisite(s): MUS 126

142 Singing & Dictation II 1 Cr. Hr.

Two voice counterpoint, dyads, triads, seventh chords, four-voice harmony, structure of harmonic vocabulary. One lecture, two lab hours per week.

Prerequisite(s): MUS 141

143 Singing & Dictation III 1 Cr. Hr.

Chord usage and recognition, intervals/compound intervals, accompanied melody, four-voice soprano and bass factors, harmonic structure, metrical quarter-beat values. One lecture, two lab hours per week.

Prerequisite(s): MUS 142

145 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.

151 Guitar Class I R 1 Cr. Hr.

Fundamental study of guitar playing techniques. Students must provide their own instruments. Electric guitars are not appropriate.

152 Guitar Class II R 1 Cr. Hr.

Fundamental study of guitar playing including melodic line playing, scales, chords and various rhythmic patterns.

Prerequisite(s): MUS 151

154 Jazz Combo R 1 Cr. Hr.

Open to college and community musicians who develop small jazz group performance skills. Concerts and appearances are scheduled during the academic year. One lecture, one lab hour per week.

Prerequisite(s): Audition or permission of instructor

155 Sinclair Singers R 1 Cr. Hr.

Sinclair's show choir, this vocal and instrumental ensemble combines singing with movement, concentrating on the best of musical theater, comedy, jazz and popular music. The singers make many appearances on/off campus during the year. One lecture, two lab hours per week.

Prerequisite(s): Audition

158 Jazz Ensemble R 1 Cr. Hr.

Open to college and community musicians who present jazz ensemble performances. Concerts and appearances are scheduled during the academic year. One lecture, two lab hours per week.

Prerequisite(s): Audition

162 Piano Ensemble R 1 Cr. Hr.

A study, via ensemble performance by two pianists, of the repertoire written for piano duet (four hands at one piano) and piano duo (two pianos). Repertoire is chosen from the best available from the classical era through the 20th century. Pianistic technique and musicality as they relate to the intricacies of piano ensemble performance are stressed. Public performance in student recitals is strongly encouraged.

Prerequisite(s): Approval of chairperson

- 166 Chorale R 1 Cr. Hr.**
Select mixed chamber choir specializing in performance of vocal music of several stylistic periods. School and public performances required. One lecture, two lab hours per week.
Prerequisite(s): Audition
- 167 - 192 Applied Music R 1 - 4 Cr. Hrs.**
Private instruction in Applied Music is given on the basis of (1) one credit for one 30-minute lesson per week for 10 weeks and 45 minutes per day practice or (2) two credits for one 60-minute lesson per week for 10 weeks, board examination, student recital performance and 90 minutes per day of practice, or (4) four credits for one 60-minute lesson per week for 10 weeks, board examination, student recital performance and three hours per day practice. All Applied Music students must see the Music department secretary prior to registering.
Prerequisite(s): Approval of department and sections 02/03 restricted to music majors
- 167 Jazz Piano**
- 169 Organ**
- 170 Piano**
- 171 Voice**
- 172 Percussion**
- 173 Violin**
- 174 Viola**
- 175 Cello**
- 176 String Bass**
- 177 Flute**
- 178 Clarinet**
- 179 Saxophone**
- 180 Oboe**
- 181 Bassoon**
- 182 Trumpet**
- 183 Trombone**
- 184 French Horn**
- 185 Baritone Horn**
- 186 Tuba**
- 187 Popular Guitar**
- 188 Electric Bass**
- 189 Jazz Drumming**
- 190 Classical Guitar**
- 192 Harpsichord**

- 194 Wind Symphony R 1 Cr. Hr.**
Concentration on instrumental problems and techniques. Development of wind ensemble repertoire. School and public performance will be a major part of the course activities. One lecture, two lab hours per week.
Prerequisite(s): Audition
- 195 Concert Band R 1 Cr. Hr.**
Concentration on instrumental problems and techniques. Development of symphonic band repertoire. School and public performance will be a major part of the course activities. One lecture, two lab hours per week.
Prerequisite(s): Audition
- 211 Music Theory IV 3 Cr. Hrs.**
Second level university parallel course. Composition, continuous variations, theme and variations, borrowed chords, neapolitan and augmented sixth chords, extended and altered dominants, survey of chromaticism.
Prerequisite(s): MUS 113
- 212 Music Theory V 3 Cr. Hrs.**
Composition, sonata allegro, rondo, late Renaissance polyphony, two-voice eighteenth century counterpoint, fugue.
Prerequisite(s): MUS 211
- 213 Music Theory VI 3 Cr. Hrs.**
Composition, compositional devices of the late nineteenth and early twentieth century, compositional devices of the contemporary period, modern twelve-tone set techniques.
Prerequisite(s): MUS 212
- 216 Music Major Piano Class IV 1 Cr. Hr.**
Music students are instructed in correct piano playing techniques, harmonization, improvisation, and accompanying. Appropriate piano repertoire is also studied. One lecture, one lab hour per week.
Prerequisite(s): MUS 118
- 217 Music Major Piano Class V 1 Cr. Hr.**
Continuation of MUS 216. One lecture, one lab hour per week.
Prerequisite(s): MUS 216
- 218 Music Major Piano Class VI 1 Cr. Hr.**
Continuation of MUS 217. One lecture, one lab hour per week.
Prerequisite(s): MUS 217

- 221 Sight Singing for Singers I 1 Cr. Hr.**
Developing and understanding of solfeggio through the practice of singing exercises utilizing the syllables of Solemnization to recognize the notes, rhythms and intervals important to basic sight-reading skills. One lecture, one lab hour per week.
Prerequisite(s): MUS 105 and permission of instructor
- 225 Sinclair Concert Handbell Choir R 1 Cr. Hr.**
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. One lecture, one lab hour per week.
Prerequisite(s): Audition
- 229 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 211, approval of department
- 241 Singing & Dictation IV 1 Cr. Hr.**
Chromatic pitches, augmented and diminished intervals, seventh chords, harmonic structure and function, non-harmonic tones, modulation, secondary dominants and diminished/minor sevenths and diminished/diminished sevenths. One lecture, two lab hours per week.
Prerequisite(s): MUS 143
- 242 Singing & Dictation V 1 Cr. Hr.**
Borrowed chords, neapolitan and augmented sixth chords, extended and altered dominants, ninth, eleventh-thirteenth structures and inversions, survey of chromaticism. One lecture, two lab hours per week.
Prerequisite(s): MUS 241
- 243 Singing & Dictation VI 1 Cr. Hr.**
Nontertian harmony, two-voice contrapuntal music, aural recognition of simultaneous events, improvisation, modern twelve-tone set aural recognition and application. One lecture, two lab hours per week.
Prerequisite(s): MUS 242
- 295 Music Practicum R 1 - 3 Cr. Hrs.**
Music major may receive credit for practical experiences such as performing in a musical, opera, musical organization, solo recital, etc. Arrangements must be made through the department chairperson.
Prerequisite(s): Permission of chairperson

296 Classical Guitar Ensemble R
1 Cr. Hr.

The performance and study of selected classical guitar ensemble literature. The literature covered will determine the size and performance level of the class. Public performance. One lecture, one lab hour per week.

Prerequisite(s): Audition

298 Performance Class R
1 Cr. Hr.

Performance repertoire from intermediate to advanced levels. Designed to anticipate and alleviate the public performance problems. Emphasizing all aspects of technique and music including sight-reading, memorization and control of nervousness (Piano-Section 01, Guitar-Section 02, Voice-Section 03).

Prerequisite(s): Permission of chairperson

299 Applied Music Practicum R
2 Cr. Hrs.

Private instruction one hour per week on selected musical instrument. Recitals, board examinations, and registration in degree program not required.

Prerequisite(s): Approval of department

Nursing (NSG)**120 Human Response**
3 Cr. Hrs.

Discusses scope and practice of the nursing profession and the philosophy/framework of the Nursing Program at Sinclair. Introduces human response, nursing process, evidence-based practice, critical thinking, decision making, clinical judgment, collaboration, and management principles. Provides a foundation in patient-centered care, therapeutic communication, safety, quality improvement, documentation, teaching/learning, and health promotion/disease prevention.

Prerequisite(s): BIO 141 and PSY 119 and ENG 111 and COM 206 and ALH 103, acceptance in Nursing program

121 Identifying Responses Through Assessment
3 Cr. Hrs.

Uses assessment techniques to identify normal/abnormal human responses to stressors. Applies diagnostic reasoning to assessment data to determine impact of stressors on the individual and family and the level of preventive care necessary. Two lecture, three lab hours per week.

Prerequisite(s): BIO 141 and PSY 119 and ENG 111 and COM 206 and ALH 103, acceptance in Nursing program

122 Promoting Healthy Responses to Physiological Stressors
8 Cr. Hrs.

Introduces the concept of general responses to physiological and environmental stressors. Identifies responses to changes in the immune mechanism, inflammation, wound healing, fluid and electrolytes, and cancer. Includes interventions to support or correct physiologic responses. Compares principles and issues of care in settings across the health care continuum. Four lecture, twelve clinical hours per week.

Prerequisite(s): NSG 120 and NSG 121 and BIO 141 and BIO 142 and BIO 205 and MAT 109, acceptance in Nursing program

123 Promoting Healthy Responses Through Psychomotor Interventions
3 Cr. Hrs.

Introduces a base of common nursing interventions that assist individuals responding to physiological stressors. Integrates critical thinking, nursing process, principles from nursing and the sciences, and resource management into the utilization of technical skills to provide a foundation for effective practice in settings across the health care continuum. Two lecture, three lab hours per week.

Prerequisite(s): NSG 120 and NSG 121 and BIO 141 and BIO 142 and BIO 205 and MAT 109, acceptance in Nursing program

132 Transition to Registered Nursing
4 Cr. Hrs.

The Ohio Nursing Articulation Model transition course is designed to enable the student to explore integrative concepts in nursing and to assist the student in the transition from licensed practical nurse to registered nurse. Students refine and update previous learning in addition to identifying goals for a successful transition into the registered nursing program. Combined with classroom and nursing laboratory experiences, the student learns through the application of concepts. The student will demonstrate the ability to solve problems through the use of the nursing process with a focus on client assessment and to communicate more effectively. This course meets 16 hours per week for one-half term. Two lecture, six lab hours per week.

Prerequisite(s): BIO 211 and COM 206 and ENG 111 and PSY 119 restricted to nursing majors

133 Transition to Registered Nursing II
6 Cr. Hrs.

Continues to assist the student in the transition from LPN to second year ADN student. Focuses on Sinclair nursing philosophy and conceptual framework. Identifies responses to stressors of the internal environment, protective mechanisms and cellular growth. Integrates human response, health promotion/disease prevention, crit-

ical thinking, nursing process and resource management into utilization of common nursing interventions. This course meets 24 hours per week for one-half term. Three lecture, nine clinic hours per week.

Prerequisite(s): NSG 132 restricted to nursing majors

220 Promoting Healthy Responses to Specific Stressors I
8 Cr. Hrs.

Analyzes specific stressors affecting physical integrity/infectious disease, perioperative experience, nutrition, bowel elimination, and physical regulation/metabolic function. Begins application of decision making and clinical judgment, care management, and resources management across the health care continuum. Four lecture, twelve clinical hours per week.

Prerequisite(s): NSG 122 and NSG 123 and BIO 143

221 Promoting Healthy Responses to Psychosocial Stressors
4 Cr. Hrs.

Discusses nursing management based on responses to psychosocial stressors. Includes interventions based on mental health concepts that assist individuals to achieve a balance of emotional health at any point along the health care continuum. This course meets 16 hours per week for one-half of the term. Two lecture, six clinic hours per week.

Prerequisite(s): NSG 220 and PSY 208 and ALH 219

222 Promoting Healthy Responses to Specific Stressors II
4 Cr. Hrs.

Analyzes human responses to specific stressors affecting circulation and oxygenation. Applies nursing process, diagnostic reasoning, and clinical judgment to interdisciplinary care in a variety of settings across the health care continuum. This course meets 16 hours per week for one-half of the term. Two lecture, six clinic hours per week.

Prerequisite(s): NSG 220 and PSY 208 and ALH 219

223 Promoting Healthy Responses in Women
4 Cr. Hrs.

Analyzes responses of the childbearing family during the maternity cycle. Utilizes the nursing process to promote and maintain women's health and provide care to women with interferences in reproductive health. This course meets 16 hours per week for one-half of the term. Two lecture, six clinic hours per week.

Prerequisite(s): ALH 104 and NSG 221 and NSG 222

224 Promoting Healthy Responses to Specific Stressors III 4 Cr. Hrs.

Analyzes human responses to specific stressors affecting urinary elimination, moving (musculo-skeletal), sensory, and neurological integrative functions. Applies nursing process, diagnostic reasoning, and clinical judgment to participate in interdisciplinary care in a variety of settings across the health care continuum. This course meets 16 hours per week for one-half of the term. Two lecture, six clinic hours per week.

Prerequisite(s): ALH 104 and NSG 221 and NSG 222

225 Promoting Healthy Responses in the Child & Family 4 Cr. Hrs.

Uses nursing process to identify child/family responses to hospitalization and illness. Analyzes responses to stressors affecting oxygenation, neuro-cognitive function, circulation, movement, or causing trauma. Adapts interventions to developmental needs of child. Includes primary care and anticipatory guidance to prevent illness and injury. This course meets 16 hours per week for one-half of the term. Two lecture, six clinic hours per week.

Prerequisite(s): NSG 223 and NSG 224 and ENG 112

226 Promoting Healthy Responses to Interrelated Pathophysiological Stressors 4 Cr. Hrs.

Applies critical thinking to utilize the theory and skills necessary to care for patient/families responding to life threatening complex stressors requiring continuous monitoring and interventions. This course meets 16 hours per week for one-half of the term. Two lecture, six lab hours per week.

Prerequisite(s): NSG 223 and NSG 224 and ENG 112

230 Directed Nursing Practice 7 Cr. Hrs.

Moves the individual from nursing student to beginning associate degree Nurse through a directed nursing practice. Emphasizes professional development, nurse's role in health promotion and disease prevention, management of care for a group of patients, clinical judgement, interpersonal relationships, responsibility and accountability. Three lecture, twenty clinical hours per week.

Prerequisite(s): NSG 225 and NSG 226 and portfolio elective

236 Intravenous Therapy 2 Cr. Hrs.

Classroom instruction and college lab experience in: fluid and electrolytes, legal aspects, indications for intravenous therapy, central venous pressure monitoring, hyperalimentation, blood product infusion, "push" medications, infusion pumps, piggybacks, and heparin locks.

238 Basic EKG Interpretation 2 Cr. Hrs.

Basic techniques of interpreting and analyzing the electrocardiogram. Reviews electrode placement, electrophysiology, cardiac monitoring, EKG format, and assessment of tachycardia, bradycardia, fibrillation, premature beat, and conduction disturbances.

250 Traumatic Brain Injury 1 Cr. Hr.

Physiological and behavioral changes from brain injury, including comparison of assessment and treatment of patients with mild to severe brain injury during the immediate post trauma phase with focus on maintaining adequate cerebral perfusion and restoring neuronal function. Case presentations and discussions will be divided equally into acute care and rehabilitation. Multidisciplinary goal-directed plan of care will be individualized based on severity of brain injury. Resources for patient and family will be addressed.

251 Assessment & Management of Neuromuscular Movement Disorders 1 Cr. Hr.

Pathophysiology and assessment of common neurological conditions (Parkinson's Disease, Multiple Sclerosis, Amyotrophic Lateralateral Sclerosis, and Spasticity in Stroke and other Movement Disorders). Designed to increase the neuro assessment competency of nurses, hands-on practice in comprehensive neurological assessment will be incorporated in the workshop. Group discussion will focus on the pivotal role of the nurse in the collaborative management plans.

252 Stroke Management Continuum: Prevention, Acute Care & Rehabilitation 1 Cr. Hr.

This course will review the subtypes of stroke, pathophysiology of cerebrovascular disease that can predispose to stroke, team management and the continuum of care. Presentation and discussions will encompass assessment of risk, primary prevention, early recognition of "brain attack" and transport of the patient to an acute stroke care facility for evaluation and treatment of ischemic versus hemorrhagic stroke. Major emphasis will be placed on public health education initiatives for prevention and awareness of the emergency nature of acute ischemic attack. Update on clinical management by the stroke team will focus on the recommended guidelines from coalition of stroke organizations. Application of the nursing process in stroke care from acute to subacute transitional setting, and rehabilitation in a long term care facility or home will address current evidence-based practice and secondary prevention.

258 Strategies & Techniques for Test Taking 1 Cr. Hr.

This course is designed to assist learners in the AD Nursing Program to identify priorities in learning and to focus study time to maximize individual test performance. Learners will be introduced to strategies and techniques of test-taking. Testing situations are built on actual clinical nursing experience. Techniques learned will help improve thinking and discrimination skills to enhance test performance.

Prerequisite(s): Nursing major

260 Surgical Nursing 4 Cr. Hrs.

Provides an introduction to intraoperative nursing. Discusses the basic technical, communication, professional, and critical thinking skills required to perform the role of the circulating or scrub nurse in an operating room setting. Three lecture, two lab hours per week.

Prerequisite(s): NSG 224 or current RN license

291 Drug Therapy Update I R 1 Cr. Hr.

An update on the actions, side effects, interactions and nursing implications of selected topics of drug therapy. Topics presented change each term.

292 Drug Therapy Update II 1 Cr. Hr.

Review and overview of the more widely used drugs in the nursing/medical management of major diseases and IV fluids. Participants will review and update their knowledge regarding intended actions, side effects, interactions, and nursing applications.

293 Drug Update: Cardiovascular Drugs 1 Cr. Hr.

General principles of cardiovascular function and conventional drug therapy for common disorders; primarily intended as an update and review for registered nurses, but may be of interest to respiratory therapists and nursing students.

294 Drug Update: Autonomic & Psychotropic Drugs 1 Cr. Hr.

Pharmacological principles of drugs that act on the autonomic nervous system and those used to manage various psychiatric conditions, including anxiolytics, antidepressants, and antipsychotics. This course is primarily intended as an update and review for registered nurses, but may be of interest to nursing students and various allied health professionals.

295 Drug Update: Drugs for Pain Management 1 Cr. Hr.

Pharmacological principles of drugs for acute and chronic pain, including conventional non-opioid and opioid analgesics, as well as adjunctive agents such as anxiolytics, antidepressants, glucocorticoids and local anesthetics. This course is primarily intended as an update and review for registered nurses, but may be of interest to respiratory therapists and nursing students.

296 Drug Update: Endocrine Drugs 1 Cr. Hr.

Pharmacological principles of drugs that mimic or influence thyroid, pancreatic and ovarian function. This course is primarily intended as an update and review for registered nurses but may be of interest to nursing students and various allied health professionals.

Prerequisite(s): Health care professional or current student in health care

297 Special Topics in Nursing R 0.5 - 6 Cr. Hrs.

Discussion of a wide variety of topics related to current health practices. Topics are offered throughout the academic year for varying lengths of time. Topics are selected by needs assessment, health care facility requests, and current health care literature. Topics address three areas of professional development: personal, skills development, and managerial. These areas are appropriate for the novice-to-expert health care provider.

Operations Technology (OPT)**100 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 evaluation of machined products related to engineering needs. One lecture, three lab hours per week.

101 Introduction to Operations 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 lecture, two lab hours per week.

105 Introduction to OSHA General Industry Standards 1 Cr. Hr.

Introduction to rules, interpretations, recordkeeping and standards required by OSHA (29CFR Part 1910) for the general industry to ensure a safe, healthy work place. The course complies with the guidelines and requirements for the OSHA 10-hour outreach training completion card.

107 Engineering Disasters 1 Cr. Hr.

A study of engineering disasters and their underlying causes. Discussion of the concept of acceptable risk. Introduction and use of a simple problem solving tool, Fault Tree Analysis. Small group discussion. One half lecture, one lab hour per week.

110 Operations Work Measurement 2 Cr. Hrs.

The application of the fundamentals of work measurement techniques in various operations. Basics of time study, performance rating and work measurement.

Prerequisite(s): OPT 101

111 Manufacturing Work Measurement 2 Cr. Hrs.

The application of the fundamentals of work measurement techniques in manufacturing environments, including taking time studies, calculating standard times, estimating product costs, developing standard data, performing Methods Time Measurements (MTM) standards, work sampling standards, and learning curve analysis.

Prerequisite(s): OPT 110

112 Ergonomics 3 Cr. Hrs.

Introduction to the application of ergonomic design principles in the work environment, including ergonomic planning and implementation for a variety of work environments, repetitive strain injuries, National Institute of Occupational Safety and Health (NIOSH) work standards, and the impact of these factors on workstation and equipment design. Two lecture, two lab hours per week.

113 Coordinate Measurement 3 Cr. Hrs.

Introduction to coordinate measurement instruments and GD&T principles as applied to measurements. Two lecture, two lab hours per week.

Prerequisite(s): OPT 100 or ETD 128 and INT 143 or MAT 131

114 Advanced Coordinate Measurement 3 Cr. Hrs.

Advanced operating techniques and practice for a computer aided servo driven coordinate measurement machine. Two lecture, two lab hours per week.

Prerequisite(s): OPT 113

117 Advanced Quality & Inspection 3 Cr. Hrs.

Advanced concepts of dimensional metrology, including calibration, coefficient of thermal expansion, functional gauging, Geometric Dimensioning and Tolerancing (GD&T) as applied to gauging and fixturing, inspection plans, statistical process control, and problem analysis. Advanced measuring tools will be introduced. Two lecture, two lab hours per week.

Prerequisite(s): OPT 100 or equivalent permission of department chairperson

120 Process Metrology 3 Cr. Hrs.

Fundamental methods, standards, processes and procedures for measurement and non-destructive testing based upon physical and standards of length, time, temperature, pressure and electricity. Two lecture, two lab hours per week.

Prerequisite(s): DEV 108 and DEV 065 or equivalent

125 Introduction to World Class Operations 3 Cr. Hrs.

An overview of world class operations principles, illustrating the many inter-related functions within successful companies including market research, conceptual design, detailed design, production planning, operations, sales and customer support. Additional focus on current trends.

126 Supervision & Team Leadership 3 Cr. Hrs.

Introduction to the fundamental techniques of industrial supervision and team leadership, including supervision functions, teams leadership functions, leadership styles, employee motivation, and supervision of union personnel.

128 Operations Logistics 3 Cr. Hrs.

Basic concepts of operations logistics in industrial and service organizations. Introduction of production and inventory control, Enterprise Resource Planning (ERP) and supply chain management.

130 Lean Operations 3 Cr. Hrs.

Lean Operations principles including lead time reduction, containerization, module design, Kanban, and management by eye. Two lecture, two lab hours per week.

Prerequisite(s): OPT 101

136 Plastics & Composites 3 Cr. Hrs.

Introduction to the plastics and composites industry. Terminology, materials and product development including an overview of basic processing methods with an emphasis on safe operating procedures. Two lecture, two lab hours per week.

137 Packaging Concepts & Materials 3 Cr. Hrs.

Functions of commercial, industrial and military packaging; aesthetic, technical, cost, and environmental factors in package selection and design. Laboratory testing of packaging materials including paper, corrugated, paperboard, and films using appropriate ASTM and TAPPI standards. Two lecture, two lab hours per week.

Prerequisite(s): DEV 108 or equivalent

161 Operations Technology Seminar I 1 Cr. Hr.

An overview of the unique skills and education needed by Operations Technology students. Students will also set career goals and develop a vision for their early career progress.

Prerequisite(s): Permission of instructor

162 Operations Technology Seminar II 1 Cr. Hr.

Career exploration in the field of Operations Technology through site tours and classroom contact with practicing operations technicians.

Prerequisite(s): OPT 161

163 Operations Technology Seminar III 1 Cr. Hr.

An overview of Operations Technology career development opportunities available after the associate degree.

Prerequisite(s): OPT 162

190 Operations Technology Workshop R 1 - 3 Cr. Hrs.

Various topics related to Operations Technology.

198 Excel for Engineering Technology 2 Cr. Hrs.

Application of computer tools to analyze and solve engineering technology problems; emphasizing the advanced use of spreadsheets, including programming with macros. One lecture, two lab hours per week.

201 Statistical Process Control 3 Cr. Hrs.

Applications and concepts of statistical process control with emphasis on process capability, control charts techniques, and analysis. Two lecture, two lab hours per week.

Prerequisite(s): OPT 101 or ETD 102 or CAT 216 and MAT 101 or INT 141

202 Advanced Statistical Process Control 4 Cr. Hrs.

Applications of statistical quality control methods including hypothesis testing, design of experiments and analysis, single factor experiments, factorial experiments, confidence limits, and linear regression analysis. Three lecture, three lab hours per week.

Prerequisite(s): OPT 201 or OPT 101 and MAT 131 or MAT 102

204 Operations Processes 3 Cr. Hrs.

Survey of modern operations processes found in service industries, health care, transportation, food and restaurant, financial, retail, military, government and others. Special emphasis on resource planning and quality assurance.

205 Manufacturing Processes 3 Cr. Hrs.

Survey of modern manufacturing processes including casting, molding, shearing, forming, machining, joining, and finishing for metallic and nonmetallic materials. Special emphasis on materials, equipment, tooling, capabilities and process planning.

Prerequisite(s): OPT 101

206 Value Analysis 3 Cr. Hrs.

An introduction to the purpose and need of value engineering techniques in order to reduce the cost of the product while maintaining the quality and functional requirements of product.

Prerequisite(s): OPT 205 or permission of instructor

207 Operations Systems Analysis 3 Cr. Hrs.

Computer simulation to solve manufacturing and non-manufacturing problems. Involves actual programming of computer models consisting of labor, material, processing times and resources to predict future outcome of different alternatives. Two lecture, two lab hours per week.

Prerequisite(s): OPT 101

208 Engineering Technology Economics 3 Cr. Hrs.

Basic economic concepts, decisions, analysis and evaluations as applied to engineering design, production, maintenance and quality control.

Prerequisite(s): OPT 198 and MAT 131

209 Operations Cost Analysis 3 Cr. Hrs.

Cost analysis and control for manufacturing and non-manufacturing operations to include standard, overhead, and other types of costs; budget breakeven points; cost-volume-profit relationships, cost estimating, and Activity Based Costing (ABC).

Prerequisite(s): OPT 198 and MAT 131 or equivalent

211 Applied Industrial Risk Management 3 Cr. Hrs.

A comprehensive approach to the factors that contribute to safe and environmentally sound practices in businesses and industries.

212 Operations Project Management 3 Cr. Hrs.

Project management in technical environments, including cost management, quality management and personnel communications.

Prerequisite(s): OPT 101

216 Facilities Planning 3 Cr. Hrs.

Study of actual plant layouts, symbols, nomenclature and their interpretations. Specific requirements and conditions are given as a lab project to solve a manufacturing facilities layout problem. Two lecture, two lab hours per week.

Prerequisite(s): OPT 204 or OPT 205 or permission of instructor

217 Measurement & Calibration 3 Cr. Hrs.

Selection of appropriate measurement tools, gauge R&R, calibration and certification of linear measuring tools, and development and testing of control and inspection plans. Two lecture, two lab hours per week.

Prerequisite(s): OPT 100 or QET 100 and OPT 201 or QET 201 and OPT 113 or QET 113 or ETD 230 or DRT 217

221 Quality Assurance 4 Cr. Hrs.

Applying quality systems based on ISO 9001, 9004, 16949 or Malcolm Baldrige requirements, to improve customer relations, supply chain management, and to define the appropriate financial reporting system, including performance measures such as quality costs. Three lecture, three lab hours per week.

Prerequisite(s): OPT 201

223 Quality Systems & Auditing 3 Cr. Hrs.

Review of the standards, requirements, and implementation strategies of major quality systems, including ISO, QS and AS. Additional focus on the development and implementation of internal auditing programs.

225 Design & Process Failure Modes & Effects Analyses 2 Cr. Hrs.

Application of the reliability prediction techniques including fault tree, design and process Failure Mode and Effects Analyses (FMEA), and reliability block diagrams. One lecture, two lab hours per week.

Prerequisite(s): OPT 101 or ETD 101

240 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 with utility in any type of business. It is recommended, not required, that the student have a part-time or full-time job in order to apply Six Sigma concepts. Two lecture, two lab hours per week.

251 Supply Chain Operations & Logistics 5 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.
Prerequisite(s): MAN 241 or OPT 125

261 Continuous Process Improvement 3 Cr. Hrs.

Selection and application of the appropriate problem solving models and tools for the improvement of process quality, throughput and waste reduction. Two lecture, three lab hours per week.

Prerequisite(s): OPT 221 or QET 221 and OPT 202 or QET 202 or MAT 220 and OPT 130 or OPT 130

266 Quality Technician Certification Review 3 Cr. Hrs.

Review of the requirements and topics to become certified by the American Society for Quality (ASQ) in one of the technician fields.

267 Quality Certification Review R 3 Cr. Hrs.

Review of the requirements and topics to become certified by the American Society for Quality (ASQ) in various fields.

270 Operations Technology Internship R 1 - 12 Cr. Hrs.

Students earn credits 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 term.

277 Operations Technology Project 3 Cr. Hrs.

Application of Operations Technology principles, using student teams for real or laboratory simulations of operations processes. Two lecture, two lab hours per week.
Prerequisite(s): OPT 162

278 Operations Technology Capstone 3 Cr. Hrs.

Assessment of achievement by Operations Technology students in attaining program-related outcomes by completing a project demonstrating principles and practices of the major. One lecture, four lab hours per week.
Prerequisite(s): Permission of instructor

297 Special Topics in Operations Technology R 1 - 8 Cr. Hrs.

New developments in Operations Technology and their impact on operations, competitiveness and productivity.
Prerequisite(s): Permission of instructor

Occupational Therapy Assistant (OTA)**101 Introduction to Occupational Therapy Assistant 3 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 OTA problem based curriculum. Two lecture, two lab hours (OTA 141) per week.

104 Functional Muscles 1 Cr. Hr.

Functional anatomy of musculoskeletal systems. Analysis of major joint and muscle groups involved in daily living tasks such as dressing, bathing, grooming, eating, cooking and housekeeping. Two lab hours per week.

Prerequisite(s): BIO 141 or BIO 107

105 Functional Nervous System 1 Cr. Hr.

Functional anatomy of neurological systems. Analysis of central and peripheral nervous systems involved in areas of occupation. Two lab hours per week.

Prerequisite(s): OTA 104 and OTA 132

131 Therapeutic Self 9 Cr. Hrs.

Development of the self as an effective therapeutic tool, including exploration of values, personal and cultural attitudes, sensitivity to cultural differences, group process, and ethical decision making, safety issues relating to laboratory and clinical experiences. Introduction to a community setting involving structured observations, documentation of observations with weekly verbal reports to peers. Five lecture, six lab and three clinical hours per week.

Prerequisite(s): OTA 101 and admission to program

132 The Nature of Being Human 9 Cr. Hrs.

A holistic view of normal development as related to areas of occupation, performance skills, performance patterns, activity demands, and client factors, including the influence of culture and society. Continued experience in a community setting involving structured observations relating to developmental issues; documentation of observations with weekly verbal report to peers. Five lecture, six lab and five clinical hours per week.

Prerequisite(s): OTA 131

133 The Dysfunctional Human 9 Cr. Hrs.

The screening and evaluation of occupational performance from conception to senescence within the cultural context of family and society. Includes the use of occupation for the purpose of assessment, specified screening tools, assessments, skilled observation, checklists, histories, interviews with the client/family/significant others, and consultations with other professionals. Continued experience in a community setting involving structured observations relating to dysfunction in areas of occupation; documentation of observations with weekly verbal report to peers. Five lecture, six lab and seven clinical hours per week.

Prerequisite(s): OTA 132

141 Lab for OTA 101

Laboratory must be taken with OTA 101.

151 Lab for OTA 131

Laboratory must be taken with OTA 131.

152 Lab for OTA 132

Laboratory must be taken with OTA 132.

153 Lab for OTA 133

Laboratory must be taken with OTA 133.

160 Learning Communities for OTA 1 Cr. Hr.

Understanding learning styles and the development of learning methods which facilitate success within the OTA program including developing learning communities.

Prerequisite(s): Restricted to majors

161 Clinical for OTA 131

Clinical must be taken with OTA 131.

162 Clinical for OTA 132

Clinical must be taken with OTA 132.

163 Clinical for OTA 133

Clinical must be taken with OTA 133.

220 Clinical Affiliation I 3 Cr. Hrs.

First of two eight-week assignments of advanced clinical experience under the supervision of a licensed occupational therapist or certified occupational therapy assistant which must be successfully completed before the student is eligible for certification examination. Forty contact hours per week in a clinical setting.

Prerequisite(s): OTA 232 signature of department chairperson

221 Clinical Affiliation II 3 Cr. Hrs.

Advanced clinical experience under the supervision of a licensed occupational therapist or certified occupational therapy assistant which must be successfully completed before the student is eligible for certification examination. Forty contact hours per week in a clinical setting.

Prerequisite(s): OTA 220 and approval of chairperson

231 Treatment Issues I 9 Cr. Hrs.

Focus on intervention planning to increase levels of independence in areas of occupation; includes frames of reference and models of practice; professional communication, role of occupational therapy assistants in a variety of settings and practice areas; establishing therapeutic relationships with clients and families, therapists, health care professionals; mentorship in community settings. Five lecture, six lab, three clinical and seven practicum hours per week.

Prerequisite(s): OTA 133

232 Treatment Issues II 9 Cr. Hrs.

Continued treatment implementation with groups and individuals; focus on compensatory strategies, low-tech and high-tech adaptive technology, and case coordination. Five lecture, six lab, and seven practicum hours per week.

Prerequisite(s): OTA 231

233 Clinical Issues I 1 Cr. Hr.

Facilitation of problem solving during affiliation experiences including feedback on documentation, professional and ethical issues. Taken with OTA 220, Clinical Affiliation I, in classroom and a distance learning format.

Prerequisite(s): OTA 232

234 Clinical Issues II 1 Cr. Hr.

Facilitation of continued professional development while completing OTA 221, Clinical Affiliation II. Issues related to the transition from student to professional including complying with state and national credentialing requirements, ongoing professional responsibilities, and identification of potential practice arenas.

Prerequisite(s): OTA 233

251 Lab for OTA 231

Laboratory must be taken with OTA 231.

252 Lab for OTA 232

Laboratory must be taken with OTA 232.

261 Clinical for OTA 231

Clinical must be taken with OTA 231.

262 Clinical for OTA 232

Clinical must be taken with OTA 232 and OTA 252.

297 Special Topics in Occupational Therapy Assisting R 1 - 4 Cr. Hrs.

Variable course content according to community and program needs for continuing education and state of the art techniques. Areas of special interest which would not fit or be appropriate for the regular OTA curriculum would also be presented.

Paralegal (PAR)**105 Paralegal Principles 4 Cr. Hrs.**

Legal system and the function of the paralegal within that system. The role of case law, statutes, administrative regulations, constitutions, and court rules within that system and analysis of various judicial opinions.

Prerequisite(s): Grade of "C" or better required to pass. Concurrent registration with PAR 106. Student must be accepted into the Paralegal program.

106 Paralegal Principles: Technology 2 Cr. Hrs.

Introduction to the technology used by paralegals in law firm environments. Includes software programs for file management, timekeeping and legal research on the Internet. Students will also learn to use of various types of office equipment.

Prerequisite(s): Concurrent registration with PAR 105. Student must be accepted into the Paralegal program and grade of "C" or better required to pass.

111 Legal Research & Writing 4 Cr. Hrs.

An introduction to major Ohio legal publications and techniques of legal research and writing. Students will complete problems assigned in legal research and a memorandum of law.

Prerequisite(s): PAR 105 and PAR 106 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

112 Legal Research & Writing II 4 Cr. Hrs.

Builds on and develops skills learned in Legal Research and Writing I. Use of federal and national regional legal materials. Students will prepare a memorandum of law and trial brief.

Prerequisite(s): PAR 111 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

113 Legal Research & Writing III 3 Cr. Hrs.

Analysis and computer assisted research of federal and state statutory and case law with emphasis on use of LEXIS system; preparation of memoranda of law.

Prerequisite(s): PAR 112 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

115 Contract Law & the Uniform Commercial Code 3 Cr. Hrs.

Principles of contract law and Uniform Commercial Code (UCC) emphasizing sales, secured transactions and consumer law; problems in contract agreements and accompanying documents.

Prerequisite(s): PAR 105 and PAR 106 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

121 Litigation I 3 Cr. Hrs.

The basics of jurisdiction of state and federal courts, and tort law. Introduction to the Rules of Civil Procedure.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

122 Litigation II 3 Cr. Hrs.

Paralegal's role in the litigation process. Drafting of pleadings and discovery materials. Participation in mock trial.

Prerequisite(s): PAR 121 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

131 Real Estate Transactions I 3 Cr. Hrs.

The law of real property and common types of real estate transactions and conveyances, such as deeds, real estate sales contracts, and leases and an overview of the system of recording. Problems in instrument drafting.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

201 Business Organization I 3 Cr. Hrs.

The law and procedures governing business entities, including sole proprietorships, partnerships, limited liability organizations, and corporations. Students create a corporate minute book.

Prerequisite(s): PAR 106 or PAR 105 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

202 Business Organization II 3 Cr. Hrs.

Corporation problems involving foreign corporations, mergers, consolidations and dissolutions, shareholder agreements.

Prerequisite(s): PAR 201 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

205 Criminal Law & Procedure 3 Cr. Hrs.

The Ohio Criminal Code and criminal procedure laws, from filing of a complaint through criminal trials.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

211 Probate Law I 3 Cr. Hrs.

A survey of probate law including summary administrations of estates, full estate administration, adoption, guardianship, name change, minor settlement, wrongful death, and testamentary trusts.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

212 Probate Law II 3 Cr. Hrs.

The law of wills and estates, and estate administration including Ohio tax returns and fiduciary accounting.

Prerequisite(s): PAR 211 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

215 Family Law 3 Cr. Hrs.

Divorce and dissolution and all matters relating to the ending of a marriage. Preparation of pleadings, forms, and court decrees. Ethical concerns in a family practice.

Prerequisite(s): PAR 121 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

220 Legal Ethics 3 Cr. Hrs.

Ethical issues facing paralegals in various size law firms are assessed including the unauthorized practice of law, confidentiality, and conflicts of interest. Ethical issues related to time keeping, client's files, record maintenance, organizational skills and software are emphasized.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

235 Bankruptcy Law 3 Cr. Hrs.

Federal bankruptcy statutes. Procedures required to file bankruptcy and skills necessary to gather information are stressed.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

240 Social Security Law 1.5 Cr. Hrs.

Introduction to Social Security Law concepts and practices.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

241 Workers' Compensation Law 1.5 Cr. Hrs.

Introduction to concepts and practices of Ohio Workers' Compensation Law and the Industrial Commission.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

242 Intellectual Property 1.5 Cr. Hrs.

Overview of legal concepts of patents, trademarks and copyrights. Forms and procedures required to legally acquire ownership of intellectual property.

Prerequisite(s): PAR 105 and PAR 106 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

243 Legal Interviewing Skills 1.5 Cr. Hrs.

The role of a paralegal in client and witnesses interviews, including interpersonal skills and ethical concerns.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

244 Ohio Protection Orders 1.5 Cr. Hrs.

Basic understanding of domestic violence dynamics, plus a working knowledge of Ohio Civil Protection Order (CPO) law and procedures. Includes working knowledge of the forms and orders required to put a CPO into effect and enforce it. Also includes societal barriers and justice system barriers that impede safety and justice for victims of domestic violence and their children.

Prerequisite(s): PAR 105 and PAR 106 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

245 Administrative Law 1.5 Cr. Hrs.

Introduction to federal and Ohio administrative law and agencies.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

246 Juvenile Law 1.5 Cr. Hrs.

Juvenile delinquency, parentage, child custody and child support and all matters relating to juveniles in the justice system.

Prerequisite(s): PAR 105 and PAR 106 and student must be accepted into the Paralegal program and grade of "C" or better required to pass.

247 Legal Technology Resources 1.5 Cr. Hrs.

Use of software in a legal environment, including spreadsheets, databases, data backup media, group calendaring, and research on the Internet.

Prerequisite(s): PAR 105 and PAR 106 and BIS 160 and grade of "C" or better required to pass and student must be accepted into the Paralegal program or equivalent.

248 Employment Discrimination 1.5 Cr. Hrs.

An introduction to employee rights in the work place, including civil rights, Title VII, age discrimination and sexual harassment.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass. Student must be accepted into the Paralegal program.

249 Litigation Presentations 1.5 Cr. Hrs.

Presentation development using scanner technology, digital and paper photographs, and paper and electronic documents for use in litigation scenarios using rules of evidence.

Prerequisite(s): PAR 105 and PAR 106 and BIS 160 and PAR 121 and restricted to majors.

250 Appellate Procedures 1.5 Cr. Hrs.

The process of initiating criminal and civil appeals. Requirements for ordering transcripts and organizing appellate briefs.

Prerequisite(s): PAR 121 and grade of "C" or better required to pass. Student must be accepted into the Paralegal program.

251 Attorney Client Privilege/Work Product 1.5 Cr. Hrs.

Attorney-client privilege and non-discoverable work product.

Prerequisite(s): PAR 121 and grade of "C" or better required to pass. Student must be accepted into the Paralegal program.

252 Real Estate Transactions II 1.5 Cr. Hrs.

Emphasis on commercial transactions and financing instruments, condominium and environmental laws. The student acquires skills dealing with forms required by lending institutions and government agencies.

Prerequisite(s): PAR 131 and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

291 Paralegal Internship I 2 Cr. Hrs.

Application of skills learned in the classroom to a law related work experience. Interviewing techniques; development of a resume; preparation of a report and log of the work experience. Eight (8) practicum hours per week. Eighty hours per term.

Prerequisite(s): PAR 121, PAR 112, and PAR 220 and approval of coordinator and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

292 Paralegal Internship II 2 Cr. Hrs.

Application of skills learned in the classroom to a law related work experience; students prepare a portfolio displaying evidence of skills learned. Eight (8) practicum hours per week.

Prerequisite(s): PAR 291 and approval of coordinator and grade of "C" or better required to pass and student must be accepted into the Paralegal program.

297 Special Topics in Paralegal R 0.5 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Prerequisite(s): PAR 105 and PAR 106 and grade of "C" or better required to pass and student must be accepted into the Paralegal program and permission of department chairperson.

Physical Education (PED)**101 Beginning Swimming R 1 Cr. Hr.**

Elementary knowledge of swimming techniques and overcoming the fear of water. Instruction in basic swimming strokes including front crawl plus elementary diving and water safety skills. Two lab hours per week.

102 Intermediate Swimming R 1 Cr. Hr.

Increases skill in basic swimming strokes, such as the breaststroke, side stroke, backstroke, front and back crawl plus diving and water safety skills. Two lab hours per week.

Prerequisite(s): PED 101 or equivalent skill

105 Physical Fitness R 1 Cr. Hr.

Provides exercise suited to individual needs and body types. Selected strength, endurance and flexibility activities. Increases understanding and appreciation of the values of physical activity and weight control. Two lab hours per week.

106 Weight Training R 1 Cr. Hr.

Develops muscle tone and muscle endurance through lifting (isotonic) exercises and includes philosophy, theory and programs designed for individual needs. Two lab hours per week.

107 Flexibility Fitness R 1 Cr. Hr.

A comprehensive flexibility program involving static and ballistic stretching exercises to improve the overall physical fitness level of the participant. Two lab hours per week.

117 Badminton R 1 Cr. Hr.

Beginning skills, rules and regulations and strategy for both singles and doubles play. Skill development relates to the basic forehand and backhand swing plus the serve, clear and smash shots. Two lab hours per week.

119 Golf R 1 Cr. Hr.

Beginning skills, rules and regulations, equipment and supplies, safety factors plus courtesies. Includes basic swing along with chipping and putting. Two lab hours per week.

125 Bowling R 1 Cr. Hr.

Beginning skills, rules and regulations, and courtesies. Emphasis on the basic approach, delivery, follow through, plus scoring. Two lab hours per week.

126 Volleyball R 1 Cr. Hr.

Develops basic skills including the various serves, spikes, sets, team strategy, rules and regulations, and skill techniques. Two lab hours per week.

127 Basketball R 1 Cr. Hr.

Develops fundamental skills and techniques of basketball such as shooting, passing, dribbling and team strategy, including terminology, rules and basic drills. Two lab hours per week.

131 Beginning Tennis R 1 Cr. Hr.

Basic techniques and fundamental skills of tennis such as basic strokes (forehand, backhand, and serve), playing strategy, terminology, scoring, and rules. Two lab hours per week.

132 Intermediate Tennis R 1 Cr. Hr.

Intermediate skill techniques plus playing strategy for both singles and doubles related to shot selection and placement. Two lab hours per week.

Prerequisite(s): PED 131 or equivalent skill

133 Advanced Tennis R 1 Cr. Hr.

Develops advanced skill techniques related to actual game strategy and the psychological aspect of the competition. Two lab hours per week.

Prerequisite(s): PED 132 or equivalent skill

136 Beginning Yoga R 1 Cr. Hr.

Introduction and practical application of basic yoga methods including a historical and philosophical review. Two lab hours per week.

137 Intermediate Yoga R 1 Cr. Hr.

Intermediate skills regarding positions and methods of yoga. Two lab hours per week.

Prerequisite(s): PED 136 or equivalent skill

142 Beginning Pilates R 1 Cr. Hr.

Pilates strengthens muscles, improves posture and balance, provides flexibility, and focuses on training the mind and body to work together toward the goal of overall health/fitness. Two lab hours per week.

143 Intermediate Pilates R 1 Cr. Hr.

This course is designed to introduce the student to the intermediate mat Pilates' method of body conditioning. This higher level of Pilates will help enhance posture and balance, provide better flexibility, and train the mind and body to work together toward the goal of overall health and fitness. Two lab hours per week.

Prerequisite(s): PED 142

144 Advanced Jogging/Fitness R 2 Cr. Hrs.

Knowledge and procedure(s) for obtaining advanced jogging/fitness. Detailed, individually formulated running and exercise program. One lecture, two lab hours per week.

Prerequisite(s): PED 105 or permission of instructor

148 Beginning Social Dance R 1 Cr. Hr.

Basic skills of social dancing including ballroom dances, such as the foxtrot, waltz, swing, cha-cha and rumba, along with additional musical knowledge. Two lab hours per week.

149 Intermediate Social Dance R 1 Cr. Hr.

Improves knowledge and skill related to the popular ballroom dance steps, developing grace and self-confidence. Two lab hours per week.

Prerequisite(s): PED 148 or equivalent skill

153 Water Aerobics R 1 Cr. Hr.

A fitness concept comprised of a series of exercises performed in the water with music. Swimming ability is not required. Two lab hours per week.

154 Aerobic Conditioning R 1 Cr. Hr.

A program of fitness composed of exercise routines performed with music. Aerobics increases cardiovascular endurance, flexibility, and strength through selected movements. Two lab hours per week.

161 Beginning Racquetball R 1 Cr. Hr.

A basic understanding of the rules and regulations, equipment and supplies, safety factors, fundamental skill techniques and strategy. Emphasis on positioning, stance, grip, basic strokes, and serving. Two lab hours per week.

162 Intermediate Racquetball R 1 Cr. Hr.

Intermediate skills and techniques. Emphasis on shot selection, placement, strategy and overall consistency. Two lab hours per week.

Prerequisite(s): Successful completion of PED 161, instructor's approval or a "C" rating based on league competition.

164 Cardio Sculpt R 1 Cr. Hr.

Introduction to four different approaches to strength training by using a choreographed, group training program. These approaches employ a progressive, goal-based routine that incorporates modern lifting techniques to optimize results. Two lab hours per week.

165 Country Western Dance R 1 Cr. Hr.

Fundamental skills and techniques required for the style and fluidity of movement related to Country Western dancing. Basic movement patterns of steps, turns, and breaks at the beginning level. Two lab hours per week.

166 Fitness Walking R 1 Cr. Hr.

Techniques of power walking, physiological involvement, proper stretching exercises, diet and nutrition and mobile meditation related to cardiovascular improvement. Two lab hours per week.

168 Advanced Weight Training R 2 Cr. Hrs.

Advanced weight training methods in resistive weight training, including body building, power lifting, and lifting related to specific goals; individually suited. One lecture, two lab hours per week.

Prerequisite(s): PED 106 or permission of instructor

170 Tai Chi R 1 Cr. Hr.

The ancient art of Tai Chi Chuan was developed out of the Taoist traditions in China. The Taoists were interested in the rhythms of nature. Since people are a part of nature, they devised movements and breathing techniques that would bring people into harmony with their environment. Tai Chi can be done for health, meditation or martial arts, but today it is mostly practiced for its health benefits, which are well documented by various scientific studies. Two lab hours per week.

171 Beginning Self Defense R 1 Cr. Hr.

Development of fundamental skills and techniques associated with the martial arts of Karate, Judo and Aikido. Two lab hours per week.

172 Intermediate Self Defense R 1 Cr. Hr.

Development of the intermediate skills and techniques associated with the martial arts. Two lab hours per week.

Prerequisite(s): Successful completion of PED 171, instructor's approval, or a green belt from another organization.

176 Core Conditioning R 1 Cr. Hr.

Core conditioning strengthens and stabilizes the deepest of the trunk muscles, improves posture and increases flexibility and balance by maintaining mobility and stability. Two lab hours per week.

192 Group Indoor Cycling R 1 Cr. Hr.

Introduction to group indoor cycling. Understanding of the contributions of cycling to cardio-respiratory endurance, muscular endurance, and additional components of physical fitness. A variety of training techniques enable students to design individualized programs to help them improve their level of fitness and health. Two lab hours per week.

193 Physical Fitness Evaluation R 3 Cr. Hrs.

To provide students the opportunity to experience and understand the process of evaluating basic physical fitness levels in cardio-respiratory endurance, flexibility, strength and body composition on an individual basis in order to enhance selection of physical activities. This will enable the students to determine the desirable level of physical fitness to best meet the personal needs/requirements of the client.

Prerequisite(s): Suggested BIO 107

200 First Aid & Safety 2 Cr. Hrs.

Prevention and care of injuries occurring from accidents in the home, school and community. Successful completion of the class will result in the student obtaining Red Cross certification in community first aid and CPR.

203 Advanced Swimming R 1 Cr. Hr.

Advanced skill development in the basic swimming strokes; breast, side, back, front, and back crawl. Additional work will be done in underwater areas, diving and survival skills. Two lab hours per week.

Prerequisite(s): PED 102 or equivalent skill

204 Advanced Aerobic Conditioning R 2 Cr. Hrs.

A fitness concept made up of exercise routines done with music; increases endurance, flexibility, and strength beyond beginning level. One lecture, two lab hours per week.

Prerequisite(s): PED 154 or permission of instructor

206 Water Safety Instruction R 3 Cr. Hrs.

Content and teaching methods necessary to instruct all levels of the American Red Cross swimming program. One and one half lecture, three lab hours per week.

209 Beginning Scuba Diving R 2 Cr. Hrs.

Nationally certified PADI open-water scuba course. Diving physics and physiology, safe use of diving equipment, communications, safety rules and problem management, general diving skills required for certification. Open-water certification available at additional cost. One lecture, two lab hours per week.

210 Intermediate Bowling R 1 Cr. Hr.

Fundamentals of bowling are reviewed with emphasis on teaching intermediate techniques in the following areas: approach, delivery, pin-aim or spot-aim method and spare making. Two lab hours per week.

Prerequisite(s): PED 125 or equivalent skill

211 Intermediate Volleyball R 1 Cr. Hr.

Basic skills of volleyball are reviewed and practiced with emphasis on intermediate techniques. Drills, practice procedures, and team strategy are discussed. Two lab hours per week.

Prerequisite(s): PED 126 or equivalent skill

215 Basketball Officiating 2 Cr. Hrs.

Basketball officiating includes basic knowledge about rules, regulations and officiating techniques. Materials will be supplied by O.H.S.A.A. and students passing the final exam will be certified to officiate in Ohio.

216 Football Officiating 2 Cr. Hrs.

Basic information about rules, regulations and officiating techniques. Materials will be supplied by O.H.S.A.A. Students passing the final exam will be certified to officiate in Ohio.

217 Baseball Officiating 2 Cr. Hrs.

Basic information about rules, regulations and umpiring techniques in baseball. Materials supplied by O.H.S.A.A. Students passing the final exam will be certified to officiate in Ohio.

224 Intermediate Golf R 1 Cr. Hr.

Basic fundamentals are reviewed with emphasis on intermediate skills. Grip, stance, swing, chipping and putting are reviewed and shot selection and strategy are emphasized. Two lab hours per week.

Prerequisite(s): PED 119 or equivalent skill

229 Advanced Open Water Scuba Diving R 2 Cr. Hrs.

Recommended for diving enthusiasts who want to further their diving skills with various challenging and interesting open water dives. One lecture, two lab hours per week.

Prerequisite(s): PED 209 or approval of department

231 Rescue Diving R 2 Cr. Hrs.

Prepares the student to better manage realistic rescue situations in addition to developing an increased awareness of dive safety and the anticipation and prevention of potential diving problems. One lecture, two lab hours per week.

Prerequisite(s): PED 229 or approval of department

232 Lifeguard Training 3 Cr. Hrs.

Expansion of training in the knowledge and skills required as a lifeguard in all areas of activity around an aquatics facility. Successful completion results in Red Cross certification. One and one-half hour lecture, three hours lab per week.

Prerequisite(s): PED 102 or equivalent skill

234 Concepts of Total Fitness R 3 Cr. Hrs.

An orientation to total fitness with an emphasis on evaluation and maintenance. A lifetime concept of fitness is presented that will help students understand and develop a positive healthy lifestyle.

235 Introduction to Physical Education 3 Cr. Hrs.

The profession of physical education, its history, basic principles, relation to growth and mental health. Professional opportunities in health, physical education, and recreation.

236 Personal & Community Health 3 Cr. Hrs.

Enables the student to build a philosophy of health. Basic health principles and theories are applied to both personal and community health problems on a local and national level.

237 Organization & Administration of Recreation, Fitness & Sports Programming 3 Cr. Hrs.

This course provides the concepts and applications of effective programming and administration of sport, fitness and recreation programs. Students will be able to identify best practices applicable to various settings and groups.

Prerequisite(s): DEV 110, DEV 065

238 Physical Education for the Elementary School 3 Cr. Hrs.

Designed to acquaint students with a variety of teaching techniques; to review current programs and practices in elementary physical education and to plan physical education classes for elementary students.

239 Athletic Injuries 3 Cr. Hrs.

Application of principles involved in prevention, care and treatment of athletic injuries.

245 Coaching Baseball 2 Cr. Hrs.

Theory, skills, strategies and methods of coaching baseball.

246 Coaching Basketball 2 Cr. Hrs.

Theory, skills, strategies and methods of coaching basketball.

247 Coaching Football 2 Cr. Hrs.

Coaching philosophy, skill development, drills, strategies, organizational format, scheduling, budget, scouting, plus other related information.

248 Coaching Soccer 2 Cr. Hrs.

Coaching philosophy, skill development, drills, strategies, organizational format, scheduling, budget, scouting, plus other related information.

249 Principles of Coaching & Leadership 3 Cr. Hrs.

Foundational knowledge essential for successful coaching of any sport, including development of personal coaching philosophy. Addresses three levels of coaching: youth, collegiate and professional.

Prerequisite(s): DEV 064 and DEV 075 and DEV 084

250 Introduction to Exercise Science R 3 Cr. Hrs.

This course provides students an opportunity to define professional goals and assess personal strengths and weaknesses in light of competencies essential for an exercise science career.

251 Principles & Methods of Training I 3 Cr. Hrs.

An exploration of physiology related to the utilization of the components of physical fitness needed to individualize an exercise prescription. Includes the opportunity to design an exercise prescription.

Prerequisite(s): PED 193 and DEV 085 and DEV 064 and DEV 075

252 Principles & Methods of Training II 3 Cr. Hrs.

Integration of risk stratification, fitness assessment, exercise testing, interpretation, consultation, and exercise prescription skills. Application of knowledge and skills to various populations and disease states through case studies and simulations.

Prerequisite(s): PED 251

253 Advanced Water Aerobics R 2 Cr. Hrs.

An advanced fitness concept comprised of a series of exercises performed in the water with music. One lecture, two lab hours per week.

Prerequisite(s): PED 153 or permission of instructor

260 Introduction to Sport Management 3 Cr. Hrs.

Exploration of the growing professional opportunities within the sport management industry while surveying the sociological, historical, psychological, and philosophical foundations of sport. Application of management and organization concepts to sport enterprises.

Prerequisite(s): DEV 064 and DEV 075 and DEV 085

261 Athletic Facility Planning & Management 3 Cr. Hrs.

Sport facility management and the role of the facility manager, including application skills to a variety of types of facilities.

Prerequisite(s): DEV 085 and DEV 064 and DEV 075

263 History of Sport & Physical Education 3 Cr. Hrs.

Analysis of the history of American sport from the Colonial era to the present with study of the relationship between sport and major social issues such as race, gender, ethnicity, and class.

Prerequisite(s): DEV 064 and DEV 075 and DEV 084

268 Motor Development 3 Cr. Hrs.

Development of movement abilities as a continuous process of change in functional capacity with emphasis on how motor development relates to age and how change occurs sequentially. Also includes developmental change in movement behavior, factors underlying developmental changes, the process of change, and the movement outcome.

Prerequisite(s): DEV 064 and DEV 075 and DEV 084

269 Motor Learning & Performance 3 Cr. Hrs.

Exploration of the relationship between motor learning and motor performance, including the physical and psychological principles that influence both. Examination of the elements that facilitate or prohibit the control, achievement, and retention of motor skills.

Prerequisite(s): PED 268

270 Physical Education Internship R 1 - 12 Cr. Hrs.

Provides the student with a basic understanding of what it means to be a physical educator. The student will serve as a teaching assistant in several activity classes, work with the athletic or intramural programs in some capacity and visit an off-campus physical education class.

271 Certification Exam Preparatory Course 3 Cr. Hrs.

Theoretical knowledge and practical skills in preparation for a national certification exam aligned with guidelines and standards of the fitness industry.

272 Methods of Teaching Strength Training 2 Cr. Hrs.

Introduction to methods of teaching strength training which includes the use of free weights, machines and additional equipment used in the field. Emphasizes a variety of training techniques used to design individualized programs for different populations. Also includes the basic principles of kinesiology and physiology.

Prerequisite(s): PED 106

273 Methods of Teaching Group Fitness 2 Cr. Hrs.

Knowledge and experience for teaching and evaluating a variety of group exercise classes. Includes a variety of group exercise forms, including step aerobics, water aerobics, yoga, pilates, cycling, kickboxing and strength training.

Prerequisite(s): PED 154

297 Special Topics in Physical Education R 1 - 3 Cr. Hrs.

Opportunity for students to receive credit for both non-traditional and traditional courses, workshops or special interest topics in the discipline of physical education.

Prerequisite(s): Will vary according to topic area.

Philosophy (PHI)**204 Great Books: Philosophy 4 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 and as an exercise in critical thinking.

205 Introduction to Philosophy 4 Cr. Hrs.

Basic nature of philosophy, its relationship to physical and social sciences and theology and its value to the individual.

206 Introduction to Ethics 4 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.

207 Logic 4 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.

297 Special Topics in Philosophy R 1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in philosophy.

Physics (PHY)**100 Introduction to Physics 4 Cr. Hrs.**

A survey of motion, forces, energy, heat, gas laws, kinetic theory, electricity and magnetism. Three lecture, three lab hours per week.

Prerequisite(s): DEV 108 or MAT 106

104 Sound, Light & Modern Physics 4 Cr. Hrs.

Survey of sound, music, light, color, atomic, and nuclear physics and relativity for non-science majors. Three lecture, three lab hours per week.

Prerequisite(s): PHY 100 or PHY 141

106 Physics for Radiologic Technology 5 Cr. Hrs.

Concepts of electrical energy, electromagnetic energy, production of x-radiation, interaction with matter, and the x-ray tube, circuitry and special equipment. Four lecture, two lab hours per week.

Prerequisite(s): Admission to RAT program

107 Lab for PHY 106

Laboratory must be taken with PHY 106.

110 Lab for PHY 100

Laboratory must be taken with PHY 100.

119 Lab for PHY 104

Laboratory must be taken with PHY 104.

131 Technical Physics I 4 Cr. Hrs.

Algebra based mechanics including kinematics, dynamics, statics, work, energy, power, rotational motion and fluids. Three lecture, three lab hours per week.

Prerequisite(s): MAT 132 or equivalent

132 Technical Physics II 4 Cr. Hrs.

Algebra based properties of matter, heat, thermodynamics, waves, sound and light. Three lecture, three lab hours per week.

Prerequisite(s): PHY 131

141 College Physics I 4 Cr. Hrs.

Algebra based university parallel sequence in mechanics including vectors, statics, kinematics, dynamics, work and energy, momentum, and rotational motion. Three lecture, three lab hours per week.

Prerequisite(s): MAT 116 or equivalent

142 College Physics II 4 Cr. Hrs.

Algebra based university parallel sequence in properties of matter, hydrostatics and fluid dynamics, heat and thermodynamics, periodic motion, waves, and sound. Three lecture, three lab hours per week.

Prerequisite(s): PHY 141

143 College Physics III 4 Cr. Hrs.

Algebra based university parallel course in electrostatics, D.C. and A.C. circuits, electromagnetism, and optics. Three lecture, three lab hours per week.

Prerequisite(s): PHY 141

201 General Physics I 6 Cr. Hrs.

Fundamentals of mechanics including kinematics, dynamics, work and energy, momentum using calculus as appropriate. Five lecture, three lab (PHY 207) hours per week.

Prerequisite(s): MAT 201 or MAT 202 or MAT 203 or MAT 204 or MAT 216 or MAT 215

202 General Physics II 6 Cr. Hrs.

Oscillations, gravity, fluids, waves, sound, thermodynamics and kinetic theory, using calculus as appropriate. Five lecture, three lab (PHY 208) per week.

Prerequisite(s): MAT 202 or MAT 203 or MAT 215 or MAT 216 and PHY 201

203 General Physics III 6 Cr. Hrs.

Electrostatics, D.C. conduction and circuits, magnetism, electromagnetic induction, quantum mechanics and special relativity. Calculus used extensively. Five lecture, three lab hours (PHY 209) per week.

Prerequisite(s): MAT 216 and PHY 202, MAT 203 or MAT 215

207 Lab for PHY 201

Laboratory must be taken with PHY 201.

208 Lab for PHY 202

Laboratory must be taken with PHY 202.

209 Lab for PHY 203

Laboratory must be taken with PHY 203.

210 Problem Solving in Physics with Matlab 3 Cr. Hrs.

Introduction to problem solving in Physics using the computational tool, Matlab. Topics include the Matlab desktop, array manipulations, relational and logic operations, control flow, creating M-files, low level I/O, graphics and symbolic manipulations. Two lecture, two lab hours per week.

Prerequisite(s): MAT 116 or MAT 132

211 Introduction to Computational Methods 4 Cr. Hrs.

Develop the necessary computational physics skills to model and simulate a broad set of deterministic and stochastic systems including the modeling of empirical data. Integrated problem solving methods found in modern research facilities and high technology work places will be utilized. Three lecture, three lab hours per week.

Prerequisite(s): MAT 117

212 Introduction to Modeling & Simulation 4 Cr. Hrs.

Analyze a variety of scientific problems by designing a representative model, implementing the model, completing a verification and validation process of the model, reporting on the model in oral and written form, and changing the model to reflect corrections, improvements and enhancements. Three lecture, three lab hours per week.

Prerequisite(s): MAT 117

220 Introduction to Computational Physics 5 Cr. Hrs.

Develop mathematical models of a physical system, construct simulations from the models using MatLab, explore the complex systems using the simulator, and present the results effectively in oral and written form. Four lecture, three lab hours per week.

Prerequisite(s): PHY 202 and MAT 202

245 Concepts in Physics 5 Cr. Hrs.

Basic concepts and applications of physics including motion, forces, electricity, magnetism and optics, emphasizing scientific inquiry and process skills integrated with mathematics. Elementary education majors only. Four lecture, three lab hours per week.

Prerequisite(s): ENG 112 and ASE 145 and MAT 142 and MAT 110

246 Concepts & Applications in Physics 5 Cr. Hrs.

Concepts and applications in physics with emphasis on scientific inquiry and process skills. Topics include motion, force and dynamics, work and energy. Middle childhood education majors only. Four lecture, three lab hours per week.

Prerequisite(s): ASE 145 and MAT 142 or MAT 110 and ENG 112

270 Physics Internship R 2 - 12 Cr. Hrs.

Designed to support a variety of experiential learning needs. Adult learners with extensive learning from prior experience may receive acknowledgment of that learning with internship credit upon submission of a portfolio to an evaluation committee. Younger students with limited experience will participate in selected non-classroom experiences with relationship to their educational needs. Students already working full or part time may apply to use that experience in fulfillment of the internship requirement. For the latter two types of students, learning outcomes are established and related reports and/or projects are submitted each term.

297 Special Topics in Physics R 1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in physics. Objectives will vary with the particular content area.

Political Science (PLS)**101 American Federal Government I 3 Cr. Hrs.**

American political system at the national level, process of government, democratic theory and development of the Constitution, citizen participation through voting, interest groups and political parties.

102 American Federal Government II 3 Cr. Hrs.

American political system at the national level, structure and functions of legislative, executive and judicial branches. Issues of civil liberties and equal rights.

103 State Government 3 Cr. Hrs.

Organization and operation of state governments, evolution of constitutions, elections, political parties, the three branches of government, and finances and taxation.

104 Urban Government 3 Cr. Hrs.

Organization, powers, functions, and problems of cities and metropolitan areas (particularly in Ohio), modern trends in budgeting and finance.

200 Political Life, Systems & Issues 4 Cr. Hrs.

Basic political and government concepts and systems, including ideologies and political systems; current political issues in Asia, Africa, Europe, Latin America, along with United States interests and policy options.

201 International Relations 4 Cr. Hrs.

Principles and techniques of international politics emphasizing different world perspectives.

205 Model United Nations/ 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 U.N. simulations, and opportunity to attend the Dayton Model United Nations Conference.

297 Special Topics in Political Science R 1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in Political Science.

Psychology (PSY)**119 General Psychology 5 Cr. Hrs.**

Accelerated university parallel course covering the same content as PSY 121 and 122, including: history, research, physiology, sensation and perception, learning, memory, consciousness, personality, development, gender, social, cognition, motivation, emotion, stress, disorders and therapies. Students should have reading and comprehension skills commensurate with the accelerated pace required for combining two courses in one term.

Prerequisite(s): DEV 065

121 General Psychology I 3 Cr. Hrs.

First of a two-course sequence covering: history of psychology, research methods, physiology of behavior, sensation and perception, learning, memory, states of consciousness, and personality theories. Many Sinclair Community College and university parallel programs will not accept PSY 121 without subsequent completion of PSY 122.

Prerequisite(s): DEV 065

122 General Psychology II 3 Cr. Hrs.

Second of a two-course sequence (with PSY 121) covering developmental psychology, psychology of gender, social psychology, cognition, motivation, emotion, stress, psychological disorders and therapeutic approaches.

Prerequisite(s): PSY 121

124 Honors Seminar for PSY 122 1 Cr. Hr.

Topics include language and cognition, intelligence, motivation, emotion, life span development, stress and health, psychological disorders, and an overview of psychotherapy. An academically accelerated introduction to the study of behavior, including theories, methods and research in psychology, which requires advanced written work, presentations and group discussion/activities.

Prerequisite(s): PSY 121, concurrent registration for PSY 122, permission of chairperson

126 Stress Management 3 Cr. Hrs.

An opportunity for experiential learning through 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.

129 Work Group Dynamics 3 Cr. Hrs.

This course examines work group structures and processes and their influence on organizational and individual productivity. Students will apply psychological principles and methods to manufacturing, engineering, and other organizational environments relevant to the lives of nearly all working people.

135 Living With Loss, Death & Grief 3 Cr. Hrs.

Integrates multidimensional aspects of living with loss and grief and covers experiences of loss, grief, imperatives for care givers, cultural and religious differences in beliefs and practices, children's comprehension, experiences and adjustments to loss, and legal and ethical issues.

140 Psychology of Interaction & Human Potential 3 Cr. Hrs.

Techniques for personal growth, helping relationships and more effective human interactions and covers congruent personality, modes of communication, determination of individual needs and purpose, assertiveness, conflict resolution, active listening, reality therapy and human encounter.

141 Love & Personal Growth 3 Cr. Hrs.

Research and theory concerning diverse scientific definitions of love and the development of love throughout the life cycle with special focus given to communication styles, lifestyles, values, and morality.

160 African-American Psychology 3 Cr. Hrs.

Multi-disciplinary study of theories, cultural themes, and psychological constructs used to further promote understanding of thoughts, feelings, and behaviors of African-Americans.

165 Sport & Exercise Psychology 4 Cr. Hrs.

Introductory course for novice or elite athletes, athletic trainers, coaches, or "weekend warriors" interested in enhancing their performance. Application of scientific principles of psychology to maximize performance in sporting events with emphasis on the practical application of theories to a variety of sports.

180 Psychology of Gender 3 Cr. Hrs.

Introduction to the basic theories and principles of the psychology of gender in a multicultural context. Perspectives of women and men of diverse cultural backgrounds are considered. 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.

205 Child Development 4 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. This course covers the same basic content as the first half of PSY 208.

Prerequisite(s): PSY 119 or PSY 122

206 Adolescent & Adult Psychology 3 Cr. Hrs.

Research and theory concerning physical, cognitive, social and psychological development from adolescence through old age. Focus is on developmental tasks and issues such as education, marriage, family, work, leisure and facing death.

Prerequisite(s): PSY 119 or PSY 122

208 Life Span Human Development 5 Cr. Hrs.

Research and theory concerning the physical, cognitive, and social development of a person from conception to death. The course covers conception, prenatal and child development issues, definition and tasks of adolescence, adult life crises, marriage, family, work, leisure and facing death.

Prerequisite(s): PSY 119 or PSY 122

214 Drugs & Behavior 4 Cr. Hrs.

Overview of the neuropharmacology of various psychoactive substances and their effects on physiology and behavior. Topics include basic principles of neurophysiology, neuropharmacology, and pharmacodynamics, including drug absorption, distribution, and elimination, physiology of tolerance and dependence, and ligand-receptor interactions.

Prerequisite(s): PSY 119 or PSY 121

217 Abnormal Psychology 4 Cr. Hrs.

A study of the diagnostic criteria, symptoms, causes, and treatments of the Diagnostic and Statistical Manual for Mental Disorders. Emphasis is on current scientific research.

Prerequisite(s): PSY 119 or PSY 122

218 Principles of Counseling 4 Cr. Hrs.

An introduction to the helping profession of 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 119 or PSY 122

220 Personality Psychology 4 Cr. Hrs.

An introduction to the bases of acquiring personality with emphasis on principles, theories, and research. Specific topics include psychodynamic theory, ego-psychology, object relations theory, trait/biological theory, phenomenology, behavior-environmental theory, and cognitive/self regulation theory.

Prerequisite(s): PSY 122 or PSY 119

225 Social Psychology 4 Cr. Hrs.

A study of the interaction between the individual and social environment, looked at through a multicultural context. Topics covered include: self-concept formation, attitudes, persuasion, attribution (inferences), group structure and processes, prejudice, aggression, and violence. Meets LAS multicultural studies requirement.

Prerequisite(s): PSY 119 or PSY 122

228 Psychology in the Work Place 4 Cr. Hrs.

The contributions of psychology to human resource management, organizational science, and human factors engineering are examined. The student will understand relevant theories and applications within organizational settings. Specific topics to be presented include motivation, group decision making and development, leadership, work place politics, employee selection, work related stress, performance evaluations, and organizational improvement.

Prerequisite(s): PSY 119 or PSY 122

235 Research Methods for Social Sciences 4 Cr. Hrs.

An overview of basic research methods for the social sciences covering; experimental design, dependent and independent variables, hypothesis testing, experimental and control conditions, sampling, data collection, and reading and writing research reports.

Prerequisite(s): PSY 119 or PSY 121

236 Behavioral Science Statistics 4 Cr. Hrs.

An exploration of 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 and analysis of variance.

Prerequisite(s): PSY 235

242 Educational Psychology 4 Cr. Hrs.

Principles of learning and major theories of human development and motivation are applied to educational settings. Research evidence for effective instructional strategies and assessment is used to develop effective learning experiences among learners of diverse learning styles and development.

Prerequisite(s): PSY 119 or PSY 122

270 Psychology Internship R 1 - 6 Cr. Hrs.

Involvement in a field related experience outside the classroom setting, in which the learning outcomes and the form of evaluation will be determined by the supervising psychology instructor.

Prerequisite(s): PSY 122, PSY 119

295 Independent Study in Psychology R 1 - 4 Cr. Hrs.

Students who have an identified interest in an area of psychology to explore that area in-depth under faculty direction. Open only to second year students with a 3.0 average.

297 Special Topics in Psychology R 1 - 6 Cr. Hrs.

Opportunity to receive credit for non-traditional courses, workshops and special interest topics in the discipline of psychology.

Physical Therapist Assistant (PTA)

106 Introduction to Physical Therapy 1 Cr. Hr.

Purpose, philosophy, history and development of the Physical Therapy profession. PTA duties, PT/PTA relationship, essential functions, legal and ethical responsibilities and professional behaviors. Function of regulatory agencies, licensing bodies and professional associations.

110 Fundamentals of PTA Practice 4 Cr. Hrs.

Principles related to scope and practice of the PTA including human response, critical thinking, decision making and collaborative practice. Foundations of therapeutic communication including medical terminology and documentation; business practices; ethical and professional development.

Prerequisite(s): PTA 106 and restricted to majors

112 Pathology for PTA 1 Cr. Hrs.

Recognize and manage physiological response in body systems related to physical therapy interventions in commonly treated pathological conditions.

Prerequisite(s): PTA 116 and restricted to majors

116 Movement Science I 5 Cr. Hrs.

Clinical kinesiology with emphasis on integration of anatomy, physiology, physics and geometry in relationship to human movement. Two lecture, six lab hours per week.

Prerequisite(s): BIO 121 or BIO 142 and restricted to majors

117 Lab for PTA 116

Laboratory must be taken with PTA 116.

118 Movement Science II 5 Cr. Hrs.

Continuation of clinical kinesiology with emphasis on the effect of movement on posture, gait analysis, transfer techniques and body mechanics. Two lecture, six lab hours per week.

Prerequisite(s): PTA 116 and restricted to majors

119 Lab for PTA 118

Laboratory must be taken with PTA 118.

124 Clinical Procedures I 5 Cr. Hrs.

Physiology and clinical rationale for use and application of treatment interventions including passive and mechanical physical agents, transfer techniques and gait training. Two lecture, six lab hours per week.

Prerequisite(s): PTA 116 and restricted to majors

125 Lab for PTA 124

Laboratory must be taken with PTA 124.

129 Introduction to Therapeutic Exercise 3 Cr. Hrs.

Theory and clinical rationale for use and application of basic therapeutic exercise and functional activity, as well as common tests and measurements, with emphasis on knowledge, performance and patient education related to these procedures on patients in a variety of settings.

Prerequisite(s): PTA 116, restricted to majors

132 Lab for PTA 129

Laboratory must be taken with PTA 129.

133 Intermediate Therapeutic Exercise 3 Cr. Hrs.

Intermediate theory and clinical rationale for use of specific and targeted therapeutic exercises and functional activities, as well as special tests, for treatment of those with common orthopedic and general musculoskeletal diagnoses.

Prerequisite(s): PTA 129, restricted to majors

138 Lab for PTA 133

Laboratory must be taken with PTA 133.

211 Clinical Practicum I 3 Cr. Hrs.

Introductory experience in the clinical setting under supervision of a PT or PTA clinical instructor. Application of theories and techniques for patient interventions, documentation and interdisciplinary interactions. Twenty-one practicum hours per week.

Prerequisite(s): PTA 223 and restricted to majors

212 Clinical Practicum II 3 Cr. Hrs.

Intermediate experience in the clinical setting under supervision of a PT or PTA clinical instructor. Application of theories and techniques for patient interventions, documentation and interdisciplinary interactions. Twenty-one practicum hours per week.

Prerequisite(s): PTA 211 and PTA 235 and PTA 233

213 Clinical Practicum III 3 Cr. Hrs.

Advanced experience in the clinical setting under supervision of a PT or PTA clinical instructor. Application of entry level performance including communication skills, problem solving, critical thinking and safety in therapeutic interventions. Twenty-one practicum hours per week.

Prerequisite(s): PTA 212

221 Clinical Procedures III 2 Cr. Hrs.

Physiology and clinical rationale for use and application of athermal and deep thermal physical agents. One lecture, two lab hours per week.

Prerequisite(s): PTA 118 and restricted to majors

222 Lab for PTA 221

Laboratory must be taken with PTA 221.

226 Clinical Procedures II 2 Cr. Hrs.

Theory and clinical rationale for use and application of massage and soft tissue mobilization with emphasis on functional outcomes and patient education. One lecture, two lab hours per week.

Prerequisite(s): PTA 118 and restricted to majors

228 Lab for PTA 226

Laboratory must be taken with PTA 226.

230 Neuroscience for the Physical Therapist Assistant 1 Cr. Hr.

Structure and function of the nervous system including interaction of the component parts. Changes in system across the life span and impact on human movement.

Prerequisite(s): PTA 124 and restricted to majors

233 Rehabilitation Skills 6 Cr. Hrs.
Therapeutic interventions for neurological, cardiovascular and pediatric pathologies. Wheelchair, orthotic and prosthetic use. Two lecture, eight lab hours per week.

Prerequisite(s): PTA 230 and PTA 234 corequisite and restricted to majors

234 Lab for PTA 233

Laboratory must be taken with PTA 233.

235 Practice Management 3 Cr. Hrs.
Study of management concepts, administrative skills and professional issues in the operation of a PT practice. Comprehensive review of curricular content.

Prerequisite(s): PTA 226 and restricted to majors

238 Advanced Therapeutic Exercise 3 Cr. Hrs.

Advanced theory and rationale for use of therapeutic exercises and functional activities, recognition and treatment of complex and specialized diagnoses across the life span (e.g. cardiovascular, pulmonary, obstetric, and endocrine disorders) as seen in PT practice.

Prerequisite(s): PTA 128 and PTA 138, restricted to majors

239 Lab for PTA 238

Laboratory must be taken with PTA 238.

240 Clinical Procedures Review 1 Cr. Hr.

Comprehensive review of curricular content with required competency of technical skills.

Prerequisite(s): Approval of chairperson and restricted to majors

297 Special Topics for Physical Therapist Assistant R 0.2 - 5 Cr. Hrs.

Physical Therapy therapeutic interventions, theory and practice.

Prerequisite(s): Approval of chairperson

Radiologic Technology (RAT)

104 Radiographic Principles for the General Machine Operator 4 Cr. Hrs.

Introduction to radiographic imaging principles including basic patient positioning, radiation biology, safety and physics, image production and film processing. Three lecture, two lab hours per week.

Prerequisite(s): BIO 107 and HIM 121

105 Lab for RAT 104

Laboratory must be taken with RAT 104.

111 Clinical Competency Development I 4 Cr. Hrs.

Orientation to hospital and radiology organization, introduction to competency performance of procedures involved with abdominal, skeletal and respiratory radiography; film analysis and presentation. Sixteen clinical hours per week.

Prerequisite(s): RAT 121

112 Clinical Competency Development II 4 Cr. Hrs.

Continuation of clinical competency development involved with skeletal and chest radiography with emphasis on gastrointestinal, urographic procedures and image analysis and evaluation. Sixteen clinical hours per week.

Prerequisite(s): RAT 111

121 Introduction to Radiography & Positioning 4 Cr. Hrs.

Orientation to the field of radiography, history, x-ray production, image production, positioning upper extremities and chest. Three lecture, two lab hours per week.

Prerequisite(s): Admission to program

122 Radiographic Positioning 4 Cr. Hrs.

Radiographic positioning of the lower extremities and axial skeleton; patient interactions and film analysis. Three lecture, two lab hours per week.

Prerequisite(s): RAT 121 and RAT 130

123 Fluoroscopy in Radiography 5 Cr. Hrs.

Positioning, procedures and pathologies associated with gastrointestinal and genitourinary systems; fluoroscopy; contrast media administration and exposure factor considerations. Four lecture, two lab hours per week.

Prerequisite(s): RAT 122

127 Lab for RAT 121

Laboratory must be taken with RAT 121.

128 Lab for RAT 122

Laboratory must be taken with RAT 122.

129 Lab for RAT 123

Laboratory must be taken with RAT 123.

130 Skeletal Anatomy for Radiography 1 Cr. Hr.

In-depth study of bony anatomy to include the appendicular and axial skeletons.

Prerequisite(s): Restricted to majors

131 Patient Care in Radiography 2 Cr. Hrs.

Legal and professional aspects, infection control, patient safety and assessment techniques related to care of the patient in radiography department. One lecture, two lab hours per week.

Prerequisite(s): Admission to program

132 Ethics & Law in Medical Imaging 2 Cr. Hrs.

The historical and philosophical basis of ethics, elements of ethical behavior and practical dilemmas, concepts of law and legal principles including professional standards and scopes of practice.

Prerequisite(s): RAT 131, restricted to RAT majors

137 Lab for RAT 131

Laboratory must be taken with RAT 131.

199 Principles of Digital Medical Imaging 2 Cr. Hrs.

Principles of digital technology applications in medical imaging including information and image management processes.

Prerequisite(s): RAT 123 or permission of chairperson

212 Clinical Competency Development III 6 Cr. Hrs.

Continuation of clinical competency development with emphasis in mobile radiography, pediatrics, advanced imaging assignments, formulating exposure factors and image analysis. Twenty-four clinical hours per week.

Prerequisite(s): RAT 112

213 Clinical Competency Development IV 6 Cr. Hrs.

Continuation of clinical competency development in fluoroscopy, general, and mobile radiography; continued alternative shift rotations, elective advanced imaging assignments, formulating exposure factors and image analysis. Twenty-four clinical hours per week.

Prerequisite(s): RAT 212

214 Clinical Education Development Capstone 6 Cr. Hrs.

Total exposure to the health care environment and all functions performed by entry level radiographers; completion of final clinical competency evaluations. Twenty-four clinical hours per week.

Prerequisite(s): RAT 213

215 Pathology for Radiographers 2 Cr. Hrs.

Introductory concepts of disease processes and etiologies with emphasis on radiographic appearance and exposure factor compensation.

Prerequisite(s): RAT 123

218 Advanced Radiographic Practice 2 Cr. Hrs.

Specialty practice considerations related to geriatrics, pediatrics, mobile, surgical and trauma radiography.

Prerequisite(s): RAT 123, restricted to majors

219 Pharmacology for Radiographers
1 Cr. Hr.

General pharmacological principles as they pertain to the practice of radiography. Emphasis placed on major drug classes prescribed medically as well as those having specific indications in radiology.

Prerequisite(s): RAT 123

222 Principles of Radiographic Techniques
5 Cr. Hrs.

Principles of exposure formulation, film processing and quality control, image quality factors and variables; introduction to digital imaging terminology. Four lecture, two lab hour per week.

Prerequisite(s): RAT 123

226 Synopsis in Radiography
2 Cr. Hrs.

Testing and preparation for the national registry examination. Synthesizing current knowledge in radiologic technology applicable to fluoroscopic, general and mobile radiography.

227 Lab for RAT 222

Laboratory must be taken with RAT 222.

229 Quality Management in Medical Imaging
1 Cr. Hr.

Basic principles and concepts of quality management and overview of quality assurance testing applicable to the radiographic system.

Prerequisite(s): RAT 222, restricted to RAT majors

231 Sectional Anatomy
2 Cr. Hrs.

Human anatomy analyzing structures in the transverse (axial), sagittal, and coronal planes applied to the brain, thorax and abdomen.

Prerequisite(s): BIO 122

232 Radiation Biology
2 Cr. Hrs.

Fundamental principles of molecular and cellular effects of x-ray interaction, health physics and radiation protection.

Prerequisite(s): RAT 222

240 Computed Tomography Practicum R
2 - 6 Cr. Hrs.

A variable credit clinical experience performing actual patient exams involving computer tomography.

Prerequisite(s): RAT 199 and RAT 231

241 Principles of Computed Tomography
4 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): RAT 199 and RAT 231

243 Principles of Magnetic Resonance Imaging (MRI)
4 Cr. Hrs.

Basic physics concepts involving the generation and construction of human planar images using magnetic resonance imaging technology.

244 Magnetic Resonance Imaging (MRI) Applications
4 Cr. Hrs.

Magnetic resonance imaging procedures including patient preparation, positioning, filming protocol, instrumentation and archiving.

Prerequisite(s): RAT 243

245 Magnetic Resonance Imaging Practicum R
2 - 8 Cr. Hrs.

Variable credit clinical experience performing actual patient exams involving magnetic resonance imaging.

Prerequisite(s): RAT 199 and RAT 231

247 Mammographic Principles
3 Cr. Hrs.

Comprehensive overview of mammography concepts, including patient care and education; breast anatomy, physiology, epidemiology, and pathology; positioning techniques; interventional procedures; and mammographic findings.

Prerequisite(s): Permission of chairperson required

248 Mammographic Equipment & Applications
2 Cr. Hrs.

Mammographic equipment concepts including x-ray tube considerations, imaging media and processing, quality assurance testing and exposure principles.

Prerequisite(s): Permission of chairperson required

249 Mammographic Practicum R
2 Cr. Hrs.

Clinical experience in a mammography facility performing all functions including routine and special mammographic procedures, quality assurance testing and image analysis.

Prerequisite(s): Permission of chairperson required

250 Quality Management in Radiography
3 Cr. Hrs.

Fundamental and advanced quality management practices in the medical imaging sciences to include film, film processors, imaging equipment and accessories. One lecture and four lab hours per week.

261 Radiography Practicum R
2 - 8 Cr. Hrs.

Clinical experience involving a variety of patient procedures. Experiences include, but are not limited to, fluoroscopy, mobile and general radiography.

Prerequisite(s): Permission of chairperson required

265 Seminar in Radiology R
1 - 3 Cr. Hrs.

Current issues and developments in radiologic technology. Case studies of selected topics.

Prerequisite(s): Permission of chairperson required

Religious Studies (REL)**111 Eastern Religions**
4 Cr. Hrs.

An introduction to Far Eastern religious traditions, focusing on Hinduism, Buddhism, Taoism, Jainism, Confucianism, and Shinto.

112 Western Religions
4 Cr. Hrs.

An introduction to religions originating in the Near East, focusing on Judaism, Christianity, and Islam.

135 American Religious Movements
4 Cr. Hrs.

What makes certain religious movements uniquely American? This course examines the history of American religious movements and analyzes the beliefs and practices of these movements for their greater understanding.

204 Great Books: The Bible & Western Culture
4 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. Connections with and influences upon Literature, Art, Politics, Economics, Medicine, Music, Women's Issues, and Religion itself are examined.

297 Special Topics in Religion R
1 - 6 Cr. Hrs.

Varied content offerings of special interest to the discipline but not covered within existing courses; may be scheduled in a classroom/seminar setting or in a non-traditional format.

Real Estate (RES)

121 Real Estate Abstracting I 3 Cr. Hrs.

Recorded documents affecting real estate, terms used in abstracting and the function of public offices in the abstracting process.

122 Real Estate Abstracting II 3 Cr. Hrs.

Liens, mortgages, foreclosure, divorce, wills and estates proceedings are examined as they relate to real property and the abstracting process.

Prerequisite(s): RES 121

201 Real Estate Principles & Practices 4 Cr. Hrs.

Areas encompassed in the real estate sales industry. The market, investment and brokerage areas and contractual and property rights which concern both the real estate practitioner and investor consumer.

202 Real Estate Law 4 Cr. Hrs.

The legal phases of a realty transaction. Examined are types of estates in land, co-ownership, mortgages, Ohio license law and landlord tenant law.

203 Real Estate Finance 2 Cr. Hrs.

The institutions, methods, instruments and procedures involved in the financing of real estate. Nature of mortgage market and effects of government monetary and fiscal policies are considered.

204 Real Estate Appraisal for Realtors 2 Cr. Hrs.

Methodology of appraising urban property, three basic techniques of appraising and the theory underlying these techniques.

215 Real Estate Investing 3 Cr. Hrs.

An analytical approach to investment in real estate. Financing, tax considerations, appraisal, internal rate of return, acquisitions and exchanges. Highlighted are problems requiring investment analysis.

221 Property Management 3 Cr. Hrs.

Management of residential, business, and commercial properties. Topics presented are merchandising, public relations, leasing, accounting and insurance.

278 Real Estate Capstone 3 Cr. Hrs.

Apply knowledge and practice skills acquired in real estate courses concerning principles, law, finance, appraisal, abstracting, investing, and property management through the use of case studies, simulations, and role playing.

Prerequisite(s): RES 215, RES 121, RES 122, RES 201, RES 202, RES 203, RES 204 and RES 221

297 Special Topics in Real Estate R 1 - 6 Cr. Hrs.

Provides opportunity to receive credit for non-traditional courses or approaches to learning, career related courses/opportunities, and service learning courses/activities, including special interest topics, workshops or customized training.

Respiratory Care (RET)

110 Respiratory Therapeutics I 5 Cr. Hrs.

Respiratory care theory, procedures and equipment to include: applied principles of physics, physical and pulmonary assessment, oxygen therapy and appliances, humidity and aerosol therapy and equipment, airway management, and a review of theory and procedures acquired in ALH 106 as they apply to respiratory care and entry into the clinical setting. Four lecture, three lab hours per week.

Prerequisite(s): ALH 106 and restricted to majors

111 Lab for RET 110

Laboratory must be taken with RET 110.

120 Respiratory Therapeutics II 4 Cr. Hrs.

Theory, application, equipment, and skill development of procedures required for clinical practice including a review of RET 110 skills, bland and medicinal aerosol therapy, bronchopulmonary hygiene, lung inflation and cough techniques, cleaning and sterilization of equipment, and principles of microbiology applicable to respiratory care. Three lecture, three lab hours per week.

Prerequisite(s): RET 110

121 Lab for RET 120

Laboratory must be taken with RET 120.

130 Cardiopulmonary Disease Processes 4 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 120

140 Adjuncts to Respiratory Care 8 Cr. Hrs.

Theory and application of procedures and diagnostic tests utilized in their treatment of critically ill patients including intermittent positive pressure breathing, BiPAP, intrapulmonic percussive ventilation, cleaning and sterilization of equipment, principles of fluidics, home care, pulmonary rehabilitation and an introduction to mechanical ventilation. Two lecture, three lab and 16 clinical hours per week.

Prerequisite(s): RET 120

141 Lab for RET 140

Laboratory must be taken with RET 140.

142 Clinical for RET 140

Clinical must be taken with RET 140.

146 Clinical Practice 4 Cr. Hrs.

Continued clinical practice of routine respiratory care procedures and introduction to respiratory care specialty areas of airway care, home care, pulmonary rehabilitation, and critical care.

Prerequisite(s): RET 140

147 Specialty Clinical Practice 3 Cr. Hrs.

Clinical rotations in the specialty areas of respiratory care such as sleep studies, home care, subacute care, physician's offices, pediatrics, and cardiopulmonary rehabilitation.

Prerequisite(s): RET 140 and restricted to majors

224 Cardiopulmonary Pharmacology 3 Cr. Hrs.

Actions, effects, dosages, and indications for drug classes commonly used to treat pulmonary and cardiovascular diseases.

Prerequisite(s): RET 110

230 Respiratory Critical Care I 10 Cr. Hrs.

Ventilator selection, support techniques, monitoring, discontinuance, therapeutic application and clinical application of blood gases. Four lecture, three lab, fifteen clinical hours per week.

Prerequisite(s): RET 140 or permission of department chairperson

231 Lab for RET 230

Laboratory must be taken with RET 230.

232 Clinical for RET 230

Clinical must be taken with RET 230.

240 Respiratory Critical Care II 10 Cr. Hrs.

Advanced respiratory care of critically ill pediatric and adult patients focusing on medical and surgical conditions that require intensive cardiopulmonary monitoring and therapeutic care. Four lecture, three lab, fifteen clinical hours per week.

Prerequisite(s): RET 230 or permission of department chairperson

241 Lab for RET 240

Laboratory must be taken with RET 240.

242 Clinical for RET 240

Clinical must be taken with RET 240.

250 Pediatrics & Neonatology 3 Cr. Hrs.

Development of the fetus, anticipation of high risk pregnancies and evaluation and care of the newborn infant emphasizing neonatal and pediatric pulmonary physiology and disease. Two and one-quarter lecture, one and one-half lab hours per week.

Prerequisite(s): RET 230

251 Lab for RET 250

Laboratory must be taken with RET 250.

260 Assessment of Pulmonary Function 3 Cr. Hrs.

Advanced pulmonary physiology and pathology as it relates to pulmonary function testing and interpretation emphasizing performance of testing protocols, interpretation of results, equipment maintenance and quality assurance, computer applications, special procedures, and preparation for the national board examination for certification as a pulmonary function technologist.

Prerequisite(s): RET 240

280 Correlations in Respiratory Care 6 Cr. Hrs.

Correlation of respiratory care theory, principles and procedures to the patient care setting emphasizing evaluation and implementation of appropriate patient care plans; mock national board examinations. One lecture, fifteen clinical hours per week.

Prerequisite(s): RET 240

282 Clinical for RET 280

Clinical must be taken with RET 280.

297 Special Topics in Respiratory Care R 0.2 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics within the discipline. Repeatable for credit as topic/issues changes. Approved for Continuing Respiratory Care Education (CRCE) credit.

Russian (RUS)**100 Conversational Russian** 3 Cr. Hrs.

Understanding and speaking in conversational settings, using knowledge of Russian-speaking cultures.

Sinclair Student Success Experience (SCC)**101 Student Success Experience** 2 Cr. Hrs.

This course is designed to help new students make a successful transition to Sinclair Community College. Students will learn and apply strategies required for survival in college. Topics include an introduction to the college and its resources; setting academic, career and personal goals; identifying learning styles and study strategies; the importance of active participation and collaboration in the learning process; financial responsibility; concepts of stress and wellness; and an introduction to Sinclair's general education competencies. Enrollment of high school students is limited to seniors with intentions of attending Sinclair upon graduation.

Prerequisite(s): DEV 064 and DEV 075

Science, Mathematics & Engineering (SME)**101 Introductory Mathematics for Engineering Applications** 5 Cr. Hrs.

An overview of math topics most heavily used in the core engineering courses. These include algebraic manipulation of engineering equations, trigonometry, vectors and complex numbers, sinusoids and harmonic signals, systems of equations and matrices, differentiation, integration and differential equations. All math topics will be presented within the context of an engineering application, and reinforced through extensive examples of their use in the core engineering courses. Also provides an introduction to the engineering analysis software MATLAB, which is widely used throughout engineering fields. Four lecture, two lab hours per week.

Prerequisite(s): MAT 117 or MAT 132

110 Scientific Thought & Method 4 Cr. Hrs.

Exploration of methods employed in the natural sciences through interdisciplinary units designed to illustrate scientific thinking and related mathematical skills. Intended for students who plan to major in one of the natural sciences. Three lecture, three lab hours per week.

Prerequisite(s): MAT 101

121 Introduction to the Intelligence Community 3 Cr. Hrs.

Origins and current structure of the U.S. Intelligence Community (IC) with an emphasis on the key intelligence agencies and their functions, roles, and missions, facets of the intelligence production cycle, to include tasking, collection, processing, exploitation/analysis, and dissemination. U.S. citizenship required. Two lecture, two lab hours per week.

Prerequisite(s): Approval of chairperson

122 Fundamentals of Remote Sensing in Intelligence 3 Cr. Hrs.

Science and underlying phenomenology of remote sensing, remote sensing collection systems, and how they interact with the environment while collecting information from that same environment. U.S. citizenship required. Two lecture, two lab hours per week.

Prerequisite(s): MAT 131, approval of chairperson

201 Introduction to Spectral Sensing with Applications in Intelligence 3 Cr. Hrs.

Science and technology behind Spectral Remote Sensing, underlying phenomenology being sensed, how the information is collected, and the advantages and disadvantages of the technology. U.S. citizenship required. Two lecture, two lab hours per week.

Prerequisite(s): SME 121, approval of chairperson

202 Introduction to Radar for Measurement & Signal Intelligence (MASINT) 3 Cr. Hrs.

Principles of radar and how radar, in the form of over-the-horizon and line-of-sight radar, can be used as a (MASINT) sensor. Generation and propagation of radio waves, how they interact with an object and are returned to the radar, and how the radar interprets the returned energy. U.S. citizenship required. Two lecture, two lab hours per week.

Prerequisite(s): MAT 116 or MAT 131 or MAT 201 and SME 122

211 Introduction to Overhead Persistent Non-Imaging Infrared (OPIR) 3 Cr. Hrs.

Role OPIR plays in National Defense, how data is collected and processed, and exploited. Advantages and disadvantages of OPIR as a remote sensing tool. U.S. citizenship and security clearance required. Two lecture, two lab hours per week.

Prerequisite(s): SME 202, approval of chairperson

212 MASINT Fundamentals 3 Cr. Hrs.
Overview of MASINT disciplines: Chemical, Biological, Radiological, and Nuclear; Seismic and Acoustic; Geophysical; Materials, and Radio Frequency. U.S. citizenship and security clearance required. Two lecture, two lab hours per week.
Prerequisite(s): SME 202, approval of chairperson

Sociology (SOC)

111 General Sociology I 3 Cr. Hrs.
A critical analysis of dynamics between human behavior and society through the use of the scientific method and data analysis. Topics will include culture, socialization, the nature of groups, deviance and social inequalities.

112 General Sociology II 3 Cr. Hrs.
Analysis of contemporary American society, focusing on the social institutions of family, education, religion, government, economics, collective behavior, social change, population and urbanization.
Prerequisite(s): SOC 111

114 Courtship & Marriage 3 Cr. Hrs.
Courtship, dating, and marriage; realities surrounding affectional relationships and marital conflict. Budget planning, buying insurance, writing a will, purchasing a home, divorce, remarriage and step-parenthood.
Prerequisite(s): SOC 111 or SOC 120

115 Today's Changing Family 4 Cr. Hrs.
The developmental stages of the family life cycle from the childless couple through death or divorce, family issues and problems.
Prerequisite(s): SOC 111 or SOC 120

117 Popular Culture 3 Cr. Hrs.
Exploration of popular culture in the last half of this century with projected trends; examination of influence of popular culture on the development of a unique American society and culture through media, music, sports, entertainment.

118 Appalachian Families 3 Cr. Hrs.
A critical and analytical examination of the Appalachian experience from the 1700's through the present day with emphasis on the Appalachian family (both rural and urban) as a varied and complex social system.

119 Diversity in Appalachia 3 Cr. Hrs.
Examination of the diverse populations within the Appalachian region. Historical and current overview of the significant social, political, intellectual, cultural, and educational themes impacting the diversity of rural and urban Appalachia.

120 General Sociology 5 Cr. Hrs.
Analysis of contemporary American society with review of major sociological theories, research methods, culture, socialization, groups, social structure, social institutions, deviancy, social inequalities, social processes, and social change. Not open to students with SOC 111.

125 Drug Implications 3 Cr. Hrs.
Use, misuse and abuse of the most common drugs, emphasizing extent, effects, prevention and treatment.

130 Family Violence 3 Cr. Hrs.
The nature of family violence: child abuse, abuse of elderly parents, sexual abuse, incest, marital rape, marital violence, effects of family violence, and societal reactions to family violence.
Prerequisite(s): SOC 111 or SOC 120

145 Comparing Cultures 3 Cr. Hrs.
Cultural anthropology, including cultural evolution, similarities and differences among world cultures, comparative analysis of family organization, religious beliefs, educational systems, economics and governmental systems.

160 Social Patterns in Aging 3 Cr. Hrs.
Orientation to the biological, sociological, and psychological dimensions of the aging process, and society's response to its older members and their social problems.
Prerequisite(s): SOC 111 or SOC 120

205 Social Problems 4 Cr. Hrs.
Causes, treatment and prevention of such societal problems as mental illness, inadequate health care, alcohol and drug abuse, violence, crime, delinquency, inequality, aging, family breakdown and environmental concerns.
Prerequisite(s): SOC 111 or SOC 120

208 Sociology of American Cities 3 Cr. Hrs.
Evolution and growth of cities, emphasizing affluence and poverty, racial and ethnic pluralism, physical and moral decay of inner cities, and their effects on urban residents.
Prerequisite(s): SOC 111 or SOC 120

210 Rural Communities 3 Cr. Hrs.
Examines the significance of rural communities in American history, and seeks to develop an appreciation for its diversity and complexity. Analyzes the drastic economic transition occurring in rural America today and the social impact of these changes on the individuals, families, and communities.

214 Applied Population Demography 3 Cr. Hrs.
Introduction to the study of human populations and the process that governs their change, fertility, migration and mortality. Application of demographic data to social and economic issues through computer applications for demographic research.
Prerequisite(s): SOC 111 or SOC 120

215 Cultural Diversity 4 Cr. Hrs.
Exploration of American diversity in terms of the dynamics of intergroup relations from past to present. Groups included in the exploration: racial, ethnic, social class, gender, religious, age, disability, and sexual preference.
Prerequisite(s): SOC 111 or SOC 120

216 Human Sexuality 3 Cr. Hrs.
The interrelatedness of the biological, psychological, religious and sociological factors in influencing attitudes toward sexuality.

217 Human Sexuality II 3 Cr. Hrs.
This course focuses on male and female anatomy, physiology, conception, contraception, sexually transmitted diseases and sexual violence.
Prerequisite(s): SOC 216

219 Global Poverty 4 Cr. Hrs.
This course focuses on the issue of global poverty. It specifically examines the problem of "absolute" poverty experienced by many people currently living in third world or developing nations. This course specifically examines three areas of global poverty from an interdisciplinary perspective including readings from humanities, history, sociology, literature, economics, and geography.
Prerequisite(s): SOC 211

225 Juvenile Delinquency 3 Cr. Hrs.
Extent, theories, treatment and prevention of juvenile delinquency.
Prerequisite(s): SOC 111 or SOC 120

226 Criminology 3 Cr. Hrs.
Nature and extent of conventional, organized, and white collar crime in modern society, contributing causes, and methods used in control.
Prerequisite(s): SOC 120, SOC 111

227 Probation & Parole 3 Cr. Hrs.
Techniques of case management of probationers and parolers, focusing on legal precedents, pre-sentence investigation, researches abnormal criminal personality types and approaches in working with such persons.
Prerequisite(s): SOC 226

295 Independent Study Sociology R
1 - 3 Cr. Hrs.

Examines social conditions, problems, and issues which are of interest to the student under the direction of a faculty member. May be repeated for a total of six (6) credit hours.

297 Special Topics in Sociology R
1 - 6 Cr. Hrs.

Studies selected topics related to current American social issues, trends, or problems. These topics may be offered through regular class schedules, or mini-workshops.

Spanish (SPA)**100 Conversational Spanish I 3 Cr. Hrs.**

Understanding and speaking in conversational settings, using knowledge of Spanish-speaking cultures. May not be taken for credit if the student has completed SPA 101 or any other first- or second-year Spanish course.

101 Elementary Spanish I 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing Spanish. Thirty minutes per week of work (outside of class) in the language laboratory is required.

102 Elementary Spanish II 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing Spanish. Thirty minutes per week of work (outside of class) in the language laboratory is required.

Prerequisite(s): SPA 101

103 Elementary Spanish III 4 Cr. Hrs.

Foundation for understanding, speaking, reading, and writing Spanish. Thirty minutes per week of work (outside of class) in the language laboratory is required.

Prerequisite(s): SPA 102

161 Conversational Spanish for Criminal Justice R 2 - 4 Cr. Hrs.

Conversational Spanish focused on learning to speak with Spanish-speaking individuals in the professional capacity of a law enforcement officer. Oral practice and discussions center on the understanding of the language within its cultural context. Considerable supplementary work required.

Prerequisite(s): SPA 100 strongly recommended

201 Intermediate Spanish I 4 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Language laboratory work is required.

Prerequisite(s): SPA 103

202 Intermediate Spanish II 4 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Language laboratory work is required.

Prerequisite(s): SPA 103

203 Intermediate Spanish III 4 Cr. Hrs.

Reviews and extends basic principles through composition and conversation, stressing fluency. Language laboratory work is required.

Prerequisite(s): SPA 103

297 Special Topics in Spanish R
1 - 6 Cr. Hrs.

Provides opportunities to receive credit for non-traditional courses as well as special interest topics in the discipline.

Surgical Technology (SUT)**100 Introduction to Tissue Banking 5 Cr. Hrs.**

Framework and environment for the practice of Tissue Banking. Introduces the use of communication, group process, and critical thinking in the tissue banking environment. Focuses on safety through surgical sterile technique, overview and history of tissue banking, quality systems, and the ethical and regulatory requirements set by the American Association of Tissue Banking (AATB), FDA, and related regulatory agencies. Four lecture, three lab hours per week.

Prerequisite(s): Restricted to majors

101 Tissue Banking I 5 Cr. Hrs.

Techniques for preparing the environment for tissue recovery to take place including surgical instrumentation, supplies, equipment, and quality controls. Discusses quality control measures used throughout tissue recovery and processing procedures. Applies these techniques to basic tissue recovery. Four lecture, three lab hours per week.

Prerequisite(s): Restricted to majors

111 Surgical Technology Fundamentals 6 Cr. Hrs.

Discusses the framework and environment for the practice of Surgical Technology. Introduces the use of therapeutic communication, group process, and critical thinking in perioperative care. Focuses on safety through preoperative preparation, asepsis, and an overview of anesthesia. Four lecture, four clinical hours per week.

Prerequisite(s): BIO 161 and COM 206 and ALH 103 and HIM 121 and ENG 111

112 Surgical Process 10 Cr. Hrs.

Establishes the techniques for preparing the operating room, instruments, supplies, and the equipment to be used during a surgical procedure. Applies these techniques to basic abdominal surgeries. Five lecture, sixteen directed practice hours per week.

Prerequisite(s): BIO 162 and PSY 119 and SUT 111

201 Tissue Banking II 8 Cr. Hrs.

Role transition to beginning Tissue Banking Technology practitioner. Emphasizes a common systematic approach to all tissue recovery and processing procedures. Introduces Tissue Banking Technologist's role on recovery and processing teams in all related environments. Sixteen clinical hours per week.

Prerequisite(s): Restricted to majors

202 Tissue Bank Certification Review 4 Cr. Hrs.

Preparation for the future graduate of the Tissue Banking Technology certificate program to take the Certified Tissue Bank Specialist (CTBS) exam given by the American Association of Tissue Banks (AATB). Detailed information of the AATB requirements of tissue banks that store, distribute, recover, and process human tissue. Includes preparation for the CTBS exam through review of all previous course work.

Prerequisite(s): Restricted to majors

211 Surgical Procedures I 10 Cr. Hrs.

Discusses specific surgical procedures of the gastrointestinal, urinary, and reproductive systems. Adapts surgical care concepts to geriatric and pediatric patients. Correlates intraoperative procedures with postoperative care. Five lecture, sixteen directed practice hours per week.

Prerequisite(s): BIO 205 and SUT 112 and ALH 104

212 Surgical Procedures II 10 Cr. Hrs.

Discusses ophthalmic, ear/nose/throat, head and neck, oral, plastic, and vascular surgical procedures. Explains the role of the scrub technologist when intraoperative emergencies occur. Five lecture, sixteen directed practice hours per week.

Prerequisite(s): ALH 201 and MAT 106 and SUT 211

213 Surgical Procedures III 11 Cr. Hr.

Discusses specific orthopedic, neurological, and thoracic surgical procedures. Examines immediate postanesthesia care. Five lecture, nineteen directed practice hours per week.

Prerequisite(s): ALH 142 and ENG 112 and SUT 212 or ALH 220

220 Surgical Technology Role Transition 10 Cr. Hrs.

Focuses on role transition to beginning Surgical Technology Practitioner. Emphasizes a common systematic approach to all surgeries. Introduces Surgical Technologist's role on specialty teams, as second circulator, in ambulatory surgery centers, and in pediatrics. Five lecture, twenty-five directed practice hours per week.

Prerequisite(s): SUT 213 and ALH elective

297 Special Topics in Surgical Technology R 0.5 - 6 Cr. Hrs.

Provides the opportunity to receive credit for career related courses, workshops, or customized learning experiences. Topics include current practices and special interest topics in perioperative health care.

Social Work (SWK)

206 Social Work as a Profession 4 Cr. Hrs.

Introduction to social work; history of social welfare and social work. Also addresses the emergence, development, and changing nature of social needs relating to social policy, social services and programs in response to prevailing social conditions and social problems. Exploration of feelings, beliefs and values regarding social problems; the role of professional social workers and the preparation required for professional generalist social work practice.

Prerequisite(s): SOC 111 is recommended, not required.

207 Cultural Competence in a Diverse World 4 Cr. Hrs.

Cultural competence is the set of knowledge and skills that a person must develop in order to be effective with multicultural clients. This course will prepare students with an understanding of theories and skills, which will enhance cultural competence in terms of behaviors, attitudes, and policies that come together to assist professionals to work effectively in cross cultural situations. A strong emphasis on self awareness and of personal and cultural values and beliefs to increase appreciation of the importance of multicultural identities in the lives of people.

211 Basic Practice Theory I 3 Cr. Hrs.

First course in a series of three dealing with practice theories and methods and their application to direct social work practice. Beginning theoretical concepts, values and principles that form the framework for a generalist social work practitioner. Focuses on theory and practical application for intervention with individuals, families, small groups, organizations, and communities. Also includes analysis of at-risk populations based on socio-economic class, disablement, race, ethnicity, gender and sexual orientation.

Prerequisite(s): SOC 111 or SOC 120 recommended

212 Basic Practice Theory II 4 Cr. Hrs.

Social work practice theories, methods, and applications; theoretical concepts, values and principles that form the framework for a generalist social work practitioner with emphasis on intervention with individuals, families, small groups, organizations, and communities. Also includes analysis of special at-risk populations. Students complete a practicum at a local agency with an absolute minimum of 32 hours.

Prerequisite(s): SWK 211

213 Social Welfare & Social Services 4 Cr. Hrs.

Generalist social work roles and practice settings; impact of social policy on the service delivery system. Exploration of social work values and ethics as related to practice and social welfare policy. Includes examination of the congruence between personal values and social work values, especially regarding diversity. Students are required to complete a practicum at a local agency with an absolute minimum of 32 hours.

Prerequisite(s): SWK 206, SOC 111 & 112 or SOC 120 are recommended

Theatre (THE)

103 Acting for the Non-Major 3 Cr. Hrs.

Introduction to the art of acting. Focus on acquainting non-acting majors with the concepts and skills taught to acting students. One lecture, four lab hours per week.

105 Theatre Appreciation 3 Cr. Hrs.

Theatre as an art form presented from the historical, literary and production points of view (Greeks to the present).

106 Stagecraft 3 Cr. Hrs.

A study of techniques for building and handling theatrical scenery. Covers tools, materials, and hardware used, and the artistic and practical considerations of scenery construction.

Prerequisite(s): THE 107 must be taken concurrently

107 Lab for THE 106

Laboratory must be taken with THE 106.

Prerequisite(s): THE 106 must be taken concurrently

108 Voice & Speech for the Actor 3 Cr. Hrs.

Basic training and practice in the actor's use of voice and speech. One lecture, four lab hours per week.

109 Movement for the Actor 3 Cr. Hrs.

Basic training and practice in movement for the stage. One lecture, four lab hours per week.

111 Acting I 3 Cr. Hrs.

Basic training and practice in vocal, physical, and creative processes used by the actor. One lecture, four lab hours per week.

112 Acting II 3 Cr. Hrs.

Continuation of Acting I, with emphasis on scene work from 1850-1950. One lecture, four lab hours per week.

Prerequisite(s): THE 111

113 Acting III 3 Cr. Hrs.

Continuation of the study of acting techniques examined in Acting II, with additional emphasis on acting styles. One lecture, four lab hours per week.

Prerequisite(s): THE 112

115 Stage Lighting Fundamentals 3 Cr. Hrs.

A 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.

117 Lab for THE 115 1 Cr. Hr.

Laboratory must be taken with THE 115.

125 Costume Fundamentals 3 Cr. Hrs.

Survey of the costume production process, with emphasis on research methodologies, costume construction and sewing techniques.

Prerequisite(s): THE 129 must be taken concurrently

126 Stage Make-Up 3 Cr. Hrs.

A basic approach in facial adaptation from youth to old age, achieving a likeness of fictional and non-realistic characters, use of beards and hair, three-dimensional builds and prosthetics. Primarily for the stage; however, there will be a brief excursion into techniques for film and television. One lecture, four lab hours per week.

127 Introduction to Stage Combat**3 Cr. Hrs.**

An introduction to theatrical violence and fighting styles with emphasis on integration of technical skills and characterization. One lecture, four lab hours per week.

Prerequisite(s): THE 109

129 Lab for THE 125

Laboratory must be taken with THE 125.

198 Applied Theatre Technology R**1 Cr. Hr.**

Lab experience in theatre technology; includes assistant stage management and production crew positions for departmental major productions. Assignments are made through department faculty and staff. Two lab hours per week.

201 History of Theatre I**3 Cr. Hrs.**

The world of theatre from its origins through 1000 A.D. A close look at the architecture, costuming, acting and plays of the Egyptian, Greek, Roman, and Medieval Periods.

202 History of Theatre II**3 Cr. Hrs.**

Survey of the history and development of theatrical production during the Renaissance and Restoration periods.

203 History of Theatre III**3 Cr. Hrs.**

Survey of the history and development of theatrical production from the 18th century to the present day.

206 Script Analysis R**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 lecture, four lab hours per week.

Prerequisite(s): THE 105

213 Auditions**3 Cr. Hrs.**

An overview of skills needed for successful auditioning and entry into the profession. One lecture, four lab hours per week.

Prerequisite(s): THE 111

215 Acting Shakespeare**3 Cr. Hrs.**

Script and character analysis and the performance of selected Shakespearean scenes, monologues, and soliloquies. One lecture, four lab hours per week.

220 Theatre Portfolio**3 Cr. Hrs.**

Process for creating a theatre resume and portfolio; development of presentation and interview skills.

Prerequisite(s): 15 hours from Theatre department and approval of academic advisor

240 Stage Management**3 Cr. Hrs.**

An introduction to the creative and administrative work of a stage manager. Including hands-on activities in learning the principles and practices of stage management. One lecture, four lab hours per week.

Prerequisite(s): THE 105

255 Theatre Workshop R**1-3 Cr. Hrs.**

Focused on a specialized area in the theatre. This laboratory course is designed to bring together performance, direction, and production.

298 Theatre Practicum: Technical R**1-3 Cr. Hrs.**

Practical experience in advanced stage management, engineering, technical production, and design positions for departmental major productions. Assignments are made through department faculty and staff.

Prerequisite(s): Permission of instructor

299 Theatre Practicum:**Performance R 1-6 Cr. Hrs.**

Theatre Practicum – Performance provides the student who is interested in the performance aspects of production the opportunity to receive credit for practical experience.

Prerequisite(s): Approval of department

Visual Communications (VIS)

105 Printing Basics**3 Cr. Hrs.**

Development and evaluation of printing processes including letterpress, gravure, flexographic, offset, silk screen, and digital, and the kinds of work for which they are designed. Two lecture, four lab hours per week.

106 Design Basics: 2-D**3 Cr. Hrs.**

Introduction to 2-D design fundamentals applied to visual communications, printing and the arts. Two lecture, four lab hours per week.

107 Design Basics: 3-D**3 Cr. Hrs.**

Introduction to 3-D design fundamentals applied to visual communications, printing and the arts. Two lecture, four lab hours per week.

Prerequisite(s): VIS 106

108 Typography**3 Cr. Hrs.**

Introduction to typography as an element and tool of visual communication. The concept of type as image is emphasized. Two lecture, four lab hours per week.

109 Design Drawing**3 Cr. Hrs.**

Introduction to rendering and other design drawing techniques as applied to visual communications and printing. Two lecture, four lab hours per week.

Prerequisite(s): ART 111 or IND 131

110 Design Lab Orientation**1 Cr. Hr.**

This course will provide students with basic operating knowledge of Macintosh computers and orient students to the Design department lab spaces. Filing, printing, and scanning will be covered. Students will learn how to access their files from other lab spaces and they will also learn Design lab policies and procedures. Students without basic computer skills should take BIS 104 prior to this course.

114 Interactive Digital Theory**3 Cr. Hrs.**

Various concepts of interactive design principles and methods, including the fundamentals of contemporary digital design and process from analysis and design through production and delivery.

115 Digital Video**3 Cr. Hrs.**

Introduction to digital video editing software and the development of digital video for multimedia graphics.

Prerequisite(s): VIS 104 or VIS 110 and VIS 114

116 Digital Animation**3 Cr. Hrs.**

Introduction to 2-D and 3-D animation software and the development of animations for presentations and multimedia applications.

Prerequisite(s): VIS 104 or VIS 110 and VIS 114

117 Web Page Design**3 Cr. Hrs.**

Web page design using HTML based software. Design basics and a hands-on approach emphasized. Participants will develop their own web page by the end of the course.

Prerequisite(s): VIS 104 or VIS 110 and VIS 114 and VIS 147

118 Web Page Design II**3 Cr. Hrs.**

Web page design using vector graphic based software. Design basics and hands-on approach emphasized. Development of online interactive media and/or animation.

Prerequisite(s): VIS 117

146 Digital Illustration**3 Cr. Hrs.**

Computer illustration techniques using vector based software.

Prerequisite(s): VIS 104 or VIS 110

147 Digital Imaging**3 Cr. Hrs.**

Computer imaging and photo manipulation using raster based software.

Prerequisite(s): VIS 104 or VIS 110

148 Digital Page Layout 3 Cr. Hrs.

Introduction to computer page layout and composition using desktop publishing software.

Prerequisite(s): VIS 108 and VIS 146 or VIS 147

150 Screen Printing 3 Cr. Hrs.

An introduction to producing a textile print, from preparing camera ready art to printing the finished product.

151 Offset Printing 3 Cr. Hrs.

A study of basic offset printing. Characteristics and operations of the duplicator size presses. A study of various types of dampening systems. Understand the required adjustments necessary for quality printing.

Prerequisite(s): VIS 105

180 History of Design 3 Cr. Hrs.

History of graphic design covering major designers and their work, as well as design movements. From the ancient origins of graphic art 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 110

201 Digital PrePress I 3 Cr. Hrs.

Fundamentals of digital prepress and the techniques used to prepare page layouts and designs for printing.

Prerequisite(s): VIS 146 and VIS 147 and VIS 148

202 Digital PrePress II 3 Cr. Hrs.

Advanced digital prepress and color separation techniques used to prepare page layouts and designs for printing.

Prerequisite(s): VIS 201

206 Design Principles I 4 Cr. Hrs.

First of a two-part series exploring advanced elements and principles of design; introduction to design symbology. Two lecture, four lab hours per week.

Prerequisite(s): VIS 148, VIS 146 and VIS 147

Corequisite: VIS 236

207 Design Principles II 4 Cr. Hrs.

Second of a two-part series exploring advanced elements and principles of design; introduction to identity systems. Two lecture, four lab hours per week.

Prerequisite(s): VIS 206

Corequisite: VIS 237

236 Design Applications I 4 Cr. Hrs.

Application of symbology created in Design Principles I to the development and examination of a signage system. Two lecture, four lab hours per week.

Prerequisite(s): VIS 148, VIS 146 and VIS 147

Corequisite: VIS 206

237 Design Applications II 4 Cr. Hrs.

Exploring the use of design elements and principles and applying it to current trends within a marketing concept. Two lecture, four lab hours per week.

Prerequisite(s): VIS 236

Corequisite: VIS 207

270 Visual Communications Internship R 1 - 12 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.

276 Visual Communications Portfolio Development 4 Cr. Hrs.

Each second year student will develop a portfolio from portfolio projects, work experience, freelance, etc. Through lecture, demonstration, class handouts, and guest speakers, the student will have the exposure and guidelines necessary to build a unique and individualized portfolio. Two lecture, four lab hours per week.

Prerequisite(s): IND 232 or VIS 237

278 Visual Communications Capstone 3 Cr. Hrs.

Comprehensive application of all skills and techniques learned in prior visual communications classes and resources available in the Design department.

Prerequisite(s): VIS 207 and VIS 237

297 Special Topics in Visual Communications R 1 - 6 Cr. Hrs.

Provides opportunities to offer special interest content within the discipline as well as receive credit for instruction delivered in a non-traditional format. Students may apply only six credit hours of Special Topics courses toward an associate degree in Applied Arts.



Commonly Used Terms

Academic Advisor – Advisors help students plan their program of study and course selection. The Academic Advising Center, where all academic advisors are located, is in Building 11, Room 11346, Dayton, Campus.

Academic Credit Assessment Information Center (ACAIC) – This center provides information about non-traditional or alternative ways to receive Sinclair credit, such as articulation agreements with other colleges, universities, high schools, equivalency CLEP examinations, and evaluation of prior learning by portfolio, CLEP, PONSI, and Dantes.

Academic Divisions – Headed by a dean, Sinclair’s four academic divisions include:

- Business & Public Services
- Liberal Arts, Communication & Social Sciences.
- Life & Health Sciences
- Science, Mathematics & Engineering

Academic Probation – If a student’s grade point average is below 2.0 for two consecutive quarters, he or she is in danger of being dismissed from school. A student on probation is required to see an academic counselor prior to the time of registration for classes.

Academic Program – The student’s academic area of study.

Academic Resource Center (ARC) – Academic Resource Center is a place where potential students can refresh basic skills in mathematics, English and reading either before taking the placement test or by enrolling in developmental studies classes.

Accreditation – To become accredited, a college, university or particular degree program must meet or exceed certain minimum education competency standards (local, state or national).

Admission – Fulfilling all entrance requirements so a student may register for classes.

Alumni – Graduates of Sinclair Community College are called alumni.

Articulation Agreements – Local colleges and universities agree to identify courses that will transfer and may guarantee junior status to Sinclair students. Also, Sinclair agrees to give college credit for selected course work taken in high school. Other articulation agreements exist with companies or agencies and may only apply to specific degree programs.

Associate Degree – This degree awarded by Sinclair is in a career area or transfer program. Students need to talk to an academic advisor about degree types, such as associate of arts (A.A.), associate of applied science (A.A.S.), and associate of science (A.S.).

Associate of Individualized Study (A.I.S.) – Those who want to design their own degree program should use the different courses of study in liberal arts or combine the liberal arts with technical areas of study.

Associate of Technical Study (A.T.S.) – Those who have technical degree goals that cannot be met through existing programs, may find this a good alternative.

Audit – To take a course without being responsible for homework or tests, students may “audit” – they won’t earn a grade, but the course will show on their record as an audit. Auditing students register during late registration and pay the regular tuition.

Bachelor’s Degree – Also called a baccalaureate degree, the bachelor’s degree is awarded by a four-year institution and usually indicates successful completion of at least a four-year course of study.

Bursar – The Bursar’s (or cashier’s) office is responsible for collecting tuition and fees.

Career Development (C.D.) – Courses which may be taken for career development/advancement rather than as part of a degree program.

Career or Technical Program – This kind of program prepares students to enter a particular job/vocational area and leads to an associate degree. (It is not designed to transfer to a four-year institution.)

Career Services – Students can find career counseling and assessment, a career and employment library and job information here. Employment services also arranges initial job interviews for new graduates and alumni, and conducts seminars on resume writing and interviewing techniques.

Certificate of Completion – This program of study trains students in skills essential to a particular career area, but not at the level required for an associate degree.

Change of Academic Program – To change from one academic program to another, students meet with an academic faculty advisor, who will make the change. This change will be indicated on the students’ records and will not affect the cumulative grade point average.

Chairperson – This teaching faculty member is responsible for managing his or her academic department.

College for Lifelong Learning (College for Seniors)

This program coordinates opportunities for senior citizens, such as tuition free audit classes, registration in regular classes, and non-credit classes in the Senior Academy.

Community College – To meet the diverse needs of the community, this type of college offers courses, certificates and associate degrees in the arts, sciences and technical career areas.

Cooperative Education (Co-op) – Students can combine taking classes with working part time in a job related to their area of study.

Cost of Attendance (COA) – The total amount it will cost students to go to school. This amount includes, but is not limited to, tuition and fees, books, room and board, transportation, supplies and personal expenses. The students' direct cost is tuition, fees and books.

Credit for Lifelong Learning Program (CLLP) – In CLLP students develop a portfolio to earn credit for prior learning from experience.

Credit Hour – Usually refers to the number of hours per week a student attends class and for which he or she can earn credits toward completion of a course of study. In many cases, the number of hours per week that a class meets determines the number of credit hours the class is "worth."

Curriculum – The total program of courses required for a degree or certificate in the student's academic program.

Dean – This administrator directs an academic division (such as "Liberal Arts, Communication & Social Sciences") at the college.

Dean's List – Students who have a grade point average of 3.4 or above; have no grade below a "C;" are carrying six or more credit hours; and are in good academic standing are on the "Dean's List" each term.

Degree Audit – A review to determine progress toward the completion of a degree. For those who change academic programs, a separate degree audit is needed. (This is different from "auditing" a course.) Degree audits can be printed from Web Advisor.

Department – An academic subdivision (such as the department of English) of the college where students are taught courses in a particular subject area (such as composition or literature).

Developmental Courses – These pre-college courses in reading, mathematics, science, and English help develop basic skills and prepare students for college level course work.

Distance Learning – Take courses any time, any place through video, online and at off-campus sites.

Drop/Add – If students need to add a course or drop a course after registering or want to change sections, they have to complete the drop/add process, either on a form or on the web (Internet).

Early Childhood Education Centers (ECEC) – Provides full- or part-time care for young children and also serves as a learning laboratory for early childhood education academic programs.

Elective – Courses that fulfill the requirements for a degree but aren't in the academic program subject area.

Enrollment Center – If a student is new to Sinclair and has been through the admissions process, this is the next step. This office has information about enrolling, placement testing, orientation, academic programs, and registering for the first term.

Entrance Counseling – A student loan borrower must complete an online entrance counseling session before an initial loan disbursement can be paid to the student's account.

Estimated Family Contribution (EFC) – Is a calculated formula established to determine a family's financial strength and what they are able to contribute toward the students' education.

Exit Counseling – A student loan borrower must complete online loan exit counseling prior to graduation, when the student withdraws from school or ceases to be enrolled in at least six hours.

Federal Parent Loan for Undergraduate Students (FPLUS) – A federal direct loan program designed to assist parents with student's educational costs.

Federal Stafford Loan Program (FSLP) – A federal direct loan program designed to assist a student with educational costs.

Federal Supplemental Educational Opportunity Grant (FSEOG) – A federal grant provided to assist a student with exceptional financial need as determined by the EFC.

Federal Work Study Program (FWSP) – Provides opportunities for part-time employment either on or off campus. To determine eligibility, stop by the office of Financial Aid & Scholarships, Dayton Campus.

Financial Aid – Grants, scholarships, loans and federal work-study positions that help in financing college education.

First Year Student – One who is registered in a specific program and has earned fewer than 46 quarter hours of credit, including transfer credit.

Free Application for Federal Student Aid (FAFSA) – The application submitted by a student and parent(s) to the U.S. Department of Education to determine eligibility for federal and state financial aid.

Fresh Start Policy – Those returning to the college after an absence of at least three consecutive years, can choose a one-time-only "Fresh Start" option of having their grade point average recalculated from the point of re-enrollment. Students won't lose credit for previous course work with a grade of "S," "P," "C" or better.

Full-time Student – Carries 12 or more credit hours per quarter.

General Education Diploma (G.E.D.) – This nationally recognized high school equivalency diploma is awarded for successfully completing the G.E.D. test.

Grade Point Average (G.P.A.) – Students can calculate the G.P.A. by dividing the total number of points assigned to the letter grades earned (for instance, a B = 3 points) by the total number of credit hours completed in a given period.

Hold – Those students who owe fees or have books or equipment that belong to the college, they will not be able to register further or get a transcript. (This is called putting a “hold” on the students’ records.)

I.D. Card – See “Tartan Card.”

Individualized Degrees – These programs are Associate of Technical Study and Associate of Individualized Study. Students design the program with help of the A.I.S./A.T.S. coordinator.

Individual Learning Plan (ILP) – A customized success plan for selected new degree and certificate students interested in support for completion of educational goals.

Internship – Academic course in which students apply career skills and competencies learned in the classroom in a supervised work setting. Credit is earned for learning that occurs as a result of work place experience and is assessed through written assignments and evaluation by work site supervisor.

Kiosk – Stand alone information centers to check personal information, grades, locations on campus.

Live Interactive Television – The distance learning Lifelong Education and Resources Network provides “live” interactive courses, one-way video, two-way audio broadcast to multiple remote sites using video conferencing technology and allows for live interactivity between the sites.

my.sinclair – The college’s online portal designed to provide a home for web based services and instructional tools. Available on the Internet at <http://my.sinclair.edu>.

my.sinclair e-mail – E-mail accounts provided by the college to all students. Accounts are accessed through the my.sinclair portal at <http://my.sinclair.edu>.

National Student Loan Database System (NSLDS) – Is the database for federal student aid where students can find out about the aid received throughout their academic history.

Neighborhood Centers – Students may take classes for college credit at these locations around Montgomery County.

Non-credit – No grades are awarded for certain educational experiences, such as one-day workshops on improving skills.

Option – This specialized curriculum is approved as a specialized area of study under an academic degree program.

PAC – See Physical Activity Center.

Part-time Student – Carries 11 credit hours or less per quarter.

PELL – A federally funded grant awarded by the federal government. If eligible, this award adjusts to how many hours the student is enrolled. Enrollment status is full time (12 or more hours), three-quarter time (9-11 hours), half-time (6-8 hours), or less than half (5 hours or less).

Personal Identification Number (PIN) – Originally the student’s birth month and birth date, must be used for telephone registration, grade and reporting.

Personal Interest (P.I.) Courses – Courses which may be taken for personal interest rather than as part of a degree program.

Physical Activity Center (PAC) – A place to take classes or relax with sports and entertainment. Located in Building 8, Dayton Campus, with access from the lower levels of Building 4, 5, and 6.

Placement Testing – Those who want to work toward a Sinclair degree or certificate take this assessment of skills in English, mathematics and reading to help determine course placement.

Prerequisite – For a particular area of study, students have to complete all courses as preliminary work before they can register for a more advanced course.

Proficiency Exam – Those who have had extensive knowledge in a subject may be able to earn college credit in that subject by taking the appropriate exam.

Program Outcomes – At the end of the degree program, students need to have acquired specific skills and knowledge called outcomes.

Promissory Note (PN) – The binding legal document the student signs before he or she receives a student loan.

Quarter – The academic year at Sinclair is divided into four terms known as fall, winter, spring and summer quarters. In 2012, the curriculum will change to semesters. (See “Semesters”).

REAP – Reserve Educational Assistance Program, Chapter 1607. Education program designed to provide educational assistance to reservists activated after September 11, 2001 for 90 continuous days or more.

Registration for Classes – Before each quarter begins, students have a registration period to sign up for courses and pay fees.

Residency for Fee Purposes – Established by the State of Ohio and Montgomery County, these rules determine the amount of tuition and fees a student has to pay based on several factors, including where he or she lives. Changing an address doesn’t automatically change residency.

Residency for Graduation Purposes – Students have to complete the last 30 hours of credit at Sinclair to get a degree.

Satisfactory Academic Progress (SAP) – To be eligible for federal student aid at Sinclair Community College, students must complete 75% of the hours they enroll in and earn a 2.0 G.P.A. each term. Students also have a maximum of 153 credit hours to complete a degree program and a maximum of 77 credit hours to complete a certificate program.

Second Year Student – One who is registered in a specific program and has earned at least 46 quarter hours of credit, including transfer credit, but not a degree.

Section of a Course – A section is one of a number of classes offering the same course in the same quarter. When students register, they must choose both a course and a section for that course.

Semester – One of two terms into which many colleges divide the school year. Sinclair will be on semesters in 2012.

Sequence – A series of courses taken in a specific order.

Service Learning – Service Learning is a teaching method that combines community service with academic instruction focusing on critical, reflective thinking and civic responsibility. Service Learning programs involve students in organized community service that addresses local needs, while developing their academic skills, sense of civic responsibility and commitment to the community.

Short Term Certificate – Short term certificates include courses that are standard, a term in length that meet the same amount of contact hours.

Sinclair Central – Students receive registration assistance here, Building 10, Second Floor, Dayton Campus.

Sinclair Guarantee – This policy guarantees transfer credit for graduates earning Associate of Arts and Associate of Science degrees at Sinclair Community College and job competency for graduates earning Associate of Applied Science degrees at Sinclair.

Specialized Courses – Single courses that lead to industry recognized certificate.

TBA – “To be arranged,” indicates that meeting details are still pending with an academic department to complete a course requirement.

Telecommunications Device for the Deaf (TDD/TTY) – A keyboard connects with most analog telephones to enable people who are deaf, hard of hearing or speech impaired to communicate with others who have TDD/TTY.

Tartan Card – Students need this Sinclair student I.D. card, which they can obtain after registration. It is for certain facilities like the Library or PAC, and can use it to pay for services on campus (bookstore, copiers, parking, etc.).

Teleport (Technology Enhanced Learning Environments Port) – This computer lab provides equipment, software and support personnel for students.

Transcript – Prospective colleges, universities and employers may require this official written record of students’ course registrations and grades.

Tuition – The dollar amount students pay for academic instruction. Sinclair’s tuition is the lowest in the state.

Tutor – Person who provides help on academic work. Sinclair offers free academic assistance outside the regular classroom through Tutorial Services.

University Parallel – A program designed to transfer to four-year colleges and universities.

Verification – A process by which the U.S. Department of Education or Sinclair Community College requires the student and parent to submit certain written documents to confirm the information on the FAFSA. The documents may include, but are not limited to, tax forms, household size and untaxed income received.

Waitlisting – An upgrade to registration that allows students to electronically “wait in line” for the next available seat in class. See Registration for information.

Web Advisor – Sinclair’s online Registration & Student Records system.

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Semesters 
sinclair.edu/semesters



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