## WELCOME FROM THE PRESIDENT AND BOARD CHAIRPERSON

# President's Welcome

# Chairperson's Welcome

All of us at Northwest State Community College welcome you to our college community. Northwest State's goal is to be an innovative college that is creating ways to reach out to you. The college is proud to have an excellent staff, faculty and facilities with a full array of support services that are available to all of our students. At Northwest State it is all about you – your future, your career and your success.

At Northwest State, opportunities come in many forms – the Applied Associate Degrees, Associate of Arts and Science Degrees, as well as pathways to careers or bachelor degree programs. These are available through partnerships with local high schools, career centers, colleges and universities. There are opportunities for certificate programs, licensure preparation and industry certification in various fields, and continuing education for professional development and personal interest. Custom Training Solutions (CTS), a division of Northwest State, offers customized training for the business and industry workforce.

The Northwest State community looks forward to assisting you throughout your college experience by providing a quality education that is accessible and flexible enough to fit your busy lifestyle. Whether you are entering college directly from high school or returning to college later in life, we thank you for making Northwest State your first choice for providing you with a relevant curriculum that will transform your life.

Best wishes,

Tom Stuckey
President

On behalf of the Board of Trustees and the College, we welcome you to Northwest State Community College.

Whether you are continuing your education, looking for challenging and engaging courses, or improving your current job skills, we invite you to consider Northwest State Community College.

Try to imagine all the individuals who have succeeded after graduating from NSCC. You are following in their footsteps. You too have the opportunity to partner with a student-focused school that has your success as our primary goal. When you tour our campus you quickly discover that our faculty, staff, and administration want to help you take full advantage of our academic programs and support services. Our people and our facilities provide the environment, the curriculum, the technical support, and state of the art equipment to meet the highest academic standards. As the Chancellor of the Ohio Board of Regents stated during his recent visit to Northwest State, "community colleges are the backbone of our effort to increase educational attainment. They are the most accessible, affordable parts of our educational system."

We welcome the opportunity to serve you. Thank you for letting us help start working on your future…right now.

Sincerely,

Philip Ennen
NSCC Board of Trustees Chair

# Table of Contents

*Nothwest State Community College reserves the right to make changes to any item contained herein as deemed necessary without notice. You are advised to consult your academic advisor or the appropriate College official for confirmation of matters that are essential to your programs of study.  To meet graduation requirements, students are expected to follow the curriculum listed in the catalog in the year which they start.  If continuous enrollment is not maintained, the catalog year would be updated.*

## Important Dates and College Phone Numbers

### 2011 – 2012 CLASS CALENDAR

#### Summer Semester 2011

| | |
|---|---|
| May 31 | Payment due by 4:00 p.m. |
| June 6 | Classes begin |
| July 4 | Holiday – College Closed |
| July 29 | Last Day of Semester |
| August 1 | Grades Due by 10 a.m. |

#### Fall Semester 2011

| | |
|---|---|
| August 18 | Payment due by 4:00 p.m. |
| August 24 | Classes Begin |
| September 3-5 | Labor Day Holiday |
| October 19 | Second 8-weeks begins |
| November 23-27 | Thanksgiving Break – No Classes |
| December 12-17 | Exam Week |
| December 17 | Last Day of Semester |
| December 19 | Grades Due by 10 a.m. |

#### Spring Semester 2012

| | |
|---|---|
| January 3 | Payment due by 4:00 p.m. |
| January 9 | Classes Begin |
| January 16 | MLK Day – College Closed |
| March 5-11 | Spring Break |
| March 12 | Second 8-weeks begins |
| April 30 - May 5 | Exam Week |
| May 5 | Last Day of Semester |
| May 5 | Commencement |
| May 7 | Grades Due by 10 a.m. |

### College Phone Numbers

Main Number: (419) 267-5511
www.northweststate.edu

**Offices**

| | |
|---|---|
| President's Office: | (419) 267-1366 |
| Business Office: | (419) 267-1311 |
| Admissions Office: | (419) 267-1320 |
| Financial Aid Office: | (419) 267-1389 |
| | (419) 267-1333 |
| Registrar's Office: | (419) 267-1315 |
| | (419) 267-1395 |

**Bookstore**

| | |
|---|---|
| NSCC Bookstore: | (419) 267-1256 |

**Student Resource Center**

| | |
|---|---|
| Transfer Advising: | (419) 267-1353 |
| Accessibility Services: | (419) 267-1265 |
| Career Services: | (419) 267-1330 |
| Educational Planning: | (419) 267-1316 |
| Success Center: | (419) 267-1447 |
| Library Services: | (419) 267-1274 |
| Student Activities: | (419) 267-1303 |

**Academic Divisions**

| | |
|---|---|
| Vice President for Academics: | (419) 267-1301 |
| Allied Health & Public Services: | (419) 267-1345 |
| Arts & Sciences: | (419) 267-1247 |
| Business Technologies: | (419) 267-1351 |
| Engineering Technologies: | (419) 267-1394 |
| Nursing: | (419) 267-1246 |

*NSCC Non-Discrimination Statement*

*Northwest State Community College does not discriminate on the basis of race, color, national origin, sex, disability, religion or age in its programs or activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Denis Ciaciuch, Director of Human Resources, 22600 State Route 34, Archbold, OH 43502 (419) 267-1407, dciaciuch@northweststate.edu*

*For further information on notice of non-discrimination, visit: http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm. For the address and phone number of the office that serves our area, call 1-800-421-3481.*

# About Northwest State Community College

## About Northwest State

Northwest State Community College is a state supported, public, two-year college which awards the following degrees: Associate of Applied Business, Associate of Applied Science, Associate of Arts, Associate of Individualized Studies, Associate of Science and Associate of Technical Studies.

## Progressive History

Northwest State Community College is located in the last region of the Buckeye State to be claimed by settlers. Since the Ohio Board of Regents approved the formation of the Four County Technical Institute, this community-serving institution has progressed steadily into the future, discovering and meeting the diverse and ever-changing needs of Defiance, Fulton, Henry, Paulding and Williams Counties.

Studies in 1966 and again in 1967 established that a need for technical education existed and would grow in northwest Ohio. Consequently, in 1968, the Ohio Board of Regents approved the formation of Four County Technical Institute. The first college classes were held in the west wing of Four County Joint Vocational School beginning in September of 1969.  In 1972, Northwest Technical College moved into its own building (the current "A" Building). The change made it possible to accommodate 600 daytime students with laboratories, general classrooms, a large meeting room, commons, student services area and library.

In addition, Phase II of the College Master Plan in 1987 nearly doubled the size and capacity of the College. An open Atrium became the link between the original renovated structure and the new wings. The Business Technology Division would now occupy the "B" Buildng, with those rooms available to other courses as needed. Student services, food services, an attractive conference room and an exercise area would now be housed in the "C" Building. Also in the fall of 1991, a new Child Development Center building was opened.

The State Community College status, earned in 1994, brought about growth which led to additional building and renovations that have continued to take place on the present 80 acre site.
- In 1997, a new Engineering Technology and Science Center was opened. The 54,000 square foot facility allowed the College to provide significantly upgraded science and technology laboratories, as well as additional equipment to better serve the workforce development training needs of northwest Ohio.
- In January 2002, a new 12,000 square foot Technology Training Center was opened. The Center included five technical labs that support the Plastics, Industrial Electrical and CAD Technologies.
- During the spring and summer of 2003, a total renovation of the first floor in the "A" Building was begun. At that time the maintenance department had moved to its own building, making it possible for more classroom space to be added. The bookstore and food services areas were also enlarged, and more student seating was created.
- In 2004, classes were offered at a satellite location in Van Wert, Ohio.

- In 2006, classes were offered at additional satellite locations in Metamora and Defiance, Ohio.
- In the spring of 2007, the second floor of "A" Building was renovated to create a lab for the Medical Assisting program. In addition, five classroom and faculty offices were renovated.
- In 2008, classes were offered at satellite locations in Bryan and Paulding, Ohio.
- In 2010 the College broke ground on a new Allied Health & Public Services Building.

## Accreditations and Approvals

Northwest State Community College takes pride in its accreditation by the Higher Learning Commission and is a member of the North Central Association of Colleges and Schools, 230 S. LaSalle St., Suite 7-500, Chicago, Illinois, 60604-1413, (312) 263-0456.

Professional approval and/or accreditations are given for quality programs. Many of the majors at Northwest State Community College have received this distinction.

The Human Services students who have successfully completed the major can apply for registration as a social work assistant with the State of Ohio Counselor, Social Worker and Marriage & Family Therapist Board, 50 West Broad St., Columbus, OH 43215.

The Ohio Department of Education has approved the Associate Educator Licensure Programs in Pre-Kindergarten and Educational Paraprofessional. Ohio Department of Education, 25 South Front Street, Columbus, Ohio 43215.

The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Medical Assisting Education Review Board of the American Association of Medical Assistants Endowment.  CAAHEP 1361 Park Street, Clearwater, FL 33756, (727) 210-2350.

The Associate Degree Nursing program is approved by the Ohio Board of Nursing and accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850 Atlanta, GA 30326, (404) 975-5000.

The Practical Nursing program is approved by the Ohio Board of Nursing.

The Business Technologies programs are accredited by the Accreditation Council of Business Schools and Programs, 7007 College Blvd., Suite 420, Overland Park, KS  66211, (913) 339-9356.

# Student Resource Center

## Affiliations and Memberships

Northwest State Community College maintains memberships in national, regional and local professional organizations including:

American Association of Collegiate Registrars and Admissions Officers, American Association of Community Colleges, American Association of Medical Assistants Endowment, Association of Collegiate Business Schools and Programs, Association of Community College Trustees, Association for the Advancement of Sustainability in Higher Education, Community Colleges for International Development, Inc, Commission on Accreditation of Allied Health Education Programs, Council for Higher Education, Council of North Central Two Year Colleges, Council on Women in Energy, Council for Resource Development, ECHHO, Inc, Energy Engineers, Green Energy Ohio, Higher Learning Commission, International Association of Campus Law Enforcement Administrators, League for Innovation in Community Colleges, Midwest Institute for International/Intercultural Education, National Association for Developmental Education, National Association of College and University Business Officers, National Association for Community College Entrepreneurship, National Association of StudentFinancial Aid Officers, National Council for Marketing and Public Relations, National League for Nursing, North Central Association of Colleges and Schools, Ohio Association of Associate Degree Early Childhood Programs, Ohio Association of Collegiate Registrars and Admissions Officers, Ohio Association of Community Colleges, Ohio Association for Developmental Education, Ohio Campus Law Enforcement Association, Ohio Coalition of Associate Degree Early Childhood Program, Ohio Coalition of Associate Degree Human Service Educators, Ohio College Access Network, Ohio Controllers Group, Ohio Council of Associate Degree Nursing Education Administrators, Ohio Council of Chief Academic Officers, Ohio Two Year College Career Services Association, Public Relations Society of America, Sloan Consortium, Toledo Metropolitan Area Council of Governments

Chambers of Commerce Memberships:
Archbold, Bryan, Defiance, Montpelier, Napoleon/Henry County, Paulding, and Wauseon

## Northwest State Community College Mission

To serve by providing access to excellent and affordable education, training, and services that will improve the lives of individuals and strengthen communities.

Vision:
Northwest State Community College will be an innovative leader in education and training, a first-choice institution that empowers individuals and communities to achieve a sustainable quality of life.

## Institutional/General Education Learning Outcomes

Graduates from Northwest State Community College will become professional, lifelong learners and responsible global citizens through achievement of the following outcomes.

1. **Communication** – Graduates from Northwest State Community College will demonstrate effective communication skills.
2. **Computation** – Graduates from Northwest State Community College will perform basic algebraic problem-solving and interpret and communicate numerical data.
3. **Critical Thinking** – Graduates from Northwest State Community College will comprehend the implications of a topic or problem, draw on appropriate evidence, and construct well-reasoned conclusions.
4. **Diversity** – Graduates from Northwest State Community College will demonstrate awareness of the impact of cultural differences.
5. **Sustainability** – Graduates from Northwest State Community College will evaluate the impact of economic, political, social, and/or ecological systems on this and future generations.

## Success Center

Student success is a priority at Northwest State Community College. The Success Center is designed to enhance success by providing the staff, facilities and resources necessary to support and empower students' ability to achieve their potential. Students are encouraged to use the Success Center services and resources, as all are free of charge and easily accessible. The Success Center Welcome Desk is located on the first floor of the "A" building just outside the east entrance doors of the library and is open during most daytime and early evening hours Monday through Thursday and during the day on Friday. The Success Center Tutoring Service Office offers free assistance to students experiencing difficulty with a course despite regular attendance and hard work. Students interested in receiving tutoring services are encouraged to come to the Success Center and request assistance.

The Success Center houses walk-in academic labs (Math, Writing, Life Sciences), Tutoring Services, and Accessibility Services. The lab consists of user-friendly computers with Internet access and laser printing. The computers contain easy-to-learn word processing programs and desktop publishing applications.

The Success Center labs also offer a wide range of software, audio cassette/workbook programs, videos, and supplementary textbooks to reinforce material covered in NSCC courses. These self-paced and easy-to-use tutorials are available for many topics in mathematics, English, reading and study skills, accounting, keyboarding, physical and life sciences, computer literacy, economics, and other areas.

For assistance regarding a learning disability or physical challenge, a student will need to provide recent documentation of the disability. For more specific information regarding the procedure for obtaining assistance, please see the next section.

## Accessibility Services

Under the Americans with Disabilities Act, Section 504, a student with a disability may obtain assistance to help achieve educational goals. The College is committed to providing qualified students with a disability an equal opportunity to access the benefits, rights and privileges of services, programs and activities in an accessible setting appropriate to the student's needs. No student shall, on the basis of his or her disability, be excluded from participation, be

## Student Resource Center

denied the benefits of, or otherwise be subject to discrimination under any College program or activity.

Any student who wishes to investigate available college resources should first meet with the Accessibility Services Coordinator or the Director of the Student Resource Center. To be qualified for assistance regarding a disability, a student will need to provide recent documentation of the disability from a qualified professional. Documentation should be submitted as soon as possible, preferably at least three months prior to the semester start date. Each student is expected to:

1. Schedule an appointment with the Accessibility Services Coordinator.
2. Apply for auditory books and other aids as necessary, and in a timely manner.
3. Notify instructors of the disability during the first week of class and discuss which accommodations will be most beneficial.
4. Make arrangements with instructors and Success Center Coordinator for testing accommodations, if applicable.

Individuals with visual and/or hearing disabilities should contact the Accessibility Services Coordinator or the Student Resource Center main office three months prior to their starting date in order for staff to evaluate allocation of funds.

### Library Services

The Library has many resources available for students: a book and print journal collection, DVD and video collection, access to other Ohio college collections through OhioLINK, individual and group study space, and interlibrary loan service. A student I.D. card is needed for checking out materials. For more information call (419) 267-1274.

The following are especially helpful to students working on class papers and projects:

- Statewide access to over 90 libraries in the state of Ohio
- Electronic delivery of full-text journal articles
- 100+ research databases on a variety of subjects
- Personalized research assistance on request (ask at the circulation desk)
- In-class research skills instruction on request of instructor

### Career Services

The Career Services Office offers a variety of services to help students with their educational goals. Whether you are confident in the career path you have chosen, or you have some uncertainties about your major, we can help.

We specialize in career development, the process of helping you identify, plan for, and achieve your career goals. We do this by offering information, advice, training and resources designed to help you select an educational path that leads to a financially rewarding and personally satisfying career. These services are available to prospective students, currently enrolled students and alumni.

Career Services assists students in finding jobs while pursuing their degrees or upon completion of a program. This includes assistance in planning their job search, resume development and improving interviewing skills. Career Services also assists employers who wish to post job listings on Northwest State's online job board.

Visit Career Services on Northwest State's website for more information!

### Internship Education

Internship Education combines practical work experience with an academic program. This combination can create an excellent learning environment in a paid or unpaid experience for the student. If the student is already employed in their field of study, the internship program may allow him/her to receive college credit for the work the student is currently doing. For further information, contact the Career Services office or Dr. Larry Zachrich in A101B.

### Educational Planning and Retention

At Northwest State we encourage all students to have an educational plan, a tool that can help identify goals, summarize strengths and weaknesses and link to campus support systems.

College students often start down an academic pathway only to find that succeeding means a lot more than just getting a good grade on a test. Today's students meet challenges in balancing work and family life along with classroom obligations. Worry, stress and academic workloads sometimes seem overwhelming. Research shows that having a good plan with stated goals is key to overcoming obstacles that may appear in your path.

Whether you are sure of your academic major or completely undecided on your area of study, educational planning may be able to assist you as a student at NSCC. Check the campus calendar for workshops, activities and resources or contact the main Student Resource Center's office at (419) 267-1242.

### Student Activities

All students are encouraged to participate in campus-sponsored activities outside of the classroom. The Student Body Organization officers and members plan and promote an ongoing calendar of activities.

### Student Organizations and Activities

**Students for Community Outreach & Awareness (SCOA)**

Students for Community Outreach & Awareness is a social action group that is devoted to bringing attention and raising awareness about some of the pressing social issues in our society and community. This is done through educational activities or engaging in projects that help the local community.

**Student Body Organization (SBO)**

SBO is the representative student government at Northwest State Community College. This group is responsible for promoting academic, cultural, recreational and social activities for students. Elected officers and student members coordinate and plan activities. Membership is open to all students. Regular meetings are held at which all students have a voice and a vote in the conducting of business.

**Phi Theta Kappa (PTK)**

PTK is an honors and service organization for students attaining a 3.5 GPA after completing 18 or more credit hours. Students are invited to become members and provide letters of recommendation from faculty.

**Kappa Beta Delta (KBD)**

KBD is a national honor society for students in a Business Technologies program who maintain a 3.5 GPA after completing 18 or more credit hours. Students are invited to become members and provide letters of recommendation from faculty.

**Alumni Association**

Membership in the Northwest State Alumni Association is available to all graduates of the College. The Alumni Association's mission is to engage alumni interest while promoting loyalty and strengthening relationships with students, community and alumni. For more information, contact Robbin Wilcox at (419) 267-1460.

**Intramural Sports**

NSCC offers a variety of intramural sports that compete with other colleges in the area. These sports include basketball, bowling, pool tournaments, flag football, indoor soccer and volleyball.

### Child Development Center

Quality care for children ages 3 years to kindergarten is available at Northwest State Community College through Northwest Ohio Community Action Commission. This facility strives to meet the social, emotional, physical, mental and creative needs of each child trusted to its care. The center also serves as a clinical site for the College's Early Childhood Development and Paraprofessional Educational programs.

You can enroll your child at the center by calling (419) 784-2150.  The center is open year round from 6:00 a.m. to 6:00 p.m., Monday-Friday.

### NSCC Bookstore

For the convenience of the students, a well-stocked bookstore is available on campus. In addition to new, used and rental textbooks, the bookstore also offers class supplies and materials, laptops and software, clothing items and grab-and-go snack and food items. The cost of books and supplies is separate from, and in addition to, instructional fees.

### Food Service

Food Service offers dining options in several locations throughout campus. The Snack Bar, located in the "A" building, is open from 7:45 a.m. to 6:00 p.m. and features gourmet coffee drinks and made-to-order breakfast as well as lunch and dinner specials. The NSCC Café in "C" Building, has cooler items available starting at 8:30 a.m., and offers a salad bar and daily specials from 10:30 a.m. to 2:00 p.m. The salad bar closes at 1:30 p.m. For your convenience, cold sandwiches and salads are also available in vending machines in the "A" and "E" Buildings as well as the NSCC Bookstore.

### Student Facilities

The Fitness Room, located in C105, is for use of students and employees of Northwest State Community College.

|  |  |
|---|---|
| M - TH | 7:30 a.m. - 10:00 p.m. |
| Friday | 7:30 a.m. - 3:30 p.m. |
| Saturday | 8:00 a.m. - Noon |

Game Area - Atrium
Food Court - "A" Building
Shower and Locker Rooms - Women's - C108
Shower and Locker Rooms -  Men's - C109

### Student Insurance

A health insurance plan is available to full-time students on a voluntary basis. For a reasonable rate, students are covered 24 hours a day for 12 months.  Information is available in the Student Services and Student Resources Offices and on the College website.

### Student Lockers

Atrium and fitness room lockers can be rented through the Student Activities Office. Rental by the semester or the entire academic year is available on a first-come, first-served basis. In case of a campus emergency, authorized College and/or emergency personnel may open these lockers.

# Admission Requirements

## Student N Cards

All students are required to have a Student N Card. These cards are used to identify individuals as a current NSCC student in all administrative and advising offices, and allows a student to participate in college sponsored activities both on and off campus. Along with use as an I.D. card, a student can load money on the N Card through the Bookstore for use in the Snack Bar and Bookstore.

There is no charge for a Student N Card. However, if the card is lost, there will be a $10.00 replacement fee. Student N cards are available through the Campus Police Department located in the Atrium.

## RaveAlert Emergency Communication System

Northwest State Community College has partnered with Rave Wireless to provide the campus community with RaveAlert emergency alert and communication system. This system is capable of delivering messages to your campus and personal e-mail address as well as your landline and cell phone.

NSCC will be utilizing the RaveAlert service to communicate school closings, student communications, emergencies and other reminders to the campus community. Using the Rave Wireless service is a fast and reliable means of receiving important information from Northwest State. Students, faculty and staff are encouraged to add and update their contact information and communication preferences through the myNSCC web portal.

## Adverse Weather – Closings or Delays

Northwest State Community College will operate under the premise that it will be in session according to the College calendar. However, the president or administrative designee will have the prerogative to close school (including off-campus sites) under extenuating circumstances, and under such conditions the students will not be expected to report. Such closing information will be sent via RaveAlert to participating students, and will be announced over local radio and television stations. You will also find closing information at www.northweststate.edu or through a recorded message at (419) 267-5511.

## Admission

Admission to Northwest State Community College is open to any high school graduate or holder of a high school equivalency statement (GED). A final, official high school transcript or GED should be presented at the time of application along with the appropriate application fee. Students who have earned college credit from another institution should submit college transcripts. Students who have not earned a high school diploma or GED may be admitted upon presenting to the Admissions Office evidence of the ability to satisfactorily complete college-level work. Some programs may have additional admission requirements including an application and appropriate GPA.

All first time college students, and some transfer students who are seeking a certificate or degree are required to take the COMPASS assessment for course placement and in certain instances, developmental coursework prior to enrolling in college-level courses.

You are not required to meet with an Admissions Recruiter before you enroll at NSCC, but you may find it helpful. A Recruiter can suggest opportunities at the College, explain entrance requirements and answer any questions you may have about reaching your career goals. Students are encouraged to apply at least one semester prior to their intended start date.

## Course Placement (COMPASS/ACT)

Prior to registration, all degree or certificate seeking students should be evaluated or show evidence of successful completion of college-level coursework in math and English through ACT scores or the COMPASS Placement Test. An appointment is required for the COMPASS Placement Test. Contact the Admissions Office at (419) 267-1320 or go online to www.northweststate.edu to schedule an assessment.

Students who receive a score of 95-100 on the COMPASS Placement Test may choose to complete a writing sample, administered by the testing coordinator, to qualify for placement into ENG112-Composition II. The writing sample will be reviewed by full-time faculty members in the English department. If approved, the testing coordinator will notify the student of the following placement options available to them:

- Take ENG111 and ENG112, or
- Take ENG112 and another writing intensive ENG course. The second writing course will be substituted for ENG111, but cannot be used to meet a Humanities requirement. The approved list of writing courses is maintained by the Dean of Arts & Sciences.

## COMPASS Placement Retesting

1. Students may have one retest using either an alternate form of the COMPASS Placement Test or a Departmental Proficiency Test (but not both). PSEO students may have one retest per year.
2. A retest must be requested prior to enrolling in related developmental courses.
3. Retesting must be approved by the Dean of Arts & Sciences or designee.
4. There must be at least a one month waiting period between testing dates involving a Departmental Proficiency test only.
5. Placement test results are valid for three years. After three years, retesting is recommended and the fee is waived.
6. Students may choose to retake the entire COMPASS Placement Test or choose specific sub-tests for retesting.
7. A $20.00 retesting fee will be charged for the COMPASS Placement Test and a $45.00 fee will be charged for the Proficiency Test.

## College Math Proficiency Policy

All associate degree and certificate programs offered at Northwest State Community College require graduates to demonstrate a minimum math proficiency at the level of MTH080 - Review of Beginning Algebra. Proficiency can be demonstrated on the placement test at the time of entry, by passing a proficiency test, by successfully passing the course MTH080 - Review of Beginning Algebra, or by being a recent high school graduate (within the last six years) and have taken two (2) or more high school algebra

courses (not including any pre-algebra or geometry courses) with grades of "C" or better in each semester.

## Student Orientation Advising and Registration

SOAR is a required program for new certificate or degree seeking students at Northwest State Community College. SOAR is a one-day, five-hour session. NSCC offers multiple sessions on various dates and times. For questions about SOAR please call (419) 267-5511 or email orientation@northweststate.edu.

## Classification of Students

Applicants for admission to the College may elect one of the following student classifications:

### Certificate Seeking Student

A student who has indicated, at the time of application, the intent to study toward a one-year certificate program and who has fulfilled all admission requirements.

### Degree Seeking Student

A student who has indicated, at the time of application, the intent to study toward an associate degree and who has fulfilled all admission requirements.

### Dual Enrollment Student

A high school student who meets college criteria and has been recommended by his/her guidance counselor or principal to take college courses for both college and high school credit. The course will be taught during the school schedule on the high school premises.

### Early Admit Student

Generally, a high school student who has been recommended by his/her guidance counselor or principal to take college courses for credit.

### Guest/Transient Student

A student who is attending another institution of higher education and enters NSCC for specific courses which have been approved in writing by the other institution's vice president or registrar.

### International Student

A student from another country who has met the requirements of the Student & Exchange Visitor Information System (SEVIS) as well as the requirements of NSCC. An international student must meet with an admissions representative before being admitted.

### Non-Degree Student

A student who has indicated, at the time of application, the intent to pursue selected courses (i.e. personal enrichment).

### Post-Secondary Enrollment Option Student

The State of Ohio, under Senate Bill 140 and House Bill 215, allows area students attending public school (must reside in Ohio) to enroll in college-level coursework prior to graduation from high school under the Post-Secondary Enrollment Options Program (PSEO). High school students who meet the College criteria may enroll in college classes concurrently with high school enrollment to earn college credit, or both high school and college credit. Secondary grade students in a nonpublic school may participate in the post-secondary enrollment options program if the chief administrator of such school notifies the Ohio Department of Education by the first day of April prior to the school year in which the school's students will participate.

PSEO offers students two options for enrolling:

- Option A allows high school students to enroll for college credit. Students enrolled in Option A are responsible for tuition, fees, and textbook charges, and may enroll in any semester except summer.

- Option B allows high school students to enroll concurrently and receive both high school credit and college credit. Your local school district will indirectly pay tuition, fees, and textbook charges for those students enrolling in Option B. Option B students may enroll in any semester except summer.

### Tech Prep Student

A high school student who has been recommended by his/her guidance counselor or principal to take technical college courses for college credit and high school credit. These courses prepare students for careers in the technical field.

### Transfer Student

Either a "degree" or "non-degree" student who has indicated, at the time of application, the interest to transfer selected general studies courses or a full degree program to a four-year bachelor's degree program. All students enrolling as transfer students should speak with the transfer coordinator prior to registering for classes.

## Selective Service Registration

Federal law requires that males having reached the eligible age of eighteen must register with the Selective Service System. Failure to provide proof of Selective Service registration will result in an additional out-of-state surcharge for the current semester. This surcharge will be waived only if proof of a Selective Service registration is received prior to the end of the semester. In addition, grades and transcripts will not be released without proof of registration, and financial aid eligibility may also be affected. Registration for a Selective Service number can be completed in one of two ways:

1. Applications are available at any Post Office. Complete the necessary forms and follow the procedures as outlined on the application.
2. Register online at www.sss.gov. In many cases, the selective service number will be received instantly, instead of the 90 days it takes to complete the mail-in application procedure.

*For the most up-to-date information, visit the online catalog at www.northweststate.edu*

# Transfer Information

After applying for a number, eligible students should fill out a verification form in the Registrar's Office, and as soon as they receive their selective service number, submit it to the Registrar's Office for final documentation.

## State of Ohio Policy for Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, developed a statewide 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. Since independent colleges or universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements. For additional information, please visit www.transfer.org.

Transfer Advising at NSCC – The Student Resource Center offers one-on-one advising for students interested in transferring into a four-year institution. Please call (419) 267-1242 to make an appointment.

## Transfer Module and Transfer Assurance Guides

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 program. The Transfer Module consists of 54 to 60 quarter hours or 36 to 40 semester hours of courses in the following areas: English, Mathematics, Arts and Humanities, Social and Behavioral Sciences, Natural and Physical Sciences, and Interdisciplinary Study.

A Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the 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 require additional general education courses beyond the Transfer Module.

Since many receiving institutions require general education courses within or beyond the Transfer Module, students are encouraged early in their academic careers to meet with an academic advisor at the institution to which they plan to transfer. The Ohio Board of Regents has also approved Transfer Assurance Guides (TAGs) for several academic majors. Each TAG identifies courses that are required for particular areas of study (for example, Biology, Education, and History four-year degrees). Students completing TAG-approved coursework will receive transfer credit at Ohio institutions that fulfills partial degree requirements for these majors. For more information on TAGs for specific fields of study, see the Ohio Board of Regents website at www.regents.ohio.gov.

## 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. 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

A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and of the process for filing the appeal on the Transfer of Credit Evaluation form. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

## Appeals Review Committee

The Appeals Review Committee shall review and recommend to institutions the resolutions of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

## Conditions for Transfer Admission

The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Associate of Arts or Associate of Science Degree with a cumulative grade point of 2.0 or better for all previous college-level courses.

The policy also encourages receiving institutions to give preferential treatment to students who have not earned an Associate of Arts or Associate of Science Degree, but who have earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college-level courses.

The policy further encourages that students who have not earned an Associate of Arts or Associate of Science Degree, or who have not earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses, be eligible for admission as transfer students on a competitive basis.

## Acceptance of Transfer Credit

Students who have completed the Associate of Arts or Associate of Science Degree with a cumulative grade point of 2.0 or better will receive transfer credit for all college-level courses in which a grade of "D" or better has been earned.

## Financial Aid

Students who have not earned an Associate of Arts or Associate of Science Degree will receive transfer credit only for those college-level courses in which a grade of "C" or better has been earned.

Admission to a given institution, however, does not guarantee that a transfer student will automatically be 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 all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as all students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

### Transfer Degrees

Through articulation agreements with four-year colleges and universities in the area, Northwest State Community College has developed transfer degrees/programs to provide students the opportunity to complete the first two years at Northwest State and then transfer to another college or university to complete the last two years of a baccalaureate degree. Bluffton College; Bowling Green State University; Defiance College; Franklin University; Lourdes College;  and The University of Toledo are a few of the many options available to Northwest State Community College students. NSCC offers the Associate of Arts and the Associate of Science Degrees for undecided transfer students.

Many students have found that tuition and fees at Northwest State are less than those of four-year institutions. This, coupled with small classes and a low student-to-instructor ratio, makes NSCC an attractive alternative for students wishing to obtain the first two years of a bachelor's degree.

### Financial Aid Office

Northwest State Community College offers several types of financial assistance to students. This aid includes grants, loans, scholarships and work-study opportunities. A typical Financial Aid package is a combination of several of these sources.

Financial assistance is based on financial need and academic ability, although some scholarships are given on the basis of academic achievement only. All forms required to apply for Financial Aid may be obtained through the Financial Aid Office or online at www.northweststate.edu.

### Financial Aid Application Procedures

Applying for financial aid works best when initiated several months prior to the desired semester of enrollment. Students can apply for financial aid by visiting the U.S. Department of Education financial aid website at www.fafsa.ed.gov. Completing the Free Application for Federal Student Aid (FAFSA) online is very efficient and convenient. Applications are available beginning January 1 for the upcoming academic year and should be submitted as soon as possible. NSCC's FAFSA priority date is March 31 for the following academic year.

- Apply for a PIN at www.pin.ed.gov .
- File your FAFSA electronically at www.fafsa.ed.gov and include NSCC's Title IV School Code 008677
- If a loan is desired, when completing the FAFSA answer "yes" to the question asking if you are interested in a student loan and check mark Loans on the Student Data Form.

### Determining Eligibility

Financial aid eligibility at NSCC is based on the parents' and/or students' ability to pay relative to the cost of education. The ability to pay is determined through federal methodology to calculate an Expected Family Contribution (EFC).

To receive any type of aid, a student must:
- Be a United States citizen or an eligible non-citizen
- Have a high school diploma or GED
- Comply with Selective Service requirements (male students)
- Be enrolled as a regular student in an eligible program
- Not to be in default on any student loans including Stafford, Perkins, or PLUS loans
- Not owe a refund to any Federal programs (PELL, SEOG, ACG, SMART, TEACH)
- Comply with the Anti-Drug Abuse Act. Eligibility for any of the programs may be suspended or terminated by a court as part of a conviction for possessing or dispensing illegal drugs
- Apply for financial aid and have financial need
- Maintain satisfactory academic progress
- Eligible programs for federal student aid at NSCC include Associate degrees and Certificate Programs
- Accurately verify income and other application data if requested by the Financial Aid Office
- Agree to use any federal student aid received for educational purposes
- Meet all additional federal or state requirements

### Verification of Information

Some applicants are selected at the federal or institutional level for verification of information contained on their application (FAFSA). This means that the Financial Aid Office is entitled to request additional information from you in order to determine your eligibility. You will be asked to supply a signed copy of the current year's tax return(s) of the student (and parent or spouse) and a verification worksheet. Failure to provide this requested documentation would stop further processing.

### Award Eligibility

The three components used to determine your eligibility to receive financial aid funding are:
1. Cost of education or allowable expenses
2. Expected family contribution
3. Other financial resources available to you

### Cost of Education

This is the estimated average amount for expenses at NSCC according to your residency classification, hours enrolled and program of study. This budget uses average costs and includes

# Financial Aid

everything from tuition and fees to miscellaneous expenses. Expense budgets may also include adjustments for childcare and costs related to a disability or other non-discretionary expenses. Since expense budgets reflect average costs, you may spend more or less than the amounts allowed; however, you may pay more for your personal expenses than the amount budgeted. The amount you spend, excluding tuition and fees, is up to you and depends on your own individual lifestyle, priorities, and obligations.

To obtain a copy of the current year's cost of attendance, please contact the Financial Aid Office, or you can view your student specific cost of attendance on your myNSCC account. The components included in NSCC's cost of attendance are:

- **Tuition and Fees:** Average charges for basic instructional costs and mandatory fees. Actual fees paid may vary based on the number of credits carried each semester.
- **Books and Supplies:** A standard allowance for required books and supplies.
- **Commuting Costs:** A modest allowance for transportation to and from NSCC.
- **Room and Board:** A five-county area average amount for housing, utilities and food charges.
- **Personal Expenses:** Entertainment, medical, laundry, toiletries, clothing, etc.

If attendance is less than or greater than nine months, or if enrollment is less than 12 credit hours per semester, budget components will be prorated accordingly. Please remember, financial aid often cannot meet all of your costs while attending NSCC, so it is very important for you to manage your financial resources wisely.

## Expected Family Contribution (EFC)

Since financial aid is designed to assist with your educational expenses, the EFC is the amount that you and your parents (if applicable) are expected to contribute toward your costs. This amount is determined from information provided on your Free Application for Federal Student Aid (FAFSA) according to a formula established by Congress. This is not the amount you will owe NSCC, it is an estimated contribution.

## Other Financial Resources

This component represents other known and expected financial resources you will have available to assist you with your educational costs, such as scholarships, Veterans Education Benefits, WIA, TAA, etc.

Your eligibility (financial need) is calculated by subtracting your Expected Family Contribution and Other Financial Resources from your allowable Costs of Education.

## Awarding Aid

Your award package is based on a combination of funds available and your eligibility. Your award package may not include funds from all aid programs. Some funds carry restrictions, and some are limited as to amounts that can be awarded. Financial aid packages are based on the level of eligibility from highest to lowest and files

are worked generally in the order received by the Financial Aid Office.

The Federal Pell Grant is the first program awarded if you are eligible. The next programs awarded are grants (federal & state) and scholarships. NSCC funds are limited and awarded until funds are committed. Then Stafford Loans are awarded to students who indicate on the FAFSA and student data form they want loans. PLUS Loans are the last category of aid to be awarded. PLUS (Parent) loans are awarded only when requested by the student or parent after the student applicant receives his/her award letter. Federal Work Study funds will be awarded to students on a case by case basis, after a job on campus has been secured by the student.

## Your Award Package

Your financial aid award package is designed to meet as much of your financial eligibility as possible. All awards are contingent on the following:

- Availability of funds from federal, state and institutional sources (if applicable).
- Accuracy of information provided on your application by you and/or your parents or spouse.
- Adjustments to your award when our office receives information that affects your eligibility. Any aid you receive, in addition to that listed on your award offer which exceeds your unmet need, will result in an adjustment in your award(s) from NSCC.
- Satisfactory academic progress toward your degree.
- Compliance with our requests to provide additional documentation to support your application.
- Eligibility to receive funds i.e., you are a U.S. citizen or eligible non-citizen, you have signed all required documentation, and you are enrolled in a degree-seeking program of study.

## Accepting or Declining Your Award

Unless otherwise indicated, the awards listed on your Financial Aid Award Notification represent an offer based on an estimated enrollment of full-time. Your aid will pay to your student account based on your actual enrollment and then be adjusted upon freezing of credits. You must accept or decline each part of your aid package. It is important that you make your decision, sign the award offer, and submit/return the document by the deadline date. If you want to accept a lesser amount than the amount awarded, indicate the amount you wish to request. This is very important, particularly on the loan amounts. Think about the amount and type of loan being accepted. If you have more than one type of loan, you will likely be required to repay those loans simultaneously. Do not borrow more than you absolutely need.

Awards will not be sent by paper if you are a current student and have a current NSCC email address. You will accept your awards electronically on your myNSCC account. An email will be sent including the steps to accept your awards. You will be able to accept, reject or adjust your awards electronically.

If you have unique circumstances which may affect your costs of attending NSCC, please contact the Financial Aid Office. We may be able to re-evaluate your eligibility based on special conditions.

## Financial Aid Programs

Financial aid is funding in the form of grants, employment, loans and scholarships available to students to help pay the cost of attending the institution of their choice. Financial aid comes from the Federal Government, which is the largest provider of aid, as well as state governments, the schools themselves and a large variety of other public and private sources.

The following is a source of information concerning federal financial aid for which you may be eligible. Current funding may vary from year to year and current programs can be found on the Department of Education website.

**Federal Pell Grant:** A Federal Pell Grant, unlike a loan, does not have to be repaid. Pell Grants are awarded only to undergraduate students who have not earned a bachelor's or professional degree. The maximum Pell Grant **amounts can change from year-to-year,.For specific yearly amounts see the Financial Aid Office.** You can receive a Pell Grant each semester you enroll. How much you receive will depend on your expected family contribution (EFC), cost of attendance, and whether you are a full-time or part-time student. You may not receive Pell Grant funds from more than one school at a time. Pell Grant funds will be credited to your student account in the registration process in the Business Office.

**Summer Semester Pell Grants**

Summer semesters are considered (by the Department of Education) as a cross over term. This means that the term starts in one fiscal year and ends in another. During this cross over term NSCC will determine which award year provides the student with the most Pell eligibility. Students must have a valid ISIR (FAFSA) on file for both award years, must be enrolled in a minimum of 6 credit hours (half-time) and you must have earned at least 19 credit hours in the previous aid year. For further information on summer Pell Grant awards please contact the Financial Aid Office.

**Federal Supplemental Educational Opportunity Grant (FSEOG):** A FSEOG is for undergraduates with exceptional financial need, with priority being given to students who receive Federal Pell Grants. A FSEOG does not have to be paid back. FSEOG funds will be credited to your expenses in the registration process in the Business Office. Students must be enrolled in at least 6 credit hours.

**Student Employment & Work-Study:** The Career Services Office, located in the "A" Building, assists students attending NSCC to locate employment. Both work-study and other part-time employment opportunities are listed with Career Services. On and off-campus employment opportunity assistance is available.

Work-study eligibility will be determined once you have secured a work-study position. In order to be eligible, you must have completed the FAFSA and received your financial aid award notification from the Financial Aid Office. You must be enrolled in at least 6 credit hours each term you plan to work, be maintaining a 2.0 cumulative GPA, and comply with the Financial Aid Progress Policy. For more information about securing a work study position please contact the Career Services Office.

Work-study awards are not credited to your expenses in the Business Office. You are paid on scheduled pay days for the actual hours worked during the preceding month. When you have earned the amount of your work-study award, your employer may decide to continue your employment as a regular student employee.

**William D. Ford Federal Direct Loan (Direct Loan) Program:** Loans made through this program are referred to as Direct Loans. Eligible students borrow directly from the U.S. Department of Education at participating schools. Direct Loans are either subsidized or unsubsidized Direct Stafford Loans (also known as Direct Subsidized Loans and Direct Unsubsidized Loans). With a subsidized loan, the Federal Government pays interest on the loan until you begin repayment and during authorized periods of deferment. If you receive an unsubsidized loan, you will be charged interest from the time the loan is disbursed until it is repaid in full. If you allow the interest to accumulate, it will be capitalized (added to the principal which means the loan "grows") and the amount you repay can become very expensive. If you choose to pay the interest as it accumulates, you will repay less over the life of the loan. You can receive both a subsidized and an unsubsidized loan for the same enrollment period.

- The interest rates are determined by congress July 1 of each year and are typically a fixed rate. The interest is charged on the loan from the date that the first disbursement is made until the loan is paid in full. For current rates, please contact the Financial Aid Office.
- The borrower must also pay a loan fee of 2 percent of the amount borrowed, which is deducted from each disbursement. The loan fee is paid to the lending institution.
- Repayment begins after you graduate, leave school or drop below half-time enrollment. You have six months before payments begin. This is called a "grace period." Contact the Department of Education for more information about repayment options.

# Financial Aid

- Direct Loans will be credited to your student account.
- Students must complete the Free Application for Federal Student Aid (FAFSA).

**Direct Plus Loans (Parent Loan):** Federal PLUS Loans enable parents with good credit histories to borrow to pay the education expenses of their children. To be eligible, the child must be a dependent, undergraduate student enrolled at least half-time. The yearly borrowing limit on the PLUS loan is equal to your cost of education minus any other financial aid you receive.

- The interests are determined by congress July 1 of each year and are typically a fixed rate. The interest is charged on the loan from the date that the first disbursement is made until the loan is paid in full.
- The borrower must also pay a loan fee of 3 percent of the amount borrowed, which is deducted from each disbursement. The loan fee is paid to the lending institution.
- Repayment generally begins within 60 days after the loan disbursement. There is no grace period. This means that interest begins to accumulate at the time of the first disbursement and repayment of both interest and principal begins while the student is in school.
- Contact the Financial Aid Office for information on how to process this type of loan.

**Nurse Education Assistance Loan Program (NEALP):** This is a state program for nursing students who, upon completion of their education, plan to practice nursing in the state of Ohio.

- Based on financial need.
- A student may receive a maximum of $3,000 per year, which may be renewed for a maximum of four years or total loan balance of $12,000.
- After graduation, the student may be eligible for loan forgiveness at the rate of 20 percent per year and a maximum loan cancellation of 100 percent.
- Applications are available at the Ohio Board of Regents web site http://regents.ohio.gov/sgs/index.php. Applications are due June 1 of each year. Call the Ohio Board of Regents Grants and Scholarships Office at 1-888-833-1133 for more information.
- Students must complete the Free Application for Federal Student Aid (FAFSA) and submit the results as part of the application.

**Scholarships:** Primarily two departments on campus, the Admissions Office and the Financial Aid Office, award scholarships. Committees make selections, and application information is available at each office.

Scholarships are awarded generally in the spring of each year for disbursement in the following year. These awards are made on the basis of academic achievement, financial need, or a combination of the two. Many scholarships have additional requirements as well. Institutional scholarships are provided to the institution by donors who specify the award criteria. The selection process is managed by a committee and awards are disbursed through the Financial Aid Office. Generally, the Admissions Office serves incoming student scholarships.

## Disbursement of Funds

Provided you meet all qualifications to receive financial aid funds any scholarship, grant or loan awarded to you will be automatically credited to your expenses (tuition, fees, and any books/supplies charged to account) and any other charges assessed by the institution.

If financial aid credited to your account exceeds allowable charges due for the term, a check will be prepared for the difference and will be mailed to your current address on file in your myNSCC account. The check will usually be available in week 7 of instruction of each term. See the Academic Calendar for exact dates.

Check your online fee statement carefully. Some types of financial aid appear on your student account as credits and others (such as work-study) are paid at other intervals. Compare your credits, which show your aid against your award letter, to reconcile funds awarded to you. NOTE: If for any reason you register for classes late or enroll for insufficient credits, your aid will be delayed and possibly adjusted. Loan funds will not be credited to your account until all required documents have been processed.

Please remember, fees and other charges must be paid when due or a late fee may be applied and/or your registration may be canceled. If your financial aid or outside payment (i.e. scholarship, TAA, WIA, etc) does not arrive in time for you to pay your fees and other charges, you are responsible for payment of your bill on the due date. If you have specific questions regarding charges, credits, release processes or refund checks, please contact the Business Office at (419) 267-1311.

## Class Attendance

Your financial aid will pay to your student account based on the number of credits you are attending at the time of disbursement. Aid will pay to your account upon start of additional hours. This may result in a late refund check.

## Freeze Date

NSCC financial aid uses a "freeze" date each semester to determine a student's enrollment status for awarding financial aid. The number of credit hours in which a student is enrolled on the freeze date is used to calculate the amount of federal financial aid the student will receive. This means that if a student adds or drops classes before the freeze date, the amount of financial aid for which the student is eligible will be affected. If classes are added or dropped after the freeze date, the financial aid will not change. If you are enrolled in a late-starting class and you drop that class after receiving aid, you may be required to return a portion if not all of the aid you received. Exceptions to this policy are students receiving Stafford Loans who must be enrolled for a minimum of six credit hours at the time of loan disbursement, and students who withdraw and/or stop attending all of their classes. These students will have their financial aid recalculated based on their withdrawal date or last day of attendance.

# FINANCIAL AID

## Attendance Verification

To be eligible for federal financial aid, attendance in class must be verified. Instructors will verify attendance on the 14th class day. The enrollment will be reported to the Financial Aid Office and your aid will be adjusted accordingly.

## Withdrawing From NSCC

If you withdraw from all courses, either officially or unofficially, your aid will be terminated and a withdrawal calculation will be performed by the Financial Aid Office to determine whether you received funding for which you were not eligible. A copy of this refund/return of Title IV funds is available in Financial Aid Office. If you received funds for which you were not eligible, you will receive notification from NSCC for repayment of those funds.

If you have any student loans, The Department of Education will be notified of your enrollment status change and you may enter a "grace period" or repayment status. In keeping with the terms of your loans, you are required to inform The Department of Education of changes in your enrollment status.

If you plan to return to NSCC and apply for assistance, you must pay off your balance owing with the Business Office. In order to receive financial aid you must be meeting financial aid satisfactory academic progress. Please refer to the Satisfactory Progress Policy to determine your eligibility status for future applications for aid.

## Satisfactory Academic Progress (SAP)

To remain eligible for financial aid at NSCC, you must make satisfactory academic progress toward your degree objective. Satisfactory Progress is a condition for continued eligibility and is measured by the following factors:

1. **Grade Point Average (GPA):** Students must meet a cumulative grade point average requirement according to the number hours attempted. Two consecutive terms with a cumulative GPA below the allowed rate will result in "Suspension."

   | Cr. Hrs. Attempted | Cumulative GPA |
   |---|---|
   | 1-15 | 1.4 |
   | 16-30 | 1.6 |
   | 31-45 | 1.8 |
   | 46+ | 2.0 |

   **Transfer Students:** Transfer credits do not count in the calculation of the cumulative GPA but are included in the calculation of maximum "length of eligibility" for degree completion.

2. **Credit Hour Completion:** All aid recipients must successfully complete no less than 67 percent of all credits attempted cumulatively. Successful completion of classes means passing grades must be earned. Grades of F, W, I, U, UC, P, WF, WM, WP, NP, and NR do not count towards successful course completion. Two consecutive terms with less than 67 percent completion rate will result in "SUSPENSION" of eligibility, and the student will receive NO further aid.

   Any combination of all F, W, I, U, UC, P, WF, WM, WP, NP, AND NR grades for the term with zero credits earned will result in IMMEDIATE suspension and will no longer be eligible to receive financial aid. Examples of completion rates are below:

| Total Hours Attempted | Minimum Hours Required to Complete |
|---|---|
| 42 | 29 |
| 24 | 17 |
| 12 | 9 |
| 9 | 7 |
| 4 | 3 |

3. **Length of Eligibility for Degree Completion:** For each program of study an institution must establish a maximum time frame in which a student is expected to complete his or her degree requirements. The maximum "length of eligibility" students are allowed is 150 percent of the actual credits required for their degree or program. Examples are listed below:

| Degree Program | Average Credits Req | 150% |
|---|---|---|
| Certificate | 36 Cr. Hrs. | 57 Cr. Hrs |
| Associates Degree | 70 Cr. Hrs. | 105 Cr. Hrs. |

A copy of the Satisfactory Progress Policy is posted at the NSCC web site www.nortwachstate.edu. You are responsible for knowing and understanding this policy thoroughly. The information in this policy provides more detailed instructions on how the institution monitors progress and how to exercise the appeal process.

## Special Circumstances

If you or your parent(s) have had a substantial change in family income or assets due to unemployment, disaster, disability, divorce or the loss of other compensation or benefits since applying for financial aid, you and/or your parent(s) may be eligible for special consideration. In addition, if you have non-discretionary expenses, which may affect your ability to meet educational expenses, you may ask for reconsideration to increase your eligibility. All requests must be documented and reasons for the exception must be provided. If you or your parent(s) have special circumstances, please contact the Financial Aid Office for assistance with the process.

## Student's Rights and Responsibilities

- You have the right to privacy. All records and data submitted with your application for financial aid are treated as confidential information.
- You have the right to a complete explanation of the award process. If you do not understand your financial aid award, or feel your application has not been evaluated fairly, please contact the Financial Aid Office.
- You have the right to be notified of cancellation or withdrawal of aid and to be informed of why this action is being taken.
- You have the right to appeal. You may request a review of any decision concerning your financial aid eligibility. Please contact the Financial Aid Office and make an appointment. If necessary you may be directed to submit a written appeal and supporting documentation.
- You have the responsibility to report funds or benefits

# Fees and Refund Policy

from any source (such as outside scholarships) that you receive or are promised (before and after you are awarded financial aid).

- The Financial Aid Office is required BY LAW to make adjustments to prevent or correct over awards. We take this responsibility seriously. You will save yourself frustration, inconvenience, and possible financial penalty by reporting any changes in your financial status promptly.
- You have the responsibility to report any change in your student status immediately. If you move, change your name, drop credits, withdraw from school or do anything else that may affect your financial situation, please report that information to the Financial Aid Office and your student loan lender/servicer.
- You have the responsibility to keep copies of all correspondence regarding your financial aid, whether it is from the Financial Aid Office, governmental agencies, Department of Education or outside lenders.
- You have the responsibility to use financial aid funds for educational related expenses only such as tuition and fees, books, supplies and reasonable living costs.
- You have the responsibility to repay loans on time. Acceptance of any loan carries the serious obligation to repay. Failure to meet this obligation affects the availability of loans to future students. Before you accept any loans for financing your education, you should carefully consider the total amount and repayment requirements for which you will be responsible when you terminate your educational objectives.
- You have the responsibility to understand how the Financial Aid Office determines if you are making satisfactory academic progress and what happens if you do not maintain satisfactory progress.

## How to Avoid Problems

1. Come to the institution with some money of your own. Even if your aid is prepared on time, funds may not be available until classes begin and processing is complete. You will need money for housing, books and other immediate expenses. If you are able to save money during the summer before school starts, these savings will be useful in meeting your beginning-of-the semester expenses and protecting you from hardships if your aid is delayed.
2. Be sure to complete a loan entrance counseling exam if you are a student loan borrower at NSCC. This may be completed online at www.studentloans.gov. Your funds will be delayed until you complete this requirement.
3. Pay your own fees and other charges by the due date if your aid is late. Fees are due at the beginning of each semester. If they are not paid when due, you are subject to a late fee and/or cancellation of registration. The Financial Aid Office cannot prevent cancellation for non-payment of fees. If you anticipate problems, see either the Financial Aid Office or the Business Office for assistance.
4. If you are not sure how dropping or adding classes will affect your aid status, do not drop any of your classes or withdraw from NSCC without checking with the Financial Aid Office first.
5. If you drop below the required minimum credit load or

fail to complete the appropriate number of credits, your aid may be canceled and repayment of the aid may be required.
6. Please notify the Financial Aid Office of any changes in your permanent address.

## Additional Information

Our goal is to provide information for you, the student, to enable you to meet your educational objectives and long term goals.

We have a qualified staff of professionals to assist you. If you have questions, please call us at (419) 267-1333 or (419) 267-1389. You may also come in to the office located in C103. Office hours are Monday through Thursday 8:00 a.m. to 6:00 p.m. and Friday 8:00 a.m. to 4:00 p.m. Although personnel are usually available to assist walk-ins, appointments are recommended.

Policies and procedures governing financial aid programs are subject to change at any time without prior notice or publication due to changes of policy by federal and state governments. NSCC Financial Aid Office is an equal opportunity/affirmative action office that does not discriminate on the basis of race, color, national origin, sex, sexual orientation or preference, marital status, age, physical or mental disability, creed or political belief, religion, or veteran status.

## The Tuition and Fee Installment Plan (TIP)

TIP is an alternative to the single payment of fees due at the beginning of each semester. A nonrefundable service fee will be charged to students for the Tuition and Fee Installment Plan.

Participants pay their fees in three installments for 16-week terms and in two installments for 8-week terms. The first installment is due according to the published fee payment schedule, with the second and third payments due in approximately 30-day increments. The second and third installments are due on the same dates for all students regardless of when the first payment was made. It is the students' responsibility to know the payment due dates and to make payments on time, even if they have not received a reminder notice.

A late fee  will be added to an installment payment when payment is not received by the due date stated on the contract.

Tuition, out-of-state, lab, student and late fees are covered by this program. Courses added after the first payment is made are not covered. Courses (including flexibly scheduled courses) paid for after late registration dates are not covered. Books, supplies and noncredit tuition are not covered. Financial aid is deducted from total fees due before calculation of the payments. Financial aid finalized after the first payment is applied to the TIP balance due. The refund amount of a withdrawal from class is applied to the TIP balance due. Financial aid or a withdrawal which results in an overpayment (after the TIP balance is covered in full) will be refunded to the student.

## Senior Citizen Discount

Any person who is sixty years of age or older, and who has resided in the state for at least one year, shall be permitted to enroll in classes without instructional charge, provided such attendance is

# FEES AND REFUND POLICY

on a credit basis and classroom space is available. The student is responsible for student and lab fees. Complete the "Senior Citizen Fee Waiver" form in the Business Office, in Room C107 and bring your driver's license or Golden Buckeye Card. (You will need to do this each semester you register for a class.)

## Payment of Fees

The amount of fees students pay each semester will depend upon the number of credit hours for which they are enrolled. Students choosing to audit courses will pay the same fees as if the courses were being taken for credit.

Students who have outstanding financial obligations to the College will not be permitted to register for the next semester until those obligations are met.

**All fees are subject to change at the beginning of any semester.** If paying in person by credit card with a credit card not in your name, NSCC must have both a written authorization and the credit card signed by the card holder specifying if the card may be used for fees and/or books. This must be done each time the card is used. Payment of fees is required prior to the first day of the semester or first day of class for those flexibly scheduled. Failure to pay on time will result in a late fee being added.

## Application Fee

A $20.00 non-refundable application fee is charged to all new students when applying for admission to the College. Payment is required immediately and is accepted by cash, check or credit card. Financial aid is excluded as a means of payment.

When an applicant does not enroll, his or her application materials will be retained by the College for three years before being destroyed. After that time, the applicant must submit an updated application and other supporting documentation as necessary.

## Student Fee

A student fee will be assessed to students at the rate of $30.00 each semester. Upon total withdrawal from all classes during the 100 percent refund period, the student fee will be fully refunded.

## Late Registration

Late registration will be permitted during the first week of classes, or later with the approval of the instructor and division dean. A student who wishes to register late must first confer with a faculty advisor and Division Dean and present an approved program of courses to the Registrar's Office.

## Lab Fees

Laboratory fees are assessed in certain courses to cover the cost of expendable materials used by the student and/or technology costs.

## Proficiency Examination Fees

A non-refundable fee must accompany any application for a proficiency examination. Contact your Division Dean to secure the proper proficiency application form.

## Graduation and Diploma Fee

A non-refundable $50.00 graduation and diploma fee must be paid by all students at the time they file an application for graduation, whether applying for a two-year associate degree or a one-year certificate. These applications are due by October 15 to ensure evaluation prior to the beginning of spring semester to better assist you in scheduling any remaining courses you may need. The graduation and diploma fee will also be charged for all additional degrees/majors obtained at a later date.

## Refund of Student Fees

All withdrawals from class(es) may be done through a student's myNSCC account or in writing and are effective on the date received by the Registrar. The tuition and lab/material fee refund policy is shown below. Application, graduation, proficiency and late fees are non-refundable. The student fee is refunded if a complete drop is done during the 100 percent refund period.

In extreme circumstances, tuition and lab/material fees may be refunded after the refund period. Documentation proving extreme circumstances must be submitted to the Registrar for consideration and final approval from the Chief Fiscal Officer.

## Courses that are 16 weeks or more have the following policy:

| | |
|---|---|
| Week 1 | 100% Refund |
| Week 2 | 75% Refund |
| Week 3 | 50% Refund |
| After Week 3 | No Refund |

## Courses that are 8-15 weeks have the following policy:

| | |
|---|---|
| Week 1 | 100% Refund |
| Week 2 | 50% Refund |
| After Week 2 | No Refund |

## Courses that are 2-7 weeks have the following policy:

| | |
|---|---|
| Week 1 | 100% Refund |
| Week 2 | No Refund |

## Courses that are 1 week or less have the following refund policy:

Must be dropped the day before the course begins for a 100% refund.

Financial aid recipients should contact the Financial Aid Office if they plan to withdraw from (or stop attending) all classes during the semester.

## Ohio Residency

The following persons shall be classified as residents of the state of Ohio for subsidy and tuition surcharge purposes:

1. A dependent student, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for twelve consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.
2. A person who has been a resident of Ohio for the purpose of this rule for at least twelve consecutive months immediately preceding his or her enrollment in an institution of higher education and who is not receiving, and has not directly

# Fees and Refund Policy

or indirectly received in the preceding twelve consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

3. A dependent child of a parent or legal guardian, or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time, self-sustaining employment and established domicile in the state of Ohio for reasons other than gaining the benefit of favorable tuition rates.

## Specific Exceptions and Circumstances

1. A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education shall be considered a resident of Ohio for these purposes.

2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.

3. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.

4. A person who is transferred by his employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered a resident of Ohio for these purposes as long as Ohio remains the state of such person's domicile and as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.

5. A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

6. A person who was considered a resident under this rule at the time the person started a community service position as defined under this rule, and his or her spouse and dependents, shall be considered as residents of Ohio while in service and upon completion of service in the community service position.

7. A person who returns to the state of Ohio due to marital hardship, takes or has taken legal steps to end a marriage, and reestablishes financial dependence upon a parent or legal guardian (receives greater than 50 percent of his or her support from the parent or legal guardian), and his or her dependents shall be considered residents of Ohio.

8. A person who is a member of the Ohio National Guard and who is domiciled in Ohio, and his or her spouse and dependents, shall be considered residents of Ohio while the person is in Ohio National Guard service.

## Procedures

A dependent person classified as a resident of Ohio for these purposes and who is enrolled in an institution of higher education

when his or her parents or legal guardian removes their residency from the state of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.

1. In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of twelve months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraph 1 or 2 of this rule.

2. For students who qualify for residency status under paragraph 3 (of Ohio Residency), residency status is lost immediately if the employed person upon whom resident student status was based accepts employment and establishes domicile outside Ohio less than twelve months after accepting employment and establishing domicile in Ohio.

3. Any person once classified as a nonresident, upon the completion of twelve consecutive months of residency, must apply to NSCC for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding twelve consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident.

4. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

5. Any institution of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her Ohio residency for the purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.

Documentation of full-time employment and domicile shall include the following documents:

a. A sworn statement from the employer or the employer's representative on the letterhead of the employer or the employer's representative certifying that the parent or spouse of the student is employed full-time in Ohio.

b. A copy of the lease which the parent or spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential and real property located in Ohio of which the parent or spouse is the owner and occupant; or if the parent or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that the parent or spouse resides at that residence.

Additional criteria which may be considered in determining residency for these purposes may include, but are not limited to the following:

a. If a person is subject to tax liability under section 5747.02 of the Ohio Revised Code;

# Academic Policies and Procedures

b. If a person qualifies to vote in Ohio;
c. If a person is eligible to receive state welfare benefits;
d. If a person has an Ohio driver's license and/or motor vehicle registration.

Criteria evidencing lack of residency:
a. If a person is a resident of or intends to be a resident of another state or nation for the purpose of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the student qualified for that loan program by being a resident of that state or nation);
b. If a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits.

Application packets for in-state tuition are available in the Registrar's Office. Packets should be obtained no later than the first week of classes for the semester in question. The distribution and collection of all packets will be logged by the Registrar's Office.

The completed application requesting a change of out-of-state status, including all required documentation, must be received by the Registrar by the end of the third week of classes for the semester in question. The Registrar will review the application within five working days from the date of receipt to determine the candidate's residency status.

The Registrar will notify, in writing, the student applicant within ten working days of the final determination of the request.

The applicant should plan to pay all fees, even if they believe their application will be approved. Provided that residency requirements were met prior to the first day of the semester, fees will be refunded back to the beginning of the semester in question once a final determination has been made.

## Academic Advisors
In an effort to foster individualized attention, each student is assigned an academic advisor. An advisor can provide guidance regarding class scheduling and program requirements or discuss academic problems. Advisors are available to answer any questions you may have regarding class schedules or other College policies and procedures. Each advisor has regular office hours set aside for student appointments.

## REPORTING STUDENT ACADEMIC PROGRESS

### Grading System
The quality of coursework at Northwest State Community College is indicated by means of letter grades. Each grade, in turn, carries credit points which are used in computing the student's cumulative point average.

A     Superior Quality *(4.0 Credit Points)*
B     High Quality *(3.0 Credit Points)*
C     Average *(2.0 Credit Points)*

D     Below Average *(1.0 Credit Points)*
F     Failing *(0.0 Credit Points)*
I     Incomplete *(Must be removed by the end of the next semester for fall and spring, and September 15 for summer.)*
P     Progress *(0.0 Credit Points)*
W     Withdrawal
WM    Military Withdrawal
S     Satisfactory *(Satisfactory work for a developmental course).*
U     Unsatisfactory *(Unsatisfactory work for a developmental course.)*
AU    Audit *(no credit)*
CR    Credit Given *(Credit granted through proficiency testing or prior learning.)*
SC    Satisfactory Credit *(Satisfactory work for an elective course taken on a pass/fail basis.)*
UC    Unsatisfactory Credit *(Unsatisfactory work for an elective course taken on a pass/fail basis.)*

*\*\*Grades of W, S, U, AU, P, CR, SC, UC and I, are not computed in the cumulative point average.*

## Adding or Dropping Classes
Students register for classes through myNSCC at www. northweststate.edu.

A student takes full responsibility for adding or dropping courses. Failure to attend classes or give proper written intention to withdraw will result in failure of a course. Students will be academically and/or financially responsible for any "W" or "F" grades received. The adding or dropping of courses requires the student to contact the Financial Aid Office and/or the Business Office to adjust the aid or make payment.

## Adding Classes
All courses must be added prior to the first day of class for the specific term. All course additions must have written approval of the instructor and the Dean once classes have started. All added courses will be charged the full tuition rate.

Registering for more than 20 credit hours in the fall/spring terms or more than 10 hours in the summer term require a student to obtain permission from the Dean or Vice President for Academics.

## Auditing Courses
The term "audit" refers to a course which is taken without credit. Courses taken on this basis are not included in the computation of the cumulative grade point average and are not applicable to graduation requirements. A student must elect audit status at the time of registration or take action to change to audit during the refund period for that class length. (Class length: 1 week or less = enroll as audit; 2 wks to 7 wks = 1 week to change to audit; 8 wks to 15 wks = 2 weeks to change to audit; 16 wks = 3 weeks to change to audit) The student initiates such action through the Registrar's Office. Students auditing a course will pay the same fees as if the course was being taken for credit.

# Academic Policies and Procedures

## Dropping Classes
Student's drop courses using myNSCC through the 100 percent tuition refund period for a specific course.

## Withdrawing from class(es)
Dropping a course after the 100 percent tuition refund period is a "withdrawal," which may be completed by using myNSCC, i n person at the Registrar's Office room C106, by faxing the request to the Registrar's Office at (419) 267-5604, or by mailing the request which must be post marked on or before the last date for a "W" deadline. Failure to attend classes or give proper written intention to withdraw will result in failure of a course. Students will be academically and financially responsible for any "W" or "F" grade received.

## Courses that are 3 weeks or less have the following policy:
No withdrawal option.

## Courses that are 4-7 weeks have the following policy:
End of second week to withdraw.

## Courses that are 8-15 weeks have the following policy:
End of the fourth week to withdraw.

## Courses that are 16 weeks or more have the following policy:
End of the eighth week to withdraw.

**Students may withdraw from any or all courses on or before the posted withdrawal deadline. Deadlines are posted on the College website. Withdrawals after the withdrawal deadline are on an exception basis only and may be approved by a Division Dean or the Vice President for Academics.**

## Military Withdrawal
Withdrawals due to military activation during a semester will require the student to withdraw from classes at the time of activation, at which time a "W" will be assigned.  Upon receipt of a copy of the student's actual military activation orders, the College will refund 100 percent of the student's tuition and fee for the semester, and any "W" grade will be changed to a "WM" to signify a military withdrawal on the transcript.  Upon returning to college the student is required to submit a copy of the DD214.

## Satisfactory Credit / Unsatisfactory Credit Option
Students are permitted to select Satisfactory Credit or Unsatisfactory Credit grade (SC/UC) status for a limit of two elective courses per associate degree, and one per certificate program. Courses must be designated as such no later than the end of the first week of classes. SC/UC status for flexibly scheduled courses must be designated as such no later than the end of the first week of the original registration. The Request for SC/UC Status Form must be completed in the Registrar's Office, and students will not be allowed to change this status after formally selecting such. NOTE: SC/UC courses may not transfer to other institutions.

## Cumulative Point Average
The cumulative point average is obtained at the conclusion of each semester by dividing the total number of credit points earned by the number of semester credit hours the student has attempted. Please refer to the Grading System for point system.

Example:

| Course | Credits | Grade | Points |
|--------|---------|-------|--------|
| ENG111 | 3 | B | 9 |
| CIS119 | 1 | A | 4 |
| CHM101 | 4 | B | 12 |
| MTH109 | 4 | C | 8 |
|  | 12 credits |  | 33 points |

$33 \div 12 = 2.75$ cumulative GPA

## Grade Reports
Grades are accessed electronically through **myNSCC**.

## Dean's List
For the purposes of the Dean's List calculations, a full-time student is defined as a student carrying at least 12 graded credit hours for the semester. A part-time student is defined as a student carrying between 6 -11.99 graded credit hours for the semester.

Each full-time student earning a grade point average of 3.50 or above on a 4.00 scale will be named to the full-time Dean's List for that semester. Each half-time student earning a grade point average of 3.50 or above on a 4.00 scale will be named to the half-time Dean's List for that semester.

## Repeated Courses
A student may repeat coursework for which he or she earned a "D", "U", or an "F" grade. When a course, or its current equivalent, is repeated, the most recent grade will be included in the calculation of the grade point average. The former grade will be replaced with a "P" grade. This also applies to transfer credit if the transfer course is taken after the NSCC course.

To qualify for graduation, each required course in which an "F" grade is received must be repeated.  The Vice President for Academics may waive the repeating of an "F" grade in special circumstances where a course is no longer available for the student to repeat and/or a reasonable substitution can be made.

Repeating a course may affect financial aid. Students receiving veteran educational benefits or other students who receive financial assistance from an outside agency should check for any agency rules that do not permit payment for courses that are taken more than once. Veteran educational benefits, for example, will not cover a third attempt for a failed course.

# Academic Policies and Procedures

## Incomplete Grade

Students may request an incomplete grade through discussion with the instructor and by negotiating and completing an "Incomplete Grade Contract" with that instructor and the academic dean, provided that each of the following criteria is met:

1. The student is unable to complete the work due to reasons beyond their control.
2. The student is passing the course.
3. At least seventy-five percent of the coursework is completed.
4. The course may be completed without the aid of classroom instruction.

The contract must indicate the specific procedures and deadlines for fulfilling course requirements. A grade of an "I" will be assigned until a final grade can be established. Work must be completed by the deadline established by the instructor or by the end of the next semester for fall and spring and Septmeber 15 for summer, whichever is earlier. All incomplete grade contracts must be approved and signed by the Division Dean.

Failure to complete the requirements of the contract will result in failure of the course, and the "I" will be converted to a grade of "F" on the student's permanent record by the Registrar's Office. Extensions to the time limit may be made only upon recommendation of the instructor involved and approval of the Division Dean. Students are academically and financially responsible for an "I" grade received.

## Academic Standing

Academic Standing is verified at the end of each semester. Students remain in good academic standing with a grade point average of 2.0 or higher. Students are placed on academic probation or suspension when the cumulative grade point average falls below minimum levels. Students on probation or suspension will work with the retention coordinator to develop academic success plans. In addition, students on probation or suspension will be required to take GSD100 Success Seminar.

## Academic or Financial Aid Probation or Suspension

### Academic Probation

Students will be placed on academic probation at the end of any semester, including summer session, in which their cumulative grade point average falls below the following minimum levels:

| Credit hours attempted | Cumulative GPA below |
|---|---|
| 15 | 1.40 |
| 16 – 30 | 1.60 |
| 31 – 45 | 1.80 |
| 46 + | 2.00 |

Students will remain on academic probation until such time as their cumulative GPA meets or exceeds the minimum levels referenced above. While on probation, students may register for a maximum of 12 credit hours. **NOTE**: Veterans receiving VA educational assistance may have benefits terminated following their second semester of academic probation if progress is not being made toward the required GPA.

### Academic Suspension

A student on probation will be suspended at the end of any semester, including summer, if the minimum cumulative grade point average is not reached while on probation. There will be no suspension if the semester grade point average is 2.00 or the student shows significant progress, as determined by the Vice President for Academics.

The period of suspension will be for one academic semester, excluding summer session. Students will be required to develop a success plan that is approved by the Division Dean prior to being released from academic suspension by the Vice President for Academics. A student may register for 6 credit hours the first semester returning from suspension.

## Using Financial Aid Funds in the Bookstore

No student on academic or financial aid probation or suspension can make purchases in the bookstore with financial aid funds until after the current semester grades have been posted. Students will remain eligible for federal financial aid while on financial aid probation, but will not be allowed to purchase books in the bookstore with future financial aid until a week prior to the start of classes. As of the week prior to the semester, all financial aid funds available to the student will be totally accessible for all bookstore purchases.

## Credit by Transfer, Examination or Documentation

A student must have submitted an application for admission to the College and paid the application fee before any type of credit is posted to the transcript.

### A. Transfer Credit

Transfer credit will be allowed for any previous courses in which a "D" or better grade was earned from a U.S. or Canadian regionally accredited institution of higher learning. Some course prerequisites and program requirements may only be fulfilled with a "C" grade or better.

International students may receive credit for coursework taken at foreign institutions of higher learning by:

1. Providing a Credential Evaluation Report from a credential evaluation service of the student's choice (i.e. Educational Credential Evaluation, Inc. – (414) 289-3400; World Education Services - www.wes.org; Josef Sliney & Associates – (305) 273-1616; or,
2. A student may choose, in lieu of providing a Credential Evaluation Report (officially translated transcript), to take

# Academic Policies and Procedures

proficiency examinations for any applicable coursework according to the College's Proficiency Examinations policy.

Credits transferred to NSCC will apply toward graduation only if they satisfy requirements for a particular major. Transfer credit not required by a particular major may be counted as additional hours completed.

Transfer credit may be awarded for courses in which a student received credit through a proficiency exam taken at another regionally accredited institution. Such credit will be given only if the transcript clearly indicates that credit was granted for the course at another institution. If the transcript simply indicates that a proficiency exam was taken but credit was not given for the course, NSCC will not accept the proficiency as transfer credit.

Students may receive credit for courses taken at non-accredited institutions by successfully passing a proficiency examination, if one is available.

In order to be eligible for an associate degree awarded from NSCC at least thirty percent of the credits must have been earned at NSCC.

**B. Military School Credit**

Transfer credit will be given to those students who have successfully completed educational experience through the military services as evaluated in the American Council on Education Guide (ACE).

Total military credit transferred may not exceed seventy (70) percent of any degree requirement.

**C. College Level Examination Program (CLEP), Advanced Placement (AP), and DANTES (DSST) Credit**

1. Full college credit may be granted or prerequisite courses waived based upon College Level Examination Program (CLEP), Advanced Placement (AP), or DANTES (DSST) test results. A list of courses will be maintained by the Vice President for Academics.
   a. Credit will be granted for equivalent courses for a score of 3 or higher on the AP test.
   b. An AP score of at least 4 may be required for highly dependent sequence of courses in a STEM area.
   c. A score of 3 or higher on an AP foreign language area will provide credit for at least the first year of a foreign language.
   d. Credits earned via AP exams are transferable in Ohio according to the state's transfer module. (The NSCC AP code is 1235).
   e. CLEP and DANTES credit will be granted for equivalent courses based on the American Council on Education minimum score.
2. Credit awarded through CLEP, AP, or DSST scores may not exceed 70 percent of any degree or certificate requirement.

3. Upon presentation of CLEP, AP, or DSST scores in the same area, credit will be awarded for either CLEP, AP, or DSST based upon the higher number of credit hours. In no case will CLEP, AP, and DSST credits be combined. In the event that the credit hours to be awarded through CLEP, AP, or DSST are equal, the individual department will award the appropriate credit at their discretion.

**D. Proficiency Examination**

1. Students may complete an application for a proficiency examination in an available subject area. The exam fee must be paid prior to the examination.
2. If enrolled in the course in which examination is requested, the exam must be completed before the end of the fourth week of a regular semester and before the end of the second week of a summer session.
3. A student cannot proficiency in a course previously taken (successfully or unsuccessfully).
4. A student may submit an application for a Proficiency Examination ONE TIME PER COURSE.
5. Students certified as proficient, who are enrolled in the proficiency course, will be refunded the appropriate credit hour tuition charge for the course.
6. Credit for the course for a satisfactory proficiency examination will become part of the student's permanent record, and a grade of "CR" will be assigned.
7. Proficiency credit cannot be posted to the transcript until the end of the semester in which the student has completed at least one course at NSCC.
8. A student may submit an application for proficiency examination, if not enrolled in the particular course for which examination is requested, at any time during the regularly scheduled semesters by completing the application process outlined above. All other policies will apply with the exception of refund of instructional charges.

**E. Credit by Documentation**

Northwest State Community College recognizes that students may have knowledge and skills, based on prior learning and experiences, which could be considered for college credit. Prior learning assessment is a means to review prior learning, to identify concepts already acquired, and to appropriately place students into the sequence of courses toward a degree.

Examples of documentation that may identify successful accomplishment of course learning outcomes include but are not limited to: a portfolio of work samples, reference letters, employment verification, licensure, and certifications. Documentation requirements are determined by the Division Dean and faculty teaching the course.

A student may not receive credit by documentation for a course previously completed (successfully or unsuccessfully). A documentation fee must be paid to have the course reviewed entered on the transcript.

# Academic Policies and Procedures

## Developmental Courses

Refresher courses are offered in reading, writing and mathematics for students who need or desire preparation for college-level studies. These courses may be required on the basis of COMPASS Assessment scores, ACT scores, or elected by students. Students with questions regarding their need for these courses should consult with the Testing Office or the Success Center for clarification. Please see the Course Description section of this catalog for more details. Students whose placement scores indicate a need for developmental courses may be limited to twelve credit hours until satisfactory ("S") academic status is achieved. Developmental courses do not count towards graduation requirements and are graded as Satisfactory or Unsatisfactory (S/U).

## Academic Honesty

Students and faculty are expected to engage in their academic work with integrity and respect for others. Students are expected to submit academic work that reflects their own original thought and is their own. Any misrepresentation in academic work, including plagiarism, is a form of academic dishonesty.

**Examples of academic dishonesty include but are not limited to:**
- Plagiarism – representing the words or ideas of another person as your own without identifying the source.
- Using the exact words from a source, including cutting and pasting from a Web site, without both quotation marks to indicate the extent of the material borrowed and a citation of the original source.
- Paraphrasing or summarizing ideas from a source without proper citation. Submitting work written or created by another, whether such work is written by a friend, an author or is downloaded from the internet.
- Quoting from an unacknowledged source during an oral presentation.
- Patching together a work using phrases and ideas borrowed from a number of different sources.
- Accepting assistance or collaborating with other students beyond what is explicitly permitted by the faculty.
- Cheating - The use of unauthorized or prohibited materials. Students, who intentionally use or attempt to use unauthorized information in any academic exercise, including computers or exams, are cheating.
- Cooperating with another person in academic dishonesty, such as, taking an exam for another student, having another student take an exam for you, or exchanging information with another student during or after an exam.
- Copying from or looking at another person's exam or allowing another student to copy your exam.
- Obtaining unauthorized copies of an exam prior to exam time.
- Intentionally falsifying information in an academic exercise or clinical/laboratory record.
- Unauthorized resubmission of coursework for more than one course.

**Disciplinary Penalties for Academic Dishonesty**
A. The faculty member who detects academic dishonesty and the Division Dean will handle the discipline. In the event the faculty member is the dean, the Vice President for Academics handles the discipline. Each action will be documented in writing and the faculty member will be notified.
B. For a first time offense, a grade of "F" will be issued for the project, paper, test or whatever assignment in which academic dishonesty has occurred. A faculty member may have other penalties specified in the course syllabus. The faculty member will impose the grade.
C. For a second offense, not necessarily in the same course, a grade of "F" will be issued for the course in which academic dishonesty has occurred. The Vice President for Academics will inform the faculty member of the second offense, and the faculty member will impose the grade. The Vice President for Academics will inform the student.
D. For a third offense, not necessarily in the same course, a grade of "F" will be issued for the course in which academic dishonesty has occurred. Additionally, any student who has been involved in three (3) offenses, not necessarily in the same course or semester, will be dismissed from the College immediately for one (1) semester (excluding summer). Upon readmission to the College, any future offense will cause the student to be dismissed immediately with no right to readmission. The Vice President for Academics will be responsible for imposing dismissal.
E. The student may appeal any disciplinary action by following the steps of the grievance procedure.

## Catalog Requirements

Students will follow the curriculum requirements for their major as listed in the catalog in effect at the time of their admission to the College. Following a break of enrollment at NSCC of two years or more, students will automatically be updated to the catalog requirements in effect at the time of their re-enrollment.

## Change of Student Information

A change of major, address or name is made by completing the Change of Student Information form in the Registrar's Office. A name change is completed by submitting the legal or court issued documents such as a marriage certificate, divorce decree or other documentation of legal action to the Registrar's Office.

## Attendance Policy

Student attendance is essential to success in the course. Faculty may issue a failing grade to students who incur excessive absences and who have not filed an official withdrawal from a course.

Excessive absences are defined as three consecutive absences or sporadic absences that impair satisfactory student progress in a course. For those students, instructors should report excessive absences and last date of attendance to Student Resources.

The College is obligated to report lack of attendance or last date of attendance to federal and state agencies that provide financial assistance to students. Failure to attend classes will result in loss of financial aid (grants and/or loans). Students considering

# Academic Policies and Procedures

withdrawing from all classes should contact the Financial Aid Office to discuss the financial implications of withdrawing from all classes.

The last date of attendance may be determined from attendance records, tests taken, or homework assignments submitted. Faculty will be required to report the student's last date of attendance when a final grade of "F" or "U" is assigned. All Title IV refunds will be calculated using the student's last date of attendance.

## Course Cancellation for Cause
The College reserves the right to cancel courses for cause, such as insufficient enrollment or unavailability of faculty.

## Course and Credit Hour Load Limitations
The maximum credit load for a student enrolled in a fall or spring term is 20 credit hours and 10 credit hours during a summer term, except upon recommendation of his/her advisor and approval of the Division Dean and/or Vice President for Academics. A student is considered to be enrolled full-time for a fall or spring term when enrolled in at least 12 credit hours and at least 6 credit hours for a summer term.

## Academic Fresh Start Policy
Once in a lifetime, a student may apply for a change of grade from "D", "F", "U", or "WF" to a W. The fresh start requirements for application are:

1. A student must be currently enrolled in credit courses and have a declared major at NSCC.
2. The student must have demonstrated satisfactory academic progress for at least one academic term (12 cumulative credit hours beyond fresh start course(s) request) with a GPA of 2.0 for these courses at NSCC including developmental courses.
3. Courses requested for fresh start must have been taken during the first 30 credit hours attempted.
4. The application for Academic Fresh Start must be in writing and is subject to review and approval by the Division Dean and Vice President for Academics.
5. An application fee of $10.00 per requested course change must be paid at the time of the application.
6. A transcript placement fee of $20.00 per approved course must be paid within ten (10) days of notice of final approval.
7. Academic Fresh Start application forms are available in the Registrar's Office.

## Medical Fresh Start Policy
Once in a lifetime, due to catastrophic personal health/medical circumstances, students may be eligible to retake at no additional cost, classes that they failed (earned and "F" or "U" grade) as a result of their medical condition. The requirements are as follows:

1. The student's incapacitation must have exceeded two weeks in duration.
2. A medical fresh start only applies to illness/injury experienced by the student.
3. Petition for medical fresh start within two weeks of the

end of the semester in which the event occurred. The petition must be in writing and is subject to review and approval by committee(s). The Medical Fresh Start form and instructions are available in the Registrar's Office.
4. The student had to be passing course(s) prior to the event.
5. The student must register to re-take the affected courses or equivalent credit hours within one year of filing the petition for Medical Fresh Start.
6. The student and his/her attending physician must complete and sign the Petition for Medical Fresh Start. The Petition for Medical Fresh Start must be mailed to the Registrar's Office directly from the physician.
7. A non-refundable petition fee of $20.00 must be paid at the time of the application.
8. Upon registration for the affected courses, the student must submit their course schedule to the Registrar so that a fee waiver can be completed for those courses.

## Graduation Requirements
The associate degree is awarded upon the successful completion of any one of the two-year programs. A certificate is awarded upon the successful completion of any of the one-year certificate programs.
Students must:

- Successfully complete all required courses in their program. Certain majors require a "C" grade or better in certain courses to meet graduation requirements. Each required course in which an "F" grade is received must be repeated.
- Attain a 2.0 grade point average in their technical courses. The cumulative technical point average (CUM TECH GPA) is obtained at the conclusion of each semester by dividing the number of credit points earned by the number of credit hours the student has attempted in technical courses only. Technical courses are designated by a "+" in front of the course number under each technology in this catalog.
- Maintain an accumulative grade point average of 2.0 in all courses.
- Completion of 30 percent of the credits from Northwest State Community College.
- Submit the non-refundable graduation fee with the application for graduation.
- In addition, all associate degree graduates may be required to :
  - Complete a national normed test
  - Submit the required elements of a portfolio

Students are eligible to receive only one degree within a technology but may have more than one major. All majors are listed on the student's transcript. Diplomas are issued for each degree within a technology. Students applying for a certificate and associate degree within the same technology at the same time will be awarded the higher degree only. Students wishing to receive dual degree/dual technologies must meet with their academic advisor to fulfill their programs of study.

# Academic Policies and Procedures

All petitions for graduation must be completed by the date established by the Registrar's Office. Students who do not complete requirements for a degree or certificate within the academic year of submitting a petition must reapply for graduation. The graduation fee is waived for reapplications. A graduation application is available on the Registrar's Office web page and in the office.

Each graduate is expected to attend the graduation exercises after the application for graduation has been approved. Students who are unable to attend graduation exercises should notify the College by contacting the Registrar's Office at least two weeks prior to commencement.

The Vice President for Academics may waive the repeating of an "F" grade in special circumstances where a course is no longer available for the student to repeat and/or a reasonable substitution can be made. Students may, with written permission of their Division Dean or Vice President for Academics, repeat a course in which they earned a passing grade. The grade received for the repeated course will thereafter be substituted for the former grade in calculating the student's cumulative grade point average.

## Graduation with Honors

Any student graduating with a cumulative point average of 3.50 or higher will be graduated with honors as follows:

| | |
|---|---|
| 3.50 - 3.74 | Cum Laude |
| 3.75 - 3.89 | Magna Cum Laude |
| 3.90 - 4.00 | Summa Cum Laude |

A notation of this honor will be placed on the student's diploma and transcript.

## Completing a Second Major

When a student completes a second major at any time within the same technology area, the second major will be added to the transcript. Students must complete a graduation application, including the fee, if the second major is completed after the initial degree was awarded. A graduation application is available on the Registrar's Office link at www.northweststate.edu, or in the office located in C106.

## Current Electronic Portfolio Requirements Include

- The argument paper from English 111 (submission required to pass course).
- The research paper from English 112 (submission required to pass course).
- A writing assignment from a Humanities core course most likely to demonstrate critical thinking skills.
- A writing assignment from a Social Sciences core course most likely to demonstrate critical thinking skills.
- A writing assignment that represents, in the student's opinion, his or her best writing and critical thinking performance from late in the program (preferably from the final semester, and not duplicating other portfolio submissions).

- A writing assignment from the student's technical program (or, for an Associate of Arts or Associate of Science student, from the intended area of study upon transfer), that demonstrates application of writing and critical thinking skills (not to duplicate other portfolio submissions).
- Any other assignments designated by the student's specific degree program. Some programs require additional submissions beyond the minimum listed above.
- Submissions are made through myNSCC.

## Independent Study

Independent study courses are initiated by the dean of the division in which the independent study course is to be offered. The independent study of a course must be the last resort method of instruction considered only when program requirements, electives and appropriate substitutes are not available.

The independent study must satisfy the following three criteria:

1. The student is capable of successfully completing the course independently.
2. The course is appropriate for the independent study methodology.
3. The College is willing to offer the course independently.

## Student Directory Information

### Right to Inspect and Review Records

The Family Education Rights and Privacy Act of 1974 was designated to protect the privacy of education records. It established the right of students to have access to inspect and review their academic records, as well as limits the release of any such information about a student without the student's consent. A request to inspect and review records shall be made in writing to the Registrar.

### Directory Information

The items listed below are designated as "Directory Information" and may be released by this institution at its discretion:

| | | |
|---|---|---|
| Name | Major | Full-time or Part-time status |
| Address* | Birth Date | Dates of Attendance |
| Email* | Honors | Degree(s) Conferred |

*For legitimate educational purposes only*

Under the provisions of the Family Educational Rights and Privacy Act of 1974, students have the right to withhold the disclosure of any or all of the above information. Should a student decide to withhold any information, he/she will need to fill out a Request to Prevent Disclosure of Directory Information form and submit it to the Registrar no later than the end of the second week of classes each semester. This form is available in the Registrar's Office. Such requests will be honored for one academic year or a shorter period of time as designated by the student. A complete set of FERPA guidelines is available for students to review in the Registrar's Office.

# Academic Policies and Procedures

**Third parties:** Whenever a student's information is passed on to a third party, the College will inform the third party that such information may not be passed on to a fourth party.

**Records:** The institution will maintain a record of persons who are not institutional employees who request access to a student's file or who obtain access to a student's file. These requests will be directed to the Registrar and/or the Vice President for Academics.

## Access to Student Records

It is College policy for a student to have the right to inspect and review personally identifiable records and the right for a hearing to challenge the content of those records:

**Inspect and Review Records**
1. Individuals who have attended Northwest State Community College have the right to inspect and review official records, files and data directly related to themselves, including material incorporated into each student's cumulative record folder in accordance with the College policy on access to student records.
2. A student may request, in writing, the opportunity to inspect and review his/her records.
   a. The request should be made to the chief administrator or designee(s) of the department in which the records are on file.
   b. A request must specify records to be inspected and reviewed.
3. Release of Information for Deceased Students.
   a. Requests for information on individuals other than the executor during the first 10 years after death will be limited to the release of directory information only. Thereafter, all information becomes available to the public.
4. A request by a student to inspect and review his/her records will be granted within a reasonable period of time, but such time is not to exceed seven days in which classes are held after the request has been made.
5. Records will be inspected and reviewed by the student in the presence of the department head or his/her designee(s).
   a. Records may not be changed or deleted during the process of inspection and review.
   b. The student shall be advised of his/her right to challenge and the procedure to challenge any portion(s) of his/her College record.
   c. Upon written request, the student shall be provided with a copy of requested documents within his/her record.
6. Northwest State Community College will release non-directory information, including grades, to parents of dependent students only with the written consent of the student, regardless of the student's age or dependency status. Written consent for such requests must be submitted to the Registrar's Office.

**Hearing to challenge content of records:**
1. Students shall have an opportunity for a hearing to challenge the content of their College generated records, to insure that the records are not inaccurate, misleading, or otherwise in violation of the privacy or other rights of students, and to provide an opportunity for the correction or deletion of any such inaccurate, misleading, or otherwise inappropriate data contained therein. Third party records are not open to challenge.
2. A student may request, in writing, an opportunity for a hearing to challenge the content of his/her College record.
   a. Request should be made to the President or President's designee(s).
   b. A request must:
      1. Identify in specific terms the portion(s) of the record to be challenged.
      2. State the reason(s) for challenging the portion(s) of the record so identified.
      3. State the remedy sought; i.e., the correction or the information under challenge.

**Hearing procedures:**
1. The hearing will be conducted by the President or designee(s) who will act as the hearing officer.
2. The hearing will be granted within ten days after the request has been made.
3. The department head or his/her designee(s) responsible for the student record under challenge shall represent that record in the hearing.
4. Prior to the hearing, the hearing officer shall notify the student and the department head of the time, place and date of the hearing and of the specific portion(s) of the student's record to be challenged in the hearing.
5. The hearing shall be limited to consideration of the specific portion(s) of the student's record being challenged.
6. The student will have the right to be assisted by an advisor of his/her choice.
7. The burden of sustaining the challenge rests with the student.
8. The student and the department head have the right to present evidence and witnesses directly related to that portion(s) of the student's record being challenged.
9. The hearing officer shall keep a taped record of the hearing.
10. The hearing officer must provide the student with a written notification of the disposition of the challenge including the reason(s) for the disposition.

**Institutional personnel access to student records:**
1. Students have the right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.
   a. One exception, which permits disclosure without consent, is disclosure to "school officials" with

legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic, research or support staff position, including law enforcement unit personnel; a person or company with whom the College has contracted such as an attorney, auditor or collection agent; a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

   b.  A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

2.  Financial aid information supplied by students or parents will be maintained on a confidential basis, with only necessary information released to institutional personnel from the standpoint of processing financial aid awards.

## Second-Year Student Status

A "second-year student" is anyone who has completed thirty or more credit hours.

## Affirmative Action

### Policy Statement

1.  The Northwest State Community College affirmative action policy has as its objective the equal employment and treatment of all individuals without regard to race, color, religion, sex, national origin or ancestry, handicap, age, marital or parental status, veteran status, or other non-job related factors.

2.  The College is fully committed to providing:

   a.  equal opportunities in all employment-related activities, including but not limited to, recruiting, hiring, advancement, transfer, compensation, benefits, and terms of employment;

   b.  Equal opportunities in all educational, social and recreational programs;

   c.  Physical access to all facilities.

3.  It is the intent that this policy be in full compliance with all applicable federal and state laws and regulations concerning affirmative action.

## Harassment Policy Statement

### General Policy Statement

It is the policy of the Board of Trustees of NSCC to maintain an education and work environment which is free from all forms of unlawful harassment, including sexual harassment.  This commitment applies to all College operations, programs and activities.  All students, administrators, faculty, staff, and all other College personnel share responsibility for avoiding, discouraging and reporting any form of unlawful harassment. This policy applies to unlawful conduct occurring on College property, or at another location if such conduct occurs during an activity sponsored by the College.

The College will vigorously enforce its prohibition against harassment based on sex, race, color, national origin, religion,

disability, or any other unlawful basis, and encourages students to report any violations of this policy. The College will investigate all allegations of harassment and in those cases where unlawful harassment is substantiated the College will take immediate steps to end the harassment.  Individuals who are found to have engaged in unlawful harassment will be subject to appropriate disciplinary action.

### Reports and Complaints of Harassing Conduct

Students are encouraged to promptly report incidents of harassing conduct to  the Vice President for Academics, the Dean of your division, faculty or administrators so that the College may address the conduct before it becomes severe, pervasive or persistent.

### Confidentiality

The College will make reasonable efforts to maintain the confidentiality of the parties involved in a harassment investigation. Confidentiality, however, cannot be guaranteed.

**A full copy of the NSCC Anti-Harassment Policy is available in the Office of the Vice President for Academics.**

## Code of Student Conduct

The code of student conduct exists to advance the core missions of the college, promote a safe and secure educational environment, foster the academic and social development of students, and protect the persons, property, processes and academic integrity of the college community. Although the code is intended to be as comprehensive as possible, it makes no attempt to list all activities, behavior or conduct which may adversely affect the college community.

In order to maintain an orderly process for learning, the instructor/supervisor/administrator has the authority to exclude any student who is considered to be detrimental to an ongoing learning experience. Disciplinary action may include, but is not limited to, disciplinary probation, suspension, dismissal, expulsion, withholding of transcripts or other appropriate action.

The code applies to the on-campus conduct of all students and registered student organizations. The code also applies to the off-campus conduct of students and student organizations in direct connection with:

   a.  A class assignment;

   b.  Academic course requirements or any credit-bearing experiences, such as clinical experiences, externships, internships, field trips, study abroad or student teaching;

   c.  Any activity supporting pursuit of a degree;

   d.  Activities sanctioned, sponsored, conducted or authorized by the College or by registered student organizations;

   e.  Any activity that causes substantial destruction of property belonging to the College or members of the College community or causes serious harm to the health or safety of members of the College community; or

   f.  Any activity in which a police report has been filed, a summons or indictment has been issued or an arrest has occurred for a crime of violence.

# College Policies

All persons are encouraged to report code violations to a College official as soon as possible. Charges must be filed within sixty days of the incident or of the identification of the person having allegedly committed the violation. Students continue to be subject to city, state and federal laws while at the college. Violations of city county, state and/or federal laws may also constitute violations of the code. The college reserves the right to proceed with disciplinary action under the code, independently of any criminal proceedings and impose sanctions for code violation, whether or not the criminal proceedings are resolved or is resolved in the student's favor.

Any student found to have engaged, or attempted to engage, in any of the following conduct while within the College's jurisdiction will be subject to disciplinary action by the college. Prohibited Conduct may include but is not limited to academic misconduct, endangering health or safety of others, sexual misconduct, destruction of property, possession of dangerous weapons, dishonest conduct, theft, failure to comply with College authority, use or possession of drugs or alcohol, unauthorized presence, disorderly or disruptive conduct, hazing, abuse of discipline proceedings, misuse of computing resources, violation of college rules, and riotous behavior.

A student who is formally charged with a code violation will have their case heard at an administrative proceeding. Failure of the accused student to respond to the initiation of charges or schedule a preliminary meeting will not prevent the College from scheduling an administrative hearing and conducting the hearing in the student's absence. Disciplinary action may include but is not limited to disciplinary warning, disciplinary probation, suspension, dismissal, expulsion, withholding of transcripts or other appropriate action.

A complete copy of the policy with definitions and procedural guidelines can be obtained from the Vice President for Academics.

## Student Due Process and Grievance Policy

Resolution of a problem, whether academic or administrative, including challenging of a grade, can be achieved through proper channels or authority and may be resolved at any level of the due process and grievance procedure. Any student filing a grievance must follow the step-by-step procedure in the listed sequence.

## Academic and Non-Academic Matter

**Informal discussion** between the student and the faculty member or administrator should take place within twelve (12) instructional days* from the date of occurrence or discovery.**  If the matter is not resolved, the student may invoke the formal written appeal process outlined below.

* An instructional day is defined as any day, Monday through Saturday, that NSCC holds classes, during the regular fall, spring, and summer (8 week) term.
**A grade challenge date of occurrence will be the date posted to the transcript.

**Step 1 - Formal Appeal Process**
i.    The student will submit a written grievance form to the

individual involved within six (6) instructional days following unresolved informal discussion.  If the written request is not received within the 6-day deadline, the case will be considered closed and the student will have forfeited the right for an appeal hearing.

ii.    Within six (6) instructional days of receiving the formal grievance, the individual involved and the student will meet and attempt to resolve the problem to the mutual satisfaction of both parties.

iii.    The faculty member/administrator will issue a written response to the student within six (6) instructional days after the meeting.

iv.    If the problem is not resolved in step one or the above time frames are not adhered to by the faculty member/administrator, the student may proceed with Step 2.

**Step 2 - Formal Appeal Process**
i.    Within six (6) instructional days of receiving the written response from Step 1, the student will submit the original grievance form to the supervisor of the individual involved, with a copy to the Vice President for Academics.

ii.    Within six (6) instructional days of receiving all written documentation, the immediate supervisor will meet with the student and the individual involved to attempt to resolve the problem to the mutual satisfaction of both parties.  The Vice President for Academics may attend this meeting at his/her discretion.

iii.    Within six (6) instructional days after the meeting, the immediate supervisor will issue a written response to all parties involved, with the original copy to the Vice President for Academics.

iv.    If the problem is resolved, the written resolution issued by the supervisor will become part of the original document and bring closure to the grievance.

v.    If the problem is not resolved, the student may proceed to Step 3.

vi.    If the above time frames are not adhered to by the student, the case will be considered closed and the student will have forfeited the right for an appeal hearing.

**Step 3 - Formal Appeal Process**
i.    Within six (6) instructional days of receiving the written response from Step 2, the student may request a formal hearing by notifying the Vice President for Academics.  If the request is not received within the 6-day deadline, the case will be considered closed, and the student will have forfeited the right for an appeal hearing.

ii.    *Within six (6) instructional days of receiving the request, the Vice President for Academics will appoint an ad hoc due-process committee to hear the grievance.
1.    The ad hoc committee will consist of five (5) members:  one grade level I, II, or III employee; two faculty members; an officer of the student body organization; and a person of the student grievant's choice (person must be a present student, faculty member or other employee of the college).
2.    Alternate committee members may be appointed as well by the Vice President for Academics.  Grade level I, II, and III include Vice Presidents, Division Deans and student service professionals.

# College Policies

3. The Vice President for Academics will appoint one member of the ad hoc committee to act as chair for the proceedings.

iii. *The hearing will take place within six (6) instructional days after the committee appointments. To prepare for the hearing, the chair of the ad hoc committee may make the following arrangements, which are intended to facilitate due process.

   1. Provide all ad hoc committee members with copies of the written grievance prior to the meeting.

   2. Identify a date, time and meeting place convenient for the ad hoc committee members, the student grievant, and the person who is the object of the grievance.

   3. Inform the student and the individual involved that they may present witnesses and additional written documentation at the hearing.

   4. The following chronology for the hearing and follow-up is recommended. (The proceedings may also be tape-recorded, provided that all parties are informed in advance.)

      a. Select a recorder.

      b. Review the grievance and hearing procedures. This segment will be closed to the grievant and faculty member.

      c. Invite the student to be heard. The student may present witnesses and additional written documentation at this time. This segment will be closed to the faculty member / administrator.

      d. Invite the individual involved to be heard, at which time he or she may provide witnesses and additional written documentation. This segment will be closed to the student.

      e. In closed session, the committee will discuss its findings and reach a clear and explicit decision. The student and individual involved may be invited to reappear and provide more information as requested.

   5. Within six (6) instructional days after the formal hearing is concluded, the ruling of the ad hoc committee will be presented in writing to the student, the faculty member/ administrator involved, the department dean, and the Vice President for Academics, who will implement the ruling.

   6. The decisions rendered by the ad hoc due-process committee will be final. All committee members will need to sign the decision on Step 3 Form at the time the decision is made.

   7. All original documentation will be kept on file in the Vice President for Academic's office.

*Timelines for step 3, iii. are not strictly enforced during the summer semester – student would be notified of altered timeframe.
.

## Study at Other Institutions

A student who wants to attend another institution during the summer or any other part of the academic year, for the purpose of transferring credit to a degree program of NSCC, must first obtain permission from the Vice President for Academics and file a transient student form signed by the Vice President for Academics or the Registrar.

Only credit hours transfer - quality points and grades are not figured into the student's permanent record.

## Campus Crime and Security Policy

Northwest State Community College does comply with the Crime Awareness and Campus Security Act of 1990. The Campus Security Report can be found on the college website.

## Drug Free Workplace Policy

Northwest State Community College shall comply with the Drug Free Workplace Act of 1988 and the Drug Free Schools Community Act of 1989.

## Protection of Human Subjects Research Policy

Northwest State Community College shall comply with the federal provisions of the protection of human subjects in research policy in accordance with 45 CFR 46, and 21 CFR 56. Research proposals must be reviewed and approved prior to any research activity. Contact the Vice President for Academics for more information.

## Smoking and Tobacco Use Policy

Smoking and the use of other tobacco products is prohibited at all times in all Northwest State Community College buildings and fleet vehicles. This also applies to branch and remote campus sites or other locations where classes are conducted. Smoking is permitted in the courtyard south of the "E" Building on the Archbold Campus near the vending area and in campus parking lots. Smoking is not permitted within 50 feet of any NSCC location or near any building entrance.

# Northwest State Core Requirements

Arts & Sciences courses provide instruction that is essential to a well-rounded education, including written and oral communications, humanities, natural sciences, mathematics, and social and behavioral sciences. Every degree program requires a core of these general education courses to insure that our graduates are not only academically prepared but also better citizens. Arts & Sciences courses help the students develop ways of approaching information and experience that strengthen their reasoning capacity, their awareness of relationships and responsibilities in a social and civic context, and their attention to values and moral issues.

Students whose goal is a four-year degree may find they can take selected courses at NSCC for a lower cost while staying near home. Academic work toward virtually any major at any college in the nation can be started at NSCC. To transfer efficiently, students must take courses that can be applied to the specific degree requirements at the institution to which they intend to transfer.

Students in the Associate of Arts or Science degree program should plan their courses with the assistance of a faculty advisor after checking the requirements of the college to which they intend to transfer. By completing the Associates of Arts (AA) or Associates of Science (AS) degree, the requirements for the Transfer Module may also be met. Additional courses or courses with higher credit value may be taken in order to meet the requirements of the major at the receiving institution. Electives should be chosen carefully in consultation with the receiving institution according to the desired major at the receiving institution.

NSCC continues to develop and maintain articulation agreements and transfer guides with the institutions who receive the majority of NSCC's transfer students. Currently, articulation agreements are signed between Northwest State Community College and the following institutions of higher education: Bluffton College, Bowling Green State University, Cuyahoga Community College, Defiance College, Franklin University, Jackson Community College, Lakeland Community College, Lorain County Community College, Lourdes College, Ohio Northern University, Owens Community College, Terra Community College, University of Toledo, and Trine University. These agreements and guides help simplify the process for students transferring to these colleges and universities. Because new agreements and guides are continually being developed, students interested in transferring must stay in contact with their academic advisors for the most current information.

As part of the graduation requirements for the Associate of Arts, Associate of Science, Associate of Applied Business, Associate of Applied Science, Associate of Individualized Study, and Associate of Technical Study degrees, a student must complete at least five courses of general studies. These courses are distributed within five core categories. Students must take at least one course from each of the five categories as listed below. Students should consult their degree program for specific requirements within this core.

Associate of Arts and Associate of Science degrees are recommended primarily for students who plan to transfer to a four-year college or university. The planned program of instruction is generally equivalent to the first two years of a baccalaureate degree program.

## Core Requirements

| | | |
|---|---|---|
| **I** | **ENG111** | **Composition I** |
| **II** | **ENG112** | **Composition II** |
| **III** | **Natural Sciences** | |
| | BIO100 | World of Science |
| | BIO101 | Principles of Biology |
| | BIO115 | Ecology |
| | BIO131 | Nutrition |
| | BIO150 | The Human Body |
| | BIO180 | Genetics |
| | BIO201 | General Biology I |
| | BIO202 | General Biology II |
| | BIO210 | Botany |
| | BIO220 | Zoology |
| | BIO231 | Anatomy & Physiology |
| | BIO232 | Anatomy & Physiology II |
| | BIO257 | Microbiology |
| | CHM100 | World of Science |
| | CHM101 | Principles of Chemistry |
| | CHM201 | General Chemistry I |
| | CHM202 | General Chemistry II |
| | CHM256 | Principles of Biochemistry |
| | PHY100 | World of Science |
| | PHY101 | Principles of Physical Science |
| | PHY140 | Astronomy |
| | PHY150 | Geology |
| | PHY251 | Physics: Mechanics & Heat |
| | PHY252 | Physics: Electricity & Magnetism |
| **IV** | **Humanities** | |
| | ENG223 | Interpretation of Literature |
| | ENG230 | Children's Literature |
| | ENG234 | Narrative Literature of the Old Northwest Territory |
| | ENG240 | Introduction to Poetry |
| | ENG241 | Introduction to Fiction |
| | ENG250 | American Literature Through the Mid-19th Century |
| | ENG251 | American Literature Since the Mid-19th Century |
| | ENG260 | British Literature Through the 18th Century |
| | ENG261 | British Literature 19th Century to Present |
| | ENG271 | Non-Western Literature |
| | HUM209 | Humanities and Cultures: Ancient & Medieval Worlds |
| | HUM210 | Humanities and Cultures: Renaissance to Present |
| | HUM221 | Music Appreciation |
| | HUM230 | Art Appreciation |
| | PHI110 | Critical Thinking & Logic |
| | PHI201 | Introduction to Philosophy |
| | PHI210 | Ethics |
| | PHI220 | Ethics in Health Care |
| | PHI222 | Ethics in the Helping Professions |
| | PHI230 | World Religions |
| **V** | **Social/Behavioral Sciences** | |
| | HIS101 | US History Pre-1876 |
| | HIS102 | US History Post-1876 |
| | HIS203 | US Since 1945 |
| | HIS210 | The Modern World |
| | HIS234 | History of the Old Northwest Territory |
| | PSY110 | General Psychology |
| | PSY210 | Abnormal Psychology |
| | PSY220 | Social Psychology |
| | PSY230 | Human Growth & Development |
| | SSC101 | Sociology |
| | SSC102 | Sociology Sustainable World |
| | SSC110 | General Anthropology |
| | SSC120 | American Government |
| | SSC130 | Comparative Government |
| | SSC210 | Cultural Diversity |
| | SSC220 | Interpersonal Violence |
| **VI** | **Mathematics** | |
| | BUS110 | Business Math & Calculators |
| | MTH109 | College Algebra |
| | MTH170 | Survey of Mathematics |
| | MTH112 | Trigonometry |
| | MTH213 | Calculus I |
| | MTH214 | Calculus II |
| | STA120 | Introduction to Statistics |
| | STA220 | Statistics |

In addition to these requirements, MTH080 proficiency is required for all NSCC Associate Degree graduates; however, individual programs may require a higher mathematics competence. This requirement may be fulfilled by placement test, proficiency test, or by taking the course.

If you are trying to identify a program that will help you increase your knowledge, skills and abilities while enhancing your career options then the Arts & Sciences Division has programs to meet your needs.

# Arts and Sciences

# Arts & Sciences Division

Develop your critical thinking skills, sharpen your writing ability, and enhance your knowledge by completing a degree in Arts & Sciences. Position yourself to compete for jobs in the global economy by choosing the first step toward a bachelor's degree and a successful career.

The Associate of Arts (AA), Associate of Science (AS) and the Transfer Module (TM) programs are all designed to transfer into various bachelor degree programs. The future demands highly-skilled and knowledgeable people who are adaptable, flexible, and capable of embracing change in a fast-paced world. Choosing to pursue an AA, AS or the TM will help you develop the skills and knowledge required to be a highly sought-after graduate – by both universities and employers. Sign up and take the first step on your journey to success! Whatever goals you want to accomplish, our courses will help you develop the ability to achieve them.

## Program Learning Outcomes
1. Produce unified, coherent, and well-developed essays following the rules of written academic English and proper source documentation.
2. Interpret the larger thematic, historical, or cultural significance of primary works in the humanities.
3. Define and apply key concepts when examining human functioning and problems in society.
4. Demonstrate symbolic and graphic manipulations using analytic mathematics skills appropriate to the program.
5. Incorporate the steps of the scientific method, beginning with a question, and concluding by analyzing data and drawing conclusions about a stated hypothesis.
6. Apply information literacy skills focusing on locating and evaluating scholarly sources.

## Prerequisites
All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the placement test or take the recommended classes. If you have not taken the tests, stop by the Admissions Office in C106 or call (419) 267-1320 for information or referral to testing.

Some courses listed in this program have specific prerequisites. See prerequisites required for each course in the Course Description section of this publication.

## General Education
For Northwest State Core Requirements for all graduates, see page 30.

Students enrolled in either the Associate of Arts or Associate of Science degree program must demonstrate the following abilities through placement testing or successful course completion:

| | |
|---|---|
| ENG080 | Reading Comprehension |
| OR | |
| ENG090 | Basic Composition |
| ENG095 | Integrated College Reading |
| MTH050 | Review of Basic Math |
| MTH080 | Beginning Algebra |
| MTH090 | Intermediate Algebra |
| MTH099 | Engineering Math |
| CIS090 | Introduction to Computers |
| ENG090 | Basic Composition |
| OAS090 | Keyboarding Basics |

Additional courses should be selected in line with the student's chosen field of study and the four-year college to which the student plans to transfer. Note that many four-year institutions require a foreign language sequence.

| **English and Composition** | | **Credit Hours** |
|---|---|---|
| 2 Courses Required | | |
| ENG111 | Composition I ("C" or better required) | 3 |
| ENG112 | Composition II (Required) .............. | 3 |

| **Humanities:** | **Credit Hours** |
|---|---|

# Associate of Arts

## Arts and Sciences Division

15 Credit Hours Required
- One Literature course: ENG223, ENG240, ENG241, ENG250, ENG251, ENG260, ENG261, or ENG271 (required)
- One humanities survey: HUM209 or HUM210 (required)
- No more than 6 hours in the applied arts*

| | | |
|---|---|---|
| ART103 | Beginning Drawing* | 3 |
| ART210 | Oil/Acrylics* | 3 |
| ART220 | Beginning Sculpture* | 3 |
| ENG217 | Introduction to Creative Writing | 3 |
| ENG223 | Interpretation of Literature | 3 |
| ENG230 | Children's Literature | 3 |
| ENG234 | Narrative Literature of the Old Northwest Territory | 3 |
| ENG240 | Introduction to Poetry | 3 |
| ENG241 | Introduction to Fiction | 3 |
| ENG250 | American Literature Through the Mid-19th Century | 3 |
| ENG251 | American Literature Since the Mid-19th Century | 3 |
| ENG260 | British Literature Through the 18th Century | 3 |
| ENG261 | British Literature 19th Century to Present | 3 |
| ENG271 | Non-Western Literature | 3 |
| HUM121 | Concert Band* | 1 |
| HUM209 | Humanities and Cultures: Ancient & Medieval Worlds | 3 |
| HUM210 | Humanities and Cultures: Renaissance to Present | 3 |
| HUM221 | Music Appreciation | 3 |
| HUM230 | Art Appreciation | 3 |
| PHI110 | Critical Thinking and Logic | 3 |
| PHI201 | Introduction to Philosophy | 3 |
| PHI210 | Ethics | 3 |
| PHI230 | World Religions | 3 |

## Social/Behavioral Sciences:     Credit Hours

15 Credit Hours Required
- One Behavioral Science course: PSY110 (required)
- One Social Science course: SSC101 or SSC102 (required)

| | | |
|---|---|---|
| PSY 110 | General Psychology (required) | 3 |
| SSC101 | Sociology (required) OR | 3 |
| SSC102 | Sociology Sustainable World | 3 |
| ECO211 | Macroeconomics | 3 |
| ECO212 | Microeconomics | 3 |
| GEO110 | World Geography | 3 |
| GEO210 | Geography - U.S. & Canada | 3 |
| HIS101 | U.S. History Pre-1876 | 3 |
| HIS102 | U.S. History Post-1876 | 3 |
| HIS203 | U.S. Since 1945 | 3 |
| HIS210 | The Modern World | 3 |
| HIS 234 | History of the Old Northwest Territory | 3 |
| HST212 | Principles of Addiction | 3 |
| HST240 | Social Problems | 3 |
| HST242 | Marriage and the Family | 3 |
| PSY210 | Abnormal Psychology | 3 |
| PSY220 | Social Psychology | 3 |
| PSY230 | Human Growth & Development | 3 |
| PSY260 | Forensic Psychology | 3 |
| SSC110 | General Anthropology | 3 |
| SSC120 | American Government | 3 |
| SSC130 | Comparative Government | 3 |
| SSC210 | Cultural Diversity | 3 |
| SSC220 | Interpersonal Violence | 3 |

## Mathematics and Science:     Credit Hours

10 Credit Hours Required
- You must choose one, 3 credit hour Transfer Module (TM) approved mathematics or statistics class below
- At least 1 course must be a lab course*
- Courses must be from at least 2 prefixes
- Please Note: BIO100, CHM100 and PHY100 are the same course-choose the disciplinary prefix of most interest to you

| | | |
|---|---|---|
| BIO100 | World of Science | 3 |
| BIO101 | Principles of Biology* | 4 |
| BIO115 | Ecology* | 4 |
| BIO150 | The Human Body | 4 |
| BIO180 | Genetics* | 4 |
| BIO201 | General Biology I* | 4 |
| BIO202 | General Biology II* | 4 |
| BIO231 | Anatomy & Physiology I* | 4 |
| BIO232 | Anatomy & Physiology II* | 4 |
| BIO257 | Microbiology* | 4 |
| CHM100 | World of Science | 3 |
| CHM101 | Principles of Chemistry* | 4 |
| CHM110 | Science&Technology of Sustainability* | 4 |
| CHM201 | General Chemistry I* | 5 |
| CHM202 | General Chemistry II* | 5 |
| CHM256 | Principles of Biochemistry* | 3 |
| PHY100 | World of Science | 3 |
| PHY101 | Principles of Physical Science* | 4 |
| PHY140 | Astronomy* | 4 |
| PHY150 | Geology* | 4 |
| PHY251 | Physics: Mechanics & Heat* | 4 |
| PHY252 | Physics: Electricity & Magnetism* | 4 |
| MTH109 | College Algebra | 3 |
| MTH112 | Trigonometry | 3 |
| MTH213 | Calculus I | 5 |
| MTH214 | Calculus II | 5 |
| STA120 | Introduction to Statistics | 3 |

## Elective:

14 Credit Hours Required

Electives may include any 100 or 200 level course. Electives should be selected in line with the student's chosen field of study and the four-year college to which the student plans to transfer. Note that many four-year institutions require a foreign language sequence.

## Total Required:

60 Credit Hours

Curriculum guide sheets for typical programs are available in the Student Services Office. Students planning to transfer to another college should use a guide sheet to help with academic planning. For additional guidance, students should contact the college to which they intend to transfer and utilize the service of the Student Resource Center's Transfer Coordinator.

## English Composition:     Credit Hours

2 Courses Required

| | | |
|---|---|---|
| ENG111 | Composition I ("C" or better required) | 3 |
| ENG112 | Composition II (Required) | 3 |

## Humanities:     Credit Hours

12 Credit Hours Required

# Associate of Science

## Arts & Sciences Division

- One Literature course: ENG223, ENG240, ENG241, ENG250, ENG251, ENG260, ENG261, or ENG271 (required)
- One humanities survey: HUM209 or HUM210 (required)
- No more than 6 hours in the applied arts*

| | | |
|---|---|---|
| ART103 | Beginning Drawing* | 3 |
| ART210 | Oil/Acrylics* | 3 |
| ART220 | Beginning Sculpture* | 3 |
| ENG217 | Introduction to Creative Writing | 3 |
| ENG223 | Interpretation of Literature | 3 |
| ENG230 | Children's Literature | 3 |
| ENG234 | Narrative Literature of the Old Northwest Territory | 3 |
| ENG240 | Introduction to Poetry | 3 |
| ENG241 | Introduction to Fiction | 3 |
| ENG250 | American Literature Through the Mid-19th Century | 3 |
| ENG251 | American Literature Since the Mid-19th Century | 3 |
| ENG260 | British Literature Through the 18th Century | 3 |
| ENG261 | British Literature 19th Century to Present | 3 |
| ENG271 | Non-Western Literature | 3 |
| HUM121 | Concert Band* | 1 |
| HUM209 | Humanities and Cultures: Ancient & Medieval Worlds | 3 |
| HUM210 | Humanities and Cultures: Renaissance to Present | 3 |
| HUM221 | Music Appreciation | 3 |
| HUM230 | Art Appreciation | 3 |
| PHI110 | Critical Thinking and Logic | 3 |
| PHI201 | Introduction to Philosophy | 3 |
| PHI210 | Ethics | 3 |
| PHI230 | World Religions | 3 |

### Social/Behavioral Sciences:                      Credit Hours
12 Credit Hours Required
- One Behavioral Science: PSY110 (Required)
- One Social Science: SSC101 or SSC102 (Required)

| | | |
|---|---|---|
| PSY110 | General Psychology (required) | 3 |
| SSC101 | Sociology (required) OR | 3 |
| SSC102 | Sociology Sustainable World | 3 |
| ECO211 | Macroeconomics | 3 |
| ECO212 | Microeconomics | 3 |
| GEO110 | World Geography | 3 |
| GEO210 | Geography - U.S. & Canada | 3 |
| HIS101 | U.S. History Pre-1876 | 3 |
| HIS102 | U.S. History Post-1876 | 3 |
| HIS203 | U.S. Since 1945 | 3 |
| HIS210 | The Modern World | 3 |
| HIS234 | History of the Old Northwest Territory | 3 |
| HST212 | Principles of Addiction | 3 |
| HST240 | Social Problems | 3 |
| HST242 | Marriage and the Family | 3 |
| PSY210 | Abnormal Psychology | 3 |
| PSY220 | Social Psychology | 3 |
| PSY230 | Human Growth & Development | 3 |
| PSY260 | Forensic Psychology | 3 |
| SSC110 | General Anthropology | 3 |
| SSC120 | American Government | 3 |
| SSC130 | Comparative Government | 3 |
| SSC210 | Cultural Diversity | 3 |
| SSC220 | Interpersonal Violence | 3 |

### Mathematics and Science:                      Credit Hours
16 Credit Hours Required.
- At least 2 courses must be lab courses*
- Mathematics proficiency must be demonstrated at the level of MTH 109 College Algebra and MTH112 Trigonometry or MTH213 Calculus I
- Please Note: BIO100, CHM100 and PHY100 are the same course-choose the disciplinary prefix of most interest to you

| | | |
|---|---|---|
| BIO100 | World of Science | 3 |
| BIO101 | Principles of Biology* | 4 |
| BIO115 | Ecology* | 4 |
| BIO150 | The Human Body | 4 |
| BIO180 | Genetics* | 4 |
| BIO201 | General Biology I* | 4 |
| BIO202 | General Biology II* | 4 |
| BIO231 | Anatomy & Physiology I* | 4 |
| BIO232 | Anatomy & Physiology II* | 4 |
| BIO257 | Microbiology* | 4 |
| CHM100 | World of Science | 3 |
| CHM101 | Principles of Chemistry* | 4 |
| CHM110 | Science&Technology of Sustainability* | 4 |
| CHM201 | General Chemistry I* | 5 |
| CHM202 | General Chemistry II* | 4 |
| CHM256 | Principles of Biochemistry* | 3 |
| PHY100 | World of Science | 3 |
| PHY101 | Principles of Physical Science* | 4 |
| PHY140 | Astronomy* | 4 |
| PHY150 | Geology* | 4 |
| PHY251 | Physics: Mechanics & Heat* | 4 |
| PHY252 | Physics: Electricity & Magnetism* | 4 |
| MTH109 | College Algebra | 3 |
| MTH112 | Trigonometry | 3 |
| MTH213 | Calculus I | 5 |
| MTH214 | Calculus II | 5 |

### Electives:
14 Credit Hours Required

Electives may include any 100 or 200 level course. Electives should be selected in line with the student's chosen field of study and the four-year college to which the student plans to transfer. Note that many four-year institutions require a foreign language sequence.

### Total Required:
60 Credit Hours

Curriculum guide sheets for typical programs are available in the Student Services Office, A102. Students planning to transfer to another college should use a guide sheet to help with academic planning. For additional guidance, students should contact the college to which they intend to transfer and utilize the service of the Student Resource Center's Transfer Coordinator.

The value and importance of historic preservation has finally come of age in the United States, where market forces are demanding professionals and paying them competitive wages for knowledge and skills in this area. Northwest State is fortunate to be within driving distance of the University of Eastern Michigan which has the premier, award-winning program in the U.S. for

# Historic Preservation
## Associate of Arts

## Arts and Sciences Division

historic preservation. Students entering into Northwest State's associate degree program will fulfill the first two years of course requirements for the bachelor's degree at Eastern. The program provides students an entry level preparation that will make them cultural stewards who increase awareness and effectiveness of the preservation movement in the United States.

### Career Outlook

Based upon Eastern Michigan University's placement statistics, the most common placements are by the following categories: State Historic Preservation Offices, museums and historical societies, planning consultants and architectural firms, as well as local, state, and federal government entities. Other groups such as, historic district commissions, downtown development authorities, statewide preservation organizations, as well as archives and libraries have hired graduates with preservation backgrounds. A few graduates have even been hired by the National Trust for Historic Preservation.

### Program Learning Outcomes

1. Produce unified, coherent, and well-developed essays following the rules of written academic English and proper source documentation.
2. Interpret the larger thematic, historical or cultural significance of primary works in the humanities.
3. Define and apply key concepts when examining human functioning and problems in society.
4. Demonstrate knowledge of historically significant events and their impact on society.
5. Demonstrate symbolic and graphic manipulation using analytic mathematics skills appropriate to the program.
6. Incorporate the steps of the scientific method, beginning with a question, and concluding by analyzing data and drawing conclusions about a stated hypothesis.
7. Demonstrate competency in utilizing current software applications.
8. Demonstrate practices which lead to the preservation and use of historically significant documents.

### Humanities Electives:

| | |
|---|---|
| ART103 | Beginning Drawing |
| ART210 | Oil Acrylics |
| HUM209 | Hum. & Cultures: Ancient & Med. Worlds |
| HUM210 | Hum. & Cultures: Renaissance to Present |
| HUM230 | Art Appreciation |

### Social/Behavioral Science Electives:

| | |
|---|---|
| PSY220 | Social Psychology |
| SSC110 | General Anthropology |
| SSC120 | American Government |
| SSC210 | Cultural Diversity |

| **First Semester** | | **Credits** |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| ENG111 | Composition I | 3 |
| GEO110 | World Geography | 3 |
| HIS101 | U.S. History Pre-1876 | 3 |
| VCT108 | Photo Editing | 2 |
| | | 14 |

| **Second Semester** | | **Credits** |
|---|---|---|
| ENG112 | Composition II | 3 |
| HIS102 | U.S. History Post-1876 | 3 |
| PSY 110 | General Psychology | 3 |
| | Math/Science Elective | 4 |
| SSC101 or | Sociology | |
| SSC102 | Sociology-Sustainable World | 3 |
| | | 15 |

| **Third Semester** | | **Credits** |
|---|---|---|
| ENG250 | American Literature Thru Mid 19th Century | 3 |
| HIS234 | History of the Old Northwest Territory | 3 |
| PHI230 | World Religions | 3 |
| | Math/Science Elective | 4 |
| | Humanities Elective | 3 |
| | | 16 |

| **Fourth Semester** | | **Credits** |
|---|---|---|
| GEO210 | Geography U.S. & Canada | 3 |
| STA220 | Statistics | 3 |
| ENG234 | Narrative Literature of the Old Northwest Territory | 3 |
| | Humanities Elective | 3 |
| | Social/Behavioral Science Elective. | 3 |
| | | 15 |

### Science Electives:

- Must take 2 prefixes, one lab course denoted with an asterisk*

| | |
|---|---|
| BIO101 | Principles of Biology* |
| BIO115 | Ecology* |
| BIO150 | The Human Body |
| BIO180 | Genetics* |
| BIO201 | General Biology I* |
| BIO202 | General Biology II* |
| BIO231 | Anatomy & Physiology I* |
| BIO232 | Anatomy & Physiology II* |
| BIO257 | Microbiology* |
| CHM101 | Principles of Chemistry* |
| CHM201 | General Chemistry I* |
| CHM202 | General Chemistry II* |
| PHY101 | Principles of Physical Science* |
| PHY140 | Astronomy* |
| PHY150 | Principles of Geology* |
| MTH109 | College Algebra |
| MTH112 | Trigonometry |
| MTH213 | Calculus I |

# Northwest State Transfer Module

## Arts & Sciences Division

The NSCC Transfer Module consists of 40 semester credit hours which will transfer to any Ohio public two- or four-year college. Students should follow the instructions below in selecting courses for the Transfer Module:

1. Choose courses to fulfill the minimum requirements in each section below, according to the guidelines provided.
2. Complete the remaining hours of the Transfer Module by selecting additional courses listed in any of the sections to total the 40 semester hours required for the Transfer Module. NOTE: Be sure to check with an advisor to assure that the courses chosen are appropriate for the major and the transfer institution selected and that they are consistent with the minimum graduation requirements of this institution. Also, check the college catalog for any prerequisite requirements.
3. NSCC students completing the Associate of Science degree requirements will have satisfied this Transfer Module.

### English Composition:
- 2 courses required

| | | |
|---|---|---|
| ENG111 | Composition I (required)................. | 3 |
| ENG112 | Composition II (required) ............... | 3 |

### Mathematics Electives:                Credit Hours

| | | |
|---|---|---|
| MTH109 | College Algebra............................... | 3 |
| MTH112 | Trigonometry.................................... | 3 |
| MTH213 | Calculus I ........................................ | 5 |
| MTH214 | Calculus II ....................................... | 5 |

### Arts & Humanities:                Credit Hours
- Select a minimum of 3 courses from the following list:

| | | |
|---|---|---|
| ENG223 | Interpretation of Literature.............. | 3 |
| ENG230 | Children's Literature ........................ | 3 |
| ENG250 | American Literature Through the Mid-19th Century ....... | 3 |
| ENG251 | American Literature Since the Mid-19th Century ............ | 3 |
| ENG260 | British Literature Through the 18th Century ............... | 3 |
| ENG261 | British Literature 19th Century to Present...................................... | 3 |
| ENG271 | Non-Western Literature.................... | 3 |
| HUM209 | Humanities and Cultures: Ancient and Medieval Worlds......... | 3 |
| HUM210 | Humanities and Cultures: Renaissance to Present .................... | 3 |
| HUM221 | Music Appreciation ......................... | 3 |
| HUM230 | Art Appreciation.............................. | 3 |
| PHI110 | Critical Thinking and Logic ............ | 3 |
| PHI201 | Introduction to Philosophy.............. | 3 |
| PHI210 | Ethics............................................... | 3 |
| PHI230 | World Religions............................... | 3 |

### Social/Behavioral Sciences                Credit Hours
- Select a minimum of 3 courses from at least 2 areas on the following list:

| | | |
|---|---|---|
| ECO211 | Macroeconomics .............................. | 3 |
| ECO212 | Microeconomics............................... | 3 |
| GEO110 | World Geography ............................ | 3 |
| GEO210 | Geography - US and Canada........... | 3 |
| HIS101 | U.S. History Pre-1876..................... | 3 |
| HIS102 | U.S. History Post-1876 ................... | 3 |
| HIS203 | U.S. Since 1945............................... | 3 |
| HIS210 | The Modern World .......................... | 3 |
| HST240 | Social Problems............................... | 3 |
| HST242 | Marriage and the Family ................ | 3 |
| PSY110 | General Psychology ........................ | 3 |
| PSY210 | Abnormal Psychology...................... | 3 |
| PSY220 | Social Psychology ........................... | 3 |
| PSY230 | Human Growth & Development ..... | 3 |
| SSC101 | Sociology (required) or .................. | 3 |
| SSC102 | Sociology for a Sustainable World.. | 3 |
| SSC110 | General Anthropology..................... | 3 |
| SSC120 | American Government...................... | 3 |
| SSC130 | Comparative Government ............... | 3 |
| SSC210 | Cultural Diversity............................ | 3 |

### Natural and Physical Sciences:                Credit Hours
- Select a minimum of 6 credits from the following list:

| | | |
|---|---|---|
| BIO101 | Principles of Biology*..................... | 4 |
| BIO115 | Ecology* ......................................... | 4 |
| BIO150 | The Human Body ............................ | 4 |
| BIO180 | Principles of Genetics* ................... | 4 |
| BIO201 | General Biology I............................ | 4 |
| BIO202 | General Biology II........................... | 4 |
| BIO210 | Botany* ........................................... | 4 |
| BIO220 | Zoology* ......................................... | 4 |
| BIO231 | Anatomy & Physiology I* .............. | 4 |
| BIO232 | Anatomy & Physiology II*............. | 4 |
| BIO257 | Microbiology*................................. | 4 |
| CHM101 | Principles of Chemistry*................ | 4 |
| CHM201 | General Chemistry II...................... | 5 |
| CHM256 | Principles of Biochemistry*........... | 3 |
| PHY101 | Principles of Physical Science* ...... | 4 |
| PHY140 | Astronomy*..................................... | 4 |
| PHY150 | Principles of Geology*.................... | 4 |
| PHY251 | Physics: Mechanics & Heat* ......... | 4 |
| PHY252 | Physics: Electricity & Magnetism* | 4 |

# Business Technologies

**Contact the Dean:**
Von Plessner • 419.267.1351 • vplessner@northweststate.edu

# Business Technologies Division

## Advisory Committees

### Accounting Advisory Committee

Tim Funchion, Arrow Tru-Line, Inc., Archbold, Ohio
Sue Irving, Napoleon, Ohio
Chris Lee, Defiance City Schools, Defiance, Ohio
Pat Michaelis, Defiance, Ohio
Toni Neuenschwander, SANLUIS Rassini – Ohio, Montpelier, Ohio
Jennifer Roth, Napoleon, Ohio
Randy Schroeder, Farmers & Merchants State Bank, Archbold, Ohio

Richard Sealscott, Van Wert, Ohio
Bob Slattery, Hicksville, Ohio
Amy Trowbridge, Delta, Ohio
Janette Wagner, CK Technologies, Montpelier, Ohio
Cindy Wendell, Defiance, Ohio

### Business Management Advisory Committee

Lance Bowsher, Edgerton, Ohio
Doug Daoust, Daoust Drugs, Inc., Defiance, Ohio
Mike Farmer, Paulding Chamber of Commerce, Paulding, Ohio
Jill Jacoby, Northern Buckeye Education Council, Archbold, Ohio
Pam Johnson, Northwest Ohio Job Center, Bryan, Ohio
Jan Lauro, Defiance County Juvenile Probation, Bryan, Ohio
Isaac Lee, Defiance County Economic Development, Defiance, Ohio
Marcy LeFevre, Delta Area Chamber of Commerce, Delta, Ohio
Joel Miller, Napoleon/Henry Chamber of Commerce, Napoleon, Ohio
Ken Miller, Archbold Chamber of Commerce, Archbold, Ohio
Jerry Monnin, Defiance, Ohio
Debbie Nelson, Wauseon Chamber of Commerce, Wauseon, Ohio

Linda Nofziger, First Federal Savings & Loan, Montpelier, Ohio
Al Phipps, Pioneer, Ohio
Steve Raymond, Mont. Area Chamber of Commerce, Montpelier, Ohio
Brent Schlegel, Toledo, Ohio
Tim Small, Defiance Area Chamber of Commerce, Defiance, Ohio
Wally Snyder, Mayor, Holgate, Ohio
Neil Toeppe, Swanton Area Chamber of Commerce, Swanton, Ohio
Bruce Van Arsdalen, ITW Tomco, Bryan, Ohio
Greg Whitacre, Archbold, Ohio
Dan Yarhaus, Bryan Area Chamber of Commerce, Bryan, Ohio
Diamond Zimmerman, WEDCO, Bryan, Ohio

### Information Technology Advisory Committee

Catherine Aldrich, NWOCA, Archbold, Ohio
Kevin Anderson, Bryan, Ohio
Bill Brandt, RDSI Banking Systems, Defiance, Ohio
Joe Ferrall, NWOCA, Archbold, Ohio
Jim Hornyak, Bryan, Ohio
Larae Meyer, Napoleon, Ohio
Doug Nafziger, Fulton Co. Auditor's Office, Wauseon, Ohio

Sam Petros, Toledo, Ohio
John Robinson, Bryan, Ohio
Mary Beth Royal, Royal Computer Sales & Service, New Bavaria, Ohio
Bill Wolfrum, The Ohio Art Company, Bryan, Ohio
John Zuber, Defiance, Ohio

### Office Services Advisory Committee

Carolyn Brown, Swanton, Ohio
Morgan Etoll, OI Glass, Perrysburg, Ohio
Stephanie Fisher, Community Health Professionals, Defiance, Ohio
Karla Golding, AmeriCare Home Health Services, Bryan, Ohio
Kenzie Hammon, Four County Career Center, Archbold, Ohio
Atanya Hayes, Fulton County Health Center, Archbold, Ohio
Barb Lause, Stryker, Ohio

LuAnn Masters, Community Health Professionals, Archbold, Ohio
Teresa Monroe, Community Health & Wellness Centers, Bryan, Ohio
Betty Mowery, Tenneco Automotive, Napoleon, Ohio
Marleen Shumaker, Bryan, Ohio
Kendra Smith, Continental, Ohio
Leslie Witsaman, SRT Prosthetics & Orthotics, Bryan, Ohio

### Paralegal Advisory Committee

Erwin Bandy, Paulding, Ohio
Sara Boyd, Defiance, Ohio
Kimberly Kazimier, Gallagher, Stelzer & Yosick, Ltd., Bryan, Ohio

Kathleen Reed, University of Toledo, Toledo, Ohio
Carrie Schlade, Montpelier, Ohio

### Visual Communications Advisory Committee

Rick Bolman, Fypon, Archbold, Ohio
Jim Buchholz, Four County Career Center, Archbold, Ohio
Katie Delay, Four County Career Center, Archbold, Ohio
Jeff Jameson, Sauder Manufacturing, Archbold, Ohio

Michael Quimby, Sauder Manufacturing, Archbold, Ohio
Joe Sauder, Think Tank, Vancouver, Canada
Emily Hall Lantz, Northwest Signal, Napoleon, Ohio

# Business Technologies Division

The Business Technologies Division at Northwest State offers a variety of degree, certificate and licensing programs that provide the skills needed to help students who are seeking a new and rewarding career in business. These programs also benefit students who are interested in advancing their current careers.

Many of the associate degrees offered in the Business Technologies Division offer a two-plus-two option. This means that students can earn the first two years of a bachelor's degree at Northwest State and transfer seamlessly into their junior year at a four-year college or university.

Degree and Certificate programs offered through the Business Technologies Division include:

**Associate of Applied Science**
Pre Business Administration

**Associate of Applied Business**
Accounting
Business Management
Forensic Accounting
Logistics and Supply Chain Management
Paralegal Studies
Public Administration & Non-Profit Management (Proposed)
Visual Communications Technologies

**Business Management**
Banking & Finance
Entrepreneurship
Human Resource Management
International/Global Business
Marketing & Retailing

**Information Technology**
Computer Programming
Internet Security
Network Administration
Web Site Administration

**Office Administrative Services**
Office Administration
Office Administration – Legal Support
Office Administration – Medical Support
Office Administration – Office Management

**Certificate Programs**
Accounting Assistant
Computer Technician
Logistics and Supply Chain Management
Office Assistant
Real Estate
Truck Driving

The following elective lists should be used unless specified on the program page.

### Humanities Electives:
| | |
|---|---|
| ENG223 | Interpretation of Literature |
| ENG230 | Children's Literature |
| ENG234 | Narrative Literature of the Old Northwest Territory |
| ENG240 | Introduction to Poetry |
| ENG241 | Introduction to Fiction |
| ENG250 | American Literature Through the Mid-19th Century |
| ENG251 | American Literature Since the Mid-19th Century |
| ENG260 | British Literature Through the 18th Century |
| ENG261 | British Literature 19th Century to Present |
| ENG271 | Non-Western Literature |
| HUM209 | Humanities and Cultures: Ancient & Medieval Worlds |
| HUM210 | Humanities and Cultures: Renaissance to Present |
| HUM221 | Music Appreciation |
| HUM230 | Art Appreciation |

| | |
|---|---|
| PHI110 | Critical Thinking & Logic |
| PHI201 | Introduction to Philosophy |
| PHI210 | Ethics |
| PHI220 | Ethics in Health Care |
| PHI222 | Ethics in the Helping Professions |
| PHI230 | World Religions |

### Social Behavioral Science Electives:
| | |
|---|---|
| HIS101 | U.S. History Pre-1876 |
| HIS102 | U.S. History Post-1876 |
| HIS203 | U.S. Since 1945 |
| HIS210 | The Modern World |
| HIS234 | History of the Old Northwest Territory |
| PSY110 | General Psychology |
| PSY220 | Social Psychology |
| SSC101 | Sociology |
| or | |
| SSC102 | Sociology Sustainable World |
| SSC110 | General Anthropology |
| SSC120 | American Government |
| SSC130 | Comparative Government |
| SSC210 | Cultural Diversity |
| SSC220 | Interpersonal Violence |

### Prerequisites:
All students are required to demonstrate proficiency in reading, writing, mathematics, keyboarding, and computers based on scores on the assessment test or by taking the recommended classes. If you have not taken these tests, stop by the Admissions Office in C106 or call (419) 267-1320 for information or referral to testing.

**Algebra**
1. Meets course placement results for MTH090 Intermediate Algebra proficiency.
2. Intermediate Algebra or Algebra II in high school and ACT $\geq$ 22.
3. College equivalent (MTH090 Intermediate Algebra) with a minimum grade of "S."

**Computer Competency**
1. High school microcomputer course with a minimum grade of "C" since 1992.
2. Successfully complete or proficiency CIS090 Introduction to Computers or equivalent.

**Keyboard Competency**
1. High school keyboarding course with a minimum grade of "C."
2. Successfully complete or proficiency OAS090, Keyboarding Basics or equivalent.

Some courses listed in this program have specific prerequisites. It is strongly recommended that students without prior accounting instruction take ACC090, Introduction to Accounting, BEFORE registering for Financial Accounting. See prerequisites required for each course in the Course Description section of the College catalog.

### General Education:
For Northwest State Core Requirements, see page 30. For the NSCC Transfer Module, see page 36.

### Course Sequence:
This is a suggested sequence of courses for full-time students. If you are a part-time student, or have transferred courses from another school, you should generally complete courses listed under the first semester before moving on to semester 2, 3, and then 4. Elective courses may be taken at any time. Please meet with your advisor to develop a personalized schedule which will meet your needs. Your advisor can help you make any necessary changes to this recommended sequence.

# Pre-Business Administration
## Associate of Science

## Business Technologies Division

Students who wish to transfer into the College of Business Administration (COBA) at the University of Toledo can complete the first two years at Northwest State and earn an Associate of Science in Pre Business Administration. Courses will transfer to the Bachelor of Business Administration degree. Many other four-year colleges and universities will also accept the courses for transfer credits.

### Career Outlook

Employment opportunities are varied and will depend on each individual goal. Entry-level management positions are found in the manufacturing, retail, food service, banking and governmental services. Individuals interested in sales positions will find many opportunities. Both nationally and in the state of Ohio business services sales positions, particularly technical sales are expected to grow much faster than the average. Companies which are new and existing will be hiring managers. Service industries, such as food service, will experience a faster than average growth.

### Program Learning Outcomes

Students who complete the Pre Business Administration program will be able to transfer to four-year colleges in degree programs in which:
1. Students will demonstrate understanding of the major styles of management.
2. Students will demonstrate mastery of a foundation of business understanding.

| First Semester | | Credits |
|---|---|---|
| ACC111 | Financial Accounting | 4 |
| ECO212 | Microeconomics | 3 |
| ENG111 | Composition I | 3 |
| MGT110 | Management | 3 |
| | Humanities Elective | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| ACC112 | Managerial Accounting | 4 |
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| MKT110 | Marketing | 3 |
| | Humanities Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| MTH213 | Calculus I | 5 |
| SSC210 | Cultural Diversity | 3 |
| | Humanities Elective | 3 |
| | Natural Science Elective | 4 |
| | Social Behavioral Science Elective | 3 |
| | | 18 |

| Fourth Semester | | Credits |
|---|---|---|
| ECO211 | Macroeconomics | 3 |
| STA222 | Statistics | 3 |
| | Humanities Elective | 3 |
| | Literature Elective | 3 |
| | Natural Science Elective | 4 |
| | | 16 |

### Humanities Electives:
- At least one from each prefix

| | |
|---|---|
| HUM209 | Humanities & Cultures: Renaissance to Present |
| HUM210 | Humanities & Cultures: Ancient & Medieval Worlds |
| HUM221 | Music Appreciation |
| HUM230 | Art Appreciation |
| PHI110 | Critical Thinking & Logic |
| PHI201 | Introduction to Philosophy |
| PHI210 | Ethics |
| PHI230 | World Religions |

### Social Behavioral Science Electives:

| | |
|---|---|
| HIS101 | U.S. History Pre-1876 |
| HIS102 | U.S. History Post-1876 |
| PSY110 | General Psychology |
| SSC101 | Sociology |
| SSC120 | American Government |

### Literature Electives:

| | |
|---|---|
| ENG223 | Interpretation of Literature |
| ENG250 | American Literature Through the Mid-19th Century |
| ENG251 | American Literature Since the Mid-19th Century |
| ENG260 | British Literature Through the 18th Century |
| ENG261 | British Literature 19th Century to Present |
| ENG271 | Non-Western Literature |

### Natural Science Electives:
- One course per prefix

| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO180 | Principles of Genetics |
| PHY140 | Astronomy |
| PHY251 | Physics: Mechanics and Heat |
| PHY252 | Physics: Electricity and Magnetism |

# Accounting
## Associate of Applied Business

## Business Technologies Division

Students in accounting develop a high degree of technical skills in accounting systems and business organization. The accounting programs provide business-related experience on modern equipment. Courses utilize personal computers and electronic printing calculators. The Accounting degree program is designed to help students attain technical accounting skills and a broad knowledge of business fundamentals. Accounting systems are studied as they are applied every day in business and industrial organizations.

Graduates are qualified as senior clerks or junior accountants, positions as a cost accountant, accounting supervisor, payroll supervisor or office manager. The Associate of Applied Business degree in Accounting is offered on a weekend college basis along with the typical schedule of daytime or evening classes.

### Career Outlook

As the economy grows, the number of businesses will increase as well as the need for accountants. The accounting profession generally has a low rate of turnover; therefore, openings will be primarily created through retirements and promotions.

### Program Learning Outcomes

Students who complete the Accounting program will be employable in a variety of accounting positions in which:
1. Students will create financial statements, reports, and schedules.
2. Students will make managerial decisions based on their interpretation of financial statements.
3. Students will integrate accounting knowledge into software programs.
4. Students will demonstrate accurate skills in recording and reporting of accounts.
5. Students will demonstrate mastery of a foundation of business understanding.

### Accounting Electives:
| | | |
|---|---|---|
| ACC240 | Business Income Tax Accounting | |
| ACC291 | Accounting Internship | |

### Computer Accounting Electives:
| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

### First Semester — Credits
| | | | |
|---|---|---|---|
| + | ACC111 | Financial Accounting | 4 |
| + | ACC120 | Payroll Accounting | 3 |
| | ENG111 | Composition I | 3 |
| | | Mathematics Elective | 3 |
| | | Social Behavioral Science Elective | 3 |
| | | | 16 |

### Second Semester — Credits
| | | | |
|---|---|---|---|
| + | ACC112 | Managerial Accounting | 4 |
| + | ACC140 | Individual Income Tax Accounting | 3 |
| | CIS114 | Microsoft Applications | 3 |
| | ENG112 | Composition II | 3 |
| | | Humanities Elective | 3 |
| | | | 16 |

### Third Semester — Credits
| | | | |
|---|---|---|---|
| + | ACC211 | Intermediate Accounting I | 3 |
| + | ACC221 | Cost Accounting I | 3 |
| + | | Computer Accounting Electives (3) | 3 |
| + | | Accounting Elective | 3 |
| | | Business Elective | 3 |
| | | | 15 |

### Fourth Semester — Credits
| | | | |
|---|---|---|---|
| + | ACC212 | Intermediate Accounting II | 3 |
| + | ACC222 | Cost Accounting II | 3 |
| + | ACC230 | Auditing | 3 |
| | BUS221 | Business Law | 3 |
| | | Science Elective | 3 |
| | | | 15 |

### Business Electives:
| | |
|---|---|
| BUS160 | International/Global Business |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| CIS113 | Microsoft Excel |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS122 | Intermediate Excel |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| MGT110 | Management |
| MGT210 | Human Resource Management |
| MGT280 | Business Climate Analysis |
| MKT230 | Salesmanship |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Forensic Accounting
## Associate of Applied Business

## Business Technologs Division

Forensic Accounting is a combination of accounting and investigation skills that provide students with both litigation support and investigative support skills. Forensic accountants testify in courtrooms in a clear and concise manner and present evidence for financial investigations. The investigations performed may include traditional audits or a court-required examination of records to provide evidence used to resolve a legal issue. Forensic accountants may find employment with police agencies, banks and financial institutions, insurance companies, or within various governmental agencies. The forensic accountant will use their skills to gather, analyze, and present information that is clear and understandable. The analyst's skills include accounting and reporting of financial information, use of computer applications, and good communication.

### Career Outlook
As the economy grows, the number of businesses will increase as well as the need for accountants. The accounting profession generally has a low rate of turnover; therefore, openings will be primarily created through retirements and promotions.

### Program Learning Outcomes
Students who complete the Accounting program will be employable in a variety of accounting positions in which:
1. Students will create financial statements, reports, and schedules.
2. Students will interpret financial statements and make managerial decisions.
3. Students will integrate accounting knowledge into software programs.
4. Students will demonstrate accurate skills in recording transactions.

### Business Electives:
| | | |
|---|---|---|
| ACC222 | Cost Accounting II |
| BUS160 | International/Global Business |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| CIS113 | Microsoft Excel |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS122 | Intermediate Excel |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| MGT110 | Management |
| MGT210 | Human Resource Management |
| MGT280 | Business Climate Analysis |
| MKT230 | Salesmanship |

### Computer Accounting Electives:
| | | |
|---|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |

| First Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting ...................... | 4 |
| + ACC120 | Payroll Accounting.......................... | 3 |
| ENG111 | Composition I................................. | 3 |
| | Mathematics Elective ..................... | 3 |
| | Social Behavioral Science Elective | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting ................... | 4 |
| ENG112 | Composition II ............................... | 3 |
| + FRA100 | Fraud Detection and Deterrence...... | 3 |
| | Computer Elective........................... | 2 |
| | Humanities Elective ........................ | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| + ACC211 | Intermediate Accounting I.............. | 3 |
| + ACC221 | Cost Accounting I........................... | 3 |
| + FRA200 | Fraud Examination ......................... | 3 |
| | Business Elective ........................... | 3 |
| | Computer Accounting Electives (3) | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| + ACC212 | Intermediate Accounting II ............ | 3 |
| BUS221 | Business Law ................................. | 3 |
| + FRA210 | Legal Elements of Fraud ................ | 3 |
| + FRA220 | Corporate Internal | |
| | Control & Governance .................... | 3 |
| | Science Elective ............................. | 3 |
| | | 15 |

### Computer Electives:
- Choose 3 credit hours from the following list:
| | | |
|---|---|---|
| CIS112 | Microsoft Word |
| CIS113 | Microsoft Excel |
| CIS114 | Microsoft Applications |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS122 | Intermediate Excel |

### Humanities Electives:
Select any core Humanities course on page 30.

### Mathematics Electives:
| | | |
|---|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

### Social Behavioral Science Electives:
Select any core Social Behavioral Science course on page 30.

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Accounting Assistant
## Certificate

## Business Technologies Division

Accounting is an excellent foundation for any type of business or office position.  Most managerial positions require at least some understanding of accounting functions. The one-year certificate program provides students with accounting skills in balance sheets, income statements, payroll accounting and personal tax accounting.

Those who complete the program are employable within one academic year as a payroll clerk, accounts payable clerk, Accounts receivable clerk or general accounting bookkeeper in business or industrial organizations. The student can earn the associate degree by completing one year of full-time study beyond the Accounting Assistant Certificate.

### Career Outlook
As the economy grows, the number of businesses will increase as well as the need for accountants. The accounting profession generally has a low rate of turnover; therefore, openings will be primarily created through retirements and promotions.

### Program Learning Outcomes
Students who complete the Accounting program will be employable in a variety of accounting positions in which:
1. Students will create financial statements, reports, and schedules.
2. Students will make managerial decisions based on their interpretation of financial statements.
3. Students will integrate accounting knowledge into software programs.
4. Students will demonstrate accurate skills in recording and reporting of accounts.
5. Students will demonstrate mastery of a foundation of business understanding.

| First Semester | | | Credits |
|---|---|---|---|
| + | ACC111 | Financial Accounting | 4 |
| + | ACC120 | Payroll Accounting | 3 |
| | ENG111 | Composition I | 3 |
| | | Business Elective | 3 |
| | | Mathematics Elective | 3 |
| | | | 16 |

| Second Semester | | | Credits |
|---|---|---|---|
| + | ACC112 | Managerial Accounting | 4 |
| + | ACC140 | Individual Income Tax Accounting | 3 |
| | ENG112 | Composition II | 3 |
| | CIS114 | Microsoft Applications | 3 |
| + | | Computer Accounting Electives (3) | 3 |
| | | | 16 |

### Business Electives:
| | |
|---|---|
| BUS160 | International/Global Business |
| BUS221 | Business Law |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| CIS113 | Microsoft Excel |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| MGT110 | Management |
| MGT210 | Human Resource Management |
| MGT280 | Business Climate Analysis |
| MKT230 | Salesmanship |

### Computer Accounting Electives:
| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Business Management
## Associate of Applied Business

## Business Technologies Division

Today's successful managers need a variety of skills, including communication and analytical and decision-making skills. The demand for business management personnel has risen with the growing number of small businesses in northwest Ohio. At the same time, large businesses continuously require mid-management and supervisory personnel. The graduate of the business management program is skilled in supervision, labor relations, accounting, marketing, salesmanship and decision-making. The graduate is qualified for a position as a general manager or assistant manager of a small business or a personnel specialist, foreman or supervisor of a manufacturer, commercial business, or other organization. The business management program offers a weekend college option along with the typical schedule of daytime or evening classes.

### Career Outlook

Employment opportunities are varied and will depend on each individual goal. Entry-level management positions are found in the manufacturing, retail, food service, banking and governmental services. Individuals interested in sales positions will find many opportunities. Both nationally and in the state of Ohio, business services sales positions, particularly technical sales, are expected to grow much faster than the average. Companies which are new and existing will be hiring managers. Service industries, such as food service, will experience a faster than average growth.

### Program Learning Outcomes

Students who complete the Business Management program will be employable in a variety of management positions in which:
1. Students will demonstrate understanding of the major styles of management.
2. Students will exhibit personal skills of telephone etiquette, proper business attire, and social skills.
3. Students will exhibit work skills of attendance, work ethic, and self-motivation.
4. Students will demonstrate mastery of a foundation of business understanding.
5. Students will demonstrate understanding of business ethics.

| First Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| ECO212 | Microeconomics | 3 |
| ENG111 | Composition I | 3 |
| + MGT110 | Management | 3 |
| | Mathematics Elective | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| + MKT110 | Marketing | 3 |
| | Science Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| + BUS221 | Business Law | 3 |
| + MGT210 | Human Resource Management | 3 |
| + | Business Elective | 3 |
| | Humanities Elective | 3 |
| | Social Behavioral Science Elective | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| + BUS250 | Labor Relations | 3 |
| + MGT280 | Business Climate Analysis | 3 |
| + MKT230 | Salesmanship | 3 |
| | Business Analysis Elective | 3 |
| | Business Elective | 3 |
| | Computer Elective | 3 |
| | | 18 |

**Business Analysis Electives:**
| | |
|---|---|
| ACC221 | Cost Accounting I |
| STA220 | Statistics |

**Business Electives:** (6 total credit hours required)
| | |
|---|---|
| ACC140 | Individual Income Tax Accounting |
| ACC221 | Cost Accounting I |
| ACC240 | Business Income Tax Accounting |
| BUS160 | International/Global Business |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| MGT221 | Entrepreneurship |
| MGT230 | Retail Management |
| MGT290 | Business Mgt. Co-Op/Internship |
| MKT210 | Advertising |
| REA210 | Real Estate Principles |
| VCT182 | Photography |

*All of the following are 1 credit hour courses:*
| | |
|---|---|
| MKT111 | Entrepreneurial I |
| MKT112 | Entrepreneurial II |
| MKT113 | Entrepreneurial III |

**Computer Electives:** (Choose 3 credit hours)
| | |
|---|---|
| ACC260 | Accounting on Computers |
| CIS113 | Microsoft Excel |
| CIS129 | Web Page Development |

*All of the following are 1 credit hour courses:*
| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS121 | Intermediate Word |
| CIS122 | Intermediate Excel |

**Mathematics Electives:**
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

+    Students must attain a 2.00 grade point average in these technical courses to graduate.

# Banking & Finance
## Associate of Applied Business in Business Management

### Business Technologies Division

The banking and finance degree provides students with a broad and practical background in bank-related management skills and the application of those skills to the banking field. Topics with which a bank manager should be familiar (commercial and real estate lending, investments, regulatory structure, and financial statements) receive major emphasis. Several course projects require extensive research into these bank-related fields. The graduate is also familiar with the computer field and with some accounting and spreadsheet applications.

The graduate is qualified for a position as a manager or assistant manager of a small bank, savings and loan or credit union. In a larger institution, the graduate could specialize in either the loan origination or consumer/commercial credit department.

Real estate classes are offered in a seminar format as full-day sessions on weekends.

### Career Outlook

Most opportunities will be found in financial institutions which include banks, credit unions, loan companies, insurance firms, stock brokerage firms, investment banking firms and commercial and residential real estate businesses. As the economy grows, loan officers/counselors will process more applications for commercial, consumer, and mortgage loans. Financial Manager Positions are expected to grow about as fast as the average, especially in the securities industry because more people are investing.

### Program Learning Outcomes

Students who complete the Banking & Finance program will be employable in a variety of management positions in which:

1. Students will demonstrate understanding of the major styles of management.
2. Students will exhibit personal skills of telephone etiquette, proper business attire, and social skills.
3. Students will exhibit work skills of attendance, work ethic, and self motivation.
4. Students will demonstrate mastery of a foundation of business understanding.
5. Students will demonstrate understanding of business ethics.
6. Students will demonstrate understanding of banking practices.

| First Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| ECO212 | Microeconomics | 3 |
| ENG111 | Composition I | 3 |
| + MGT110 | Management | 3 |
| | Mathematics Elective | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| + BAN110 | Bank Management | 3 |
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| MGT120 | Supervision | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| + BAN210 | Credit Management | 3 |
| + BUS221 | Business Law | 3 |
| ECO211 | Macroeconomics | 3 |
| MKT110 | Marketing | 3 |
| + REA210 | Real Estate Principles | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| + BAN220 | Investment Management | 3 |
| + MGT280 | Business Climate Analysis | 3 |
| + MKT230 | Salesmanship | 3 |
| | Computer Elective | 3 |
| | Humanities Elective | 3 |
| | Science Elective | 3 |
| | | 18 |

**Computer Electives:** (Choose 3 credit hours)
| | |
|---|---|
| ACC260 | Accounting on Computers |
| CIS113 | Microsoft Excel |
| CIS129 | Web Page Development |

*All of the following are 1 credit hour courses:*
| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS121 | Intermediate Word |
| CIS122 | Intermediate Excel |

**Mathematics Electives:**
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Marketing & Retailing
## Associate of Applied Business in Business Management

### Business Technologies Division

Graduates of the marketing & retailing degree are skilled in retailing, retail buying, marketing, small business management, salesmanship and advertising, as well as accounting, supervision and decision making. Graduates are qualified for a position as manager or assistant manager of a retail store, franchise outlet or department store. Graduates may also work as managers or supervisors of other organizations.

### Career Outlook
Employment in marketing and retail, both nationally and in the state of Ohio, is expected to grow as fast as the average. The main employers in marketing and retail management are grocery stores, automotive dealerships, clothing stores and department stores.

### Program Learning Outcomes
1. Students will demonstrate understanding of the major styles of management.
2. Students will exhibit personal skills of telephone etiquette, proper business attire, and social skills.
3. Students will exhibit work skills of attendance, work ethic, and self-motivation.
4. Students will demonstrate mastery of a foundation of business understanding.
5. Students will demonstrate understanding in marketing and retailing practices.

| First Semester | | Credits |
|---|---|---|
| ECO212 | Microeconomics | 3 |
| ENG111 | Composition I | 3 |
| + MGT110 | Management | 3 |
| + MGT230 | Retail Management | 3 |
| | Mathematics Elective | 3 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| + MGT120 | Supervision | 3 |
| + MKT110 | Marketing | 3 |
| | Science Elective | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| + BUS221 | Business Law | 3 |
| ECO211 | Macroeconomics | 3 |
| + MKT210 | Advertising | 3 |
| | Computer Elective | 3 |
| | Social Behavioral Science Elective. | 3 |
| | | 19 |

| Fourth Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| + MGT221 | Entrepreneurship | 3 |
| + MGT280 | Business Climate Analysis | 3 |
| + MKT230 | Salesmanship | 3 |
| | Humanities Elective | 3 |
| | | 16 |

**Computer Electives:** (Choose 3 credit hours)

| | |
|---|---|
| ACC260 | Accounting on Computers |
| CIS113 | Microsoft Excel |
| CIS129 | Web Page Development |

*The following is a 2 credit hour course:*

| | |
|---|---|
| VCT108 | Photo Editing |

*The following are 1 credit hour courses:*

| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS121 | Intermediate Word |
| CIS122 | Intermediate Excel |

**Mathematics Electives:**

| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

+    Students must attain a 2.00 grade point average in these technical courses to graduate.

# Entrepreneurship
## Associate of Applied Business in Business Management

<div style="background:green">BUSINESS TECHNOLOGIES DIVISION</div>

Graduates of this program acquire skills to create innovative ventures, recognize opportunities, evaluate alternative courses of action and formulate a plan to successfully achieve organizational objectives. Entrepreneurial skills can be utilized within existing organizations and government agencies to effect changes necessary to the success and survival of the organization.

Students are prepared with assessment skills in financial and legal analysis. The creation of the business plan forms the foundation for the entrepreneur and is a major focus of the entrepreneurship program.

### Career Outlook
Employment both nationally and in the state of Ohio, is expected to grow as fast as the average. From 2002 to 2012 the top areas of job creation will be management and consulting (42.9 percent growth rate), computer systems and related services (41.3 percent growth rate), and home health care services (39.6percent growth rate), indicating areas of opportunities for individuals with a drive, vision and skills to provide new and creative services.

### Prerequisites
All students are required to demonstrate proficiency in reading, writing, mathematics, keyboarding, and computers based on scores on the assessment test or by taking the recommended classes. If you have not taken these tests, see the testing coordinator in room C104 for information or referral to testing.

Some courses listed in this program have specific prerequisites. It is strongly recommended that students without prior accounting instruction take ACC090 Introduction to Accounting BEFORE registering for Financial Accounting. See prerequisites required for each course in the Course Description section of the College catalog.

### General Education
For Northwest State Core Requirements, see page 30. For the NSCC Transfer Module, see page 3

### Program Learning Outcomes
1. Students will identify entrepreneurial opportunities.
2. Students will develop and present a feasible business plan.
3. Students will demonstrate understanding of the major styles of management.
4. Students will exhibit work skills of attendance, work ethic, and self-motivation.
5. Students will demonstrate understanding of business ethics.

**Business Electives:**

| | | |
|---|---|---|
| BUS250 | Labor Relations | |
| MGT290 | Business Management Internship | |
| MKT210 | Advertising | |
| MKT230 | Salesmanship | |

*All of the following are 1 credit hour courses:*

| | | |
|---|---|---|
| MKT111 | Entrepreneurial Marketing I | |
| MKT112 | Entrepreneurial Marketing II | |
| MKT113 | Entrepreneurial Marketing III | |

**First Semester** — Credits

| | | | |
|---|---|---|---|
| | ECO212 | Microeconomics | 3 |
| | ENG111 | Composition I | 3 |
| + | MGT110 | Management | 3 |
| | | Mathematics Elective | 3 |
| + | | Technical Elective | 3 |
| | | | 15 |

**Second Semester** — Credits

| | | | |
|---|---|---|---|
| | CIS114 | Microsoft Applications | 3 |
| | ENG112 | Composition II | 3 |
| + | MGT120 | Supervision | 3 |
| + | MKT110 | Marketing | 3 |
| | | Science Elective | 3 |
| | | | 15 |

**Third Semester** — Credits

| | | | |
|---|---|---|---|
| + | ACC111 | Financial Accounting | 4 |
| + | BUS221 | Business Law | 3 |
| | ECO211 | Macroeconomics | 3 |
| + | MGT210 | Human Resource Management | 3 |
| | | Social Behavioral Science Elective. | 3 |
| | | | 16 |

**Fourth Semester** — Credits

| | | | |
|---|---|---|---|
| + | ACC112 | Managerial Accounting | 4 |
| + | MGT221 | Entrepreneurship | 3 |
| + | MGT280 | Business Climate Analysis | 3 |
| + | | Business Elective | 3 |
| | | Computer Elective | 3 |
| | | Humanities Elective | 3 |
| | | | 19 |

**Computer Electives:** (Choose 3 credit hours)

| | |
|---|---|
| ACC260 | Accounting on Computers |
| CIS113 | Microsoft Excel |
| CIS129 | Web Page Development |

*All of the following are 1 credit hour courses:*

| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS121 | Intermediate Word |
| CIS122 | Intermediate Excel |

**Mathematics Electives:**

| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

**Technical Electives:**

| | |
|---|---|
| CAD111 | CAD I |
| IND110 | Industrial Computing I |
| MET110 | Print Reading & Sketching |
| MGT230 | Retail Management |
| PET110 | Principles of Plastics |
| QCT100 | Quality Concepts |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Human Resource Management
## Associate of Applied Business in Business Management

## Business Technologes Division

An environment that is very fast paced and dynamic requires human resource professionals that are able to help manage a productive and efficient workforce. The human resource professional is a critical member of the management team and has direct responsibility for managing employee relations, wage and salary administration, benefits, as well as contract negotiations. The Ohio demand for professionals in the time period 2006 to 2016 is expected to grow at 14% compared to a national average of 11 percent for Human Resource Managers.

### Program Learning Outcomes
1. Students will demonstrate understanding of the major styles of management.
2. Students will exhibit personal skills of telephone etiquette, proper business attire, and social skills.
3. Students will exhibit work skills of attendance, work ethic, and self-motivation.
4. Students will demonstrate mastery of a foundation of business understanding.
5. Students will demonstrate understanding of the Human Resource Function.

| First Semester | | Credits |
|---|---|---|
| ECO212 | Microeconomics | 3 |
| ENG111 | Composition I | 3 |
| + MGT110 | Management | 3 |
| | Science Elective | 3 |
| | Mathematics Elective | 3 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| ECO211 | Macroeconomics | 3 |
| ENG112 | Composition II | 3 |
| + MGT120 | Supervision | 3 |
| + MGT210 | Human Resource Management | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| + ACC120 | Payroll Accounting | 3 |
| + BUS221 | Business Law | 3 |
| | Computer Elective | 3 |
| | Social Behavioral Science Elective | 3 |
| | | 16 |

| Fourth Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| + BUS223 | Employment Law, Safety & Security | 3 |
| + BUS250 | Labor Relations | 3 |
| + MGT290 | Business Management Internship | 3 |
| | Humanities Elective | 3 |
| | | 16 |

**Computer Electives:** (Choose 3 credit hours)
| | | |
|---|---|---|
| ACC260 | Accounting on Computers |
| CIS113 | Microsoft Excel |
| CIS129 | Web Page Development |

*The following are 1 credit hour courses:*
| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS121 | Intermediate Word |
| CIS122 | Intermediate Excel |

**Mathematics Electives:**
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

+    Students must attain a 2.00 grade point average in these technical courses to graduate.

# International/Global Business
## Associate of Applied Business in Business Management

### Business Technologies DIVISION

The value and importance of global business has finally come of age in the United States, where market forces are demanding professionals and paying them competitive wages for knowledge and skills in this area. Northwest State is fortunate to be located in the heart of the NAFTA Corridor, on the road between Monterrey, Mexico and Windsor, Ontario. Students entering into Northwest State's associate degree program will learn international and global business concepts while studying the Business Management program. The program provides students an entry-level preparation that will enhance cultural awareness and polish business skills.

### Career Outlook

Employment opportunities are varied and will depend on each individual goal. Entry-level management positions are found in the manufacturing, retail, food service, banking, and governmental services. Students will be familiar with international business so as to assist in businesses which focus on a global market of customers and suppliers.

### Program Learning Outcomes

Students who complete the International/Global Business program will be employable in a variety of positions in which:
1. Students will demonstrate understanding of the major styles of management.
2. Students will exhibit personal skills of telephone etiquette, proper business attire, and social skills.
3. Students will exhibit work skills of attendance, work ethic, and self-motivation.
4. Students will demonstrate mastery of a foundation of business understanding.
5. Students will demonstrate understanding of business ethics.
6. Students will demonstrate understanding of global business practices.

| First Semester | | Credits |
|---|---|---|
| + BUS160 | International/Global Business | 3 |
| ECO212 | Microeconomics | 3 |
| ENG111 | Composition I | 3 |
| + MGT110 | Management | 3 |
| | Mathematics Elective | 3 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| GEO110 | World Geography | 3 |
| + MKT110 | Marketing | 3 |
| | Science Elective | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| + BUS221 | Business Law | 3 |
| + ECO257 | Global Economics | 3 |
| SSC210 | Cultural Diversity | 3 |
| | Humanities Elective | 3 |
| | | 16 |

| Fourth Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| + BUS260 | International Trade | 3 |
| + MGT281 | Global Business Climate Analysis | 3 |
| + MKT230 | Salesmanship | 3 |
| | Business Elective | 3 |
| | Computer Elective | 3 |
| | | 19 |

### Business Electives:

| | |
|---|---|
| BUS250 | Labor Relations |
| ECO211 | Macroeconomics |
| MGT230 | Retail Management |
| MGT290 | Business Management Internship |
| MKT210 | Advertising |
| MKT230 | Salesmanship |

*All of the following are 1 credit hour courses:*

| | |
|---|---|
| MKT111 | Entrepreneurship I |
| MKT112 | Entrepreneurship II |
| MKT113 | Entrepreneurship III |

### Computer Electives: (Choose 3 credit hours)

| | |
|---|---|
| ACC260 | Accounting on Computers |
| CIS113 | Microsoft Excel |
| CIS129 | Web Page Development |

*All of the following are 1 credit hour courses:*

| | |
|---|---|
| ACC261 | QuickBooks |
| ACC271 | Intermediate QuickBooks |
| ACC272 | Advanced QuickBooks |
| CIS118 | Access |
| CIS119 | PowerPoint |
| CIS121 | Intermediate Word |
| CIS122 | Intermediate Excel |

### Mathematics Electives:

| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Logistics and Supply Chain Management
## Associate of Applied Business in Business Management

### BUSINESS TECHNOLOGIES DIVISION

A career in supply chain management deals with a dynamic environment of efficiently facilitating the delivery of goods to customers through a variety of intermediaries. The process is known as channel management and is only a small part of supply chain management. Supply chain management deals with the entire array of sourcing, procurement, conversion and logistics management activities. Organizations must rely on effective supply chains to coordinate the vast array of inputs and outputs of globally networked companies. The combination of information technology and outsourcing have created organizations like Dell and Wal-Mart adept at forming alliances and/or performing specific strategic tasks to take advantage of market conditions.

### Career Outlook

Employment outlook appears strong through 2014 for front line supervisors/managers of production/operating workers with 860 new jobs per year and hourly rates of pay at $24.15. Upper management positions including general and operations managers will experience an average annual growth of 1,894 workers per year and wage rates of $45.63/hr and would require additional education and experience.

### Program Learning Outcomes

Students who complete the Logistics Supply Chain Management program will be employable in a variety of management positions in which they can:

1.  Demonstrate an understanding of Supply Chain management.
2.  Differentiate between an internal and external supply chain.
3.  Differentiate between make-to-stock and make-to-order strategies.
4.  Differentiate between a push and pull manufacturing system.

| First Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| ENG111 | Composition I | 3 |
| + MGT110 | Management | 3 |
| MTH109 | College Algebra | 3 |
| + SCM220 | Operations Management | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| ENG112 | Composition II | 3 |
| + MKT110 | Marketing | 3 |
| + SCM200 | Supply Chain Management | 3 |
| | Computer Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| + BUS221 | Business Law | 3 |
| ECO212 | Microeconomics | 3 |
| + SCM210 | Purchasing and Materials Management | 3 |
| STA222 | Statistics | 3 |
| | Humanities Elective | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| + MGT120 | Supervision | 3 |
| + SCM230 | Physical Distribution Logistics | 3 |
| | Business Elective | 3 |
| | Science Elective | 3 |
| | Social Behavioral Science Elective | 3 |
| | | 15 |

**Business Electives:**

| | |
|---|---|
| ACC140 | Individual Income Tax Accounting |
| ACC221 | Cost Accounting I |
| ACC240 | Business Income Tax Accounting |
| BUS160 | International/Global Business |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| MGT221 | Entrepreneurship |
| MGT230 | Retail Management |
| MGT290 | Business Mgt. Co-Op/Internship |
| MKT210 | Advertising |
| REA210 | Real Estate Principles |
| VCT182 | Photography |

*All of the following are 1 credit hour courses:*

| | |
|---|---|
| MKT111 | Entrepreneurial Marketing I |
| MKT112 | Entrepreneurial Marketing II |
| MKT113 | Entrepreneurial Marketing III |

**Computer Electives:**

| | |
|---|---|
| CIS112 | Microsoft Word |
| CIS113 | Microsoft Excel |
| CIS114 | Microsoft Applications |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Logistics and Supply Chain Management
## Certificate

A career in supply chain management deals with a dynamic environment of efficiently facilitating the delivery of goods to customers through a variety of intermediaries. The process is known as channel management and is only a small part of supply chain management. Supply chain management deals with the entire array of sourcing, procurement, conversion, and logistics management activities. Organizations must rely on effective supply chains to coordinate the vast array of inputs and outputs of globally networked companies. The combination of information technology and outsourcing have created organizations like Dell and Wal-Mart adept at forming alliances and/or performing specific strategic tasks to take advantage of market conditions.

## Career Outlook

Employment outlook appears strong through 2014 for front line supervisors/managers of production/operating Workers with 860 new jobs per year and hourly rates of pay at $24.15. Upper management positions including general and operations managers will experience an average annual growth of 1,894 workers per year and wage rates of $45.63/ hr and would require additional education and experience.

## Program Learning Outcomes

Students who complete the Logistics Supply Chain Management program will be employable in a variety of management positions in which they can:

1. Demonstrate an understanding of Supply Chain management.
2. Differentiate between an internal and external supply chain.
3. Differentiate between make-to-stock and make-to-order strategies.
4. Differentiate between a push and pull manufacturing system.

### First Semester

| | | | Credits |
|---|---|---|---|
| + | ACC111 | Financial Accounting | 4 |
| | ENG111 | Composition I | 3 |
| + | MGT110 | Management | 3 |
| | MTH109 | College Algebra | 3 |
| + | SCM220 | Operations Management | 3 |
| | | | 16 |

### Second Semester

| | | | Credits |
|---|---|---|---|
| | ENG112 | Composition II | 3 |
| + | MGT120 | Supervision | 3 |
| + | SCM200 | Supply Chain Management | 3 |
| + | SCM230 | Physical Distribution Logistics | 3 |
| | STA222 | Statistics | 3 |
| | | Computer Elective | 3 |
| | | | 18 |

### Computer Electives:

| | |
|---|---|
| CIS112 | Microsoft Word |
| CIS113 | Microsoft Excel |
| CIS114 | Microsoft Applications |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.e.

# REAL ESTATE
## CERTIFICATE

## BUSINESS TECHNOLOGIES DIVISION

Real estate agents assist people in buying, selling and renting properties and businesses. Real estate agents work for brokers on a contractual basis. Some real estate agents work for construction companies, promoting homes that the company is building. Students who complete the Real Estate Certificate are qualified to pursue licensure as a real estate salesperson. The Ohio Real Estate Commission has approved the following courses in preparation for licensure: REA210 Real Estate Principles, REA220 Real Estate Law, REA230 Real Estate Finance and REA240 Real Estate Appraisal.  Credits earned in the Real Estate Certificate also apply toward a banking & finance degree.

Real estate classes are offered in a seminar format as full-day sessions on weekends.

### Career Outlook

Employment will be stable in the state of Ohio for real estate agents. The demand for home purchases and management of rental units is expected to grow in the future. People will continue to move to other parts of the country, creating a demand for home sales, while others will be seeking larger homes as their income increases. Real estate agents will be able to work more efficiently with the increased use of technology in the field, such as computers, cellular phones, and pagers. Access to the Internet will also allow agents to show clients homes without leaving the office, therefore helping the agent to serve more clients than in the past.

| First Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting | 4 |
| ENG111 | Composition I | 3 |
| + REA210 | Real Estate Principles | 3 |
| + REA220 | Real Estate Law | 3 |
| | Mathematics Elective | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + ACC112 | Managerial Accounting | 4 |
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| + REA230 | Real Estate Finance | 3 |
| + REA240 | Real Estate Appraisal | 3 |
| | | 16 |

### Mathematics Electives:

| BUS110 | Business Math /Calculators |
|---|---|
| MTH109 | College Algebra |

+   Students must attain a 2.00 grade point average in these technical courses to graduate.

# Computer Programming
## Associate of Applied Business in Information Technology

### Business Technologies Division

Computers play a part in nearly all phases of our life today. Businesses and governmental agencies, large and small, require trained computer specialists. The computer programming degree prepares computer programmers and computer operators to work with a wide variety of computers and languages used by area employers. Emphasis is placed upon business-oriented computer languages. Programming and practical applications of business data are stressed. In the laboratory, hands-on experience is provided using the Internet and PC compatible computers.

Graduates may find employment in entry-level positions with typical titles such as computer operator, application programmer, maintenance programmer, software developer or in technical support. A career path may include lead or denior programmer and data processing manager.

### Career Outlook
Employment of computer programmers is expected to be quite good. Opportunities should be especially favorable for those programmers who know several programming languages.

### Program Learning Outcomes
Students who complete the Computer Programming program will be employable in a variety of positions in which:
1. Students will gain an understanding of structured programming concepts.
2. Students will install and troubleshoot current Personal Computer hardware and current Operating System software.
3. Students will demonstrate software skills.
4. Students will write and debug programs.

### Business Electives:
| | |
|---|---|
| BUS160 | International/Global Business |
| BUS221 | Business Law |
| BUS223 | Employment Law, Safety, & Security |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| ECO257 | Global Economics |
| MGT110 | Management |
| MGT120 | Supervision |
| MGT210 | Human Resource Management |
| MGT230 | Retail Management |
| MKT110 | Marketing |
| MKT210 | Advertising |
| MKT230 | Salesmanship |

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |
| STA220 | Statistics |

### First Semester

| | | | Credits |
|---|---|---|---|
| + | CIS111 | Visual Basic Programming | 4 |
| + | CIS191 | Computer Operations | 3 |
| | ENG111 | Composition I | 3 |
| | | Mathematics Elective | 3 |
| | | | 13 |

### Second Semester

| | | | Credits |
|---|---|---|---|
| + | CIS109 | Database Management | 4 |
| + | CIS114 | Microsoft Applications | 3 |
| | ENG112 | Composition II | 3 |
| | | Business Elective | 3 |
| | | Humanities Elective | 3 |
| | | | 16 |

### Third Semester

| | | | Credits |
|---|---|---|---|
| | ACC111 | Financial Accounting | 4 |
| + | CIS108 | Internet Scripting | 4 |
| + | CIS150 | Programming C++ | 4 |
| | | Science Elective | 4 |
| | | | 16 |

### Fourth Semester

| | | | Credits |
|---|---|---|---|
| | ACC112 | Managerial Accounting | 4 |
| + | CIS165 | Java Programming | 4 |
| | | Social Behavioral Science Elective | 3 |
| + | | Technical Elective | 3 |
| + | | Technical Elective | 3 |
| | | | 17 |

### Science Electives:
| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO180 | Genetics |
| CHM101 | Principles of Chemistry |
| PHY101 | Principles of Physical Science |
| PHY140 | Astronomy |
| PHY150 | Geology |

### Technical Electives:
| | |
|---|---|
| CAD111 | CAD I |
| CIS155 | Linux Networking I |
| CIS161 | C# |
| CIS192 | Microsoft Workstation Technology |
| CIS193 | Microsoft Server Technology |
| CIS194 | IT Security Fundamentals |
| CIS255 | Linux Networking II |
| CIS284 | Microsoft Infrastructure Technology |
| CIS285 | Microsoft Directory Services Technology |
| CIS290 | Information Technology Internship |

+    Students must attain a 2.00 grade point average in these technical courses to graduate.

# Internet Security
## Associate of Applied Business in Information Technology

An internet decurity professional assists in securing networks and computers from unauthorized activity. This program will teach students how to monitor networks using packet sniffing, secure networks using firewalls, secure network file systems, manage passwords, encrypt files, encrypt network traffic and deal with threats such as spyware, malware and viruses.

### Career Outlook

Career opportunities are numerous for individuals in this field. All organizations, large and small, use the computer as an integral part of their business. Workers need both software and hardware support to do their jobs. Graduates may find employment in entry-level positions with typical titles such as internet security specialist, network security analyst, security administrator or computer security specialist.

### Program Learning Outcomes

Students who complete the Internet Security program will be employable in a variety of positions in which:

1. Students will gain an understanding of structured programming concepts.
2. Students will install and troubleshoot current Personal Computer hardware and current Operating System software.
3. Students will demonstrate software skills.
4. Students will implement procedures designed to counteract current Computer and Network security risks.

| First Semester | | | Credits |
|---|---|---|---|
| + | CIS191 | Computer Operations | 3 |
| | ENG111 | Composition I | 3 |
| + | CJT130 | Criminal Justice Principles | 3 |
| | | Mathematics Elective | 3 |
| + | | Programming Elective | 4 |
| | | | 16 |

| Second Semester | | | Credits |
|---|---|---|---|
| + | CIS114 | Microsoft Applications | 3 |
| + | CIS194 | IT Security Fundamentals | 3 |
| | ENG112 | Composition II | 3 |
| | | Humanities Elective | 3 |
| | | Science Elective | 4 |
| | | | 16 |

| Third Semester | | | Credits |
|---|---|---|---|
| | ACC111 | Financial Accounting | 4 |
| + | CIS193 | Microsoft Server Technology | 3 |
| | | Social Behavioral Science Elective | 3 |
| + | | Technical Elective | 3 |
| + | | Technical Elective | 3 |
| | | | 16 |

| Fourth Semester | | | Credits |
|---|---|---|---|
| | ACC112 | Managerial Accounting | 4 |
| + | CIS155 | Linux Networking I | 4 |
| + | CIS284 | Microsoft Infrastructure Technology | 3 |
| | | Business Elective | 3 |
| | | | 14 |

### Business Electives:

| | |
|---|---|
| BUS160 | International/Global Business |
| BUS221 | Business Law |
| BUS223 | Employment Law, Safety, & Security |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| ECO257 | Global Economics |
| MGT110 | Management |
| MGT120 | Supervision |
| MGT210 | Human Resource Management |
| MGT230 | Retail Management |
| MKT110 | Marketing |
| MKT210 | Advertising |
| MKT230 | Salesmanship |

### Mathematics Electives:

| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |
| STA220 | Statistics |

### Programming Electives:

| | |
|---|---|
| CIS108 | Internet Scripting |
| CIS111 | Visual Basic Programming |
| CIS150 | Programming C++ |
| CIS161 | C# |
| CIS165 | Java Programming |

### Science Electives:

| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO180 | Genetics |
| CHM101 | Principles of Chemistry |
| PHY101 | Principles of Physical Science |
| PHY140 | Astronomy |
| PHY150 | Geology |

### Technical Electives:

| | |
|---|---|
| CAD111 | CAD I |
| CIS109 | Database Management |
| CIS192 | Microsoft Workstation Technology |
| CIS255 | Linux Networking II |
| CIS285 | Microsoft Directory Services Technology |
| CIS290 | Information Technology Internship |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Network Administration
## Associate of Applied Business in Information Technology

## Business Technologies Division

The Network Administration major provides the skills and training necessary to install and maintain networks using Microsoft and Linux Operating Systems. The program provides the student with training in current programming languages such as C++, Java, C#, and Visual Basic. Graduates are eligible to sit for certification tests leading to certification such as a Microsoft Certified Professional, a Microsoft Certified System Engineer, TIA Linux+ Certification, and A+ Certification.

### Career Outlook

Career opportunities are numerous for individuals in this field. All organizations, large and small, use computers as an integral part of how they do business. Workers need both software and hardware support to do their jobs. Graduates may find employment in entry-level positions with typical titles such as network administrator, network engineer, network installation engineer, computer programmer, technical support or help desk. A career path may include enterprise network administration, lead or senior programmer, systems programmer and data processing Manager.

### Program Learning Outcomes
1. Students will gain an understanding of structured programming concepts.
2. Students will install and troubleshoot current Personal Computer hardware and current Operating System software.
3. Students will demonstrate software skills.
4. Students will install and troubleshoot Network Operating Systems and protocols.

| First Semester | | Credits |
|---|---|---|
| + CIS114 | Microsoft Applications | 3 |
| + CIS191 | Computer Operations | 3 |
| ENG111 | Composition I | 3 |
| | Mathematics Elective | 3 |
| + | Programming Elective | 4 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + CIS155 | Linux Networking I | 4 |
| ENG112 | Composition II | 3 |
| | Business Elective | 3 |
| | Social Behavioral Science Elective | 3 |
| + | Technical Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| ACC111 | Financial Accounting | 4 |
| + CIS192 | Microsoft Workstation Technology | 3 |
| + CIS193 | Microsoft Server Technology | 3 |
| | Humanities Elective | 3 |
| + | Technical Elective | 3 |
| | | 16 |

| Fourth Semester | | Credits |
|---|---|---|
| ACC112 | Managerial Accounting | 4 |
| + CIS284 | Microsoft Infrastructure Technology | 3 |
| + CIS285 | Microsoft Directory Services Technology | 3 |
| | Science Elective | 4 |
| | | 14 |

### Business Electives:
| | |
|---|---|
| BUS160 | International/Global Business |
| BUS221 | Business Law |
| BUS223 | Employment Law, Safety, & Security |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| ECO257 | Global Economics |
| MGT110 | Management |
| MGT120 | Supervision |
| MGT210 | Human Resource Management |
| MGT230 | Retail Management |
| MKT110 | Marketing |
| MKT210 | Advertising |
| MKT230 | Salesmanship |

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |
| STA220 | Statistics |

### Programming Electives
| | |
|---|---|
| CIS108 | Internet Scripting |
| CIS111 | Visual Basic Programming |
| CIS150 | Programming C++ |
| CIS161 | C# |
| CIS165 | Java Programming |

### Science Electives:
| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO180 | Genetics |
| CHM101 | Principles of Chemistry |
| PHY101 | Principles of Physical Science |
| PHY140 | Astronomy |
| PHY150 | Geology |

### Technical Electives:
| | |
|---|---|
| CAD111 | CAD I |
| CIS109 | Database Management |
| CIS194 | IT Security Fundamentals |
| CIS255 | Linux Networking II |
| CIS290 | Information Technology Internship |

+   Students must attain a 2.00 grade point average in these technical courses to graduate.

# Web Site Administration
## Associate of Applied Business in Information Technology

### Business Technologies Division

Having a Web presence today is expected. A successful web site internet for the world or intranet for limited or restricted access is the result of the efforts of a technical specialist – web site administrator. In a past era the term "webmaster" emerged as a potential career title but the tasks and activities of individuals eclipse these older job descriptions. The modern specialists must manage ever changing applications, email, content, security and have the ability to manage and direct a team of individuals. The day and age of having a single individual manage the Internet resources for an organization is only possible for the smallest of operations.

The skills needed by individuals include an emphasis on network and network administration, some programming skills in appropriate internet languages, operating system software, network operating software, and database software. Some typical duties and responsibilities include:

- Administration, installation and maintenance of web servers
- Advise on the selection of web development tools
- Establish a disaster recovery plan
- Evaluate new hardware and software for possible adoption at your company

Typical job titles:  Web Master, Web Administrator, Web Server Administrator, Web Technician

### Career Outlook
Career opportunities are numerous for individuals in this field. All organizations, large and small, use computers as an integral part of how they do business. Workers need both software and hardware support to do their jobs. Graduates may find employment in entry-level positions with typical titles such as Network Administrator, Network Engineer, Network Installation Engineer, Web Master, Technical Support or Help Desk.

### Program Learning Outcomes
1. Students will gain an understanding of structured programming concepts.
2. Students will install and troubleshoot current Personal Computer hardware and current Operating System software.
3. Students will demonstrate software skills.
4. Students will develop and edit web pages.

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |
| STA220 | Statistics |

### Programming Electives:
| | |
|---|---|
| CIS108 | Internet Scripting |
| CIS111 | Visual Basic Programming |
| CIS150 | Programming C++ |
| CIS161 | C# |
| CIS165 | Java Programming |

### Science Electives:
| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO180 | Genetics |
| CHM101 | Principles of Chemistry |
| PHY101 | Principles of Physical Science |
| PHY140 | Astronomy |
| PHY150 | Geology |

| First Semester | | Credits |
|---|---|---|
| + CIS129 | Web Site Development | 3 |
| + CIS191 | Computer Operations | 3 |
| + CIS193 | Microsoft Server Technology | 3 |
| ENG111 | Composition I | 3 |
| | Mathematics Elective | 3 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| + CIS114 | Microsoft Applications | 3 |
| + CIS155 | Linux Networking I | 4 |
| ENG112 | Composition II | 3 |
| + VCT266 | Multimedia Production | 3 |
| | Business Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| ACC111 | Financial Accounting | 4 |
| + | Programming Elective | 4 |
| | Science Elective | 4 |
| + | Technical Elective | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| ACC112 | Managerial Accounting | 4 |
| + CIS284 | Microsoft Infrastructure Technology | 3 |
| | Humanities Elective | 3 |
| | Social Behavioral Science Elective | 3 |
| + | Technical Elective | 3 |
| | | 16 |

### Business Electives:
| | |
|---|---|
| BUS160 | International/Global Business |
| BUS221 | Business Law |
| BUS223 | Employment Law, Safety, & Security |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| ECO257 | Global Economics |
| MGT110 | Management |
| MGT120 | Supervision |
| MGT210 | Human Resource Management |
| MGT230 | Retail Management |
| MKT110 | Marketing |
| MKT210 | Advertising |
| MKT230 | Salesmanship |

### Technical Electives:
| | |
|---|---|
| CAD111 | CAD I |
| CIS109 | Database Management |
| CIS192 | Microsoft Workstation Technology |
| CIS194 | IT Security Fundamentals |
| CIS255 | Linux Networking II |
| CIS285 | Microsoft Directory Services Technology |
| CIS290 | Information Technology Internship |
| VCT182 | Photography |
| VCT260 | 3D Computer Animation |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Computer Technician
## Certificate

## Business Technologies Division

The computer technician must have experience working on personal computers, experience working on networks and some programming experience. Technicians are acquainted with software packages such as word processors and spreadsheets. The computer technician must be knowledgeable in computer operations and computer systems.

### Career Outlook
Students can earn the associate degree by completing one year of full-time study beyond the Computer Technician Certificate. Graduates may find employment in entry-level positions such as computer technician, peripheral equipment operator, help desk technician or technical support.

### Program Learning Outcomes
Students who complete the Computer Technician program will be employable in a variety of positions in which:
1. Students will gain an understanding of structured programming concepts.
2. Students will install and troubleshoot current Personal Computer hardware and current Operating System software.
3. Students will demonstrate software skills.
4. Students will write and debug programs.

| First Semester | | Credits |
|---|---|---|
| + CIS111 | Visual Basic Programming.............. | 4 |
| + CIS191 | Computer Operations ..................... | 3 |
| + CIS193 | Microsoft Server Technology.......... | 3 |
| ENG111 | Composition I................................. | 3 |
| | Mathematics Elective..................... | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| + CIS114 | Microsoft Applications................... | 3 |
| + CIS165 | Java Programming.......................... | 4 |
| ENG112 | Composition II .............................. | 3 |
| | Business Elective ........................... | 3 |
| + | Technical Elective .......................... | 3 |
| | | 16 |

### Business Electives:
| | |
|---|---|
| BUS160 | International/Global Business |
| BUS221 | Business Law |
| BUS223 | Employment Law, Safety, & Security |
| BUS250 | Labor Relations |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| ECO212 | Microeconomics |
| ECO257 | Global Economics |
| MGT110 | Management |
| MGT120 | Supervision |
| MGT210 | Human Resource Management |
| MGT230 | Retail Management |
| MKT110 | Marketing |
| MKT210 | Advertising |
| MKT230 | Salesmanship |

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |
| STA220 | Statistics |

### Technical Electives:
| | |
|---|---|
| CAD111 | CAD I |
| CIS108 | Internet Scripting |
| CIS109 | Database Management |
| CIS150 | Programming C++ |
| CIS155 | Linux Networking I |
| CIS161 | C# |
| CIS192 | Microsoft Workstation Technology |
| CIS194 | IT Security Fundamentals |
| CIS255 | Linux Networking II |
| CIS284 | Microsoft Infrastructure Technology |
| CIS285 | Microsoft Directory Services Technology |
| CIS290 | Information Technology Internship |

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Office Administration
## Associate of Applied Business in Office Administrative Services

### Business Technologies Division

A management team is complete only with a qualified administrative staff. The office administrative services technology develops well-trained graduates for positions in business and in governmental agencies as principal assistants to the managers and administrators of industrial corporations, financial institutions, colleges and schools, hospitals, clinics, law firms, governmental agencies and small businesses.

Graduates' skills include records management, keyboarding on computers, operating word processing software programs on the PC, accounting and the composition of business letters and reports. They also prioritize work, process mail, arrange business trips, make appointments, answer the telephone, operate photocopy machines and assist in routine office duties. They may supervise other office employees.

### Career Outlook

This occupation is one of the largest in the United States. Employment opportunities should be very good, especially for those who have obtained excellent communication skills. Although many of the tasks that secretaries and administrators perform have become automated, it will be those tasks which require personal contact and communication which will continue to play a key role in the office activities of most organizations. Those duties include planning conferences, receiving clients and giving staff instructions. It is expected that several hundred thousand secretarial positions will be open annually throughout the U.S.

### Program Learning Outcomes

Students who complete the Office Administration program will be employable in a variety of positions in which:
1. Students will develop proficient keyboarding skills.
2. Students will create documents using language arts skills such as proofreading, grammar, and punctuation.
3. Students will develop and formulate documents using computer software skills.
4. Students will develop time management and organizational skills.
5. Students will create financial statements, reports, and schedules.
6. Students will apply mathematical operations to realistic business problems.

### Accounting Electives:

| | | |
|---|---|---|
| ACC102 | Office Accounting | |
| ACC111 | Financial Accounting | |

### Business Electives:

| | | |
|---|---|---|
| ACC120 | Payroll Accounting | |
| ACC260 | Accounting on Computers (QuickBooks, Int., & Adv.) | |
| CIS201 | Workplace Technologies | |

### Management Electives:

| | | |
|---|---|---|
| MGT110 | Management | |
| MGT120 | Supervision | |
| MGT210 | Human Resource Management | |

### First Semester — Credits

| | | | |
|---|---|---|---|
| | CIS104* | Desktop Management | 2 |
| + | CIS112* | Microsoft Word | 3 |
| | CIS119* | PowerPoint | 1 |
| | ENG111 | Composition I | 3 |
| | OAS101* | College Keyboarding | 3 |
| + | OAS110 | Records Management | 3 |
| | | | 15 |

### Second Semester — Credits

| | | | |
|---|---|---|---|
| + | CIS113* | Microsoft Excel | 3 |
| | CIS118* | Access | 1 |
| | CIS138 | Intermediate Access | 1 |
| | ENG112 | Composition II | 3 |
| + | OAS102 | Keyboarding Applications | 3 |
| + | OAS105 | Document Editing & Proofreading | 2 |
| | | Science Elective | 3 |
| | | | 16 |

### Third Semester — Credits

| | | | |
|---|---|---|---|
| + | | Accounting Elective | 4 |
| | CIS117* | Microsoft Publisher | 1 |
| | OAS104* | Voice Recognition | 1 |
| + | OAS160 | Administrative Technology & Procedures | 3 |
| + | OAS200 | Speedbuilding | 1 |
| | | Mathematics Elective | 3 |
| + | | Technical Elective | 3 |
| | | | 16 |

### Fourth Semester — Credits

| | | | |
|---|---|---|---|
| + | | Business Elective | 3 |
| + | OAS249 | Advanced Microsoft Suite | 3 |
| + | OAS291 | Internship I | 1 |
| | | Management Elective | 3 |
| | | Humanities Elective | 3 |
| | | Social Behavioral Science Elective | 3 |
| | | | 16 |

### Mathematics Electives:

| | | |
|---|---|---|
| BUS110 | Business Math/Calculators | |
| MTH109 | College Algebra | |
| STA120 | Introduction to Statistics | |

### Technical Electives:

| | | |
|---|---|---|
| ENG220 | Business Writing | |
| OAS230 | Transcription | |

\* CIS090 Introduction to Computers & OAS090 Keyboarding Basics are prerequisites to CIS104, CIS112, CIS113, CIS117, CIS118, CIS119, OAS101 and/or OAS104. A placement test is available for CIS090 & OAS090. See the Admissions Office

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Legal Support
## Associate of Applied Business in Office Administrative Services

### Business Technologies Division

Legal services continue to be in high demand in both the public and private sectors. The demand for services drives the need for skilled competent employees that organize, retrieve, store and create the documents required. Graduates' skills include records management, keyboarding on computers, operating word processing software programs on the PC, accounting and the composition of business letters and reports. They also prioritize work, process mail, arrange business trips, make appointments, answer the telephone, operate photocopy machines and assist in routine office duties.

### Career Outlook

The Bureau of Labor Statistics says that employment of executive secretaries and administrative assistants is projected to grow faster than average for all occupations in the 2006-2016 periods. Little or no change in employment is expected for secretaries, except legal, medical or executive, who account for about 46 percent of all secretaries and administrative assistants.

### Program Learning Outcomes
1. Students will exhibit proficient keyboarding skills.
2. Students will create documents using language arts skills such as proofreading, grammar, and punctuation.
3. Students will develop and formulate documents using computer software skills.
4. Students will develop time management and organizational skills.
5. Students will create financial statements, reports, and schedules.
6. Students will apply mathematical operations to realistic business problems.
7. Students will create documents using accurate legal terminology and transcription.
8. Students will exhibit understanding of law office practices.

| First Semester | | Credits |
|---|---|---|
| CIS104* | Desktop Management | 2 |
| + CIS112* | Microsoft Word | 3 |
| ENG111 | Composition I | 3 |
| OAS101* | College Keyboarding | 3 |
| + OAS110 | Records Management | 3 |
| + PAR100 | Introduction to Paralegal | 3 |
| | | 17 |

| Second Semester | | Credits |
|---|---|---|
| + BUS221 | Business Law | 3 |
| CIS113* | Microsoft Excel | 3 |
| ENG112 | Composition II | 3 |
| + OAS102 | Keyboarding Applications | 3 |
| | Mathematics Elective | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| ACC102 | Office Accounting | 4 |
| + OAS104* | Voice Recognition | 1 |
| + OAS105 | Document Editing & Proofreading | 2 |
| + OAS230 | Transcription | 3 |
| + PAR101 | Law Office Management | 3 |
| | Science Elective | 3 |
| | | 16 |

| Fourth Semester | | Credits |
|---|---|---|
| ACC261 | QuickBooks | 1 |
| + OAS160 | Administrative Technology & Procedures | 3 |
| + OAS291 | Internship I | 1 |
| | Humanities Elective | 3 |
| + | Legal or Business Elective | 3 |
| | Social Behavioral Science Elective | 3 |
| | | 14 |

**Business Elective:**
CIS201      Workplace Technologies

**Legal Electives:**
Any course with a PAR course prefix.

**Mathematics Electives:**
BUS110      Business Math/Calculators
MTH109      College Algebra
STA120      Introduction to Statistics

\*  CIS090 Introduction to Computers & OAS090 Keyboarding Basics are prerequisites to CIS104, CIS112, CIS113, OAS101, and/or OAS104.  A placement test is available for CIS090 & OAS090.  See the Admissions Office.

+  Students must attain a 2.00 grade point average in these technical courses to graduate.

# Medical Support
## Associate of Applied Business in Office Administrative Services

### Business Technologies Division

Medical support employees work in physicians' offices, hospitals, nursing homes, and other medical settings. They may transcribe dictation, prepare medical records or charts, schedule appointments, handle correspondence, prepare bills and process insurance forms. In addition to a good background in keyboarding, accounting and computers, there is a need for expertise with medical terminology and familiarization with medical references. Strong communication skills are also important in dealing with patients in stressful situations.

### Career Outlook
The increase in medical services and the aging population place tremendous demands on physicians and hospitals. Medical support employees are essential workers who must accurately process medical and insurance documents.

### Program Learning Outcomes
Students who complete the Medical Support program will be employable in a variety of positions in which:
1. Students will exhibit proficient keyboarding skills.
2. Students will create documents using language arts skills such as proofreading, grammar, and punctuation.
3. Students will develop and formulate documents using computer software skills.
4. Students will develop time management and organizational skills.
5. Students will create financial statements, reports, and schedules.
6. Students will apply mathematical operations to realistic business problems.
7. Students will create documents using accurate medical terminology and transcription.
8. Students will determine accurate codes for medical billing procedures.

### Mathematics Electives:
| | | |
|---|---|---|
| BUS110 | Business Math/Calculators | |
| MTH109 | College Algebra | |
| STA120 | Introduction to Statistics | |

### Science Electives:
BIO150  The Human Body
(Required for students who are sitting for coding exam). *Before registering for BIO150, students must have completed High School Biology with a grade of "C" or higher or BIO101 Principles of Biology with a grade of "C" or higher.*
Any course with a BIO prefix.

### First Semester — Credits
| | | | |
|---|---|---|---|
| | CIS104* | Desktop Management | 2 |
| + | CIS112* | Microsoft Word | 3 |
| | ENG111 | Composition I | 3 |
| | OAS101* | College Keyboarding | 3 |
| | ACC102 | Office Accounting | 4 |
| + | OAS180 | Medical Terminology | 3 |
| | | | 18 |

### Second Semester — Credits
| | | | |
|---|---|---|---|
| | MEA110 | Pharmacology for Allied Health Professionals | 3 |
| | ENG112 | Composition II | 3 |
| + | OAS102 | Keyboarding Applications | 3 |
| + | OAS105 | Document Editing & Proofreading | 2 |
| + | OAS227 | Diagnostic Coding | 3 |
| | BIO150 | Human Body | 4 |
| | | | 18 |

### Third Semester — Credits
| | | | |
|---|---|---|---|
| + | OAS160 | Administrative Technology & Procedures | 3 |
| + | OAS111 | Electronic Health Records | 3 |
| + | OAS200 | Speedbuilding | 1 |
| + | OAS282 | Medical Transcription | 3 |
| | | Mathematics Elective | 3 |
| | MEA205 | Disease Conditions | 3 |
| | | | 16 |

### Fourth Semester — Credits
| | | | |
|---|---|---|---|
| | OAS104* | Voice Recognition | 1 |
| + | OAS228 | Procedural Coding | 3 |
| + | OAS283 | Computerized Medical Insurance | 3 |
| + | OAS291 | Internship I | 1 |
| | PHI220 | Ethics in Health Care | 3 |
| | PSY110 | Psychology | 3 |
| | CIS113* | Microsoft Excel | 3 |
| | | | 17 |

### Extended Pathway:
After completing the Medical Support degree requirements, a student interested in sitting for the Certified Coding Associate (CCA), Certified Coding Specialist (CCS), Certified Coding Physician (CCS-P) Exam(s), you will want to complete the following:
| | |
|---|---|
| MEA110 | Pharmacology |
| MEA205 | Disease Conditions |
| OAS223 | CCA Coding Exam Review |
| OAS224 | CCS Hospital Coding Exam Review |
| OAS225 | CCS-P Physician Office Coding Exam Review |

\*    CIS090 Introduction to Computers & OAS090 Keyboarding Basics are prerequisites to CIS104, CIS112, CIS113, OAS101, and/or OAS104. A placement test is available for CIS090 & OAS090.  See the Admissions Office.

+    Students must attain a 2.00 grade point average in these technical courses to graduate.

# Office Management
## Associate of Applied Business in Office Administrative Services

### Business Technologies Division

Office management is a critical component in the efficient and effective office operations. All organizations need timely and effective office and administrative support to operate efficiently. Office and administrative support supervisors and managers coordinate this support. These workers are employed in virtually every sector of the economy, working in positions as varied as teller supervisor, customer services manager or shipping and receiving supervisor.

### Career Outlook

Employment is expected to grow by 6 percent during the 2006-2016 period. According to the Bureau of Labor Statistics, office and administrative support supervisors and managers held 1.4 million jobs in 2006. Although jobs for office and administrative support supervisors and managers are found in practically every industry, the largest number are found in organizations with a large administrative support workforce, such as banks, wholesalers, government agencies, retail establishments, business service firms, health care facilities, schools and insurance companies. Because of most organizations' need for continuity of supervision, few office and administrative support supervisors and managers work on a temporary or part-time basis.

### Program Learning Outcomes

1. Students will demonstrate language arts skills such as proofreading, grammar, and punctuation.
2. Students will demonstrate proficiency in computer software skills.
3. Students will demonstrate the understanding of defining the problem, identification of possible solutions and development and implementation of the solution.
4. Students will be able to analyze and differentiate the major styles of management.

**Business Electives:**

| | |
|---|---|
| BUS160 | International/Global Business |
| BUS260 | International Trade |
| ECO211 | Macroeconomics |
| MGT120 | Supervision |
| MGT280 | Business Climate Analysis |
| MGT290 | Business Management Co-Op/Internship |

**Mathematics Electives:**

| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra |
| STA120 | Introduction to Statistics |

**First Semester** — **Credits**

| | | | |
|---|---|---|---|
| + | | Accounting Elective | 4 |
| | CIS112* | Microsoft Word | 3 |
| | ENG111 | Composition I | 3 |
| + | OAS110 | Records Management | 3 |
| | | Mathematics Elective | 3 |
| | | | 16 |

**Second Semester** — **Credits**

| | | | |
|---|---|---|---|
| + | | Accounting Elective | 3 |
| | BUS221 | Business Law | 3 |
| | CIS113* | Microsoft Excel | 3 |
| + | CIS118* | Access | 1 |
| | ENG112 | Composition II | 3 |
| + | MGT110 | Management | 3 |
| | | | 16 |

**Third Semester** — **Credits**

| | | | |
|---|---|---|---|
| | ECO212 | Microeconomics | 3 |
| + | MKT110 | Marketing | 3 |
| + | OAS160 | Administrative Technology & Procedures | 3 |
| + | PAR101 | Law Office Management | 3 |
| | | Science Elective | 3 |
| | | | 15 |

**Fourth Semester** — **Credits**

| | | | |
|---|---|---|---|
| | CIS117* | Microsoft Publisher | 1 |
| + | CIS201 | Workplace Technologies | 3 |
| + | MGT210 | Human Resource Management | 3 |
| + | | Business Elective | 3 |
| | | Humanities Elective | 3 |
| | | Social Behavioral Science Elective | 3 |
| | | | 16 |

**Accounting Electives:**

| | |
|---|---|
| ACC102 | Office Accounting |
| ACC111 | Financial Accounting |
| ACC112 | Managerial Accounting |
| ACC120 | Payroll Accounting |
| ACC260 | Accounting on Computers (QuickBooks, Int., & Adv.) |

\*  CIS090 Introduction to Computers & OAS090 Keyboarding Basics are prerequisites to CIS112, CIS113, CIS117, and/or CIS118.  A placement test is available for CIS090 & OAS090. See the Admissions Office.

+  Students must attain a 2.00 grade point average in these technical courses to graduate.

# OFFICE ASSISTANT
## CERTIFICATE

A one-year certificate is available for students who need a quick entry into the job market. The skills needed for entry-level positions in today's fast-paced and automated business office are provided in this program. The office assistant is prepared to assemble facts and figures from office records and express them in statements, letters, and forms; file office records, operate calculators, photocopy machines, and the latest word processing equipment; and assist with general business duties such as responding to mail, making arrangements for business trips, and scheduling appointments.

Students can earn the associate degree by completing one year of full-time study beyond the Office Assistant Certificate.

## Career Outlook

Employment opportunities should be very good, especially for those who have obtained excellent communication skills. Although many of the tasks that secretaries perform have become automated, it will be those tasks which require personal contact and communication which will continue to play a key role in the office activities of most organizations.

## Program Learning Outcomes

Students who complete the Office Assistant program will be employable in a variety of positions in which:
1. Students will exhibit proficient keyboarding skills.
2. Students will demonstrate language arts skills such as proofreading, grammar, and punctuation.
3. Students will demonstrate proficiency in computer software skills.
4. Students will demonstrate time management and organizational skills.

### First Semester

| | Course | Title | Credits |
|---|---|---|---|
| | CIS104* | Desktop Management | 2 |
| + | CIS112* | Microsoft Word | 3 |
| | CIS119* | PowerPoint | 1 |
| | ENG111 | Composition I | 3 |
| + | OAS101* | College Keyboarding | 3 |
| + | OAS110 | Records Management | 3 |
| | | | 15 |

### Second Semester

| | Course | Title | Credits |
|---|---|---|---|
| + | CIS113* | Microsoft Excel | 3 |
| | CIS118* | Access | 1 |
| | CIS138 | Intermediate Access | 1 |
| | ENG112 | Composition II | 3 |
| + | OAS102 | Keyboarding Applications | 3 |
| + | OAS105 | Document Editing & Proofreading | 2 |
| + | OAS160 | Administrative Technology & Procedures | 3 |
| | | | 16 |

\* CIS090 Introduction to Computers & OAS090 Keyboarding Basics are prerequisites to CIS104, CIS112, CIS113, CIS118, CIS119, and/or OAS101. A placement test is available for CIS090 & OAS090. See the Admissions Office.

\+ Students must attain a 2.00 grade point average in these technical courses to graduate.

# Paralegal
## Associate of Applied Business

## usiness Technologies Division

The paralegal works under the direct supervision of an attorney, performing a variety of duties including research and investigation of facts. The Associate of Applied Business Degree in Paralegal Studies prepares students for an entry-level position in a law firm or law department of a business or financial institution. Typical job titles include legal assistant, title researcher and legal researcher. The paralegal may be called on to prepare a variety of law-related documents including standard forms, pleadings, deeds mortgages and other documents. The paralegal may search official records and record and file documents with County Clerk of Courts, Secretary of State or other officials. The paralegal will perform legal research for the preparation of briefs and other legal documents and communicate clearly and effectively in writing and orally with attorneys, clients and other government officials.

This program prepares the student for transfer to the University of Toledo's Bachelor of Science in Paralegal Studies.

### Career Outlook
Most paralegals will be hired by private firms, although opportunities will also exist in the public sector. In larger cities there are also opportunities with consumer organizations, public agencies and the courts.

### Program Learning Outcomes
Students who complete the Paralegal program will be employable in a variety of positions in which:
1. Students will exhibit understanding of law office practices.
2. Students will demonstrate ability to conduct legal research and comprehend legal documents.
3. Students will demonstrate understanding of civil and criminal procedures.
4. Students will exhibit understanding of tort law situations and procedures.
5. Students will demonstrate understanding of real estate transactions and probate procedures in Ohio.
6. Students will demonstrate understanding of domestic relations law in Ohio.

| First Semester | | Credits |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| ENG111 | Composition I | 3 |
| + PAR100 | Introduction to Paralegal | 3 |
| + PAR101 | Law Office Management | 3 |
| | Mathematics Electives | 3 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| ACC111 | Financial Accounting | 4 |
| ENG112 | Composition II | 3 |
| + PAR110 | Civil Procedures | 3 |
| + PAR115 | Family Law | 3 |
| | Social Behavioral Science Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| + PAR205 | Real Estate Transactions | 3 |
| + PAR210 | Legal Research & Writing | 3 |
| + PAR215 | Tort Law | 3 |
| | Business Elective | 3 |
| | Science Elective | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| + PAR220 | Criminal Law | 3 |
| + PAR222 | Estates, Trusts & Wills | 3 |
| PHI110 | Critical Thinking & Logic | 3 |
| SSC210 | Cultural Diversity | 3 |
| | Program Elective | 3 |
| | | 15 |

### Business Electives:
| | |
|---|---|
| BUS221 | Business Law |
| ECO211 | Macroeconomics (Transfer) |

### Mathematics Electives:
| | |
|---|---|
| BUS110 | Business Math/Calculators (Not for Transfer) |
| MTH109 | College Algebra (Transfer) |

### Program Electives:
| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO231 | Anatomy & Physiology I |
| PAR221 | Bankruptcy (Not for Transfer) |
| PHY140 | Astronomy |

### Social Behavioral Science Electives:
| | |
|---|---|
| PSY110 | General Psychology |
| SSC110 | General Anthropology |
| SSC120 | American Government |

+   Students must attain a 2.00 grade point average in these technical courses to graduate.

# VISUAL COMMUNICATIONS
## ASSOCIATE OF APPLIED BUSINESS

## BUSINESS TECHNOLOGIES DIVISION

The visual communication degree prepares students for a variety of positions utilizing computer graphics and imaging skills. Graduates are prepared to produce public relations materials including print, video and electronic media.

Graduates may transfer as juniors to complete a bachelor's degree in visual communications.

### Career Outlook

Opportunities within this field are expected to grow due to the emphasis on visual appeal in product design, advertising, marketing, web design and television. Willingness to relocate, however, may be an important factor since many of the opportunities will be in larger metropolitan areas.

### Program Learning Outcomes

Students who complete the Visual Communications program will be employable in a variety of positions in which:

1. Students will produce, analyze, and evaluate photos and video taken under various conditions.
2. Students will accurately analyze, edit, and prepare photos for various uses.
3. Students will apply knowledge of graphics and drawing skills to create a product.
4. Students will demonstrate the ability to manipulate software programs to create and enhance graphics, web pages, and print layouts.
5. Students will plan, prepare, and produce a multimedia project.

### First Semester

| | | | Credits |
|---|---|---|---|
| + | CIS114 | Microsoft Applications | 3 |
| + | CIS118 | Access | 1 |
| + | CIS119 | PowerPoint | 1 |
| | ENG111 | Composition I | 3 |
| + | VCT108 | Photo Editing | 2 |
| + | VCT182 | Photography | 3 |
| | | Mathematics Elective | 3 |
| | | | 16 |

### Second Semester

| | | | Credits |
|---|---|---|---|
| | ART103 | Beginning Drawing | 3 |
| + | CIS129 | Web Page Development | 3 |
| | ENG112 | Composition II | 3 |
| + | VCT111 | Layout & Design | 3 |
| + | VCT205 | Visual Communication Technology | 2 |
| | | Program Elective* | 3 |
| | | | 17 |

### Third Semester

| | | | Credits |
|---|---|---|---|
| | ACC111 | Financial Accounting | 4 |
| | HUM230 | Art Appreciation | 3 |
| + | VCT260 | 3D Computer Animation | 3 |
| + | VCT268 | Video Production | 3 |
| | | Science Elective | 3 |
| | | | 16 |

### Fourth Semester

| | | | Credits |
|---|---|---|---|
| | BUS221 | Business Law | 3 |
| | ENG210 | Technical Communications | 3 |
| + | VCT204 | Concepts of Visual Communications | 3 |
| + | VCT266 | Multimedia Production | 3 |
| + | VCT289 | VCT Co-Op Experience | 3 |
| | | Social Behavioral Science Elective | 3 |
| | | | 18 |

### Mathematics Electives:

| | |
|---|---|
| BUS110 | Business Math/Calculators |
| MTH109 | College Algebra (Transfer) |

### Program Electives:

| | |
|---|---|
| ART210 | Oil/Acrylic Painting |
| ART220 | Beginning Sculpture |
| CAD111 | CAD I |
| MGT110 | Management |
| MKT110 | Marketing |
| MTH112 | Trigonometry (Transfer) |

\*   Students planning to transfer to a four-year college should take MTH112 Trigonometry.

+   Students must attain a 2.00 grade point average in these technical courses to graduate.

# Engineering Technologies

WARNING
TO AVOID INJURY
-DO NOL

Contact the Dean:
Dan Burklo  •  419.267.1394  •  dburklo@northweststate.edu

# Engineering Technologies Division

## Advisory Committees

### Maintenance Technician/Mechatronics Advisory Committee

James F. Simpson, International Fluid Power Society, Toledo, OH

Ernie Parker, Hennepin Technical College, Eden Prairie, MN

Rickey L. Rodeffer, Boeing, Everett, WA

Jim Popovich, Washtenaw Community College, Shiloh, MI

Peter Beck, Automatic Feed Company, Napoleon, OH

Ted Downing, Chase Brass , Montpelier, OH

Eric Yoder, Kaufman Engineered Systems , Waterville, OH

William Tullock, RHM Fluid Power and Eaton Corporation, Westland, MI

### Alternative Energy Technology Advisory Committee

Edward Singer, NSCC, Archbold, OH

John Krochmalny, Custom Training Solutions, Toledo, OH

Sherri Fleming, Eating Foods Locally Committee, Bryan OH

Bradley Geer, Country Home Restoration, Deshler, OH

Matt Rasey, Poggemeyer Design Group, Bowling Green, OH

Jeff Waisner, Go Green 4 Power LLC, Napoleon, OH

Glen Bowen, Bard Manufacturing, Bryan, OH

John Witte, Advanced Distributed LLC, Toledo, OH

### Mechanical Engineering Technology Advisory Committee

Jeff Gerken, Automatic Feed Company, Napoleon, OH

Rick Behnfeldt, Figley Die and Stamping, Defiance, OH

Cary Drewes, Campbell Soup Company, Napoleon, OH

Scott Bowen, Sauder Woodworking, Archbold, OH

David Weber, Alex Products, Ridgeville Corners, OH

### Plastics Engineering Technology Advisory Committee

Evan Geno, Patrick Products Inc., New Bavaria, OH

Rich Leaser, Ferro Corp., Stryker, OH

Dennis Curry, CK Technologies, Montpelier, OH

Greg Burkholder, CK Technologies, Montpelier, OH

Jim Anderson, Plas-Tek, Edon, OH

### Computer Aided Design Advisory Committee

Todd Tracey, FASTech, Inc., Findlay, OH

Bruce Beck, Sauder Manufacturing Co., Archbold, OH

Ian Scribner, Camlogic,Oxford, MI

Linda Gallup, CAD/Shop Instructor, Fairview High School Sherwood, OH

Rick Mohr, Nucor Fasteners, St. Joe, IN

Jeff Goodman, MDI, Wauseon, OH

Justin Yoder, Alex Products, Ridgeville Corners, OH

Dakota Kime, Triton Metals, Hamilton, IN

John Barlage, NSCC, Archbold, OH

# Engineering Technologies Division

Northwest State Community College offers a variety of degree and certificate programs in the field of Engineering Technologies. Students enrolled in an Engineering Technologies program will benefit from the small classroom sizes as they learn to analyze problems and, more importantly, how to fix them.

Through the Engineering Technologies Division, students will be prepared to enter the workforce immediately after graduation. They will also have the option of transferring into a four-year degree program at a partnering college or university.

Degree and certificate programs offered through the Engineering Technologies Division include:

**Applied Science**
Systems Design, (Alternative Energy Technology)
Systems Service (Alternative Energy Technology)
Automation & Controls
CAD/CAM
Computer Science Engineering Technology
Electrical Engineering Technology
Industrial Management Technology
Mechanical Engineering Technology
Plastics Engineering Technology
**Industrial Technology**
Industrial Electrician
Machining CNC Programming
Maintenance Technician/Mechatronics
Millwright
**Technical Studies**
Plastics Machine Maintenance
**Certificate Programs**
Systems Design (Alternative Energy Technology)
Systems Service (Alternative Energy Technology)
Computer Aided Design
HVACR (Climate Control)
Industrial Electrical
Industrial Maintenance
Machining
Millwright
Plastics Manufacturing
Programmable Controller (PLC)
Quality Control

## Course Sequence
The suggested sequence of courses is for full-time students. If you are a part-time student or have transferred courses in from another school, you should generally complete the courses listed under semester 1 before moving on to semester 2, 3, and then 4. Elective courses may be taken at any time.  Please meet with your advisor if you need assistance to register.  Your advisor can help you make any necessary changes to this recommended sequence.

The following elective lists should be used unless specified on the program page.

**Communications:**

| ENG111 | Composition I (General Studies) |
| ENG113 | Speech |
| ENG210 | Technical Communications |
| ENG214 | Discussion & Conference Methods |

**Humanities:**

| ENG223 | Interpretation of Literature |
| ENG230 | Children's Literature |
| HUM209 | Hum. & Cultures: Ancient & Medieval Worlds |
| HUM210 | Hum. & Cultures: Renaissance to Present |
| HUM221 | Music Appreciation |
| HUM230 | Art Appreciation |
| PHI110 | Critical Thinking & Logic |
| PHI201 | Introduction to Philosophy |
| PHI210 | Ethics |
| PHI230 | World Religions |
| | Any core Humanities course - see page 30 |

**Science:**

| CHM101 | Principles of Chemistry |
| CHM201 | General Chemistry I |
| PHY101 | Principles of Physical Science |
| PHY251 | Physics:  Mechanics & Heat |
| PHY252 | Physics:  Electricity & Magnetism |

**Social/Behavioral Science:**

| HIS101 | U.S. History Pre-1876 |
| HIS102 | U.S. History Post-1876 |
| HIS203 | U.S. Since 1945 |
| HIS210 | The Modern World |
| PSY110 | General Psychology |
| PSY220 | Social Psychology |
| SSC101 | Sociology |
| or | |
| SSC102 | Sociology - Sustainable World |
| SSC120 | American Government |
| SSC130 | Comparative Government |
| SSC210 | Cultural Diversity |
| | Any Core Social Behavioral Science course - see page 30 |

**Technical Electives:**
Any AET, CAD, EET, IND, INT, MET, PET, PLC or QCT course

## Prerequisites
All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the assessment test or take the recommended classes. If you have not taken these tests, stop by the Admissions Office in C106 or call (419) 267-1320 for information or referral to testing.

Some courses listed in this program have specific prerequisites. See prerequisites required for each course in the Course Description section of this publication.

# Systems Design
## Associate of Applied Science in Alternative Energy Technology

### Engineering Technologies Division

Due to rising fuel costs and the depletion of our earth's natural resources, there is an increasing interest in alternative energy technologies. Regional and national legislation is requiring a shift to alternative and renewable energy sources. The manufacturing core is shifting toward solar, biomass, wind and other alternative energy technologies. As industry shifts, a large workforce will need developed and/or retrained for new jobs; new jobs in the area of alternative energy technology.

This program will prepare individuals for different technical careers in alternative energy related fields. This may include the design of systems incorporating various alternative energies or the design and specification of components related to the AET systems. This program will also be a path to transfer into similar or related four-year engineering technology programs.

### Career Outlook
Currently there is a large amount of research in alternative energy technology. With the innovation of this technology, there will be a need for individuals who can design, specify and incorporate these systems into machines and building structures.

### Program Learning Outcomes
Students earning an Associate degree from this program will:
1. Recognize current forms of energy and how that energy is utilized.
2. Compare and contrast various current energy sources, and determine the applicability of various alternative energy sources.
3. Examine current structures, calculate energy requirements, and specify appropriate components using alternative energy technologies.
4. Design and specify various components of alternative energy systems.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MTH109 | College Algebra | 3 |
| MET100 | Intro to Engineering Technologies | 2 |
| + MET110 | Print Reading and Sketching | 3 |
| + EET121 | DC Circuits | 3 |
| + AET100 | Introduction to Alternative Energy | 3 |
| | | 17 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| MTH112 | Trigonometry | 3 |
| PHY251 | Physics Mechanics and Heat | 4 |
| + AET110 | Energy Audit | 3 |
| | Communications Elective | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| + MET235 | Statics | 3 |
| + MET234 | Strengths of Materials | 3 |
| + AET200 | Sustainable Building Design | 3 |
| + CAD213 | CAD III | 4 |
| + | Alternative Energy Tech Elective | 4 |
| | | 17 |

| Fourth Semester | | Credits |
|---|---|---|
| + | Alternative Energy Tech Elective | 4 |
| + AET290 | Alternative Energy Capstone | 4 |
| | Humanities Elective | 3 |
| | Social/Behavioral Science Elective | 3 |
| | Science Elective | 4 |
| | | 18 |

### Alternative Energy Technology Electives:
| | |
|---|---|
| AET120 | Wind Power |
| AET130 | Solar Thermal |
| AET140 | Geothermal |
| AET220 | Solar Photovoltaics |
| AET230 | Hydrogen and Fuel Cell Technology |
| AET240 | Biofuels |

+   Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Systems Design
## Certificate in Alternative Energy Technology

### Engineering Technologies Division

Due to rising fuel costs and the depletion of our earth's natural resources, there is an increasing interest in alternative energy technologies. Regional and national legislation is requiring a shift to alternative and renewable energy sources. The manufacturing core is shifting toward solar, biomass, wind and other alternative energy technologies. As industry shifts, a large workforce will need developed and/or retrained for new jobs; new jobs in the area of alternative energy technology.

This program will prepare individuals for different technical positions in alternative energy related fields along with a path to transfer into related two-year associate degree programs.

### Career Outlook

Currently there is a large amount of research in alternative energy technology. With the innovation of this technology, there will be a need for individuals who can design, specify and incorporate these systems into machines and building structures.

### Program Learning Outcomes

Students earning a certificate from this program will:
1. Recognize current energy utilization.
2. Compare and contrast various energy sources, and determine the applicability of various alternative energy sources.
3. Examine current structures and specify appropriate related components using alternative energy.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MET100 | Intro to Engineering Technologies | 2 |
| + AET100 | Introduction to Alternative Energy | 3 |
| | | 8 |

| Second Semester | | Credits |
|---|---|---|
| + MET110 | Print Reading and Sketching | 3 |
| + EET121 | DC Circuits | 3 |
| + AET110 | Energy Audit | 3 |
| | | 9 |

| Third Semester | | Credits |
|---|---|---|
| + CAD213 | CAD III | 4 |
| + AET200 | Sustainable Building Design | 3 |
| | | 7 |

| Fourth Semester | | Credits |
|---|---|---|
| MTH109 | College Algebra | 3 |
| + | Alternative Energy Tech Elective | 4 |
| + | Alternative Energy Tech Elective | 4 |
| | | 11 |

### Alternative Energy Technology Electives:

| | |
|---|---|
| AET120 | Wind Power |
| AET130 | Solar Thermal |
| AET140 | Geothermal |
| AET220 | Solar Photovoltaics |
| AET230 | Hydrogen and Fuel Cell Technology |
| AET240 | Biofuels |

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Systems Service
## Associate of Applied Science in Alternative Energy Technology

### Engineering Technologies Division

Due to rising fuel costs and the depletion of our earth's natural resources, there is an increasing interest in alternative energy technologies. Regional and national legislation is requiring a shift to alternative and renewable energy sources. The manufacturing core is shifting toward solar, biomass, wind and other alternative energy technologies. As industry shifts, a large workforce will need developed and/or retrained for new jobs; new jobs in the area of alternative energy technology.

This program will prepare individuals for different technical careers in alternative energy related fields. This may include the specification and installation of various alternative energy systems or the maintenance and repair of these systems. This program will also be a path to transfer into similar or related four-year engineering technology programs.

### Career Outlook
Currently there is a large amount of research in alternative energy technology. With the innovation of this technology, there will be a need for individuals who can install, service, maintain and repair these systems in machines and building structures.

### Program Learning Outcomes
Students earning an Associate degree from this program will:
1. Recognize current energy utilization.
2. Determine the applicability of the various alternative energy sources.
3. Examine current structures, calculate requirements, and specify appropriate related components using alternative energy.
4. Install, service and repair various alternative energy systems.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MTH109 | College Algebra | 3 |
| MET100 | Intro to Engineering Technologies | 2 |
| + MET110 | Print Reading and Sketching | 3 |
| + EET121 | DC Circuits | 3 |
| + AET100 | Introduction to Alternative Energy | 3 |
| | | 17 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| IND103 | Applied Geometry and Trigonometry | 3 |
| + EET122 | AC Circuits | 3 |
| + AET110 | Energy Audit | 3 |
| | Communications Elective | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| + IND131 | Industrial Pipefitting | 3 |
| PHY101 | Principles of Physical Science | 4 |
| + INT120 | HVACR I | 3 |
| CAD111 | CAD I | 4 |
| + | Alternative Energy Tech Elective | 4 |
| | Social/Behavioral Science Elective | 3 |
| | | 21 |

| Fourth Semester | | Credits |
|---|---|---|
| + AET290 | Alternative Energy Capstone | 4 |
| + INT221 | HVACR III Heating Systems | 3 |
| + | Alternative Energy Tech Elective | 4 |
| + | Technical Elective | 3 |
| | Humanities Elective | 3 |
| | | 17 |

### Alternative Energy Technology Electives:
| | |
|---|---|
| AET120 | Wind Power |
| AET130 | Solar Thermal |
| AET140 | Geothermal |
| AET220 | Solar Photovoltaics |
| AET230 | Hydrogen and Fuel Cell Technology |
| AET240 | Biofuels |

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Systems Service
## Certificate in Alternative Energy Technology

### Engineering Technologies Division

Due to rising fuel costs and the depletion of our earth's natural resources, there is an increasing interest in alternative energy technologies. Regional and national legislation is requiring a shift to alternative and renewable energy sources. The manufacturing core is shifting toward solar, biomass, wind and other alternative energy technologies. As industry shifts, a large workforce will need developed and/or retrained for new jobs; new jobs in the area of alternative energy technology.

This program will prepare individuals for different technical positions in alternative energy related fields along with a path to transfer into related two-year associate degree programs.

### Career Outlook

Currently there is a large amount of research in alternative energy technology. With the innovation of this technology, there will be a need for individuals who can install, service, maintain and repair these systems in machines and building structures.

### Program Learning Outcomes

Students earning a certificate from this program will:
1. Recognize current energy utilization.
2. Determine the applicability of the various alternative energy sources.
3. Examine current structures.
4. Service and repair various alternative energy systems.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MET100 | Intro to Engineering Technologies | 2 |
| + AET100 | Introduction to Alternative Energy | 3 |
| | | 8 |

| Second Semester | | Credits |
|---|---|---|
| + MET110 | Print Reading and Sketching | 3 |
| + EET121 | DC Circuits | 3 |
| + AET110 | Energy Audit | 3 |
| | | 9 |

| Third Semester | | Credits |
|---|---|---|
| IND103 | Applied Geometry and Trigonometry | 3 |
| + EET122 | AC Circuits | 3 |
| + INT120 | HVACR I | 3 |
| | | 9 |

| Fourth Semester | | Credits |
|---|---|---|
| PHY101 | Principles of Physical Science | 3 |
| + IND131 | Industrial Pipefitting | 3 |
| + | Alternative Energy Tech Elective | 4 |
| | | 10 |

### Alternative Energy Technology Electives:

| | |
|---|---|
| AET120 | Wind Power |
| AET130 | Solar Thermal |
| AET140 | Geothermal |
| AET220 | Solar Photovoltaics |
| AET230 | Hydrogen and Fuel Cell Technology |
| AET240 | Biofuels |

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Automation & Controls
## Associate of Applied Science in Instrumentation Technology

### Engineering Technologies Division

The market today divides employees in the electrical field in two distinct areas: industrial electrical (installation & troubleshooting), and industrial automation (design and application).

The industrial automation program will allow students to apply technology such as industrial networking, programmable controllers, instrumentation, robotics and automated controls to solve problems in the manufacturing workplace. We see such a market demand for graduates of this program in the OEM (original equipment manufacturers) and system integrator market. This is an excellent program for upgrading the skill level of the engineering and maintenance personnel in the industrial automation field that are currently working in the industry.

### Career Outlook

The career outlook for graduates of the automation & controls program is promising. Skilled technicians in the fields of electrical, automation, control and robotics are in high demand as the nation rebuilds its manufacturing base. This is particularly true in the emerging alternative energy industry in northwest Ohio and across the country. Ambitious, educated technicians with an automation & controls degree can provide crucial support of production and testing facilities in a variety of manufacturing environments.

### Program Learning Outcomes

Students earning an Associate degree from this program will:
1. Demonstrate knowledge of direct current (DC) and alternating current (AC) electrical circuits, devices, and electrical wiring codes.
2. Show proficiency in reading electrical prints, using computer software to design electrical schematics and for writing technical documentation.
3. Develop skills in circuit construction, field wiring, and fabrication of instrument and control cables.
4. Create industrial computer programs, discuss network solutions for process control systems and develop robot software for industrial applications.
5. Practice skills in system troubleshooting, analysis, and fundamental problem solving.

| First Semester | | Credits |
|---|---|---|
| + CAD111 | CAD I | 4 |
| ENG111 | Composition I | 3 |
| MTH109 | College Algebra | 3 |
| + IND120 | Industrial Electricity I | 3 |
| MET100 | Intro to Engineering Technology | 2 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| + EET240 | Engineering Programming | 3 |
| ENG112 | Composition II | 3 |
| MTH112 | Trigonometry | 3 |
| + IND121 | Industrial Electricity II | 3 |
| PHY252 | Physics: Electricity & Magnetism | 4 |
| | Communications Elective | 3 |
| | | 19 |

| Third Semester | | Credits |
|---|---|---|
| + PLC200 | Programmable Controller I | 3 |
| + EET272 | CISCO Networking I | 4 |
| + IND223 | Motors and Motor Control | 3 |
| + EET277 | Industrial Electronics | 3 |
| | Humanities Elective | 3 |
| | | 16 |

| Fourth Semester | | Credits |
|---|---|---|
| + PLC210 | Programmable Controller II | 3 |
| + PLC230 | Servo/Robotic Systems | 3 |
| + IND221 | Instrumentation & Controls I | 3 |
| + | Technical Elective | 3 |
| | Social/Behavioral Science Elective | 3 |
| | Science Elective | 4 |
| | | 19 |

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Programmable Controller (PLC)
## Certificate

## Engineering Technologies Division

A Programmable Logic Controller (PLC) Certificate prepares the individual to install, maintain and troubleshoot industrial grade Programmable Logic Controllers (PLC) systems. Typically these technicians will work closely with maintenance supervisors and electrical engineers, sometimes receiving objectives and technical advice from them. Technicians conduct extensive self study (reading, research and practice) to improve and maintain technical proficiency, due to new and improved electrical control devices.

Typically technicians work on assignments and tasks with minimum supervision and guidance, often requiring the technician to interface and pass down information between cross function personnel of incoming and outgoing shifts. It is expected by employers that technicians demonstrate excellent verbal, written and interpersonal communication skills.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in Automation and Controls.

### Career Outlook

Graduates of this program may find employment as entry-level control technicians, electrical technicians or as service technicians working under the direction of the maintenance or engineering department. Some of the typical duties of these technicians will include: troubleshooting and programming of PLC control systems; variable frequency drives; 480 volt 3 phase motor wiring; reading blueprints and electrical schematics; installing conduit and wiring; testing wiring connections; working closely with electrical engineers and / or general contractors.

### Program Learning Outcomes

Students earning a certificate from this program should demonstrate:

1. Knowledge of electrical symbols and abbreviations.
2. Basic knowledge of operating systems, networking, and computer hardware.
3. Proficiency in design concepts, orthographic projection, dimensioning practices, and blueprint reading.
4. Basic ladder logic programming, addressing, editing, and troubleshooting.

| First Semester | | Credits |
|---|---|---|
| + IND120 | Industrial Electricity I ..................... | 3 |
| MTH080 | Review of Beginning Algebra ......... | 4 |
| | | 7 |

| Second Semester | | Credits |
|---|---|---|
| + IND121 | Industrial Electricity II ................... | 3 |
| + IND110* | Industrial Computing I ................... | 3 |
| | | 6 |

| Third Semester | | Credits |
|---|---|---|
| + CAD111 | CAD I ............................................ | 4 |
| + IND223 | Motors & Motor Controls .............. | 3 |
| | | 7 |

| Fourth Semester | | Credits |
|---|---|---|
| + PLC200 | Programmable Controller I ............. | 3 |
| | General Studies Elective ................ | 3 |
| | | 6 |

| Fifth Semester | | Credits |
|---|---|---|
| + IND221 | Instrumentation & Controls............ | 3 |
| + PLC210 | Programmable Controller II ........... | 3 |
| | | 6 |

| Sixth Semester | | Credits |
|---|---|---|
| + EET240 | Engineering Programming .............. | 3 |
| + PLC220 | Programmable Controller III........... | 3 |
| | | 6 |

\*  Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+  Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# CAD/CAM
## Associate of Applied Science in Mechanical Engineering Technology

## Engineering Technologies Division

The CAD/CAM graduate will earn an Associate of Applied Science degree in the Mechanical Engineering Technology. Students completing the associate degree are qualified to play a support role to the engineering professionals in industry preparing blueprints, layouts, bills of materials, manufacturing and product support documentations. The CAD/CAM major will also prepare the student to interpret designs and to design components and tooling used in manufacturing and to operate production machines and program CNC machines, using G Codes and state-of-the-art CAM software.

### Career Outlook

Job seekers who have a two-year degree should have the best prospects for employment. With the shortage of skilled metalworkers in the United States today, the job opportunities are favorable for the CAD/CAM Technician.

### Program Learning Outcomes

Students earning an Associate degree from this program will:

1. Utilize Computer-Aided-Design (CAD) software to solve engineering problems.
2. Demonstrate knowledge of computer operation systems, application software, and computer hardware.
3. Illustrate design concepts, orthographic projection, dimensioning practices and blueprint reading.
4. Explain common manufacturing processes and determine their applicability for a given product.
5. Read and operate precision measuring devices and instruments.

| First Semester | | Credits |
|---|---|---|
| + CAD111 | CAD I | 4 |
| ENG111 | Composition I | 3 |
| MET100 | Intro to Engineering Technology | 2 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| + MET110 | Print Reading & Sketching | 3 |
| + IND140 | Principles of Machining | 3 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| + CAD112 | CAD II | 4 |
| ENG112 | Composition II | 3 |
| + IND241 | Tooling & Fixtures | 3 |
| + MET222 | Programming CNC | 3 |
| MTH109 | College Algebra | 3 |
| | Communications Elective | 3 |
| | | 19 |

| Third Semester | | Credits |
|---|---|---|
| + CAD213 | CAD III | 4 |
| + MET223 | CAM I | 4 |
| + QCT141 | Precision Measurement | 3 |
| MTH112 | Trigonometry | 3 |
| | Social/Behavioral Science Elective | 3 |
| | | 17 |

| Fourth Semester | | Credits |
|---|---|---|
| + MET260 | CAM II | 3 |
| + MET262 | CAD/CAM Project | 4 |
| PHY251 | Physics: Mechanics & Heat | 4 |
| + | Technical Elective | 3 |
| | Humanities Elective | 3 |
| | | 17 |

+     Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Computer Aided Design
## Certificate

### Engineering Technologies Division

A Computer Aided Design Certificate prepares the individual to create engineering drawings using CAD software. Typically these individuals will work closely with mechanical engineers, sometimes receiving objectives and technical advice from supervisors and/or engineers (both Electrical and Mechanical), displaying both their knowledge of the software and current knowledge of drafting and design standards. It is expected by employers that individuals demonstrate excellent verbal, written and interpersonal communication skills.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in mechanical engineering technology with a CAD/CAM major.

### Career Outlook

Graduates of this program may find employment as an entry-level CAD operator/technician or as a detailer working under the direction of a design engineer. Some of the typical duties of a CAD operator/technician will include: compiling and computing a variety of engineering data; developing and preparing schematics from designs made by you and/or others; making preliminary designs from rough specifications and/or verbal directions; generating and revising current engineering prints and three-dimensional patterns for parts and products; designing and modifying equipment used for manufacturing; building a bill of material for new or revised designs, revising drawings and checking prints for accuracy.

Job opportunities for CAD technicians will remain stable through the next several years, with most of the positions occurring from replacing workers who leave the profession or retire.

### Program Learning Outcomes

Students earning a certificate from this program should demonstrate:

1. Knowledge of file handling and management.
2. Familiarity with computer software, CAD, computer hardware, and component terminologies.
3. Basic knowledge working with Cartesian coordinate system.
4. Knowledge of setup, display, drawing, inquiry, and modify commands.
5. Demonstrate ability of developing, modifying, and manipulating symbols, crosshatching, and various types of dimensioning.
6. Demonstrate knowledge of inquiry commands and developing industrial-type detail and assembly drawings as well as plotting finished projects.

| First Semester | | Credits |
|---|---|---|
| + CAD111 | CAD I | 4 |
| + MET110 | Print Reading & Sketching | 3 |
| | | 7 |

| Second Semester | | Credits |
|---|---|---|
| + CAD112 | CAD II | 4 |
| + IND110* | Industrial Computing I | 3 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| + IND241 | Tooling & Fixtures | 3 |
| | | 13 |

| Third Semester | | Credits |
|---|---|---|
| + CAD213 | CAD III | 4 |
| + IND140 | Principles of Machining | 3 |
| + QCT141 | Precision Measurement | 3 |
| | | 10 |

\* Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Computer Science Engineering Technology
## Associate of Applied Science

## Engineering Technologies Division

The Computer Science Engineering Technology program prepares graduates for the field of computer science with a comprehensive understanding of computer hardware and software at the machine and system level. The program combines curriculum in electronics and computer programming addressing both hardware and software aspects of computer design and applications. The design aspect places emphasis on computer structures, computer architectures, microcomputer systems, digital design, and computational applications. The applications part of the program includes a general knowledge of computer operating systems, utilization of software in engineering technologies, low- and hi-level programming techniques, and the use of mathematical algorithms.

### Career Outlook

With an increasing utilization of computer systems and programming, demand for technicians with a computer science background is ever increasing. Graduates of this program will have the foundational coursework leading into four year computer science and electrical engineering programs at various universities, as well as being qualified for entry level engineering technicians in product design, engineering support, and other technical support positions. Typical job titles with this degree would include Application Specialist, Computer Systems Specialist, Computer Maintenance Technician, Field Service Representative, Field Engineer, Installation Technician, and Systems Integrator.

### Program Learning Outcomes

Students earning an Associate degree from this program will be able to:
1. Comprehend fundamental electrical and magnetic theory and reduce to practice direct current (DC) circuits.
2. Understand the foundations of digital logic.
3. Implement logic circuits using electronic and microprocessor hardware.
4. Write and debug software using high- and low-level structured programming techniques.
5. Utilize foundational algorithms and mathematical constructs.
6. Diagnose and solve computer-based application problems using an analytical stepwise approach.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MTH109 | College Algebra | 3 |
| MET100 | Intro to Engineering Technology | 2 |
| PHI110 | Critical Thinking and Logic | 3 |
| + CIS191 | Computer Operations | 3 |
| + EET240 | Engineering Programming | 3 |
| | | 17 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| MTH112 | Trigonometry | 3 |
| + EET221 | Digital Electronics | 4 |
| + EET131 | Discrete Structures | 3 |
| + CIS165 | Java Programming | 4 |
| | | 17 |

| Third Semester | | Credits |
|---|---|---|
| PHY251 | Physics: Mechanics & Heat | 4 |
| + EET121 | DC Circuits | 3 |
| + EET231 | Microprocessors | 4 |
| | Communications Elective | 3 |
| | Social/Behavioral Science Elective | 3 |
| | | 17 |

| Fourth Semester | | Credits |
|---|---|---|
| PHY252 | Physics: Electricity & Magnetism | 4 |
| + EET122 | AC Circuits | 3 |
| + EET272 | Cisco Networking I | 4 |
| + PLC200 | Programmable Controller I | 3 |
| | Technical Elective | 3 |
| | | 17 |

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate

# Electrical Engineering Technology
## Associate of Applied Science

### Engineering Technologies Division

Electrical engineering technology (EET) is a comprehensive electrical technologies program that prepares graduates for employment as skilled technicians, or for pursuit of a Bachelor of Science degree in Engineering Technology. The EET program provides a foundation of electrical and electronics theory and practice applicable to a variety of subject areas including, but not limited to, Alternative energy systems, automation and control and electric drive technology. A focus on laboratory experience gives students the technical hand skill and problem solving insight to employ solutions in the field. The curriculum includes algebra-based courses with emphasis on applied science and engineering.

Students in the EET program have opportunity to participate in applied research and testing activities to supplement coursework.

### Career Outlook

Demand is growing for technicians in the electrical-related fields in northwest Ohio and across the country who possess diverse technical skills and problem solving acumen. The career outlook for graduates of the EET program is promising, with special opportunities in Alternative Energy and Electric Vehicle manufacturing and product improvement.

### Program Learning Outcomes

Students earning an Associate degree from this program will be able to:

1. Understand fundamental electrical and magnetic theory and reduce to practice direct current (DC) and alternating current (AC) circuits.
2. Interpret electrical diagrams and schematics to predict behavior and to assess functionality using handheld and benchtop measurement instruments.
3. Analyze electrical circuits using Ohm's Law and theorems for specifying conductors and components, and for calculating power and energy.
4. Fabricate electrical circuits, modules, and systems using industry-accepted practices.
5. Diagnose and solve circuit problems using an analytical stepwise approach.
6. Implement computer-based instrumentation, control, and networking of digital and analog electronics.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MTH109 | College Algebra | 3 |
| + EET121 | DC Circuits | 3 |
| MET100 | Intro to Engineering Technology | 2 |
| CAD111 | CAD I | 4 |
| | | 15 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| MTH112 | Trigonometry | 3 |
| + EET122 | AC Circuits | 3 |
| + EET221 | Digital Electronics | 4 |
| + EET240 | Engineering Programming | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| PHY251 | Physics: Mechanics & Heat | 4 |
| + EET277 | Industrial Electronics | 3 |
| + EET272 | Cisco Networking | 4 |
| | Communications Elective | 3 |
| | Social/Behavioral Science Elective | 3 |
| | | 17 |

| Fourth Semester | | Credits |
|---|---|---|
| + PLC200 | Programmable Controller I | 3 |
| PHY252 | Physics: Electricity & Magnetism | 4 |
| + EET231 | Microprocessors | 4 |
| + | Technical Elective | 3 |
| | Humanities Elective | 3 |
| | | 17 |

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Industrial Management Technology
## Associate of Applied Science

## Engineering Technologies Division

This program is designed to prepare graduates for careers as technicians, management trainees or supervisors in manufacturing. Courses include a mixture of business management topics with an emphasis on engineering technologies.

### Career Outlook

Employment in industrial management technicians and electrical engineering technicians is expected to grow nationally and in the state of Ohio. The world is dependent on many types of electronic products and consumers continue to want newer and faster products. This need will ensure that manufacturers will continue to hire the technicians to improve the products.

### Program Learning Outcomes

Students earning an Associate degree from this program should demonstrate:

1. Basic knowledge of operating systems, networking, and computer hardware.
2. Proficiency in manipulating Computer-Aided-Design (CAD) software, in a hands-on environment.
3. Proficiency in design concepts, orthographic projection, dimensioning practices, and blueprint reading.
4. Basic knowledge of common manufacturing processes.
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.
6. Basic knowledge of polymers including history, current industry, recycling, types of polymers, properties, and common manufacturing processes used in the plastics industry.
7. Knowledge of reading measuring devices and the ability to apply SPC practices to various processes within the plastics industry.

| First Semester | | Credits |
|---|---|---|
| + CAD111 | CAD I................................................ | 4 |
| ENG111 | Composition I.................................... | 3 |
| + MET100 | Intro to Engineering Technology .... | 2 |
| + MET110 | Print Reading & Sketching.............. | 3 |
| MGT110 | Management..................................... | 3 |
| MTH109 | College Algebra............................... | 3 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| + BUS250 | Labor Relations .............................. | 3 |
| ENG112 | Composition II ............................... | 3 |
| MTH112 | Trigonometry................................... | 3 |
| + PET110 | Principles of Plastics ...................... | 4 |
| | Communications Elective .............. | 3 |
| | | 16 |

| Third Semester | | Credits |
|---|---|---|
| + ACC111 | Financial Accounting ...................... | 4 |
| + MGT210 | Human Resource Management ....... | 3 |
| PHY251 | Physics: Mechanics & Heat ........... | 4 |
| | Humanities Elective ....................... | 3 |
| + | Technical Elective .......................... | 3 |
| | | 17 |

| Fourth Semester | | Credits |
|---|---|---|
| + QCT100 | Quality Concepts............................ | 3 |
| + | Business Elective ........................... | 3 |
| | Science Elective ............................. | 4 |
| | Social/Behavioral Science Elective | 3 |
| + | Technical Elective .......................... | 3 |
| | | 16 |

**Business Electives:**
| | |
|---|---|
| BUS280 | Finance |
| MKT110 | Marketing |
| MKT230 | Salesmanship |

+   Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Mechanical Engineering Technology
## Associate of Applied Science

### Engineering Technologies Division

The machinery of modern industry consists of mechanical devices – levers that move, wheels that spin and cogs that must mesh. The mechanical engineering technology degreeis designed to train students in technology based, entry-level occupations related to the mechanical and manufacturing engineering fields. Graduates will be able to assist engineers and other professional staff engaged in plant and facilities maintenance and other plant engineering and management functions.

All aspects of industry are dependent on the production and reading of drawings to convey information.

The mechanical engineering technology degree provides students the opportunity to study engineering topics associated with the design and installation of mechanical equipment and systems with the option of transferring to another institution to pursue a four-year bachelor degree in mechanical engineering technology.

The student who follows this course of study will be trained to function as a Mechanical Technician in a number of industrial situations which require knowledge of mechanical systems, engineering materials and equipment. The student may find himself/herself working closely with engineers engaged in designing, testing, servicing or assembly and installation of machinery and industrial equipment.

### Career Outlook

Many diverse occupations find their origins in the mechanical field. These occupations include a variety of titles in the areas of drafting, production, testing, design and analysis, to name a few. Employment in the mechanical field should be quite good with job opportunities growing as fast as average nationally and in the state of Ohio.

The largest need for mechanical engineering technicians will be in manufacturing, with companies continually wanting new or improved machinery.

### Program Learning Outcomes

Students earning an Associate degree from this program will:
1. Interpolate and complete engineered drawings using orthographic projection, isometric views, and proper dimensioning practices, then employ the use of Computer-Aided-Design (CAD) software.
2. Describe the different manufacturing processes and demonstrate proper use of precision measuring devices and instruments.
3. Examine the physical and chemical properties of engineering materials, analyze and calculate the properties of fluids.
4. Analyze and calculate the resolution of forces on rigid bodies; determine the stress, strain, and deflection, then design machines and mechanisms.

| First Semester | | Credits |
|---|---|---|
| + CAD111 | CAD I | 4 |
| ENG111 | Composition I | 3 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| + MET110 | Print Reading & Sketching | 3 |
| MTH109 | College Algebra | 3 |
| MET100 | Intro to Engineering Technologies | 2 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| + CAD112 | CAD II | 4 |
| ENG112 | Composition II | 3 |
| MTH112 | Trigonometry | 3 |
| + MET121 | Manufacturing Processes | 3 |
| PHY251 | Physics: Mechanics and Heat | 4 |
| | | 17 |

| Third Semester | | Credits |
|---|---|---|
| + QCT141 | Precision Measurement | 3 |
| + MET235 | Statics | 3 |
| + MET234 | Strength of Materials | 3 |
| | Science Elective | 4 |
| | Communications Elective | 3 |
| | | 16 |

| Fourth Semester | | Credits |
|---|---|---|
| + MET134 | Engineering Materials | 3 |
| + MET265 | Machine Design | 3 |
| + MET255 | Fluid Mechanics | 3 |
| + | Technical Elective | 3 |
| | Social/Behavioral Science Elective | 3 |
| | Humanities Elective | 3 |
| | | 18 |

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Plastics Engineering Technology
## Associate of Applied Science

## Engineering Technologies Division

Plastics is one of the fastest growing manufacturing industries today. The plastics program at Northwest State Community College was created in response to the industry demand in northwest Ohio for employee training and student education in plastics manufacturing. Students will receive specialized training in thermoplastic materials, injection molding and plastics testing. Graduates will also be skilled in various processes such as blow molding, extrusion and thermoforming.

### Career Outlook

While consumer demand for convenient, plastic products increases, so will the need for highly-skilled plastics technicians. Job titles in this field can include Molding Technician, Production Supervisor, design and development and quality control technician to name a few. Employment of plastic processing workers is expected to grow as fast as the average both nationally and in the state of Ohio. An increase in workers trained in the field will stem from manufacturers substituting plastic parts for those that had been manufactured from metal in the past.

### Program Learning Outcomes

Students earning an Associate degree from this program will:
1. Demonstrate knowledge of polymers including history, current industry, recycling, types of polymers and properties as well as test for said functional properties.
2. Create design concepts, orthographic projection, dimensioning practices, blueprint reading, and produce said items through the use of 3-D modeling software.
3. Demonstrate basic knowledge of the injection molding process and several other primary processes, formulate and troubleshoot the process, and ultimately producing quality parts.
4. Demonstrate knowledge of reading and operating precision measuring devices and the ability to apply SPC practices to various processes within the industry.
5. Demonstrate basic knowledge of common secondary operations used in the plastics industry primarily for assembly and decorating.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| MET110 | Print Reading & Sketching | 3 |
| MTH109 | College Algebra | 3 |
| + PET110 | Principles of Plastics | 4 |
| MET100 | Intro to Engineering Technology | 2 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| MTH112 | Trigonometry | 3 |
| + PET210 | Injection Molding | 4 |
| + QCT141 | Precision Measurement | 3 |
| PHY251 | Physics: Mechanics & Heat | 4 |
| | | 17 |

| Third Semester | | Credits |
|---|---|---|
| + PET231 | Plastics Materials Testing | 4 |
| CHM201 | General Chemistry I | 5 |
| + CAD213 | CADIII | 4 |
| + | Plastics Elective | 3 |
| | Communications Elective | 3 |
| | | 19 |

| Fourth Semester | | Credits |
|---|---|---|
| + PET250 | Plastics Secondary Operations | 4 |
| + QCT100 | Quality Concepts | 3 |
| + | Plastics Elective | 4 |
| | Social/Behavioral Science Elective. | 3 |
| | Humanities Elective | 3 |
| | | 17 |

**Plastics Electives:**

| | | |
|---|---|---|
| PET220 | Advanced Injection Molding | |
| PET225 | Extrusion, Blowmolding & Thermoforming | |
| PET240 | Injection Mold Tooling | |

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Plastics Manufacturing
## Certificate

A Plastics Manufacturing Certificate prepares the individual to setup and maintain injection molding processes; plastics testing processes and ensure quality control. Individuals may also be skilled in various processes such as blow molding, extrusion, and thermoforming. Typically these individuals report to manufacturing supervisors, receiving daily objectives from them.

Technicians work on assignments and tasks with minimum supervision and guidance, often requiring the technician to interface and pass down information to personnel on incoming and outgoing shifts. It is expected by employers that technicians demonstrate excellent verbal, written and interpersonal communication skills.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in plastics engineering technology.

## Career Outlook

Graduates of this program may find employment as entry-level mold technicians, mold setters, job setters and material handlers working under the direction of the manufacturing department. Some of the typical duties of these technicians will include performing: mold insert changes; material color changes; press start-ups and shut downs; mold changes and planned maintenance (PMs) on the molds; performing product inspections to verify conformance to specifications, ensuring quality control; and directing and performing adjustments of molding equipment, working closely with the production and the quality control departments.

## Program Learning Outcomes

Students earning a certificate from this program should demonstrate:
1. Basic knowledge of polymers including history, current industry, recycling, types of polymers and properties.
2. Basic knowledge of common manufacturing processes used in the plastics industry.
3. Proficiency in design concepts, orthographic projection, dimensioning practices, and blueprint reading.
4. Knowledge of reading and operating precision measuring devices and the ability to apply SPC practices to various processes within the plastics industry.
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.
6. Basic knowledge of the injection molding process and the ability to establish a production intent process and troubleshoot various defects.
7. Basic knowledge of the various properties associated with plastics and ability to perform functional tests used to determine properties.
8. Basic knowledge of common secondary operations used in the plastics industry primarily for assembly and decorating.

| First Semester | | Credits |
|---|---|---|
| + MET110 | Print Reading & Sketching | 3 |
| + PET110 | Principles of Plastics | 4 |
| | General Studies Elective | 3 |
| | | 10 |

| Second Semester | | Credits |
|---|---|---|
| MTH109 | College Algebra | 3 |
| + PET210 | Injection Molding | 4 |
| | | 7 |

| Third Semester | | Credits |
|---|---|---|
| IND103 | Applied Geometry & Trigonometry | 3 |
| + PET240 | Injection Mold Tooling | 4 |
| | | 7 |

| Fourth Semester | | Credits |
|---|---|---|
| + PET231 | Plastics Materials Testing | 4 |
| + QCT100 | Quality Concepts | 3 |
| + | Plastics Elective | 4 |
| | | 11 |

**Plastics Electives:**

| | |
|---|---|
| PET220 | Advanced Injection Molding |
| PET225 | Extrusion, Blowmolding & Thermoforming |
| PET231 | Plastic Materials Testing |
| PET250 | Plastics Secondary Operations |

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Plastics Machine Maintenance
## Associate of Technical Studies

## Engineering Technologies Division

Polymers (plastics) and rubber is the number one industry in Ohio. This industry requires sophisticated production machinery. maintenance technicians are required to keep this type of machinery running. This program combines basic plastics courses as well as courses from the industrial maintenance programs.

The Associate of Technical Studies (ATS) degree is a recognized degree through the Ohio Board of Regents. The ATS is a customizable degree that is made up of two technical content areas, primarily for students that have educational goals that do not match traditional programs offered at NSCC. This degree is designed for a student who wishes to enter the field of plastics maintenance.

The degree consists of three different types of courses: General Courses (15 hrs.), Basic Courses (15 hrs.) and Technical Courses (30-43 hrs.). The General Studies core of classes is required of all graduates of NSCC. The Basic Courses are courses that basically prepare students for the technical courses. The Technical Courses are made up of two types of classes: plastics and industrial electrical.

If students wish to transfer on to a university for a bachelor's degree, they must have each course evaluated individually by the university.

This is an excellent program for employees who are currently working in the maintenance department of a plastic company, or an employee of a plastic company wishing to get into the maintenance department.

To sign up for this program or to customize your own ATS degree, the student should meet with the Dean of the Engineering Technologies Division.

### Program Learning Outcomes
Students earning an Associate degree from this program should demonstrate:
1. Basic knowledge of polymers including history, current industry, recycling, types of polymers and properties.
2. Basic knowledge of common manufacturing processes used in the plastics industry.
3. Proficiency in design concepts, orthographic projection, dimensioning practices, and blueprint reading.
4. Knowledge of reading and operating precision measuring devices and the ability to apply SPC practices to various processes within the plastics industry.
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.
6. Basic knowledge of the injection molding process and the ability to establish a production intent process and troubleshoot various defects.
7. Basic knowledge of the various properties associated with plastics and ability to perform functional tests used to determine properties.
8. Basic knowledge of common secondary operations used in the plastics industry primarily for assembly and decorating.

| **First Semester** | | **Credits** |
|---|---|---|
| ENG111 | Composition I | 3 |
| + MET100 | Intro to Engineering Technology | 2 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| + PET110 | Principles of Plastics | 4 |
| + IND120 | Industrial Electricity I | 3 |
| | Social/Behavioral Science Elective | 3 |
| | | 18 |

| **Second Semester** | | **Credits** |
|---|---|---|
| ENG112 | Composition II | 3 |
| MTH109 | College Algebra | 3 |
| + PET210 | Injection Molding | 4 |
| + IND121 | Industrial Electricity II | 3 |
| + IND122 | Industrial Wiring (NEC) | 3 |
| | Humanities Elective | 3 |
| | | 19 |

| **Third Semester** | | **Credits** |
|---|---|---|
| + IND134 | Industrial Fluid Power I | 3 |
| PHY251 | Physics: Mechanics & Heat | 4 |
| + PLC200 | Programmable Controller I | 3 |
| + IND223 | Motors & Motor Controls | 3 |
| + | Technical Elective | 3 |
| | | 16 |

| **Fourth Semester** | | **Credits** |
|---|---|---|
| + PLC210 | Programmable Controller II | 3 |
| + IND221 | Instrumentation & Controls I | 3 |
| + IND220 | Electrical Prints & Troubleshooting | 3 |
| + PET220 | Advanced Injection Molding | 4 |
| | Communications Elective | 3 |
| | | 16 |

**Technical Electives:**
See Division Dean for Technical Electives

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Industrial Electrician
## Associate of Applied Science in Industrial Technology

### Engineering Technologies Division

This degree will focus on learning experiences for students that will prepare them with the technical skills to work in the Industrial Electrical field in positions such as industrial electrician, electrical technician, industrial controls technician or maintenance technician.

Students in this program will be trained not only in traditional Electrician skills, but also how to operate and troubleshoot state-of-the-art programmable controller systems, solid state motor drives, instrument systems and industrial computer systems used by maintenance personnel in manufacturing and process plants.

Students will receive hands-on training on AC/DC motors, transformers, test equipment, basic hydraulic systems, and industrial wiring practices according to the National Electrical Code. Most of the technical classes will have 50 percent of the learning experience in the classroom, and the other 50 percent in the laboratory with hands-on training. This program focuses on basic fundamentals so that graduates can also adapt to the continuous changes in this technology.

### Career Outlook

As manufacturers invest in new highly technological equipment, the demand for the Industrial Electrician is great.

### Program Learning Outcomes

Students earning an Associate degree from this program should demonstrate:

1. Knowledge of electrical symbols and abbreviations.
2. Proficiency in basic electrical theory, motor starters, solenoid valves, various control devices, motor circuits, and variable frequency drives.
3. Proficiency in the systematic elimination of the various parts of a system to locate a malfunctioning part safely but promptly.
4. Basic knowledge of PLC control systems, analog instrumentation, and Servo robotics systems.
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | Credits |
|---|---|---|
| CAD111 | CAD I | 4 |
| ENG111 | Composition I | 3 |
| IND110* | Industrial Computing I | 3 |
| MTH109 | College Algebra | 3 |
| + IND120 | Industrial Electricity I | 3 |
| | | 16 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| + IND121 | Industrial Electricity II | 3 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| + IND122 | Industrial Wiring (NEC) | 3 |
| + IND134 | Industrial Fluid Power I | 3 |
| | Communications Elective | 3 |
| | | 18 |

| Third Semester | | Credits |
|---|---|---|
| + INT120 | HVACR I | 3 |
| + PLC200 | Programmable Controller I | 3 |
| + IND223 | Motors & Motor Controls | 3 |
| + EET277 | Industrial Electronics | 3 |
| | Humanities Elective | 3 |
| | Science Elective | 4 |
| | | 19 |

| Fourth Semester | | Credits |
|---|---|---|
| + IND220 | Electrical Prints & Troubleshooting | 3 |
| + IND221 | Instrumentation & Controls I | 3 |
| + IND234 | Industrial Fluid Power II | 3 |
| + PLC230 | Servo/Robotic Systems | 3 |
| + | Technical Elective | 3 |
| | Social/Behavioral Science Elective | 3 |
| | | 18 |

\* Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Industrial Electrical
## Certificate

## Engineering Technologies Division

This program will focus on learning experiences that will prepare students with the technical skills to work in the industrial electrical field in positions such as Industrial Electrician, Electrical Technician, Industrial Controls Technician or Maintenance Technician. All of these courses apply toward the comparable associate degree.

Students in the program will be trained not only in traditional Electrician skills, but also how to operate and troubleshoot state-of-the-art programmable controller systems, solid state motor drives, instrument systems and industrial computer systems used by maintenance personnel in manufacturing and process plants.

Students will receive hands-on training on AC/DC motors, transformers, test equipment, basic hydraulic systems, and industrial wiring practices according to the National Electrical Code. Most of the technical classes will have 50 percent of the learning experience in the classroom, and the other 50 percent in the laboratory with hands-on training. This program focuses on basic fundamentals so that graduates can also adapt to the continuous changes in technology.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in Industrial Electrician.

### Career Outlook

As manufacturers invest in new highly technological equipment, the demand for the Industrial Electrician is great.

### Program Learning Outcomes

Students earning a certificate from this program should demonstrate:

1. Knowledge of electrical symbols and abbreviations.
2. Proficiency in basic electrical theory, motor starters, solenoid valves, various control devices, motor circuits, and variable frequency drivers.
3. Proficiency in the systematic elimination of the various parts of a system to locate a malfunctioning part safely but properly.
4. Basic knowledge of PLC control systems.
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | Credits |
|---|---|---|
| + IND120 | Industrial Electricity I ..................... | 3 |
| MTH080 | Review of Beginning Algebra......... | 4 |
| | | 7 |

| Second Semester | | Credits |
|---|---|---|
| + IND121 | Industrial Electricity II ................... | 3 |
| + IND110* | Industrial Computing I .................. | 3 |
| | | 6 |

| Third Semester | | Credits |
|---|---|---|
| + IND220 | Electrical Prints & Troubleshooting | 3 |
| + IND134 | Industrial Fluid Power I ................. | 3 |
| | | 6 |

| Fourth Semester | | Credits |
|---|---|---|
| + IND223 | Motors & Motor Controls .............. | 3 |
| + PLC200 | Programmable Controller I ............ | 3 |
| | | 6 |

| Fifth Semester | | Credits |
|---|---|---|
| + EET277 | Industrial Electronics ..................... | 3 |
| + PLC230 | Servo/Robotics Systems................. | 3 |
| | | 6 |

| Sixth Semester | | Credits |
|---|---|---|
| + IND221 | Instrumentation & Controls I .......... | 3 |
| | General Studies Elective ................ | 3 |
| | | 6 |

| Seventh Semester | | Credits |
|---|---|---|
| + IND122 | Industrial Wiring (NEC)................. | 3 |

\*    Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Machining CNC Programming
## Associate of Applied Science in Industrial Technology

### Engineering Technologies Division

This program has a diversified audience. It is naturally intended for related trades students who have completed a four-year apprenticeship program leading to a journeyman's card. It provides the opportunity to count apprentice coursework toward an associate degree in industrial technology.

The degree/certificate program can be used by anyone as a springboard into a career as a journeyman by using the certificate as leverage into a company that has an apprenticeship/training program, since it contains more than the contact hours required for related classroom hours in an apprenticeship program.

The machining CNC programmer creates machine parts. This person has a broad knowledge of tooling and its uses. Not only does he/she use manual and CNC mills, drills and lathes, but may also be trained in the use of non-traditional machining techniques, such as Electrical Discharge Machining.

## Career Outlook

Based on a highly technological global market, the demand for machinists has fallen prey to a need to modernize the machinist vocation. Implementing up-to-date technology involving Computer-Numerical-Controls has become the only salvation for the trade. Contact with several regional machine shops has indicated a strong desire to bring jobs back which had already made their way to other countries.

## Program Learning Outcomes

Students earning an Associate degree from this program should demonstrate:

1. Knowledge of basic print reading skills including dimensioning practices and calculations, sketching including orthographic, isometric, sectional and auxiliary views.
2. Knowledge of basic machining principles using lathes, mills, drills, band saw, and various handtools.
3. Proficiency in machining and fabricating projects with an emphasis on safety, fixturing, feeds and speeds, tooling, precision, and accuracy.
4. Proficiency in welding with an emphasis on shielded metal arc (stick), oxy-acetylene, gas metal (MIG) and gas tungsten (TIG).
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | | Credits |
|---|---|---|---|
| | ENG111 | Composition I | 3 |
| | IND110* | Industrial Computing I | 3 |
| + | MET110 | Print Reading & Sketching | 3 |
| + | IND140 | Principles of Machining | 3 |
| + | IND132 | Benchwork | 2 |
| | MTH109 | College Algebra | 3 |
| | | | 17 |

| Second Semester | | | Credits |
|---|---|---|---|
| | ENG112 | Composition II | 3 |
| + | IND241 | Tooling & Fixtures | 3 |
| | IND103 | Applied Geometry & Trigonometry | 3 |
| + | IND240 | Machining Processes II | 3 |
| + | MET222 | Programming CNC | 3 |
| | | Communications Elective | 3 |
| | | | 18 |

| Third Semester | | | Credits |
|---|---|---|---|
| + | IND133 | Applied Welding Techniques | 3 |
| + | IND134 | Industrial Fluid Power I | 3 |
| + | MET223 | CAM I | 4 |
| | CAD100 | CAD for Machining | 3 |
| + | QCT141 | Precision Measurement | 3 |
| | | Humanities Elective | 3 |
| | | | 19 |

| Fourth Semester | | | Credits |
|---|---|---|---|
| + | MET226 | Jig Fixture & Mold Design | 3 |
| + | IND141 | Metallurgy and Heat Treatment | 2 |
| + | IND105 | Industrial Safety | 2 |
| | | Science Elective | 4 |
| | | Social/Behavioral Science Elective | 3 |
| + | | Technical Elective | 3 |
| | | | 17 |

\*  Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

\+  Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Machining
## Certificate

## Engineering Technologies Division

The Machining Certificate is designed to meet the needs of a diverse vocational audience. Whether your interest is in computer numerical control programming, tool and die maker or patternmaker this program is designed to prepare the learner for a number of advantages as a skilled tradesman.

CNC or computer numerical control machining has literally replaced the machinist trade. You will be trained in the proper use of mills, drills and lathes, the latest in programming software as well as set-up and operational procedures of CNC equipment to produce a precision part.

As a patternmaker trainee you will learn the most up-to-date technology needed to build a pattern. To obtain this skill level the learner will become knowledgeable of the properties of metals, precision measurement and the fundamentals of repairing molds and dies.

The tool and die maker will learn how to create tools, dies and fixtures. This individual will gain a broad understanding of tooling by learning how to properly use mills, drills, lathes and other machining related equipment including non-traditional machining techniques such as the Electrical Discharge Machine.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in machining CNC programming.

### Program Learning Outcomes
Students earning a certificate from this program should demonstrate:
1. Knowledge of basic print reading skills including dimensioning practices and calculations, sketching including orthographic, isometric, sectional and auxiliary views.
2. Knowledge of basic machining principles using lathes, mills, drills, band saw, and various hand tools.
3. Proficiency in machining and fabricating projects with an emphasis on safety, fixturing, feeds and speeds, tooling, precision, and accuracy.
4. Proficiency in welding with an emphasis on shielded metal arc (stick), oxy-acetylene, gas metal (MIG) and gas tungsten (TIG).

| First Semester | | Credits |
|---|---|---|
| + MET110 | Print Reading & Sketching | 3 |
| MTH080 | Review of Beginning Algebra | 4 |
| | | 7 |

| Second Semester | | Credits |
|---|---|---|
| IND103 | Applied Geometry & Trigonometry | 3 |
| + IND110* | Industrial Computing I | 3 |
| | | 6 |

| Third Semester | | Credits |
|---|---|---|
| + IND133 | Applied Welding Techniques | 3 |
| + IND132 | Benchwork | 2 |
| | General Studies Elective | 3 |
| | | 8 |

| Fourth Semester | | Credits |
|---|---|---|
| + IND140 | Principles of Machining | 3 |
| + QCT141 | Precision Measurement | 3 |
| | | 6 |

| Fifth Semester | | Credits |
|---|---|---|
| + IND240 | Machining Processes II | 3 |
| + IND241 | Tooling & Fixtures | 3 |
| | | 6 |

| Sixth Semester | | Credits |
|---|---|---|
| + MET222 | Programming Computer Numerical Control | 3 |
| + IND141 | Metallurgy & Heat Treatment | 2 |
| | | 5 |

\*    Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Maintenance Technician/Mechatronics
## Associate of Applied Science in Industrial Technology

### Engineering Technologies Division

The industrial maintenance technician not only troubleshoots and repairs the most highly advanced industrial equipment, but is responsible for the layout and installation. This individual will be versed in electrical, hydraulics, pneumatics, pipefitting, welding, machine repair and installation as well as motor control systems, PLC control systems and instrumentation control networking.

### Career Outlook

Employers trying to stay competitive with an international marketplace are hard pressed to find a multi-crafted maintenance employee who can accomplish a multitude of vocational qualities (electrician, plumber, pipefitter, hydraulics and pneumatics specialists, HVACR, machine set-up, machine installer, welder, systems troubleshooter and control systems programming). This program will provide those employers with such a skilled professional.

### Program Learning Outcomes

Students earning an Associate degree from this program will:

1. Demonstrate a knowledge of fluid power and electrical symbols per ISO and JIC standards.
2. Read and interpret fluid power schematics.
3. Analyze electrical and PLC controls within fluid power circuits and systems.
4. Specify components, hoses, pipes and tubing, in the design, construction, and sizing of fluid power systems.
5. Apply principles of electrical controls and fluid power applications to industrial situations.

**First Semester** — **Credits**

| | | | |
|---|---|---|---|
| | ENG111 | Composition I | 3 |
| | MET100 | Intro to Engineering Technology | 2 |
| + | IND120 | Industrial Electricity I | 3 |
| + | IND140 | Principles of Machining | 3 |
| | MTH109 | College Algebra | 3 |
| + | IND134 | Industrial Fluid Power I | 3 |
| | | | 17 |

**Second Semester** — **Credits**

| | | | |
|---|---|---|---|
| | ENG112 | Composition II | 3 |
| + | IND121 | Industrial Electricity II | 3 |
| + | MET110 | Print Reading & Sketching | 3 |
| | IND103 | Applied Geometry & Trigonometry | 3 |
| + | IND234 | Industrial Fluid Power II | 3 |
| | | Communications Elective | 3 |
| | | | 18 |

**Third Semester** — **Credits**

| | | | |
|---|---|---|---|
| | PHY101 | Principles of Physical Science | 4 |
| + | IND133 | Applied Welding Techniques | 3 |
| + | IND223 | Motors & Motor Controls | 3 |
| + | PLC200 | Programmable Controller I | 3 |
| + | IND131 | Industrial Pipefitting | 3 |
| | | Humanities Elective | 3 |
| | | | 19 |

**Fourth Semester** — **Credits**

| | | | |
|---|---|---|---|
| + | IND221 | Instrumentation & Controls I | 3 |
| | CAD111 | CAD I | 4 |
| + | IND232 | Machine Repair | 3 |
| + | EET289 | Systems Integration | 3 |
| | | Social/Behavioral Science Elective | 3 |
| | | | 16 |

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Industrial Maintenance
## Certificate

## Engineering Technologies Division

The industrial maintenance technician not only troubleshoots and repairs advanced industrial equipment, but is responsible for the layout and installation. This individual will be versed in electrical, hydraulics, pneumatics, pipefitting, welding, machine repair and installation as well as motor control systems and PLC control systems.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in maintenance technician/mechatronics.

### Career Outlook

Many manufacturing companies across the country no longer employ segregated trades (electrician, millwright, machinist, etc.) Instead, they are moving to a multi-craft classification that will perform electrical, mechanics, machining, welding, etc. Therefore, positions for general maintenance and industrial maintenance are currently in great demand.

### Program Learning Outcomes

Students earning a certificate from this program should demonstrate:
1. Knowledge of electrical symbols and abbreviations.
2. Proficiency in basic electrical theory, motor starters, solenoid valves, various control devices, motor circuits, and variable frequency drivers.
3. Proficiency in the systematic elimination of the various parts of a system to locate a malfunctioning part safely but promptly.
4. Basic knowledge of PLC control systems.
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | Credits |
|---|---|---|
| + IND120 | Industrial Electricity I ..................... | 3 |
| MTH080 | Review of Beginning Algebra......... | 4 |
| | | 7 |

| Second Semester | | Credits |
|---|---|---|
| IND103 | Applied Geometry & Trigonometry | 3 |
| + IND110* | Industrial Computing I ................... | 3 |
| + IND121 | Industrial Electricity II ................... | 3 |
| | | 9 |

| Third Semester | | Credits |
|---|---|---|
| + IND132 | Benchwork ..................................... | 2 |
| + IND133 | Applied Welding Techniques .......... | 3 |
| | | 5 |

| Fourth Semester | | Credits |
|---|---|---|
| + IND232 | Machine Repair .............................. | 3 |
| + IND223 | Motors & Motor Controls .............. | 3 |
| | | 6 |

| Fifth Semester | | Credits |
|---|---|---|
| + IND131 | Industrial Pipefitting....................... | 3 |
| + IND134 | Industrial Fluid Power I ................. | 3 |
| | | 6 |

| Sixth Semester | | Credits |
|---|---|---|
| + PLC200 | Programmable Controller I ............. | 3 |
| | General Studies Elective ................ | 3 |
| | | 6 |

\*    Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Millwright
## Associate of Applied Science in Industrial Technology

The millwright is trained to install, dismantle or move machinery and heavy equipment according to engineered plans, blueprints or other drawings. The skill level of the millwright ranges from rigger, welder and machine repairman to fabricator, pipefitter and machine reconditioner.

### Career Outlook

Openings for millwrights will be found in areas where manufacturing is high. Related vocations are also a possibility with pipefitters and riggers, machine repairmen, structural iron and steel workers being in high demand.

### Program Learning Outcomes

Students earning an Associate degree from this program should demonstrate:

1.  Knowledge of basic print reading skills including dimensioning practices and calculations, sketching including orthographic, isometric, sectional and auxiliary views.
2.  Knowledge of basic machining principles using lathes, mills, drills, band saw, and various hand tools.
3.  Proficiency in machining and fabricating projects with an emphasis on safety, fixturing, feeds and speeds, tooling, precision, and accuracy.
4.  Proficiency in welding with an emphasis on shielded metal arc (stick), oxy-acetylene, gas metal (MIG) and gas tungsten (TIG).
5.  Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| MTH109 | College Algebra | 3 |
| + MET110 | Print Reading & Sketching | 3 |
| IND132 | Benchwork | 2 |
| + IND140 | Principles of Machining | 3 |
| IND110* | Industrial Computing I | 3 |
| | | 17 |

| Second Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| + IND232 | Machine Repair | 3 |
| IND103 | Applied Geometry & Trigonometry | 3 |
| + IND133 | Applied Welding Techniques | 3 |
| | Communications Elective | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| + IND134 | Industrial Fluid Power I | 3 |
| + QCT141 | Precision Measurement | 3 |
| + IND130 | Rigging & Erecting | 2 |
| + IND131 | Industrial Pipefitting | 3 |
| PHY101 | Principles of Physical Science | 3 |
| | Humanities Elective | 3 |
| | | 17 |

| Fourth Semester | | Credits |
|---|---|---|
| + IND141 | Metallurgy & Heat Treatment | 2 |
| + IND234 | Industrial Fluid Power II | 3 |
| | Science Elective | 4 |
| | Social/Behavioral Science Elective | 3 |
| + | Technical Elective | 3 |
| | | 15 |

\*    Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

\+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Millwright
## Certificate

## Engineering Technologies Division

The millwright is trained to install, dismantle or move machinery and heavy equipment according to engineered plans, blueprints or other drawings. The skill level of the millwright ranges from rigger, welder and machine repairman to fabricator, pipefitter and machine reconditioner.

Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in millwright.

### Career Outlook

Openings for millwrights will be found in areas where manufacturing is high. Related vocations are also a possibility with pipefitters and riggers, machine repairmen, structural iron and steel workers being in high demand.

### Program Learning Outcomes

Students earning a certificate from this program should demonstrate:

1. Knowledge of basic print reading skills including dimensioning practices and calculations, sketching including orthographic, isometric, sectional and auxiliary views.
2. Knowledge of basic machining principles using lathes, mills, drills, band saw, and various hand tools.
3. Proficiency in machining and fabricating projects with an emphasis on safety, fixturing, feeds and speeds, tooling, precision, and accuracy.
4. Proficiency in welding with an emphasis on shielded metal arc (stick), oxy-acetylene, gas metal (MIG) and gas tungsten (TIG).
5. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | Credits |
|---|---|---|
| + IND132 | Benchwork ...................................... | 2 |
| MTH080 | Review of Beginning Algebra......... | 4 |
| | | 6 |

| Second Semester | | Credits |
|---|---|---|
| IND103 | Applied Geometry & Trigonometry | 3 |
| + MET110 | Print Reading & Sketching.............. | 3 |
| | | 6 |

| Third Semester | | Credits |
|---|---|---|
| + IND140 | Principles of Machining .................. | 3 |
| + IND133 | Applied Welding Techniques .......... | 3 |
| | | 6 |

| Fourth Semester | | Credits |
|---|---|---|
| + IND232 | Machine Repair ............................... | 3 |
| + IND134 | Industrial Fluid Power I .................. | 3 |
| | General Studies Elective ................. | 3 |
| | | 9 |

| Fifth Semester | | Credits |
|---|---|---|
| + IND130 | Rigging & Erecting ......................... | 2 |
| + IND131 | Industrial Pipefitting........................ | 3 |
| | | 5 |

| Sixth Semester | | Credits |
|---|---|---|
| PHY101 | Principles of Physical Science ........ | 3 |
| + QCT141 | Precision Measurement ................... | 3 |
| | | 6 |

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# HVAC-R (Climate Control)
## Certificate

### Engineering Technologies Division

Heating, Ventilating, Air Conditioning, and Refrigeration, as a technical discipline, has made its transition to the "high-tech" field. Modern environmental control equipment use advanced controls involving pneumatic, electro-mechanical and direct digital control technologies. Today, common HVAC-R applications include the use of computers and computer network interfaces to facilitate building/space climate control and monitoring. Presently, manpower shortages exist for qualified personnel (see http://www.mepatwork.com for additional information). Men and women wanting to enter this field must understand these advanced technologies, their controls and communications networks if they are to be successful in this changing field.

## Career Outlook

A wide variety of employment possibilities exist for those individuals who have training in the Climate Control field. HVAC-R Installers and Service Technicians are always needed to support companies involved in product sales and service. These skilled tradespersons work in residential, commercial and industrial settings keeping related equipment operational throughout the climate seasons. refrigeration journeymen work in commercial and industrial settings providing support for the food industry. Air balance specialists work with environmental engineers to test and adjust newly installed and existing HVAC-R systems. Systems integrators unify various sub-systems involving the HVAC-R and fire control-life safety technologies under one common control.

## Upgrade to an Associate Degree

Coursework (100 level or higher) completed in this certificate directly applies toward the Associate Degree in Alternative Energy Technology.

## Program Learning Outcomes

Students earning a certificate from this program should demonstrate:
1. Knowledge of electrical symbols and abbreviations.
2. Basic knowledge of operating systems, networking, and computer hardware.
3. Proficiency in design concepts, orthographic projection, dimensioning practices, and blueprint reading.
4. Knowledge of the physics of fluids, components, troubleshooting and design applications for hydraulic and pneumatic systems.

| First Semester | | Credits |
|---|---|---|
| + INT120 | HVACR I | 3 |
| + IND120 | Industrial Electricity I | 3 |
| + IND131 | Industrial Pipefitting | 3 |
| MET100 | Intro to Engineering Technology | 2 |
| + MET110 | Print Reading and Sketching | 3 |
| + AET100 | Intro to Alternative Energy | 3 |
| | | 17 |

| Second Semester | | Credits |
|---|---|---|
| + INT220 | HVACR II | 3 |
| + INT221 | HVACR III | 3 |
| + IND121 | Industrial Electricity II | 3 |
| + AET110 | Energy Audit | 3 |
| + AET140 | Geothermal | 4 |
| | Communications Elective | 3 |
| | | 19 |

Must be proficient in MTH080.

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Quality Control
## Certificate

## Engineering Technologies Division

A Manufacturing Quality Certificate prepares the student for a career as a quality specialist (supplier quality engineer, green belt, mechanical inspector, quality technician, auditor and similar roles).

Twenty-first century manufacturing operations link productivity to quality. Lean manufacturing quality concepts are essential to modern competiveness. Accordingly, persons seeking greater responsibility should consider the quality curriculum.

This program of study prepares the student to sit for American Society for Quality Technician exam. ASQ certifications are widely recognized and favorably impact hiring and compensation decisions.

### Career Outlook

The greatest demand for engineering technicians will be in manufacturing. Companies need improved machinery, up-to-date processes, and lean manufacturing methods to compete on a global basis. Quality skills apply during all phases of the product cycle – from concept to production to distribution and service.

ISO/TS/OHSA certifications are becoming a common prerequisite for doing business, worldwide. This course of study imparts the skills needed to comply with many certification system requirements. Skills learned in this course form a solid foundation on which to build if your goal is to become a Quality Assurance Manager, Quality Engineer, or Quality Auditor.

### Program Learning Outcomes

Students earning a certificate from this program should demonstrate:

1. Basic knowledge leading to quality from management, practitioner and customer perspectives.
2. Concentration on quality problem solving and process control tools.
3. Basic understanding of probability and philosophies espoused by Deming, Crosby, and Juran.
4. Basic knowledge of quality, measurement system analysis and control charting principles.
5. Proper selection and use of measuring tools for the feature based upon the print specification.
6. Proficiency for dealing with tolerance stacks, another layer of G D & T.
7. Basic understanding of more complex quality improvement methods by studying at least three of the following topics: Advanced SPC, Six Sigma Start-Up, DOE: Screening Experiments, Measurement Systems Analysis or Problem Solving.

| First Semester | | Credits |
|---|---|---|
| + MET110 | Print Reading & Sketching.............. | 3 |
| MTH109 | College Algebra............................... | 3 |
| + QCT100 | Quality Concepts............................ | 3 |
| | | 9 |

| Second Semester | | Credits |
|---|---|---|
| + CAD100 | CAD for Machining ........................ | 3 |
| + QCT131 | Quality for Lean Manufacturing ..... | 3 |
| + IND110* | Industrial Computing I ................... | 3 |
| | | 9 |

| Third Semester | | Credits |
|---|---|---|
| + QCT141 | Precision Measurement ................... | 3 |
| + QCT243 | Advanced Quality Improvement..... | 3 |
| | General Studies Elective ................ | 3 |
| | | 9 |

| Fourth Semester | | Credits |
|---|---|---|
| + PET110 | Principles of Plastics ....................... | 4 |
| + QCT250 | Certified Quality Technician/ Certified Mechanical Inspector Review | 3 |
| + QCT142 | Advanced Concepts of GD&T ........ | 3 |
| | | 10 |

\*    Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+    Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

# Allied Health & Public Services

**Contact the Dean:**
Lori Robison • 419.267.1345 • lrobison@northweststate.edu

# Allied Health and Public Services Division

## Advisory Committees

### Early Childhood Advisory Committee

Harmony Beck, NSCC Student, Archbold, Ohio
Fred Coulter, Defiance College, Defiance, Ohio
Bev Emch, Four County Career Center, Archbold, Ohio
Janet Engler, NOCAC, Defiance, Ohio
Kristen Foley, Imagination Center, Archbold, Ohio
Heidi Keween, NOCAC, Defiance, Ohio
Elaine Krauss, TLC Child Care, Wauseon, Ohio
Michelle Leitch, Williams County YMCA, Bryan, Ohio
April McNeil-Sprulock, Hope School, McClure, Ohio

Terra Peggs, NSCC Student, Archbold, Ohio
Shawna Reitzel, Creative Child Development Cntr, Bryan, Ohio
Karen Roadruck, Lourdes College, Sylvania, Ohio
Melissa Rupp, Williams County Family & Children First
     Council, Bryan, Ohio
Eleanor Shankle, Rainbow Promise Child Care Center,
     Defiance, Ohio
Kristin Wymer, NSCC Student, Archbold, Ohio
Janet Yaros, NOCAC, Defiance, Ohio

### Paraprofessional Advisory Committee

Kyleigh Blad, Lincoln Elementary, Stryker, Ohio
Deanna Hull, NSCC Student, Archbold, Ohio
Holly Psurny, Washington Elementary, Bryan, Ohio

Beth Sechler, NSCC Student, Archbold, Ohio
Tiffany Wyse, Bryan Middle School, Bryan, Ohio

### Criminal Justice Advisory Committee

Gina Bunting, NSCC Student, Archbold, Ohio
Jim Dennis, CCNO, Stryker, Ohio
Richard Hupe, Four County Career Center, Archbold, Ohio
Don Knueve, Defiance College, Defiance, Ohio
Steve Lab, BGSU, Bowling Green, Ohio
Darrell Miller, Four County Career Center, Archbold, Ohio
Sheriff John Nye, Henry County Sheriff Dept., Napoleon, Ohio

Michelle Oyer, Fulton County Probation, Wauseon, Ohio
Joe Grant, NSCC Student, Archbold, Ohio
Steve Sondergaard, Defiance College, Defiance, Ohio
Chief Tim Tobias, Defiance Police Department, Defiance, Ohio
Adam Watkins, BGSU, Bowling Green, Ohio
Sheriff David Westrick, Def. Co. Sheriff Dept., Defiance, Ohio
Jacob Roose, NSCC Student, Archbold, Ohio

### Human Services Advisory Committee

Kris Bryant, LSW, NOCAC/ Path, Defiance, Ohio
April Cook, Juvenile Detention Center, Stryker, Ohio
Renee Crampton SWA, Northwest Ohio Job Center, Bryan, Ohio
Pat Deatrick, LISW, LICDC, First Call for Help, Napoleon, Ohio
Joe Dildine, First Call For Help, Napoleon, Ohio
Angie Franklin, LSW, NOCAC, Defiance, Ohio
Beth Gerken, LISW, Center for Child & Family Advocacy,
     Napoleon, Ohio
Shirley Green Harris, LSW, Community Living & Supportive
     Services (CLASS), Napoleon, Ohio
Pat Kryder, Court Appointed Special Advocates, Napoleon, Ohio
Dawn Miller, LISW, Maumee Valley Guidance Center,
     Defiance, Ohio

Karen Moore, LISW-S, Recovery Services of Northwest Ohio,
     Bryan, Ohio
Tonie Ott, LSW, Four County Family Center, Wauseon, Ohio
Chris Palmer, Defiance County Board of DD, Defiance, Ohio
Sherry Potts, LSW, Bryan Care & Rehabilitation Center,
     Bryan, Ohio
Linda Schlacter-McDonald, LICDC, Recovery Services of
     Northwest Ohio, Bryan, Ohio
Carol Slight, Filling Home of Mercy, Napoleon, Ohio
Deborah Stanforth, PhD, Easy Living L.L.C., Defiance, Ohio
Lisa Vollmer, SWA, Fairlawn Haven, Archbold, Ohio
Sharon VonSeggern, Quadco, Stryker, Ohio
Shawn Waidelich, LSW, Department of Aging, Wauseon, Ohio

### Medical Assisting Advisory Committee

Connie Gochenour, MA, Henry County Hospital, Napoleon, Ohio
Joni Hetrick, CMA, ProMedica, Ney, Ohio
Rev. Julie Kling, NSCC, Archbold, Ohio
Janet Koepplinger, BSN, RN, Defiance Clinic, Defiance, Ohio
Luann Masters, Williams Fulton Co Hospice & Visiting Nurses,
     Archbold, Ohio
Krystal Miller, MT, MBA, Midwest Community Health
     Associates, Bryan, Ohio
Theresa Monroe, Comm Hospitals & Wellness Cntr, Bryan, Ohio

Kim Munson, NSCC Student, Archbold, Ohio
Beth Nofziger, NSCC Student, Archbold, Ohio
Nancy Snyder, LPN, Midwest Community Health Associates,
     Bryan, Ohio
Paula Sprow, NP, ProMedica West, Defiance, Ohio
Jackie Van Kirk, ProMedica West Physician Group,
     Sylvania, Ohio
Joyce Wonders, BA, Fulton County Health Cntr, Wauseon, Ohio

# Allied Health and Public Services

The division of Allied Health and Public Services offers a variety of majors in the fields of criminal justice, early childhood education, human services, and health care. Many of the graduates from these programs are ready to join the workforce after they earn their diploma. However, there are also opportunities for these graduates to transfer on and earn their bachelor's degree from a four-year college or university.

Northwest State Community College, along with other technical community colleges across the nation, educates the majority of the nation's first-responders. According to the Ohio Association of Community Colleges, close to 85 percent of law enforcement officers, firefighters and EMTs are educated by community colleges.

Degree and Certificate programs offered through the Allied Health and Public Services Division include:

**Associate of Applied Science**
      Paraprofessional Education
      Human Services
      Medical Assisting
**Associate of Applied Science: Early Childhood Development**
      Child & Family Specialists
      Pre Kindergarten
      Program Administrator
**Associate of Applied Science: Criminal Justice**
      Criminal Justice
      Law Enforcement – Academy Option
**Certificate Programs**
      Emergency Medical Services
      Phlebotomy
**Northwest Ohio Allied Health Education Consortium**
      Health Information Technician
      Medical Laboratory Technician
      Occupational Therapy Assistant
      Physical Therapist Assistant
      Radiographic Imaging
      Respiratory Care Practitioner

## Prerequisites
All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the assessment test or take the recommended classes. If you have not taken these tests, stop by the Admissions Office in C106 or call (419) 267-1320 for information or referral to testing.

Some courses listed in this program have specific prerequisites. See course descriptions for these prerequisites in the Course Description section of this publication. Education majors are required to have a completed documentation file.

## General Education
For Northwest State Core Requirements, see page 30. For the NSCC Transfer Module, see page 36.

## Course Sequence
This is a suggested sequence of course(s) for full-time students. If you are a part-time student or have transferred course(s) in from another school, you should generally complete the courses listed under semester 1 before moving on to semester 2, 3, and then 4. Elective courses may be taken at any time. Please meet with your advisor if you need assistance to register. Your advisor can help you make any necessary changes to this recommended sequence.

**Humanities Electives for majors in Allied and Public Service:**

| | |
|---|---|
| ENG223 | Interpretation of Literature |
| ENG230 | Children's Literature |
| ENG234 | Narrative Literature of the Old Northwest Territory |
| ENG 240 | Introduction to Poetry |
| ENG241 | Introduction to Fiction |
| ENG250 | American Literature Through the Mid 19th Century |
| ENG251 | American Literature Since the Mid 19th Century |
| ENG260 | British Literature Through the 18th Century |
| ENG261 | British Literature 19th Century to Present |
| ENG271 | Non-Western Literature |
| HUM209 | Humanities and Cultures: Ancient & Medieval Worlds |
| HUM210 | Humanities and Cultures: Renaissance to Present |
| HUM221 | Music Appreciation |
| HUM230 | Art Appreciation |
| PHI110 | Critical Thinking & Logic |
| PHI201 | Introduction to Philosophy |
| PHI210 | Ethics |
| PHI220 | Ethics in Health Care |
| PHI222 | Ethics in the Helping Professions |
| PHI230 | World Religions |

**Science Electives for Criminal Justice & Human Service Majors:**

| | |
|---|---|
| BIO101 | Principles of Biology |
| BIO115 | Ecology |
| BIO131 | Nutrition |
| BIO150 | The Human Body |
| BIO180 | Genetics |
| BIO201 | General Biology I |
| BIO202 | General Biology II |
| BIO231 | Anatomy & Physiology I |
| BIO232 | Anatomy & Physiology II |
| BIO257 | Microbiology |
| CHM101 | Principles of Chemistry |
| CHM138 | Principles of Forensics |
| CHM256 | Principles of Biochemistry |
| PHY101 | Principles of Physical Science |
| PHY140 | Astronomy |
| PHY150 | Geology |

**Math Electives for Criminal Justice & Human Service Majors:**

| | |
|---|---|
| MTH109 | College Algebra |
| MTH112 | Trigonometry |
| MTH213 | Calculus I |
| MTH214 | Calculus II |
| STA120 | Introduction to Statistics |
| STA220 | Statistics |

# Allied Health and Public Services

### Disclosure for Allied Health & Public Services Students

Students pursuing a degree in one of the Allied Health or Public Service professions leading to application for professional licensure or certification, and/or who will be participating in clinical placements, internships, or practica through their program, should be aware that their host facility may require a criminal background check, finger printing, or drug screening. Although the College will make reasonable efforts to place admitted students in field experiences and internships, it will be up to the host facility to determine whether a student will be allowed to work at the facility. Students shall further be aware that a criminal record may jeopardize licensure by the State certification body. Expunged convictions may or may not jeopardize licensure and internship placement. Students should consult the licensing certification body corresponding to their intended occupation for more details (see web sites listed to the right). Successful completion of a program of study at the College does not guarantee licensure, certification, or employment in the relevant occupation. Standards may change during a student's program of study.

**Note:** The inability to complete the internship or practicum requirements of a program will also mean the inability to complete the requirements for the degree.

### Helpful Web Sites of Licensing and Certifying Boards

- American Association of Medical Assistants www.aama-ntl.org/
- State of Ohio Counselor, Social Worker, and Marriage & Family Therapist Board http://www.cswmft.ohio.gov
- Ohio Department of Mental Retardation and Developmental Disabilities http://mrdd.ohio.gov/rules/rules.htm
- Ohio Department of Alcohol & Drug Addiction Services http://www.odadas.ohio.gov/public
- Ohio Department of Education www.ode.state.oh.us/
- Ohio Department of Corrections www.drc.ohio.gov/
- Ohio Peace Officer Training Commission www.ohioattorneygeneral.gov/opotc

# Child & Family Specialist
## Associate of Applied Science in Early Childhood Development

## Allied Health and Public Services

The child & family specialist degree blends human services courses and early childhood pre-kindergarten courses to better prepare individuals for non-classroom support roles. This program emphasizes skills in interviewing, training, and communicating with diverse families.

The student must have day-time availability for field and laboratory placements. All students are required to have a documentation file which includes: a recent medical statement, non-conviction statement, three references, and records check through the Bureau of Criminal Investigation and Identification and the FBI. The appropriate forms are available from ECD personnel and/or the division secretary. Specific program policies are stated in the ECD/EDU/EDP Student Handbook. Students must also show completion prior to graduation of standard first aid, community CPR, common childhood illness recognition, and child abuse and neglect training through additional college courses or approved community providers.

### Program Learning Outcomes
Students who complete the Child & Family Specialist program will:
1. Graduates will determine cognitive, affective, and psychomotor developmental characteristics of children, recognizing indicators of developmental delays and giftedness in a diverse population.
2. Graduates will explain learning theory, issues and other influence affecting the profession.
3. Graduates will utilize technology to enhance instruction and productivity.
4. Graduates will communicate effectively with parents and other educational professionals demonstrating facilitative relationships and the basic principles and practices of interviewing parents and crises intervention.
5. Graduates will utilize various public and private human service agencies in the community, understanding the organizational structure of the agencies and their functions.
6. Graduates will work with parents dealing with child rearing issues such as discipline, sibling relationships and nutrition.

### Computer Electives:
CIS114    Microsoft Applications or any 3 one credit hour computer courses

### Humanities Elective:
Select any humanities course listed on page 99.

### Natural/Physical Science Elective:
Select any 4 credit hour course with a BIO, CHM or PHY prefix.

| Fall Semester | | Credits |
|---|---|---|
| + ECD100 | Principles of Early Childhood Education | 2 |
| + ECD101 | Child Development Lab | 2 |
| ENG111 | Composition I | 3 |
| + HST101 | Principles of Human Services | 3 |
| PSY110 | General Psychology | 3 |
| SSC101 | Sociology | |
| or | | |
| SSC102 | Sociology-Sustainable World | 3 |
| | | 16 |

| Spring Semester | | Credits |
|---|---|---|
| + EDU120 | Guidance & Classroom Management | 3 |
| ENG112 | Composition II | 3 |
| + HST105 | Cultural Competence with Diverse Populations | 3 |
| PSY210 | Abnormal Psychology | 3 |
| PSY230 | Human Growth & Development | 3 |
| STA120 | Introduction to Statistics | 3 |
| | | 18 |

| Summer Semester | | Credits |
|---|---|---|
| | Computer Elective | 3 |

| Fall Semester | | Credits |
|---|---|---|
| + ECD150 | Infant Toddler Development | 2 |
| + EDU110 | Child and Youth Health | 2 |
| + EDU220 | Special Education | 3 |
| + EDU230 | Family, School, Community | 3 |
| + HST208 | Interviewing Techniques | 3 |
| + HST212 | Principles of Addiction | 3 |
| | | 16 |

| Spring Semester | | Credits |
|---|---|---|
| + ECD282 | Child Care Field Experience | 2 |
| HST242 | Marriage & Family | 3 |
| SSC210 | Cultural Diversity | 3 |
| | Humanities Elective | 3 |
| ENG214 | Discussion & Conference Methods | 3 |
| | Natural/Physical Science Elective | 4 |
| | | 18 |

+ Refers to technical coursework. Students must attain a minimum grade of "C" in all technical courses in order to progress in the program and to graduate.

# Pre-Kindergarten
## Associate of Applied Science in Early Childhood Development

## Allied Health and Public Services

The early childhood development (ECD) degree program prepares individuals for teaching positions in child care facilities, Head Start centers, and pre-schools as well as provides professional training for in-home child care providers. The curriculum integrates classroom and field experiences to provide the student with the opportunity to apply skills and techniques in fostering the young child's social, emotional, physical, creative and cognitive growth.

The student must have day-time availability for field placements. All students are required to have a documentation file which includes: a recent medical statement, non-conviction statement, three references, and records check through the Bureau of Criminal Investigation and Identification and the FBI. The appropriate forms are available from ECD personnel and/or the division secretary. Students must also show completion of standard first aid, community CPR, common childhood illness recognition, and child abuse and neglect training through additional college courses or approved community providers. Specific program policies are stated in the ECD/EDU/EDP Student Handbook.

This program is approved by the Ohio Department of Education for the Pre-Kindergarten Associate License. An ECD student who wishes to be recommended for the license must formally apply for admission to the Pre-K Associate License program and meet the criteria of the program as stated in the ECD Student Handbook.

### Program Learning Outcomes
Students who complete the Pre-Kindergarten program will:
1. Graduates will apply content knowledge of theoretical concepts and child growth and development in early childhood learning environments.
2. Graduates will create learning environments that promote growth and development and achievement for all students.
3. Graduates will describe and apply instructional strategies to promote students' learning and meet the needs and interests of all students.
4. Graduates will utilize a variety of assessment methods, tools, and technology to enhance instruction and to increase personal productivity and efficacy.
5. Graduates will create supportive partnerships and effectively communicate with families, community and other professionals to promote children's development.
6. Graduates will demonstrate professional knowledge and dispositions appropriate to the field.

| **Fall Semester** | | **Credits** |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| + ECD100 | Principles of Early Childhood Education | 2 |
| + ECD101* | Child Development Lab | 2 |
| + EDU100 | Introduction to Teaching | 2 |
| EDU110 | Child and Youth Health | 2 |
| ENG111 | Composition I | 3 |
| + PSY110 | General Psychology | 3 |
| | | 17 |

| **Spring Semester** | | **Credits** |
|---|---|---|
| + ECD201* | Pre-K Curriculum & Methods | 3 |
| + EDU120 | Guidance & Classroom Management | 3 |
| + EDU130 | Phonics and Early Literacy | 2 |
| + EDU210 | Creative Arts Curriculum | 3 |
| MTH170 | Survey of Mathematics | 3 |
| PSY230 | Human Growth & Development | 3 |
| | | 17 |

| **Summer Semester** | | **Credits** |
|---|---|---|
| ENG230 | Children's Literature | 3 |
| | Natural/Physical Science Elective | 4 |
| | | 7 |

| **Fall Semester** | | **Credits** |
|---|---|---|
| + ECD202* | Diversity in Education | 3 |
| + EDU220 | Special Education | 3 |
| + EDU230 | Family, School, Community | 3 |
| + EDU240 | Educational Psychology | 3 |
| ENG112 | Composition II | 3 |
| ECD150 | Infant Toddler Development | 2 |
| | | 17 |

| **Spring Semester** | | **Credits** |
|---|---|---|
| + ECD250 | Early Childhood Program Administration | 2 |
| + ECD290* | Pre-Kindergarten Practicum | 3 |
| + EDU250 | Education Seminar | 2 |
| + EDU260 | Instructional Technology | 3 |
| ENG113 | Speech | 3 |
| | | 13 |

### Natural/Physical Science Elective:
Select any 4 credit hour course with a BIO, CHM or PHY prefix.

Students must attain a minimum grade of "C" in all courses to progress in the program and graduate.

+   Refers to technical coursework

*   ODE Pre-K Associate License requires grade of "B" or higher in ECD101, ECD201, ECD202, and ECD290.

# Program Administrator
## Associate of Applied Science in Early Childhood Development

## Allied Health and Public Services

This degree in the early childhood development (ECD) program is designed specifically for the individual who wants to provide child care services through ownership and/or management of a child care program. The degree blends the early childhood pre-kindergarten courses, emphasizing growth and development of the child from birth to age 8, with business courses emphasizing good management and supervision practices. Many preschool teachers who advance to director positions will find this technology helpful in making the transition from classroom teacher to program manager.

The student must have day-time availability for field placements. All students are required to have a documentation file which includes: a recent medical statement, conviction statement, three references and records check through the Bureau of Criminal Investigation and Identification and the FBI. The appropriate forms are available from ECD personnel and/or the Division Secretary. Specific program policies are stated in the ECD/EDP/EDU Student Handbook. Students must also show completion prior to graduation of standard first aid, community CPR, common childhood illness recognition, and child abuse and neglect training through additional college courses or approved community providers.

### Program Learning Outcomes
Students who complete the ECD Program Administrator program will:

1. Graduates will maintain a high quality sensed environment and demonstrate awareness of program accreditations.
2. Graduates will explain management theories, financial, ethical and legal issues and other influences affecting the successful operation of profit and nonprofit early childhood programs.
3. Graduates will utilize a variety of approaches, tools and technology to enhance programming, staff development parent communications, and program evaluation.
4. Graduates will demonstrate professional behaviors in interactions with children, staff, families, and other professionals.
5. Graduates will support staff who design, implement, and evaluate learning experiences based on appropriate methods of observation and assessment, developmentally appropriate practice and understanding of children's growth and development.
6. Apply and promote positive approaches in behavior and guidance of young children in group settings, maintaining self-control and even temperament in difficult situations with children, parents, and other professionals.

| Fall Semester | | Credits |
|---|---|---|
| + ECD100 | Principles of Early Childhood Education | 2 |
| + ECD101 | Child Development Lab | 2 |
| ECD150 | Infant Toddler Development | 2 |
| + EDU100 | Introduction to Teaching | 2 |
| + EDU110 | Child and Youth Health | 2 |
| ENG111 | Composition I | 3 |
| + PSY110 | General Psychology | 3 |
| | | 16 |

| Spring Semester | | Credits |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| + ECD250 | Early Childhood Program Administration | 2 |
| + EDU120 | Guidance & Classroom Management | 3 |
| ENG112 | Composition II | 3 |
| + MGT110 | Management | 3 |
| PSY230 | Human Growth & Development | 3 |
| | | 17 |

| Fall Semester | | Credits |
|---|---|---|
| BUS110 | Business Math & Calculators | 3 |
| + EDU230 | Family, School, Community | 3 |
| + MGT210 | Human Resource Management | 3 |
| EDU220 | Special Education | 3 |
| | Natural/Physical Science Elective | 4 |
| | | 16 |

| Spring Semester | | Credits |
|---|---|---|
| ACC102 | Office Accounting | 4 |
| + ECD291 | Administrative Internship | 3 |
| ENG113 | Speech | 3 |
| + MGT221 | Entrepreneurship | 3 |
| | Humanities Elective | 3 |
| | | 16 |

### Humanities Elective:
Select any humanities course listed on page 99.

### Natural/Physical Science Electives:
Select any 4 credit hour course with a BIO, CHM or PHY prefix.

+ Refers to technical coursework. Students must attain a minimum grade of "C" in all technical courses in order to progress in the program and to graduate.

# Paraprofessional Education
## Associate of Applied Science

## Allied Health and Public Services

The paraprofessional education degree program prepares individuals for instructional teacher assistant positions in Pre-K to grade 12 settings. The program was developed to meet the Ohio Department of Education standards for the Paraprofessional Associate License. This license meets the "No Child Left Behind" guidelines for "highly qualified" paraprofessionals. The curriculum integrates classroom and field experiences to provide the student with the opportunity to apply skills and techniques with multiple age groups.

A student who wishes to be recommended for the Paraprofessional Associate License must meet the criteria of the program as stated in the student handbook. Students must also show completion of standard first aid training, community CPR, common childhood illness recognition and child abuse and neglect training through additional college courses or approved community providers to be eligible for licensure.

All students are required to have a documentation file which includes: a recent medical statement, non-conviction statement, three references, and records check through the Bureau of Criminal Investigation and Identification and the FBI. The appropriate forms are available from Education faculty and/or the division secretary. Specific program policies are stated in the ECD/EDU/EDP Student Handbook.

### Program Learning Outcomes
Students who complete the Paraprofessional Educator program will:

1. Graduates know and understand the principles of learning and child development in order to assist the classroom teacher.
2. Graduates assist teachers in creating learning environments that promote high levels of student learning and achievement.
3. Graduates assist in the implementation of instructional strategies that accommodate various learning styles, intelligences, and exceptionalities.
4. Graduates assist teachers with the implementation of varied assessment tools.
5. Graduates collaborate and communicate with students, parents, other educators, administrators, and the community to support student learning.
6. Graduates demonstrate an understanding of the importance of professional growth, ethical conduct, and involvement as an individual and as a member of a learning community.

### Fall Semester

| | | Credits |
|---|---|---|
| | CIS114 | Microsoft Applications | 3 |
| + | EDU100 | Introduction to Teaching | 2 |
| + | EDU110 | Child and Youth Health | 2 |
| | ENG111 | Composition I | 3 |
| | PSY110 | General Psychology | 3 |
| | | Natural/Physical Science Elective... | 4 |
| | | | 17 |

### Spring Semester

| | | Credits |
|---|---|---|
| + | EDP150* | Child & Classroom Observation Skills | 2 |
| + | EDU120 | Guidance & Classroom Management | 3 |
| + | EDU130 | Phonics and Early Literacy | 2 |
| | ENG112 | Composition II | 3 |
| | ENG230 | Children's Literature | 3 |
| | PSY230 | Human Growth and Development | 3 |
| | | | 16 |

### Fall Semester

| | | Credits |
|---|---|---|
| + | EDP200* | Special Education Lab Experience | 2 |
| + | EDU220 | Special Education | 3 |
| | EDU230 | Family, School, Community | 3 |
| + | EDU240 | Educational Psychology | 3 |
| | ENG214 | Discussion & Conference Methods | 3 |
| | SSC210 | Cultural Diversity | 3 |
| | | | 16 |

### Spring Semester

| | | Credits |
|---|---|---|
| + | EDP290* | Paraprofessional Internship | 2 |
| + | EDU210 | Creative Arts Curriculum | 3 |
| + | EDU250 | Education Seminar | 2 |
| + | EDU260 | Instructional Technology | 3 |
| + | MTH170 | Survey of Mathematics | 3 |
| | PHI110 | Critical Thinking & Logic | 3 |
| | | | 16 |

### Natural /Physical Science Elective:
Select any 4 credit hour course with a BIO, CHM, or PHY prefix.

Students must attain a minimum grade of "C" in all courses to progress in the program and to graduate.

+    Refers to technical coursework.

*    For an ODE Paraprofessional Associate License, students must have a grade of "B" or higher in EDP150, EDP200, and EDP290.

# Human Services
## Associate of Applied Science

### Allied Health and Public Services

The human services degree provides a foundation in social and behavioral sciences which will prepare students for challenging work in a variety of social services and correctional settings. The program is designed to integrate classroom work with practical, hands-on experience through method classes and practicums. These courses involve students in a supervised training and field placement experience in community social service agencies. The program meets the standards for the State of Ohio Counselor, Social Worker and Marriage & Family Therapist Board Certification as a social work assistant and chemical dependency Certification.

Students must meet all program requirements outlined in the Human Services Student Handbook to be eligible for certification. The student must have day-time availability for field placements. Students who have prior felony convictions and excessive civil infractions may be excluded from practicums and numerous human services opportunities. BCII and FBI criminal records checks are required for licensure.

### Career Outlook
The need for social work assistants is increasing at both the national and state level. As the older adult population increases, so will the need for increased social services to meet the demand. As crime rates, homelessness and substance abuse problems increase, so will the need for social work assistants in a variety of settings. The field has seen an increase in community based services for vulnerable populations such as the mentally ill and developmentally disabled. As social service agencies become more aware of the skill level and competence of social work assistants, we have seen an increase in employment, which is expected to continue.

### Program Learning Outcomes
Graduates will be able to demonstrate the following skills/behaviors.
1. Develop an eclectic knowledge base that draws from the social and behavioral sciences and Social Work theories.
2. Demonstrate effective counseling skills necessary for working with clients at the micro, mezzo & macro levels, including a repertoire of verbal responses, non-verbal behavior, facilitative relationships and entry level generalist practice skills.
3. Develop problem solving skills by learning to apply and analyze client problems/strengths utilizing a variety of paradigms, models, and critical thinking skills.
4. Identify and apply ethical standards of practice utilizing professional codes of ethics to assist in resolving ethical dilemmas.
5. Demonstrate understanding of how to utilize community resources when referring clients for services at community agencies.
6. Integrate and apply knowledge of diversity when working with populations at risk for social & economic injustices so as to develop culturally sensitive interventions.
7. Demonstrate appropriate assessment, documentation, and record keeping skills as per standards of practice in Human Service settings.
8. Demonstrate work readiness skills, including but not limited to, timeliness, personal responsibility, ability to follow directives, meet deadlines and the ability to cooperate and perform as a team player with faculty, students, and in practicum settings.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| + HST101 | Principles of Human Services | 3 |
| + HST108 | Principles of Developmental Disabilities | 3 |
| + HST212 | Principles of Addictions | 3 |
| PSY110 | General Psychology | 3 |
| SSC101 or | Sociology | |
| SSC102 | Sociology-Sustainable World | 3 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| CIS114 | Microsoft Applications | 3 |
| ENG112 | Composition II | 3 |
| + HST105 | Cultural Competence with Diverse Populations | 3 |
| + HST112 | Group Work in Human Services | 3 |
| PSY210 | Abnormal Psychology | 3 |
| | Math Elective | 3 |
| | | 18 |

| Third Semester | | Credits |
|---|---|---|
| + HST208 | Interviewing Techniques | 3 |
| + HST210 | Human Services Methods | 6 |
| + HST240 | Social Problems | 3 |
| PHI222 | Ethics in the Helping Profession | 3 |
| SSC210 | Cultural Diversity | 3 |
| | | 18 |

| Fourth Semester | | Credits |
|---|---|---|
| + HST214 | Human Services Case Management | 3 |
| + HST242 | Marriage and Family | 3 |
| + HST290 | Practicum I | 6 |
| | Science Elective | 3-4 |
| | | 15-16 |

### Science Electives:
Select any science course listed on page 99.

### Math Electives:
Select any math course listed on page 99.

### Additional Classes Approved by Ohio Board of Developmental Disabilities:

| | |
|---|---|
| HST218 | Introduction to Developmental Disabilities |
| HST219 | Principles of Self-Determination |
| HST220 | Principles of Work |
| HST221 | Principles of Habilitation Programming |

ALL coursework must be completed with a minimum grade of "C" or higher for state licensure.

+ Students must attain a 2.00 grade point average in each of thes courses to graduate

# Criminal Justice
## Associate of Applied Science

## Allied Health and Public Services

This degree is designed to prepare students for careers in the criminal justice field as well as prepare them for future academics and training. Students will become familiar with the components and processes of the criminal justice system as well as studying the areas of law, corrections, investigations and procedures at a more comprehensive level. Students will also examine social and criminal justice issues through multiple perspectives.

Students who have prior felony convictions may be excluded from numerous criminal justice career opportunities. Students, who have prior misdemeanor charges or excessive civil infractions, including traffic citations, may be denied an opportunity for practicum experience or employment within the criminal justice field. In addition, students should note that the people they associate with may inhibit the College from finding an adequate internship. Students who do not complete the practicum will not be able to complete the requirements for the degree. Tattoos are not considered part of professional appearance and must be covered whenever you are in the practicum setting or professional role. Additional policies regarding the criminal justice program are available in the Criminal Justice Student Handbook. All students entering the program must adhere to the regulations within the handbook as well as the division's Substance Abuse Policy.

### Program Learning Outcomes
At the completion of the program students will be able to:
1. Have a general understanding and appreciation of the role of the CJ system at local, state, and federal levels.
2. Demonstrate knowledge of appropriate codes of professional ethics and the capability to critically and reflectively engage ethical issues in CJ, particularly questions of social responsibility and professional decision-making.
3. Demonstrate knowledge of the theories, principles and practice of criminal justice, including constitutional principles, judicial and correctional processes, legal institutions, and methods of law enforcement.
4. Have a sound basic education in CJ for graduates who choose to pursue a bachelor's degree.

### Humanities Elective:
Select any humanities course listed on page 99.

### Computer Elective:
Any 3 credit hour or 3 one credit hour computer course(s).

### Science Elective:
See page 99 for list of courses.

### Math Elective:
See page 99 for list of courses.

### Technical Electives:
| | |
|---|---|
| CJT136 | Juvenile Delinquency |
| CJT242 | Probation and Parole |
| CJT252 | Seminar in Criminal Justice |
| CJT132 | Criminal Justice Administration |
| CJT140 | Constitutional Law |
| CJT 220 | Law Enforcement in American Society |

**First Semester**                                          **Credits**
|   |   |   |   |
|---|---|---|---|
|   | ENG111 | Composition I | 3 |
| + | CJT130 | Criminal Justice Principles | 3 |
|   | PSY110 | General Psychology | 3 |
|   |   | Computer Elective | 3 |
|   |   | Science Elective | 3-4 |
|   |   |   | 15-16 |

**Second Semester**                                        **Credits**
|   |   |   |   |
|---|---|---|---|
| + | CJT134 | Criminal Law | 3 |
| + | CJT230 | Corrections | 3 |
|   | ENG112 | Composition II | 3 |
|   | PSY210 | Abnormal Psychology | 3 |
| + |   | Technical Elective #1 | 3 |
|   |   | Human Service/ Social Science Elective | 3 |
|   |   |   | 18 |

**Third Semester**                                         **Credits**
|   |   |   |   |
|---|---|---|---|
| + | CJT240 | Evidence and Procedures | 3 |
| + |   | Technical Elective #2 | 3 |
|   | SSC101 | Sociology | |
|   | or | | |
|   | SSC102 | Sociology-Sustainable World | 3 |
|   |   | Math Elective | 3 |
|   |   | Humanities Elective | 3 |
|   |   |   | 15 |

**Fourth Semester**                                        **Credits**
|   |   |   |   |
|---|---|---|---|
| + | CJT244 | Criminal Investigation | 4 |
| + | CJT290* | Criminal Justice Practicum | 4 |
| + |   | Technical Elective #3 | 3 |
| + |   | Technical Elective #4 | 3 |
|   |   |   | 14 |

### Human Service/Social Science Electives:
*(For Criminal Justice Majors only)*
| | |
|---|---|
| HST101 | Principles of Human Services |

*(recommended for those seeking careers in Probation/Parole)*
| | |
|---|---|
| HST105 | Cultural Competence with Diverse Populations |
| HST 208 | Interview Techniques |

*(recommended for those seeking careers in Probation/Parole)*
| | |
|---|---|
| HST212 | Principles of Addictions |
| HST214 | Human Service Case Management |

*(recommended for those seeking careers in Probation/Parole)*
| | |
|---|---|
| HST240 | Social Problems |
| HST242 | Marriage and Family |
| PSY220 | Social Psychology |
| PSY230 | Human Growth & Development |
| PSY260 | Forensic Psychology |
| SSC110 | General Anthropology |
| SSC120 | American Government |
| SSC210 | Cultural Diversity |
| SSC220 | Interpersonal Violence |

\*    Students currently employed full-time in a professional criminal justice setting may be allowed to substitute this course.

# Law Enforcement - Academy Option
## Associate of Applied Science in Criminal Justice Technology

### Allied Health and Public Services

+    Students must attain a 2.00 grade point average in each of these technical courses to graduate.

The criminal justice-law enforcement academy option will lead to State of Ohio Certification as a Peace Officer. The student must meet Academy qualifications to be accepted into the program. Students must be 19 years of age, with a high school diploma or GED. Students under 21 years of age will have limited employment opportunities.  Students will be required to submit the Ohio Peace Officer Training Commission Student Enrollment Certification Record, a Statement of Understanding, physical form, training waiver and liability forms. A valid driver's license is required. Background and criminal record checks will be completed and an interview may be required. Students who have a weapons disability or have any felony, weapons or domestic violence convictions or conviction of any related offenses as a result of domestic violence incidents will not be eligible for admission. To successfully complete the academy, students must meet the attendance and physical conditioning requirements.

Upon successful completion, students will graduate with an Associate of Applied Science Degree and will be eligible to take the state certification exam.  Students completing this major must successfully complete the academy.

Policies regarding the criminal justice program are available in the Criminal Justice Student Handbook. All students entering the program must adhere to the regulations within the handbook as well as the division's Substance Abuse Policy. Tattoos are not considered part of professional appearance and must be covered whenever you are in the practicum setting or professional role.

### Program Learning Options
At the completion of the program students will be able to:
1. Have a general understanding and appreciation of the role of the CJ system at local, state, and federal levels.
2. Demonstrate knowledge of appropriate codes of professional ethics and the capability to critically and reflectively engage ethical issues in CJ, particularly questions of social responsibility and professional decision-making.
3. Demonstrate knowledge of the theories, principles, and practices of criminal justice, including constitutional principles, judicial and correctional processes, legal institutions, and methods of law enforcement.
4. Have a sound basic education in CJ for graduates who choose to pursue a bachelor's degree.

### Computer Elective:
Any 3 credit hour or 3 one credit hour computer course(s).

### Science Elective:
See page 99 for list of courses.

### Math Elective:
See page 99 for list of courses.

| First Semester | | Credits |
|---|---|---|
| + CJT130 | Criminal Justice Principles.............. | 3 |
| ENG111 | Composition I................................... | 3 |
| PSY110 | General Psychology ....................... | 3 |
| | Computer Elective........................... | 3 |
| | Humanities Elective ........................ | 3 |
| | Science Elective .............................. | 3-4 |
| | | 18-19 |

| Second Semester | | Credits |
|---|---|---|
| + CJT230 | Corrections ..................................... | 3 |
| ENG112 | Composition II ............................... | 3 |
| PSY210 | Abnormal Psychology..................... | 3 |
| SSC101 | Sociology | |
| or | | |
| SSC102 | Sociology-Sustainable World.......... | 3 |
| | Math Elective ................................. | 3 |
| | Human Service/Social | |
| | Science Elective .............................. | 3 |
| | | 18 |

### Third and Fourth Semester    Credits
*Academy Option: All courses listed must be taken within the Academy hours.*
*Note: The Academy schedule is Sept to April, Mon-Thurs evenings 6-10 pm, Saturdays 8am -4 pm*

| | | |
|---|---|---|
| + CJT134 | Criminal Law ................................. | 3 |
| + CJT240 | Evidence & Procedures................... | 3 |
| + CJT244 | Criminal Investigation.................... | 4 |
| + CJT246 | Technical Skills for Officers............ | 3 |
| + CJT281 | Vehicle Patrol/Traffic Enforcement | 4 |
| + CJT282 | Firearms/Driving............................ | 4 |
| + CJT283 | Defensive Tactics/Physical Fitness | 3 |
| + CJT284 | Human Conditions .......................... | 4 |
| | | 28 |

| Summer Semester | | Credits |
|---|---|---|
| + CJT290 | Criminal Justice Practicum | 4 |

### Humanities Elective:
Select any humanities course listed on page 99.

### Human Service/Social Science Electives:
*(For Criminal Justice Majors only)*

| | |
|---|---|
| HST101 | Principles of Human Services |
| HST105 | Cultural Competence with Diverse Populations |
| HST212 | Principles of Addictions |
| HST240 | Social Problems |
| HST242 | Marriage & Family |
| PSY220 | Social Psychology |
| PSY230 | Growth & Development |
| PSY260 | Forensic Psychology |
| SPN111 | Spanish I |
| SSC110 | General Anthropology |
| SC120 | American Government |
| SSC130 | Comparative Government |
| SSC210 | Cultural Diversity |
| SSC220 | Interpersonal Violence |

# Medical Assisting
## Associate of Applied Science in Medical Assisting

## Allied Health and Public Services

+ Students must attain a 2.00 grade point average in these technical courses to graduate.

Medical assistants are multi-skilled allied health professionals specifically trained to work in ambulatory settings, such as physicians' offices, clinics, and group practices, performing administrative and clinical procedures. This program will prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

The following performance standards are necessary to safely and accurately carry out medical assisting duties: critical thinking ability sufficient for clinical judgment, physical abilities sufficient to move from room to room and maneuver in small spaces, tactile ability sufficient for physical assessment, ability to prepare and administer medications, ability to transfer patients, ability to read medication labels and patient records, ability to take blood pressure and hear breath sounds through a stethoscope, communicate English clearly enough for most patients to understand and understand the verbal communication of English-speaking patients, clear written communication, and manual dexterity.

### Program Learning Outcomes

1. Demonstrate knowledge of human structure and function and recognize common disorders of the body.
2. Completely perform clinical duties associated with assisting a physician in the diagnosis and treatment of patients in an ambulatory setting.
3. Understand the legal concepts and ethical responsibilities associated with patient care and the documentation of health information; display professionalism with interpersonal situations and business functions.
4. Understand and apply principles of office management; planning, policy development, supervisory process, personnel training, equipment and facility maintenance, and time management.
5. Apply principles of effective oral and written communication skills with patients, their families and other health care providers; teach patients methods of health promotion.
6. Demonstrate competence in performing administrative clerical duties and managing medical practice finances.
7. Demonstrate proficiency in computer operations and applications relative to patient care and the management of a medical office.
8. Think rationally, systematically, and logically; solve problems through proper means of analysis / synthesis.

### Admission Requirements for the Program:

- High School Biology with a grade of "C" or higher or BIO101 Principles of Biology with a "C" grade or higher.
- COMPASS testing. Complete any developmental courses needed.
- Course placement Algebra score at the MTH080 level or successful completion of MTH080.
- GPA 2.0 or higher.

### Requirements prior to enrollment in Externship:

- Healthcare CPR & First Aid Certification
- BCI Background Check

- Medical/Immunization Form
- Signed Confidentiality Statement

| Fall Semester | | Credits |
|---|---|---|
| ACC102 | Office Accounting | 4 |
| CIS114 | Microsoft Applications | 3 |
| ENG111 | Composition I | 3 |
| OAS101 | College Keyboarding | 3 |
| BUS110 | Business Math/Calculators | 3 |
| OAS180 | Medical Terminology | 3 |
| | | 19 |

| Spring Semester | | Credits |
|---|---|---|
| BIO150 | The Human Body | 4 |
| + MEA101 | Medical Assisting Clinical I | 3 |
| + MEA105 | Microbiology for Medical Assistants | 2 |
| + MEA108 | Administrative Medical Office Procedures | 3 |
| + MEA227 | Diagnostic Coding | 3 |
| PHI220 | Ethics in Health Care | 3 |
| | | 18 |

| Fall Semester | | Credits |
|---|---|---|
| + MEA110 | Pharmacology for Allied Health Professionals | 3 |
| + OAS 111 | Electronic Health Records | 3 |
| + MEA205 | Disease Conditions | 3 |
| + MEA283 | Computerized Medical Insurance | 3 |
| PSY110 | General Psychology | 3 |
| ENG112 | Composition II | 3 |
| | | 18 |

| Spring Semester | | Credits |
|---|---|---|
| + MEA201 | Medical Assisting Clinical II | 3 |
| + MEA200 | Medical Assisting Administrative Extern | 4 |
| + MEA202 | Medical Assisting Clinical Extern | 6 |
| + MEA228 | Procedural Coding | 3 |
| | | 16 |

**Felony Conviction Disclosure:** Previous conviction of a felony may prevent an applicant from being eligible for the certification exam given by the American Association of Medical Assistants. "Individuals who have been found guilty of a felony or pleaded guilty to a felony are not eligible to take the Certified Medical Assistants exam. However, the certifying board may grant a waiver based upon mitigating circumstances."

*This program is Accredited by the Commission on Accreditation of Allied Health Programs, on the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment. (CRB-AAMAE, 1361 Park Street, Clearwater, FL 33756. (727) 210-2350.*

+ Refers to technical course work.

# Emergency Medical Services
## Certificate

## Allied Health and Public Services

Students must maintain a minimum grade of "C" in all courses to progress in the program and graduate.

This program prepares students for entry level career positions as EMT-B's and EMT-I's. Emergency medical technicians administer lifesaving care at the scene of accidental injury or sudden illness. The program leads to eligibility for state and national certification. The EMT-Basic (EMS102 and EMS103) and EMT-Intermediate (EMS202 and EMS203) classes are held at Four County Career Center, Archbold, Ohio and require additional fees.

Students are required to have a records check through the Bureau of Criminal Investigation and Identification (BCI) prior to entering clinical experiences in EMS 102.

### Program Learning Outcomes
Students completing the certificate program are able to:
1. Initiate advanced patient assessment and appropriate intravenous procedures and use specific pharmacological agents for pain, respiratory, cardiac, and diabetic emergencies.
2. Challenge the certification exam and meet the standards set forth by the Ohio Board of EMS.
3. Perform all duties of an EMT - Intermediate.
4. Apply principles of effective oral and written communication skills with patients, their families and other health care providers.

| Course | | Credits |
|---|---|---|
| BIO101 | Principles of Biology | 4 |
| EMS102* | EMT Basic I | 3.5 |
| EMS103* | EMT Basic II | 2.5 |
| EMS/PNE105 | Effective Communication Skills for the Health Care Professionals | 1 |
| ENG111 | Composition I | 3 |
| NRS105 | Math for Nurses | 1 |
| PSY110 | General Psychology | 3 |
| EMS202* | EMT Intermediate I | 3.5 |
| EMS203* | EMT Intermediate II | 2.5 |
| ENG113 or | Speech | 3 |
| ENG214 | Discussion & Conference Methods. | 3 |
| HST212 | Principles of Addiction | 3 |
| PHI220 | Ethics in Health Care | 3 |
| SSC210 | Cultural Diversity | 3 |
| | | 36 |

\*   Courses taught at Four County Career Center. Students

# Phlebotomy Technician
## Certificate

need to submit verification of current EMT-B and EMT - I Certification to receive credit for the courses.

The Phlebotomy Certificate prepares students to be an important member of the health care team. The phlebotomist's primary role is to collect blood specimens for testing which aids the physician in the proper diagnosis and treatment of illness.  Graduates will be prepared for entry level employment and will be qualified to sit for one of the national certification exams. This program will provide a career pathway to Medical Assisting, Medical Laboratory Technician and other allied health professions.

## Program Learning Outcomes
Students completing the Phlebotomy Technician Certificate will:
1. Comply with infection control standards and federal, state, and locally mandated regulations regarding safety practices.
2. Follow standard operating procedures to collect, transport, handle and process blood and other specimens.
3. Model professional appearance, behavior and interpersonal skills in the work environment.
4. Perform duties within legal and ethical boundaries.

### First Semester

| | | Credits |
|---|---|---|
| + BIO150 | Human Body* ................................ | 4 |
| or | | |
| BIO231/232 | | |
| | Anatomy & Physiology I* &  II...... | |
| CIS114 | Microsoft Applications.................... | 3 |
| + OAS180 | Medical Terminology ..................... | 3 |
| + MEA105 | Microbiology for Medical Assistants* .................................... | 2 |
| ENG111 | Composition I................................ | 3 |
| | | 15 |

### Second Semester

| | | |
|---|---|---|
| + MEA108 | Admin Med Office Proced ............. | 3 |
| PSY110 | General Psychology ....................... | 3 |
| PHI220 | Ethics in Healthcare ...................... | 3 |
| + MEA207 | Phlebotomy Externship ................... | 6 |
| | | 15 |

**\*Prerequisite requirement:**
BIO 101 or high school Biology & Chemistry with a grade of "C" or better.

**Program Requirements Prior to Externship**:
- Healthcare Provider Level CPR and First Aid
- BCI/FBI Fingerprinting
- Health Physical & Immunization Form
- Confidentiality Statement

\+ Refers to technical course work

\* Prerequisite requirement: BIO101 or high school Biology and Chemistry with a grad of "C" or better.

# Northwest Ohio Allied Health Education Consortium

## Allied Health and Public Services

> Students must maintain a minimum grade of "C" in all courses to progress in the program and graduate.

This exciting new initiative brings four institutions of higher education in the northwestern corner of Ohio into partnership to share existing Allied Health programs. The U.S. Department of Labor has awarded the consortium $1,999,054 under the President's Community-Based Job Training Grants Initiative. This opportunity will provide students throughout the region with greater access to Allied Health professional training without the burden of expense or the time required by traveling great distances.

The partner schools are Northwest State Community College, Rhodes State College, Marion Technical College and Urbana University. Students can enroll in any of these partner colleges while attending their hometown college or university with the help of distance education formats such as live video teleconferencing, webcasting, podcasting and other distance modalities. For example, Northwest State students can take their general education core courses at NSCC and become enrolled in the Occupational Therapy Assistant program at Rhodes State with a reduction in travel due to the use of distance education. Clinical education experiences may be available in your hometown as well.

More information on the Northwest Ohio Allied Health Education Consortium can be found at www.ohioalliedhealth.com.

### Health Information Technician

Health Information Technician (HIT) focuses on the management of healthcare data. As a Health Information Technician, you would be responsible for maintaining components of health information systems consistent with the medical, administrative, ethical, legal, accreditation, and regulatory requirements of the health care delivery system. The health information technician must collect, integrate, and analyze primary and secondary health care data; disseminate information and manage information resources related to the research, planning, provision, payment and evaluation of healthcare services. Health information technicians are found in all types of healthcare facilities including hospitals, research centers, and clinics.

### Medical Laboratory Technician

Medical Laboratory Technician courses are offered in a blended format, using the distance education and live laboratory sessions at Marion one day a week. Clinical education experiences may be available in the local area and will be arranged during the last quarter in the program. Upon successful completion of the program, students received an Associate's Degree from Marion Technical College. The program is designed to teach students how to collect and process specimens, perform basic analytical tests, monitor quality control and solve medical laboratory problems. Students in the program receive instruction in classroom sessions, lab practices and clinical experiences.

### Radiographic Imaging

Upon successful completion of the program, the student will be eligible to take the examination in radiography of the American Registry of Radiologic Technologists. Graduates of the program find employment as radiographers in a variety of settings including hospitals, clinics, physicians' offices and mobile units, as well as numerous specialty fields including computed tomography, magnetic resonance imaging, mammography and vascular procedures. In addition, radiography is considered the foundation for careers in diagnostic medical sonography (ultrasound), radiation therapy and nuclear medicine. Graduates may also qualify for job opportunities with commercial firms and (once advanced academic credentials are obtained), may compete for faculty appointments in radiography education as well as radiology administration positions.

### Respiratory Care

Skillful providers of respiratory care are in increasing demand. Respiratory Care Practitioners are prepared to administer pulmonary care under the direction of licensed physicians. Their tasks involve the administration of medical gases, medications by inhalation, pulmonary drainage and positive pressure breathing treatments. Knowledge of special life-support equipment and methods of monitoring the critically-ill patients are required of respiratory care practitioners. Individuals educated as respiratory care therapists must complete a minimum of two years of education. Upon completion of the Respiratory Care Program at Rhodes State College, graduates are eligible to sit for the national board exams to become a Registered Respiratory Therapist (RRT).

### Occupational Therapy Assistant

An occupational therapy assistant treats patients using purposeful and meaningful activities. The treatment is holistic including focus on the patients' physical, cognitive and psychological abilities. Occupational therapy assistants (OTA) aid individuals of any age to regain skills needed to participate in productive, satisfactory and meaningful living. Under the supervision of an occupational therapist, an assistant can treat clients with cognitive, physical, emotional and/or developmental disabilities in a variety of healthcare and other settings. After successfully completing an accredited Occupational Therapy Assistant Program, the graduate is eligible to take the National Certification Examination for the Occupational Therapy Assistant administered by the National Board for Certification in Occupational Therapy (NBCOT)

### Physical Therapy Assistant

Physical therapist assistants (PTA) are skilled technical health personnel who provide physical therapy services under the supervision and direction of a physical therapist. Physical therapist assistants enhance the delivery of physical therapy services by providing delegated interventions such as therapeutic exercise, training in assistive devices, developmental activities, balance and gait training, application of thermal agents, postural training and instruction in body mechanics. Physical therapist assistants help with data collection and must demonstrate the ability to modify intervention techniques as indicated in the plan of care designated by the physical therapist. Upon successful completion of the program, the student will be eligible to take the state licensure examination by the Federation of State Boards of Physical Therapy.

### For More Information Contact

Holly Barton
Department Chair, Allied Health
(419) 261-1431
hbarton@northweststate.edu

Lori Robison
Dean, Allied Health & Public Services
(419) 267-1342
lrobison@northweststate.edu

# Nursing

Contact the Dean:
Lori Bird  •  419.267.1246  •  lbird@northweststate.edu

# Nursing Division

## Advisory Committee

Kathleen Boff, R.N., C.N.O., DRMC, Defiance, Ohio

Jennifer Cluckey, L.P.N., Community Hospitals and Wellness Center, Montpelier, Ohio

Annette Crews, R.N., St. Luke's Hospital, Maumee, Ohio

Jan David, R.N., C.N.O., Community Hospital & Wellness Centers, Bryan, Ohio

Cathy Day, R.N., Community Hospital & Wellness Centers, Bryan, Ohio

Dianne Delventhal, R.N., Henry County Home Health and Hospice, Napoleon, Ohio

Johnathan Liechty, R.N., Parkview Health, Fort Wayne, Indiana

Karen Niese, R.N., DRMC, Defiance, Ohio

Sharon Reddington, R.N., Fulton County Health Center, Wauseon, Ohio

Jo Short, R.N., C.N.O., Fulton County Health Center, Wauseon, Ohio

Mary Jo Smallman, RN, Fulton Manor, Wauseon, Ohio

Becky Snyder, R.N., Williams County Combined Health Dept, Bryan, Ohio

Donna Sprow, RN, Williams County Hillside Country Living, Bryan, Ohio

Dodi Thompson, R.N., C.N.O., Mercy Hospital of Defiance, Defiance, Ohio

Kathy Holloway R.N., Coordinator of Nursing, Defiance College, Defiance, Ohio

Karen Walker, R.N., Four County Career Center, Archbold, Ohio

Jane Zachrich, R.N., C.N.O., Community Memorial Hospital, Hicksville, Ohio

# Nursing Division

The Nursing Division at Northwest State Community College offers nursing degree and certificate programs that prepare students to meet the rapidly changing demands of the healthcare industry.

Graduates of the Nursing Division are eligible to take the National Council Licensure Exam (NCLEX), and enter directly into the workforce. There are also opportunities for graduates to transfer into a four-year degree program at partnering institutions.

All programs in the Nursing Division are fully approved by the Ohio Board of Nursing; the RN program is also accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326.

Degree and Certificate programs offered through the Nursing Division include:

**Associate of Applied Science in Nursing**
> Registered Nurse (RN)
> LPN to RN Advanced Standing Program

**Certificate Program**
> Practical Nursing (PN)

## Prerequisites

All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the COMPASS placement test, ACT test or take the recommended classes. If you have not taken the placement test, stop by the Admissions Office in C106 or call (419) 267-1320 for information or referral to testing.

Some courses listed in this program have specific prerequisites. See course descriptions for these prerequisites in the Course Description section of this publication.

## General Education

For Northwest State Core Requirements, see page 30. For the NSCC Transfer Module, see page 36.

## Course Sequence

This is a suggested sequence of course(s) for full-time students. If you are a part-time student or have transferred course(s) in from another college, you should generally complete the courses listed under semester 1 before moving on to semester 2, 3, and then 4. General education courses may be taken at any time. Please meet with a nursing advisor to plan a course of study.

Nursing core courses must be taken in sequence; a minimum of five semesters for the RN program and a minimum of three semesters for the PN program.

## Career Outlook for RNs

Nationally, and in the state of Ohio, employment of Registered Nurses is expected to grow. The number of middle-aged and elderly people who need more health care services is expected to rise rapidly. Home health care services will probably show the fastest growth area for Registered Nurses. Many people are choosing to stay home rather than go to a long-term care facility, and these individuals will need nurses highly skilled in doing complex tasks. Hospitals are the largest employers of Registered Nurses. However, with more patients recuperating at home, the largest future growth will probably be in outpatient care, especially in chemotherapy and rehabilitation.

## Career Outlook for LPNs

Employment of LPNs is projected to grow faster than average. Overall job prospects are expected to be very good, but job outlook varies by industry. The best job opportunities will occur in nursing care facilities and home health care services, while applicants for jobs in hospitals may face competition.

Employment of LPNs is expected to grow 14 percent between 2006 and 2016, faster than the average for all occupations, in response to the long-term care needs of an increasing elderly population and the general increase in demand for health care services.

# Registered Nursing (RN)
## Associate of Applied Science in Nursing

## Nursing Division

The associate degree nursing program is designed to prepare students to demonstrate competency in providing nursing care in a variety of health care settings and for employment as a registered nurse. The five semester program incorporates face-to-face and online coursework, labs, and clinicals to prepare the student to function as a member of the healthcare team. Students must meet all admission criteria and obtain certification as a state tested nursing assistant prior to taking a clinical nursing course.

**Submit the following to the College Admissions Office.**
- a. Application to Northwest State Community College.
- b. Official High School Transcript and/or G.E.D. certificate.
- c. Official College Transcript(s) (if you have college work).

**Admission to the Associate Degree Nursing Program:**
1. Submit directly to the Nursing Office.
   - a. High school transcript or copy of GED.
   - b. Application to the Associate Degree Nursing Program. All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the College placement test or ACT or take the recommended classes. If you have not taken these tests, call (419) 267-1320 for a testing appointment; recommended courses must be completed.
2. Complete NLN Pre Admission Exam PAX $\geq$ 50 Percentile score on AD scale in each of the three areas.
3. Meet ONE criteria in each of the following areas:
   - **a. Academic Background**
     1. HS GPA $\geq$ 2.5 from accredited high school.
     2. Non-accredited HS or GED with ACT composite score $\geq$ 23.
     3. HS GPA < 2.5 or GED; complete 16 semester hours college work with GPA $\geq$ 2.5.
     4. College degree with GPA $\geq$ 2.5.
   - **b. Algebra**
     1. Meets course placement results for MTH090 Intermediate Algebra proficiency.
     2. Algebra II in high school and ACT $\geq$ 22.
     3. College equivalent (MTH090 Intermediate Algebra) with a minimum grade of "S."
   - **c. Chemistry**
     1. High school chemistry with lab with minimum grade of "B".
     2. High school chemistry with a "C," plus an ACT science score of $\geq$ 24.
     3. College equivalent (CHM101) with minimum grade of "C".
   - **d. Biology**
     1. High school biology with lab with minimum grade of "B."
     2. High school biology with a "C," plus an ACT science score of $\geq$ 24.
     3. College equivalent (BIO101) with minimum grade of "C".
   - **e. Computer Competency**
     1. High school microcomputer course with a minimum grade of "C" since 1992.

2. Successfully complete or proficiency CIS090 Introduction to Computers or equivalent.
   - **f. Keyboard Competency**
     1. High school keyboarding course with a minimum grade of "C".
     2. Successfully complete or proficiency OAS090, Keyboarding Basics or equivalent.
   - g. Students will not be admitted to the program if a grade of less than "C" is received more than one time in any of the above courses.
   - h. Acceptance into the program is based on completion of criteria and review by the Admissions Committee. Applicants will be notified by letter regarding their acceptance into the program. When more qualified applicants have applied than seats are available:
     1. Consideration will be given to students having the greatest number of credit hours completed from the Associate Degree Nursing curriculum.
     2. Priority will be given to students who have completed course work at NSCC.
     3. Technical grade point average will be used to determine placement when criteria are equal.
4. If taken prior to admission, the student must provide official documentation that knowledge of BIO231, BIO232, and BIO257 is seven (7) years old or less. If coursework is older than seven years, current knowledge may be demonstrated by taking a re-qualifying exam or by retaking the course.
5. Upon acceptance, the applicant must submit: Nursing Acceptance deposit fee ($100.00) to hold a seat in the assigned clinical.
6. Prior to entry into the program the student must submit:
   - a. Completed health and immunization forms and verify current CPR with Red Cross (CPR/AED) or American Heart Association BLS for the Healthcare Provider.
   - b. Verification of current State-tested Nursing Assistant certification.
   - c. Criminal background check.
   - d. Drug Screen.
7. Clinical agencies utilized by the nursing program may require a negative criminal background check and a negative drug screen. Although the College will make reasonable efforts to place admitted students in clinical experiences, it will be up to the host facility to determine whether a student will be allowed to be placed at that facility. A positive criminal background check or drug screen requires a conference with the Dean of Nursing to determine whether the student can continue in the clinical nursing program. Students with a positive background check or drug screen may be dismissed from the nursing program.
8. This is a rigorous program. Full-time employment is not recommended during the clinical courses.
9. Guidelines from the Center for Disease Control state that "health care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care until the condition resolves."

# Registered Nursing (RN)
## Associate of Applied Science in Nursing

10. The following physical requirements are necessary to safely and accurately carry out the nursing duties:
    a. Critical thinking ability sufficient for clinical judgment.
    b. Physical abilities sufficient to move from room to room and maneuver in small spaces.
    c. Tactile ability sufficient for physical assessment.
    d. Ability to prepare and administer medications.
    e. Ability to transfer patients.
    f. Ability to read medication labels and patient records.
    g. Ability to take blood pressure and hear breath sounds through a stethoscope (special types are available).
    h. Communicate English clearly enough for most patients to understand and understand the verbal communication of English speaking clients.
    i. Clear written communication.
11. The State of Ohio requires criminal background checks for individuals providing care for children or the elderly. The College requires students to submit to a criminal background check at the beginning of the program prior to their first clinical experience. The College will make a determination of whether a student can be placed at an agency based on a list of disqualifying offense provided by the agency that the agency normally used to hire its employees. The agency's disqualifying criminal offense may be more restrictive than required by the law.
12. Anyone with a felony, misdemeanor, or a D.U.I. conviction will be required, after completing the nursing program, to attend a hearing before the Ohio State Board of Nursing to determine eligibility to sit for the National Licensure exam. Anyone who has been convicted of or pled guilty to aggravated murder, murder, voluntary manslaughter, felonious assault, kidnapping, rape, sexual battery, gross sexual imposition, aggravated arson, aggravated robbery or aggravated burglary will not be eligible for licensure in Ohio.
13. Clinical component must be completed within four (4) years.

**Program Learning Outcomes**
1. Integrate knowledge from physical, biological, behavioral and nursing sciences and general studies in providing comprehensive nursing care.
2. Integrate the nursing process to maintain, restore, and promote health of individuals, families, and groups of all ages in a variety of settings.
3. Incorporate principles and techniques of effective interpersonal relationships with clients, colleagues, and health team members.
4. Adapt nursing practice to reflect the worth and dignity of clients within the ethical-legal obligations of associate degree nursing.
5. Assume responsibility for continued learning and personal growth in nursing practice.
6. Accept accountability and responsibility to clients, to the nursing profession, and to society for own nursing practice.
7. Analyze the past, present and emerging roles of the associate degree nurse.
8. Apply concepts of leadership and management in utilizing human and material resources for nursing practice as an associate degree nurse.

Graduates are eligible to take the National Council Licensure Exam (NCLEX-RN) for licensure as a Registered Nurse. Students who have prior misdemeanor, felony, or D.U.I. convictions may be denied access to clinical agencies and the opportunity to take the NCLEX-RN. State Law (Senate Bill 38 and Senate Bill 160) requires certain agencies providing care to children or adults age 60 or older to require a Bureau of Criminal Identification and Investigation (BCII) check of past misdemeanors and felonies. Job seekers are prohibited from holding such jobs if they have previously been convicted of (or pleaded guilty to) a variety of offenses.

The Associate Degree Nursing program is fully approved by the Ohio Board of Nursing and accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, (404) 975-5000.

# Registered Nursing (RN)
## Associate of Applied Science in Nursing

<div style="background:green;color:white">NURSING DIVISION</div>

### FALL SCHEDULE

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| BIO231 | Anatomy & Physiology I | 4 |
| + NRS106 | Nursing Perspectives | 2 |
| + NRS107 | Basic Concepts | 6 |
| PSY110 | General Psychology | 3 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| BIO232 | Anatomy & Physiology II | 4 |
| + NRS108 | Nursing Care of Clients with Physiological Health Needs I | 6 |
| + NRS110 | Pharmacology | 3 |
| + NRS131 | Health Assessment in Nursing | 2 |
| PSY230 | Human Growth and Development | 3 |
| | | 18 |

| Summer Semester | | Credits |
|---|---|---|
| + NRS213 | Nursing Care of the Childbearing Family | 3 |
| + NRS214 | Nursing Care of the Childrearing Family | 3 |
| | | 6 |

| Third Semester | | Credits |
|---|---|---|
| BIO257 | Microbiology | 4 |
| + NRS215 | Nursing Care of Clients with Psychosocial Health Needs | 5 |
| + NRS216 | Nursing Care of Clients with Physiological Health Needs II | 3 |
| PHI220 | Ethics in Health Care | 3 |
| | | 15 |

| Fourth Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| + NRS217 | Nursing Care of Clients with Physiological Health Needs III | 5 |
| + NRS218 | Concepts in Management of Groups of Clients | 4 |
| STA120 | Introduction to Statistics | 3 |
| | | 15 |

### SPRING SCHEDULE

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| BIO231 | Anatomy & Physiology I | 4 |
| + NRS106 | Nursing Perspectives | 2 |
| + NRS107 | Basic Concepts | 6 |
| PSY110 | General Psychology | 3 |
| | | 18 |

| Second Semester | | Credits |
|---|---|---|
| BIO232 | Anatomy & Physiology II | 4 |
| + NRS108 | Nursing Care of Clients with Physiological Health Needs I | 6 |
| + NRS110 | Pharmacology | 3 |
| + NRS131 | Health Assessment in Nursing | 2 |
| PSY230 | Human Growth and Development | 3 |
| | | 18 |

| Third Semester | | Credits |
|---|---|---|
| BIO257 | Microbiology | 4 |
| + NRS215 | Nursing Care of Clients with Psychosocial Health Needs | 5 |
| + NRS216 | Nursing Care of Clients with Physiological Health Needs II | 3 |
| PHI220 | Ethics in Health Care | 3 |
| | | 15 |

| Summer Semester | | Credits |
|---|---|---|
| + NRS213 | Nursing Care of the Childbearing Family | 3 |
| + NRS214 | Nursing Care of the Childrearing Family | 3 |
| | | 6 |

| Fourth Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| + NRS217 | Nursing Care of Clients with Physiological Health Needs III | 5 |
| + NRS218 | Concepts in Management of Groups of Clients | 4 |
| STA120 | Introduction to Statistics | 3 |
| | | 15 |

*Students must attain a minimum grade of "C" in all courses to progress in the program and graduate.*

+    Refers to technical coursework.

# LPN to RN Advanced Standing Program
## Associate of Applied Science in Nursing

**Admission to the College**
1. Submit to College Admissions Office:
   a. Northwest State Community College application.
   b. Official high school transcript or G.E.D. certificate.
   c. Transcripts from Approved Practical Nursing School.
   d. Official college transcript(s) (if any).

**Admission to the LPN to RN Advanced Standing Program:**
1. Submit directly to the Nursing Office:
   a. Application to LPN to RN Advanced Standing Program.
   b. High school transcript.
   c. Transcript from approved PN school.
2. Must be a graduate of a Practical Nursing program and have current Ohio LPN licensure without restrictions and with medication administration privileges. Six months continuous nursing experience with minimum 800 hours within the past two years is required.
3. All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the College placement test, ACT or take the recommended classes. If you have not taken these tests, call (419) 267-1320 for a testing appointment; recommended courses must be completed.
4. Complete National League for Nursing Pre-admission Exam for registered nursing programs (PAX-RN) with a score $\geq$ 50th percentile in each subject area.
5. Meet ONE criterion in each of the following areas.
   **a. Academic Background**
      1. LPN Program Certificate with college GPA $\geq$ 2.5.
      2. Complete 16 semester hours college work with GPA $\geq$ 2.5.
   **b. Algebra**
      1. Meets course placement results for MTH090 Intermediate Algebra proficiency.
      2. Algebra II in high school and ACT $\geq$ 22.
      3. College equivalent (MTH090 Intermediate Algebra) with a minimum grade of "S".
   **c. Chemistry**
      1. High school chemistry with lab with minimum grade of "B".
      2. High school chemistry with a "C", plus an ACT science score of $\geq$ 24.
      3. College equivalent (CHM101) with minimum grade of "C".
   **d. Computer Competency**
      1. High school microcomputer course with minimum grade of "C" since 1992.
      2. Successfully complete or proficiency CIS090 Introduction to Computers or equivalent.
   **e. Keyboarding Competency**
      1. High school keyboarding course with a minimum grade of "C".
      2. Successfully complete or proficiency OAS090 Keyboarding Basics or equivalent.
6. Complete the following courses with a "C" (2.0) grade or better <u>prior</u> to admission to advanced standing program:
   a. BIO231 Anatomy & Physiology I
   b. BIO232 Anatomy & Physiology II
   c. PSY230 Human Growth and Development
   d. PSY110 General Psychology
7. Students will not be admitted to the program if a grade of less than "C" is received more than one time in any of the above courses.
8. Acceptance into the program is based on completion of criteria and review by the Committee. Applicants will be notified <u>by letter</u> regarding their acceptance into the program. When more qualified applicants have applied than seats available:
   a. Consideration will be given to students having the greatest number of credit hours completed from the Advanced Standing Curriculum.
   b. Priority will be given to students who have completed coursework at Northwest State Community College.

c. Technical grade point average will be used to determine placement when criteria are equal.
9. If criteria (1 through 7) are not met, the LPN may apply to the generic ADN program.
10. Prior to NRS217 and NRS218, students must pass, with a mizimum of 2 attempts, the <u>NLN Acceleration Challenge Exam I</u> - Nursing Care During Childbearing and Nursing Care of the Child at a 70 decision score; or complete coursework with a maximum of 2 attempts and a grade of "C" or better:
   a. NRS209 Nursing Care During Childbearing & Childhood:
   b. NRS207 Nursing Care of the Family Throughout Pregnancy (SU only); or
   c. NRS208 Nursing Care of the Family with Children (SU only)
11. This is a rigorous program. Full-time employment is not recommended during the clinical courses.
12. <u>Upon acceptance,</u> the applicant must submit:
   a. Nursing Acceptance deposit fee ($100.00) to hold a seat in the assigned clinical.
13. Prior to entry into the program the applicant must submit:
   a. Completed health and immunization forms and verify current CPR with Red Cross (CPR/AED) or American Heart Association BLS for the Healthcare Provider.
   b. round check.
   c. Drug screen.
14. Clinical agencies utilized by the nursing program may require a negative criminal background check and a negative drug screen. Although the College will make reasonable efforts to place admitted students in clinical experiences, it will be up to the host facility to determine whether a student will be allowed to be placed at that facility. A positive criminal background check or drug screen requires a conference with the Dean of Nursing to determine whether the student can continue in the clinical nursing program. Students with a positive background check or drug screen may be dismissed from the nursing program.
15. Guidelines from the Center for Disease Control state that "health care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care… until the condition resolves."
16. The following performance standards are necessary to safely and accurately carry out nursing duties:
   a. Critical thinking ability sufficient for clinical judgment.
   b. Physical abilities sufficient to move from room to room and maneuver in small spaces.
   c. Tactile ability sufficient for physical assessment.
   d. Ability to prepare and administer medications.
   e. Ability to transfer patients.
   f. Ability to read medication labels and patient records.
   g. Ability to take blood pressure and hear breath sounds through a stethoscope (special types are available).
   h. Communicate English clearly enough for most patients to understand and be able to understand the verbal communication of English-speaking clients.
   i. Clear written communication.
17. Anyone with a felony, misdemeanor, or a D.U.I. conviction will be required, after completing the nursing program, to attend a hearing before the Ohio State Board of Nursing to determine eligibility to sit for the National Licensure exam. Anyone who has been convicted of or pled guilty to aggravated murder, murder, voluntary manslaughter, felonious assault, kidnapping, rape, sexual battery, gross sexual imposition, aggravated arson, aggravated robbery or aggravated burglary will not be eligible for licensure in Ohio. State Law (Senate Bill 38 and Senate Bill 160) requires certain agencies providing care to children or adults age 60 or older to require a Bureau of Criminal Identification and Investigation (BCII) check of past misdemeanors and felonies. Job seekers are prohibited from holding such jobs if they have previously been convicted of (or pleaded guilty to) a variety of offenses.
18. Clinical component must be completed within three (3) years.

# LPN to RN Advanced Standing Program
## Associate of Applied Science in Nursing

### Nursing Division

This three semester program is designed to prepare the licensed practical nurse for licensure as a registered nurse. Students must have a current license as a practical nurse in the state of Ohio with no restrictions and current work experience. The program incorporates face-to-face and online coursework, labs and clinicals to prepare the student to function as a member of the health care team. Students must meet all admission criteria prior to taking a clinical nursing course.

Graduates are eligible to take the National Council Licensure Exam (NCLEX-RN) for licensure as a registered nurse. Students who have prior misdemeanor, felony, or D.U.I. convictions may be denied the opportunity to take the NCLEX-RN.

*The Associate Degree program is fully approved by the Ohio Board of Nursing and accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, (404) 975-5000.*

#### Program Learning Outcomes for All Associate Degree Nursing Programs
1. Integrate knowledge from physical, biological, behavioral and nursing sciences and general studies in providing comprehensive nursing care.
2. Integrate the nursing process to maintain, restore, and promote health of individuals, families, and groups of all ages in a variety of settings.
3. Incorporate principles and techniques of effective interpersonal relationships with clients, colleagues, and health team members.
4. Adapt nursing practice to reflect the worth and dignity of clients within the ethical-legal obligations of associate degree nursing.
5. Assume responsibility for continued learning and personal growth in nursing practice.
6. Accept accountability and responsibility to clients, to the nursing profession, and to society for own nursing practice.
7. Analyze the past, present and emerging roles of the associate degree nurse.
8. Apply concepts of leadership and management in utilizing human and material resources for nursing practice as an associate degree nurse.

| First Semester | | Credits |
|---|---|---|
| ENG111 | Composition I | 3 |
| + NRS211 | LPN to RN Transition Course | 3 |
| + NRS212 | LPN to RN Bridge Course | 1 |
| | | 7 |

| Second Semester | | Credits |
|---|---|---|
| BIO257 | Microbiology | 4 |
| + NRS215 | Nursing Care of Clients with Psychosocial Health Needs | 5 |
| + NRS216 | Nursing Care of Clients with Physiological Needs II | 3 |
| PHI220 | Ethics in Health Care | 3 |
| | | 15 |

| Third Semester | | Credits |
|---|---|---|
| ENG112 | Composition II | 3 |
| + NRS217 | Nursing Care of Clients with Physiological Health Needs III | 5 |
| + NRS218 | Concepts in Management of Groups of Clients | 4 |
| STA120 | Introduction to Statistics | 3 |
| | | 15 |

### Van Wert Campus LPN to RN Advanced Standing Program
The LPN to RN Advanced Standing Program is also offered in Van Wert, Ohio through a unique collaboration between NSCC, Vantage Career Center and Wright State University (Lake Campus). Necessary remedial and all general education courses are offered at the Van Wert site either by NSCC at 793 Fox Road or Wright State University at Vantage Career Center. All nursing courses are through NSCC. Contact the Van Wert Nursing Office at (419) 238-0779 for specific details.

**Archbold campus has a Fall Semester start.**
**Van Wert campus has a Spring Semester start.**

**NRS211 is considered a validation course and can only be taken one time.** Students who are unsuccessful may apply to the two year associate degree program.

*Students must attain a minimum grade of "C" in all courses to progress in the program and to graduate.*

+   Refers to technical coursework

# Practical Nursing (PN)
## Certificate

**Admission To The College**
1. Submit to the Northwest State Community College Admissions Office:
   a. Completed Application to Northwest State Community College.
   b. Official high school transcript or G.E.D. Certificate.
   c. Official college transcript(s) if applicable.

**Admission to The Practical Nursing Program**
1. Submit directly to the nursing office:
   a. High school transcript or G.E.D. certificate.
   b. Application to the Practical Nursing Program.
2. All students are required to demonstrate proficiencies in reading, writing, and mathematics based on scores on the placement test, ACT or take the recommended classes. If you have not taken these tests, call (419) 267-1320 for a testing appointment; recommended courses must be completed.
3. Must meet ONE criterion in each of the following areas to be assigned a starting date for the first nursing course PNE120:
   **a. GPA**
   1. High school G.P.A. $\geq$ 2.0.
   2. High school G.P.A < 2.0 or G.E.D; complete 9 semester hours college work with G.P.A. $\geq$ 2.0.
   3. College G.P.A. of 2.0 or better (if applicable).
   **b. Algebra**
   1. Course Placement Algebra score at the MTH080 level.
   2. College equivalent (MTH080 Beginning Algebra) with grade of "S".
   **c. Science**
   1. High school biology with lab, with minimum grade of "C" and high school chemistry with lab, with minimum grade of "C".
   2. High school biology and high school chemistry with a "C" from a curriculum not accredited by North Central and an ACT science score $\geq$ 20.
   3. BIO101 Principles of Biology with minimum grade of "C".
   **d. Computer Competency**
   1. High school microcomputer course since 1992 with minimum grade of "C".
   2. Successfully complete or proficiency CIS090 Introduction to Computers or equivalent.
   **e. Keyboarding Competency**
   1. High school keyboarding course with a minimum grade of "C".
   2. Successfully complete or proficiency OAS090 Keyboarding Basics or equivalent.
4. Students will not be admitted to the program if a grade of less than "C" is received more than one time in any of the above courses.
5. Acceptance into the nursing program is based upon successful completion of admission criteria and review by the PN Admission Committee. Applicants will be notified by letter regarding their acceptance into the program. When more qualified applicants have applied than seats are available:
   a. Consideration will be given to students having the greatest number of credit hours completed toward the nursing program.
   b. Priority will be given to students who have completed coursework at NSCC.
   c. Technical grade point average will be used to determine placement when criteria are equal.
6. **Upon acceptance**, the applicant must submit: The nursing acceptance deposit fee ($100.00) to hold a seat in the assigned clinical class.
7. Prior to entry the student must submit
   a. Completed health and immunization forms.
   b. Verify current CPR with Red Cross (CPR/AED) for the Professional Rescuer or American Heart Association BLS for the Healthcare Provider.
   c. Verification of current STNA certification.
   d. Criminal background check.
   e. Drug Screen.
8. If taken prior to admission, the student must provide official documentation that coursework in The Human Body (BIO150) or Anatomy & Physiology I and II (BIO231 & BIO232) is seven (7) years old or less. If coursework is older than seven years, current knowledge may be demonstrated by taking the course(s) or the proficiency exam(s).
9. Clinical agencies utilized by the nursing program may require a negative criminal background check and a negative drug screen. Although the College will make reasonable efforts to place admitted students in clinical experiences, it will be up to the host facility to determine whether a student will be allowed to be placed at that facility. A positive criminal background check or drug screen requires a conference with the Dean of Nursing to determine whether the student can continue in the clinical nursing program. Students with a positive background check or drug screen may be dismissed from the nursing program.
10. Anyone with a felony, D.U.I. or misdemeanor conviction will be required, after completing the program to attend a hearing before the Ohio State Board of Nursing to determine eligibility to sit for the national licensure exam in Ohio. Anyone who has been convicted of or pled guilty to aggravated murder, murder, voluntary manslaughter, felonious assault, kidnapping, rape, sexual battery, gross sexual imposition, aggravated arson, aggravated robbery, or aggravated burglary will not be eligible for licensure in Ohio. State Law (Senate Bill 38 and Senate Bill 160) requires certain agencies providing care to children or adults age 60 or older to require a Bureau of Criminal Identification and Investigation (BCII) check of past misdemeanors and felonies. Job seekers are prohibited from holding such jobs if they have previously been convicted (or pleaded guilty) to a variety of offenses.
11. Guidelines from the Center for Disease Control state that "health care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care…until the condition resolves."
12. Clinical component must be completed within two (2) years.
13. The following performance standards are necessary to safely and accurately carry out nursing duties:
   a. Critical thinking ability sufficient for clinical judgment.
   b. Physical abilities sufficient to move from room to room and maneuver in small spaces.
   c. Tactile ability sufficient for physical assessment.
   d. Ability to prepare and administer medications.
   e. Ability to transfer patients.
   f. Ability to read medication labels and patient records.
   g. Ability to take blood pressure and hear breath sounds through a stethoscope (special types are available)
   h. Communicate English clearly enough for most patients to understand and to be able to understand the verbal communication of English-speaking clients.
   i. Clear written communication.
14. The PN program has been designed to facilitate articulation and to enhance further study in a student's area of interest. Instead of BIO150 The Human Body, students who are planning to articulate to the Advanced Standing Program may choose to take BIO231 Anatomy & Physiology I and BIO232 Anatomy & Physiology II. When the two-semester sequence of A&P is chosen, BIO231 must be taken prior to entrance into the clinical courses.
15. Northwest State Community College is an affirmative action, equal opportunity employer and educator that does not discriminate on the basis of race, color, national origin, religion, disability, sex, or age.

# Practical Nursing (PN)
## Certificate

## Nursing Division

The practical nursing program is a one year (twelve month) certificate program designed to prepare students to demonstrate competency in providing nursing care in a variety of health care settings and for employment as licensed practical nurses.

Students must meet all admission criteria and obtain certification as a state tested nursing assistant prior to taking the first clinical nursing course. The three semester program incorporates lectures, labs and supervised clinical experience in a variety of area health care facilities. Nursing faculty are available to advise students as they progress through the program. Successful completion of the program prepares the students to take the National Council Licensing Exam for Practical Nursing (NCLEX-PN), and practice as licensed practical nurses.

Students who have prior misdemeanor, felony, or D.U.I. convictions may be denied access to clinical agencies and the opportunity to take the NCLEX-PN. State Law (Senate Bill 38 and Senate Bill 160) requires certain agencies providing care to children or adults age 60 or older to require a Bureau of Criminal Identification and Investigation (BCII) check of past misdemeanors and felonies. Job seekers are prohibited from holding such jobs if they have previously been convicted of (or pleaded guilty to) a variety of offenses.

*The Practical Nursing program is fully approved by the Ohio Board of Nursing.*

### Program Learning Outcomes
1. Apply knowledge from the biological, physical, behavioral, and nursing sciences in providing individualized, safe, effective nursing care in structured, predictable settings within established legal and ethical guidelines.
2. Utilize effective verbal and written communication skills with patients, families, colleagues, and other members of the health care team.
3. Participate in the nursing process utilizing critical thinking skills to provide individualized nursing care to patients across the life span and health continuum.
4. Demonstrate responsibility for continued life-long learning and growth in nursing practice.

### Part-Time Evening PN Program
A part-time evening Practical Nursing program is also offered at Van Wert, OH through a unique collaboration between Northwest State Community College, Vantage Career Center, and Wright State University, (Lake Campus). Necessary remedial and all required general studies courses are offered either at the NSCC campus at 793 Fox Road or by Wright State University at Vantage Career Center. Clinical sites are in the Van Wert area. Contact the Van Wert Nursing Office at (419) 238-0779 for specific details.

### FALL START COURSE SEQUENCE

| Fall Semester | | Credits |
|---|---|---|
| BIO150 | The Human Body | 4 |
| | or | |
| BIO232* | Anatomy & Physiology II | 4 |
| ENG111 | Composition I | 3 |
| + PNE120 | Essentials of Practical Nursing | 8 |
| PSY110 | General Psychology | 3 |
| | | 18 |

| Spring Semester | | Credits |
|---|---|---|
| PSY230 | Human Growth & Development | 3 |
| + NRS110 | Pharmacology | 3 |
| + PNE121 | Nursing Care of Mother and Newborn | 2.5 |
| + PNE122 | Nursing Care of the Child | 2.5 |
| + PNE123 | Nursing Care of Adults I | 4.5 |
| | | 15.5 |

| Summer Semester | | Credits |
|---|---|---|
| + PNE124 | Nursing Care of Adults II | 5.5 |
| BIO131 | Nutrition | 3 |
| | | 8.5 |

### SPRING START COURSE SEQUENCE

| Spring Semester | | Credits |
|---|---|---|
| BIO150 | The Human Body | 4 |
| | or | |
| BIO232* | Anatomy & Physiology II | 4 |
| ENG111 | Composition I | 3 |
| + PNE120 | Essentials of Practical Nursing | 8 |
| PSY110 | General Psychology | 3 |
| | | 18 |

| Summer Semester | | Credits |
|---|---|---|
| + NRS11 | Pharmacology I | 1.5 |
| + PNE123 | Nursing Care of Adults I | 4.5 |
| | | 6.0 |

| Fall Semester | | Credits |
|---|---|---|
| NRS112 | Pharmacology II | 1.5 |
| BIO131 | Nutrition | 3 |
| + PNE121 | Nursing Care of Mother and Newborn | 2.5 |
| + PNE122 | Nursing Care of the Child | 2.5 |
| + PNE124 | Nursing Care of Adults II | 5.5 |
| PSY230 | Human Growth & Development | 3 |
| | | 18 |

*Students must attain a minimum grade of "C" in all courses to progress in the program and to graduate.*

\* Required for Advanced Standing ADN program (LPN to RN)

\+ Refers to technical coursework.
  NRS111 & NRS112 are the equivalent of NRS110.

# Technical Studies & Individualized Studies

# Associate of Individualized Studies

The Associate of Individualized Studies Degree program provides the student an opportunity to develop a tailor-made program of instruction which may include already learned skills, life experiences, and course credits from appropriate professional, personal, and career experiences. Such program needs may not necessarily fit into traditional program offerings.

## Admission Requirements
Admission requirements will adhere to the full requirement of the College. Upon application, the student will be advised and counseled in a program which matches the student's interest and aptitude in so far as possible. High school records, equivalency exams, and Course Placement Test scores will be evaluated.

Students may apply for the AIS program by presenting their intent to the Dean of Arts & Sciences, who will assist them in planning an individualized program of study. The program may be denied if:
1. Standards are not comparable to other technologies offered at Northwest State Community College.
2. The proposed AIS program duplicates an existing technology offered at Northwest State Community College.

For cases in which the College does not offer courses needed to fulfill the degree requirements, cooperative arrangements may be entered into with approved public and private colleges, as well as accredited correspondence schools, vocational centers, and schools conducted by business and industry. Transfer credits, credits by examination, or credit by any other acceptable method in current use at NSCC may be granted.

## Graduation Requirements
Courses designed through individualized studies may be substituted for specific course requirements with the approval of the Dean of Arts & Sciences. In all cases, the AIS Degree must meet the following minimum expectations:

## Counseling Procedure
A student interested in pursuing the Associate of Individualized Study Degree will begin the application procedure by first being directed to the Dean of Arts & Sciences for tentative program approval.

Students who plan to use life experiences or other non-collegiate work as part of their AIS degree must enroll in course AIS101 Portfolio Development.

## English and Language:
6 credit hours required
- ENG111 Composition  I      3 hr. ("C" or better)
- ENG112 Composition II      3 hr.

## Humanities:
15 credit hours required
- At least 3 hours - (other than ENG230) - from ENG prefix
- Coursework from at least 3 different prefix categories within the humanities:  ART, HIS, HUM, PHI
- No more than 6 hours in the applied arts (ART prefix courses)

## Social & Behavioral Sciences:
15 credit hours required
- Coursework from at least 2 different prefix categories within the Social & Behavioral Sciences:  ECO, GEO, PSY, SSC

## Mathematics & Science:
10 credit hours required
- Demonstrated proficiency at MTH090 Intermediate Algebra level
- STA120 Introduction to Statistics 3 hr.
- Coursework from at least 2 different prefix categories within Mathematics and Science:  BIO, CHM, PHY, MTH
- At least one course must be a lab course

## Computer Literacy:
3 credit hours required
- Selected from approved list

## Electives:
11 credit hours required
- May be selected from available college credit classes at the 100 and 200 level
- May be independent study/work experiences as described below   Total 60 hr. Minimum Independent study/work experiences:
- Must be under the supervision of NSCC faculty and subject to approval of Arts & Sciences Division.
- Must be of collegiate level of academic rigor, work expectations, and appropriate written documentation.
- May be used to meet required hours in Humanities, Social & Behavioral Sciences, or Mathematics & Science if subject matter is appropriate and approval is obtained.
- May be used to meet required elective hours.
- Independent study/work hours should be chosen and designed to transfer in an appropriate fashion to a 4-year college or university.
- Minimum of 2.00 grade point average overall.
- A minimum of 30 semester credit hours of supervised coursework after acceptance into the AIS program.
- Must earn at least 12 of the final 30 credit hours from NSCC.
- A maximum of 12 semester credit hours can be earned through portfolio assessment.

# Associate of Technical Studies

The Associate of Technical Studies Degree program provides the student an opportunity to develop a tailor-made program of instruction which may include already learned skills, life experiences, and course credits from appropriate trade schools, colleges, and universities. Such program needs may not necessarily fit into traditional program offerings.

## Admission Requirements

Admission requirements will adhere to the full requirements of the College. Upon application, the student will be advised and counseled in a program which matches the student's interest and aptitude in so far as possible. High school records, equivalency exams, and Course Placement Test scores will be evaluated. Students may apply for the ATS program by presenting their intent to the appropriate Division Dean or Department Chair, who will assist them in planning an individualized program of study. The program may be denied if:

1. Standards are not comparable to other technologies offered at Northwest State Community College.
2. The proposed ATS program duplicates an existing technology offered at Northwest State Community College. For cases in which the College does not offer technical courses needed to fulfill the degree requirements, cooperative arrangements may be entered into with approved public and private colleges, as well as accredited correspondence schools, vocational centers, and schools conducted by business and industry. Transfer credits, credits by examination, or credit by any other acceptable method in current use at NSCC may be granted.

## Graduation Requirements

Graduation requirements for the ATS program will adhere to the same requirements of any technical program at NSCC.

1. Minimum of 60 semester credit hours of coursework, total credits may not exceed 72 credit hours. The course of study must have approval from the Division Dean, Vice President for Academics, and placed on file in the Registrars' Office.
2. Eighteen credit hours in NSCC General Education Core Courses:

   | | |
   |---|---|
   | Composition I | 3 |
   | Composition II | 3 |
   | Humanities Elective | 3 |
   | Math Elective | 3 |
   | Science Elective | 3 |
   | Social Behavioral Science | 3 |

3. Minimum of twelve credit hours in general education/non-technical courses.
4. Minimum of 30 credit hours in technical studies of which 15 are to be concentrated in a single discipline. (This is the area of study where ATS students will have the greatest input to define their occupational goals.)
5. Minimum of 2.00 grade point average overall.
6. Portfolio coursework may not exceed 24 percent of the total credit hours.
7. A minimum of 30 percent of coursework must be completed at NSCC.

*Students wishing to pursue an Associate of Technical Studies (ATS) degree must have their ATS degree program approved by an Academic Dean, Academic Vice-President, and placed on file in the Registrars' Office prior to completing 15 credit hours*

# Career Technical Education
## Associate of Technical Study (University of Toledo)

### Degree Requirement for Route B Career-Technical Licenses

The Route B Career-Technical program is for career and technical teachers who do not have a degree in their field, or who have a degree in their field, but do not have a degree in education. Teachers completing the program are eligible to apply for a standard teaching license valid for teaching students age eight and beyond in any chartered school in Ohio.

This program consists of 27-30 semester hours of coursework at the University of Toledo or another institution. Enrollment in the licensure program must be initiated by the hiring school district, and applicants are required to have work experience in their field. New teachers hired in the summer take a three week licensure clinic before teaching begins, and are then monitored by a teacher educator during their first year of teaching.

To renew the provisional license, 27-30 semester hours of coursework must be completed, and teachers will complete the entry year and Praxis III during their third year of teaching. All requirements must be completed by the end of the fourth year in order to be eligible for the five year professional license.

The second renewal of the professional career-technical license obtained pursuant to the provisions in paragraph (D)(7) of rule 3301-24-05 of the Administrative Code shall require completion of a degree applicable to the career field, classroom teaching, or an area of licensure.

The Associate of Technical Studies in Career Technical Education will offer a pathway for students who take the 27-30 technical hours from a four year institution to end with an Associate's Degree in Career and Technical Education that the four year university might not offer. This will allow them to meet the mandatory licensure requirements.

### For more information, contact:

**Northwest State Community College**
Von Plessner, AAB, BS, MBA, ABD
Dean of Business
vplessner@northweststate.edu
(419) 267-1348

**The University of Toledo**
Paul Hubaker, Director
Career and Technical Education
paul.hubaker@utoledo.edu
(419) 530-7291

### Earn your Career-Technical License at The University of Toledo...

| Course: | | Credit Hours |
|---|---|---|
| CTE 3010 UG | Teaching Occup Skills............ | 3 |
| CTE 3020 UG | Teaching Occup Knowledge .. | 3 |
| CTE 3030 UG | Methods Teaching CTE 1....... | 2 |
| CTE 4930 UG | Supervised Teaching ............. | 4 |
| CTE 3040 UG | Methods Teaching CTE II...... | 2 |
| CTE 4930 UG | Supervised Teaching ............. | 4 |
| CI 4980 UG | Content Reading: Career-Technical Education ... | 3 |
| CTE 3100 UG | Curriculum Const in CTE ...... | 3 |
| CTE 3910 UG | Seminar for CTE Teachers ..... | 3 |
| | | 27 |

### ...And finish your Associate Degree at Northwest State

| Course: | Credit Hours |
|---|---|
| Transfer Credits Earned at UT.......................................27-30 | |

| General Studies Core: (see page 30) | | Credit Hours |
|---|---|---|
| ENG111 | Composition I........................ | 3 |
| ENG112 | Composition II ...................... | 3 |
| | Social Behavioral Science Elective .................................. | 3 |
| | Humanities Elective .............. | 3 |
| | General Studies Elective ........ | 3 |
| | | 15 |

**Supporting Coursework:**
Select 3 courses from the following areas: ........... 9-15
Any course with a prefix of:
*No more than 1 from each course prefix*
    ACC, BUS, MGT, MKT, STA, VCT
Computer Selection: Choose 2 courses
    CIS112, CIS113, CIS114................. 6-9
                15-18

**Minimum Total Credit Hours ...................................    60**

*May require an additional course from above to meet the minimum total 60 credit hours.*

*Students wishing to pursue an Associate of Technical Studies (ATS) degree must have their ATS degree program approved by an Academic Dean, Academic Vice-President, and placed on file in the Registrar's Office prior to completing 15 credit hours.*

# Career Technical Education
## Associate of Technical Study (Healing Arts Institute)

Healing Arts Institute offers a state approved 750 clock-hour massage therapy program with a duration of 12 months full-time, or 24 months part-time. Students may choose to start classes in either the spring (April) or the fall (October). The school year consists of four 12-week quarters with a break between each quarter. Financial Aid is available for those students who apply and are eligible.

The Institute requires students to develop the knowledge and skills of massage techniques as well as understand business procedures and communication skills. Therefore, the program offers courses that are designed to meet this need. Students can expect a rigorous curriculum in Anatomy and Physiology, Medical Terminology, Massage Theory and Practice, Ethics, Field Experiences and Student Clinics.

Upon receiving a diploma from our school, you will be eligible to sit for the state medical board examination for massage therapy and also be eligible to sit for the National Certification Board for Therapeutic Massage and Bodywork (NCBTMB) examination.

Approved by the State Medical Board of Ohio, Registered with State Board of Career Colleges and Schools (Reg. #01-03-1626T) and an Accredited member of ACCSCT.

The Associate of Technical Studies in Massage Therapy at Northwest State Community College allows students the opportunity to develop a tailor-made program of instruction which includes course credits earned at Healing Arts Institute.

Graduates of the program will be prepared to market, grow and establish clientele in a variety of settings. This program will also prepare graduates to meet the diverse needs of their clients while establishing best practices in a business or entrepreneurial setting.

At Northwest State Community College, we understand that it is not always possible to schedule your life around your classes, so we offer day, evening, weekend and online classes to give you the flexibility you need to earn a degree. Financial aid is also available to assist students with college tuition. For more information, visit our website at www.northweststate.edu.

**For more information, contact:**

**Northwest State Community College**
Von Plessner, AAB, BS, MBA, ABD
Dean of Business
vplessner@northweststate.edu
(419) 267-1348

**Healing Arts Institute**
Deb Keller, LMT, NCTMB
Director of Education
director@haiohio.com
(419) 874-4496

### Earn your Diploma in Massage Therapy at Healing Arts Institute...

| Course | Clock Hours |
|---|---|
| Anatomy & Physiology | 285 |
| Business/Law | 25 |
| CPR | 5 |
| Clinic* | 50 |
| Electives | 10 |
| Ethics | 25 |
| Field Experience | 20 |
| Massage/Theory/Practice** | 270 |
| Medical Terminology | 15 |
| Pathology | 30 |
| State Board Review | 15 |

**Total Clock Hours.............................................** **750**

### ...And finish your Associate Degree at Northwest State Community College

**Required General Education Core:** (See page 30) **Credit Hours**

| | | |
|---|---|---|
| ENG111 | Composition I | 3 |
| ENG112 | Composition II | 3 |
| | Humanities Core Elective | 3 |
| | Math Core Elective | 3 |
| | Science Core Elective | 3 |
| | Social Behavioral Science Core Elective | 3 |
| | | 18 |

**Non-Technical Electives:** (Minimum 15 hours)
Possible courses selection includes courses with the following prefixes: ART, BIO, CHM, ECO, ENG, GEO, HIS, HUM, HST, PHI, PHY, PSY, SSC

**Technical Education:** (Minimum of 30 Hours)

| | | |
|---|---|---|
| ATS103 | Transfer credits earned through the Healing Arts Institute | 15 |
| | Possible courses selection includes courses with the following prefixes: ACC, BUS, CIS, ECO, MGT, MKT, VCT | 15 |
| | | 30 |

**Minimum Total Credit Hours............................** **63**

*Students wishing to pursue an Associate of Technical Studies (ATS) degree must have their ATS degree program approved by an Academic Dean, Academic Vice-President, and placed on file in the Registrar's Office prior to completing 15 credit hours.*

# Career Technical Education
## Associate of Technical Study (Cosmetology Management)

The Associate of Technical Studies in Cosmetology Management at Northwest State Community College allows students the opportunity to develop a tailor-made program of instruction which includes course credits earned through course content taken for preparation to pass the Ohio State Board of Cosmetology as a licensed Cosmetologist.

Graduates of the program will be prepared to market, grow, and establish clientele in a variety of settings. This program will also prepare graduates to meet the diverse needs of their clients while establishing best practices in a business or entrepreneurial setting.

At Northwest State Community College, we understand that it is not always possible to schedule your life around your classes, also we offer day, evening, weekend and online classes to give you the flexibility you need to earn a degree. Financial aid is also available to assist students with college tuition. For more information, visit our website at www.northweststate.edu.

### Recognition of State Licensure – Ohio State Board of Cosmetology:

Career Planning and Placement, General Business Readiness, Economics Education, Leadership and Communication
Clock hours                                           145

Entrepreneurship, Workplace Safety, Salon Operation, Personal Hygiene, Chemistry and Bacteriology
Clock Hours                                            25

Math, Problem Solving, Applied Math, and Computation
Clock Hours                                           102

Communication, Organizational Skills and Licensure Internship
Clock Hours                                            70

Total Clock Hours                                    342

### ATS103 Credit Hours granted    15

| NSCC Core Courses: | Credit Hours |
|---|---|
| Composition I | 3 |
| Composition II | 3 |
| Humanities Elective | 3 |
| Math Elective | 3 |
| Science Elective | 3 |
| Social Behavioral Science | 3 |
| **Core subtotal** | **18** |

**Non Technical Electives:** (Minimum 12 Hours)
Possible course selection includes courses with the following prefixes: ART, BIO, CHM, ECO, ENG, GEO, HIS, HUM, HST, PHI, PHY, PSY, SSC

**Technical Course Work:** (Minimum 15 Hours)
Possible course selection includes courses with the following prefixes: ACC, BUS, CIS, ECO, MGT, MKT, VCT

### Total Credit Hours               60

### For more information contact:

**Northwest State Community College**
Von Plessner   (419) 237-1348

**Four County Career Center (419) 267-3331**
Jim Battershell
Kim Dunbar
Kay Stannard
Krista Whetro

*Students wishing to pursue an Associate of Technical Studies (ATS) degree must have their ATS degree program approved by an Academic Dean, Academic Vice-President, and placed on file in the Registrar's Office prior to completing 15 credit hours.*

# Database Programming
## (Short-Term Training Certificate)

The Database Programming short-term training certificate program develops skills in database management and reporting as well as foundations of computer programming. Students will work with industry-recognized databases (such as Oracle) and related tools for pulling data (SQL, Crystal Reports). Students will also develop skills with object-oriented programming languages that will enable them to create both windows- and web-based solutions for end-users.

## Career Outlook

Increased financial regulations, privacy rules and security guidelines are causing more companies to handle data analysis and processing within national markets. But with the high cost of information technology service in larger urban areas, provider companies are being drawn to less populated locales, prompting the demand for highly-trained employees living in these areas. The market is eager for a local option in the IT outsourcing sector for data report writing, electronic forms development and applications development in JAVA.

## Program Learning Outcomes

1. Use the applications found in the Microsoft Office suite and apply them in a business setting.
2. Develop data analysis and project management skills and be able to apply them in a business setting.
3. Utilize structured programming concepts to develop applications using programming languages such as VBA, VB, C# and Java, to meet end user requirements.
4. Identify basic networking infrastructure components and list items that comprise a secure network.
5. Set up a basic webpage with HTML/CSS technology.
6. Utilize a Relational Database Management System and be able to query data from various databases (Access, Oracle, SQL).
7. Present database data in a user friendly format using reporting and dashboarding tools.
8. Develop communication skills for both technician-to-technician as well as technician-to-end user interactions.

## Admission Requirements for the Program:

- Basic computer application literacy. Be able to pass 4-part diagnostic exam on Concepts of Information and Communication Technology, Using the Computer and Managing Files, Databases/Access 2007 and Spreadsheets/Excel 2007.
- COMPASS testing. Complete any developmental courses needed.
- Course placement Algebra score at the MTH080 level or successful completion of MTH080.
- GPA 2.0 or higher.

| Course | | Credits |
|---|---|---|
| DBP110 | Computer Technologies................... | 1 |
| + DBP120 | Computer Systems I ........................ | 2 |
| + DBP121 | Computer Systems II...................... | 3 |
| + DBP150 | Database Basics.............................. | 3 |
| + DBP210 | Foundations of Computer Programming................................... | 3 |
| + DBP215 | Intermediate Database .................... | 3 |
| + DBP220 | Database Reporting ........................ | 3 |
| + DBP225 | Computer Programming II ............. | 3 |
| DBP230 | Professional Communication Skills | 1 |
| | | 22 |

+ Refers to technical course work. Students must maintain a minimum grade of "C" in these courses to progress in the program and graduate.

**A B C D E F G H I J K L M N O P Q R S T U V W X Y Z**

This section of the catalog is arranged in alphanumeric order. In general, the following list may be used to find the courses offered within each technology:

| | |
|---|---|
| ACC | Accounting |
| AET | Alternative Energy |
| ART | Art |
| ATS | Associate of Technical Studies |
| BAN | Banking and Finance |
| BIO | Biological Sciences (Biology, A & P, etc.) |
| BUS | Business |
| CAD | Computer Aided Design |
| CHM | Chemistry |
| CIS | Computer and Information Systems |
| CJT | Criminal Justice |
| ECD | Early Childhood |
| ECO | Economics |
| EDP | Paraprofessional |
| EDU | Education |
| EET | Electrical Engineering Technologies |
| EMS | Emergency Medical Services |
| ENG | Communications (Composition, Speech, Literature) |
| FRA | Forensic Accounting |
| GEO | Geography |
| GSD | General Studies |
| HIS | History |
| HPF | Beginning Western/English Horsemanship |
| HST | Human Services |
| HUM | Humanities |
| IND | Industrial |
| INT | Industrial Technology |
| MEA | Medical Assisting |
| MET | Mechanical Engineering Technologies |
| MGT | Management |
| MKT | Marketing |
| MTH | Mathematics |
| NRS | Associate Degree Nursing |
| OAS | Office Administrative Services |
| PAR | Paralegal |
| PET | Plastics Engineering Technology |
| PHI | Philosophy, Ethics, Logic, Religions |
| PHY | Physics |
| PLC | Programmable Logic Controllers |
| PNE | Practical Nursing Program |
| PSY | Psychology |
| PUA | Public Administration |
| QCT | Quality Control Technology |
| REA | Real Estate |
| SPN | Spanish |
| SCM | Supply Chain Management |
| SSC | Social Sciences (Sociology, Political Science, etc.) |
| STA | Statistics |
| TRN | Transportation |
| VCT | Visual Communications |

Most of the course descriptions include one of the following abbreviations to indicate when the course is usually taught:

      F - Fall Semester
      S - Spring Semester
      SU - Summer Semester

The parentheses at the end of each course description indicate the lecture and lab hours respectively. Example: (3+1) indicates a course with 3 lecture hours and 1 lab hour.

*The College reserves the right to change courses as needed. Course description, semesters offered, and prerequisites are effective for the academic year(s) of this catalog.*

## Developmental Courses are Graded Pass/Fail (S/U) and Do Not Meet Course Requirements for Graduation

**ACC090**    **Introduction to**    **3 Cr. Hrs.**
             **Accounting**
This course is designed for students who have had no previous accounting instruction or for those desiring an introductory course before beginning the accounting sequence. This course covers accounting terminology, financial statement concepts, intensive drills on debits/credits, and a brief overview of the accounting cycle.
(3+0) F, S-Day

**CIS090**    **Introduction to**    **1 Cr. Hr.**
             **Computers**
This course is a beginner's introduction to computers (PC's). The text covers most of the fundamental concepts associated with computers including terminology, hardware and software issues, and introduces the student to some elementary skills via some of the well-known software applications. Students will practice basic computer skills using word processing and spreadsheets, as well as explore the Internet. No prior computer knowledge is necessary for this course.
(1+1) F, S
Course Placement Test is available

**ENG080**    **Reading Comprehension**    **3 Cr. Hrs.**
A critical reading and thinking course for improving comprehension and study skills congruent with college level course requirements. Emphasizing skills for efficient, independent learning from textbooks and other college reading materials, this course will accent a variety of comprehension skill areas: activating background knowledge, distinguishing between main ideas and supporting details, recognizing organizational patterns, and identifying a writer's tone and purpose.
(3+0) F, S, SU

**ENG090**    **Basic Composition**    **3 Cr. Hrs.**
This course provides an understanding of the writing process and English fundamentals to ensure success in college writing assignments. It reviews grammar, usage, punctuation, spelling, emphasizes skills for composing paragraphs and essays, and combines direct instruction, collaborative learning, peer editing, and individual conferences.
(3+0) F, S, SU

**MTH050**    **Basic Mathematics**    **4 Cr. Hrs.**
Designed to improve basic computation skills, as well as introduce the student to computational techniques related to their degree and preliminary algebraic concepts. The material will cover operations with whole numbers, fractions, decimals, integers, and application problems.
(4+0) F, S, SU

**MTH080  Review of Beginning Algebra  4 Cr. Hrs.**
Designed for students with no previous algebra experience or those needing a review of basic algebraic techniques before taking MTH090. Introduces the properties, rules and basic techniques of algebra as well as translation between English and the language of algebra. Topics include integers and operations, variables and operations, algebraic expressions, equations, percent's, word problems, and graphing.
(4+0) F, S, SU
Prerequisite: MTH050, high school equivalent, or satisfactory score on Course Placement Test.

**MTH090  Intermediate Algebra  3 Cr. Hrs.**
Intended for those students who have passed a previous algebra class. Designed to review topics introduced in MTH080 but at an accelerated pace and with more depth and rigor. Introduces many new topics including functions, several types of inequalities, radical expressions and equations, rational exponents and the quadratic formula.
(3+0) F, S, SU
Prerequisite: MTH080, high school equivalent, or satisfactory score on Course Placement Test

**MTH/MET099  Engineering Math  3.5 Cr. Hrs.**
The objective of this course is to increase students preparedness in basic algebra and trigonometry skills used in engineering. These concepts will be reviewed, refreshed, and mastered through application to engineering problems.  This course is designed for students who have had some algebra and need a review of specific mathematical topics to prepare them for the engineering technologies course sequence.
(3 + 1)  F, S
Prerequisite:  MTH080 or high school Algebra II with a "C" or better.

**OAS090  Keyboarding Basics  1 Cr. Hr.**
This is a beginning keyboarding course on the computer designed for students in any program. Major objectives are to develop touch control of the keyboard and proper typing techniques, while building basic speed and accuracy. This course is useful for beginning keyboarding students as well as those who want to review the basics of the computer keyboard.
(1+0) F, S, SU
Course Placement Test is available

**GSD100  Success Seminar  1 Cr. Hr.**
Required course for students who test into either MTH050 or MTH080 and either ENG080 or ENG090; required for students on Academic Probation; required for students returning from Academic Suspension. This course is open to any student and could be used as 1 credit General Studies elective.
   **\*\* For a full course description see page 143. \*\***

**ACC102  Office Accounting  4 Cr. Hrs.**
This course is designed for Office Administrative Services and Early Childhood Development majors. It may not be used as a substitute for ACC111. The primary emphasis of this course will be on a sole proprietorship operating a service business and a merchandising business. The course includes a study of the accounting cycle, beginning with the business transaction and ending with the preparation of the financial statements and all of the necessary end of the period procedures. Other topics include bank reconciliations, petty cash funds, and cash change funds. Considerable emphasis will also be placed on payroll. Students will be able to calculate payrolls and be familiar with all of the necessary payroll forms.
(4+0) F - Day, S

**ACC111  Financial Accounting  4 Cr. Hrs.**
The course includes a study of the accounting cycle beginning with the business transaction and ending with the preparation of financial statements along with other period end procedures for both sole proprietors as well as corporations. Other topics include: receivables, inventory, depreciation, liabilities, investments, and stock. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU001 - Introduction to Financial Accounting).
(4+0) F, S, SU

**ACC112  Managerial Accounting  4 Cr. Hrs.**
This course begins with the Statement of Cash Flows and then focuses on managerial topics. These areas of study include:  job order and process costing, activity based costing, cost behavior and cost-volume-profit analysis, budgeting, variance analysis, evaluation for decentralized operations, differential analysis, and product pricing, and capital investment analysis. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU002 - Introduction to Managerial Accounting).
(4+0) F, S, SU – Day
Prerequisite: ACC111 with a "C" or better

**ACC120  Payroll Accounting  3 Cr. Hrs.**
This course includes the various phases of the Social Security Act, unemployment compensation, and federal withholding tax, with considerable emphasis on the study of timekeeping systems and systems of accounting used in keeping payroll and wage records. Students complete the necessary federal and state tax reports and apply payroll accounting concepts to microcomputer applications.
(3+0) F, S - Day
Prerequisite: High school accounting, work experience
Co-requisite: ACC090 or ACC111 or ACC102

**ACC140  Individual Income  3 Cr. Hrs.**
        **Tax Accounting**
Major emphasis is on individual income tax laws and regulations. The course is designed to have both a personal and vocational value, covering tax return preparation, tax planning, and research.
(3+0) S

**ACC211  Intermediate Accounting I  3 Cr. Hrs.**
This course is a review and expansion of concepts learned in accounting principles. Topics studied are the accounting cycle, financial statements, revenue recognition, cash, receivables, and inventories.
(3+0) F
Prerequisite: ACC112 with grade of "C" or better

**ACC212  Intermediate Accounting II  3 Cr. Hrs.**
This course is a continuation of Intermediate Accounting I. Subject matter includes: debt and equity financing, noncurrent assets, long term investments, income tax allocation, employee compensation, and additional disclosures.
(3+0) S
Prerequisite: ACC211

**ACC221  Cost Accounting I  3 Cr. Hrs.**
This course teaches determination of product costs using different cost systems: primarily job order costing and process costing. Additional topics include: cost estimation, cost-volume-profit analysis, activity-based budgeting, standard costing, operational performance measures, flexible budgeting, and management of overhead activity costs.
(3+0) F
Prerequisite: ACC112 with a grade of "C" or better

**ACC222    Cost Accounting II    3 Cr. Hrs.**
This course is a continuation of Cost Accounting I.  Topics studied are activity-based costing and management, responsibility accounting, investment centers, transfer pricing, relevant costs and benefits in decision making, cost analysis for pricing decisions, capital expenditure decisions, absorption costing, variable costing, and allocation of support activity costs and joint costs.
(3+0) S
Prerequisite: ACC221

**ACC230    Auditing    3 Cr. Hrs.**
This is a study of theories, procedures, and practices employed in audits. The course includes studies on auditor's reports, internal control procedures, tests, and generally accepted auditing standards used in the profession.
(3+0) S
Prerequisite: ACC112

**ACC240    Business Income    3 Cr. Hrs.**
           **Tax Accounting**
This course teaches fundamentals of federal taxation in relation to business forms and rules. Studies include preparation of partnership, subchapter "S", and corporation returns with related income tax forms.
(3+0) F - Day

**ACC260    Accounting on Computers    3 Cr. Hrs.**
This course is a combination of ACC261 QuickBooks, ACC271 Intermediate QuickBooks, and ACC272 Advanced QuickBooks and allows the student to extensively study the QuickBooks software. Information will be processed in most of the areas of accounting in business. Many of the topics covered in financial and managerial accounting courses will be converted into a computerized accounting system. The course employs the case study method of teaching and learning and emphasis is placed upon hands-on practice in class and on assignments.
(3+0) F, S, SU

**ACC261    QuickBooks    1 Cr. Hr.**
In this course students learn the capabilities of QuickBooks software. Using a case study approach, the course covers core product features from writing checks and creating reports to theories of basic business accounting, including managing accounts payable/receivable, invoicing, inventory management, and payroll. Each of the 15 lessons begins with lesson objectives and suggested instructor preparation, followed by step-by-step educator instructions. Students learn all the key concepts through hands-on learning and practice.
(1+0) F

**ACC271    Intermediate QuickBooks    1 Cr. Hr.**
In this course students learn specialized capabilities of QuickBooks software. Using a case study approach, the course covers product features such as recording special transactions, exporting and importing data, and customizing reports. Students learn key concepts through hands-on learning and practice.
(1+0) F, S, SU
Prerequisite: ACC261 or instructor permission

**ACC272    Advanced QuickBooks    1 Cr. Hr.**
In this course students learn specialized capabilities of QuickBooks software. Using a case study approach, the course covers product features which apply to accounting procedures. Students learn key concepts through hands-on learning and practice.
(1+0) F, S
Prerequisite: ACC271, or instructor permission

**ACC291    Accounting Internship    3 Cr. Hrs.**
This course is a job-related accounting experience in which the student works for a department within the college, a business, or an industrial organization. The student is chosen for this course on the basis of academic progress or job experience.  Enrollment only with instructor permission.
(1+20) F, S, SU

**AET100    Introduction to    3 Cr. Hrs.**
           **Alternative Energies**
In this course the student will learn the units of energy, how it is measured, and what our current usage is. Students will determine their current energy usage. They will then be introduced to several alternative energy sources including solar, wind, biomass, hydrogen, fuel cells, and others. As these topics are introduced, students will gain an understanding of these energy sources, applications, and the ability to determine their potential for sustainable energy. The course ends with the development of a plan to create a sustainable energy program for them. These topics will be learned through text, presentations, various exercises, and hands on labs.
(3+0) F, S
Prerequisite: MTH080

**AET110    Energy Audit    3 Cr. Hrs.**
In this course the student will learn to conduct an effective and informative energy audit of various facilities for clients or individual use. The student will learn sources, and extent of energy usage in various facilities including residential, commercial, and industrial. Along with energy users, the operations, processes, and management of facilities will also be looked at. This material will be covered through various exercises, lecture and lab segments.
(3+0) S
Prerequisites: AET100, IND120 (formerly EET171)

**AET120    Wind Power    4 Cr. Hrs.**
In this course the student will learn how energy can be captured from wind and converted into electrical energy for commercial or residential use. The student will learn the various wind sources and energy potential of wind in a given area. The types, components, construction, and basic installation of various wind turbines will by studied. They will also learn different techniques and equipment used for monitoring the energy produced from the turbines. This material will be covered through both lecture and lab segments.
(3+2) F
Prerequisites: AET100, IND 120 (formerly EET171)

**AET130    Solar Thermal    4 Cr. Hrs.**
In this course the student will learn how energy can be captured from the sun and converted into electrical energy for commercial or residential use. The student will learn about the solar energy balance of the planet and the energy potential of solar radiation. Solar insolation and what determines its rate will be covered. The types, components, construction, and basic installation of various solar collectors will be discussed. They will also learn different techniques and equipment used for monitoring the energy produced from solar collectors. This material will be covered through both lecture and lab segments.
(3+2) S
Prerequisites: AET100, EET121 or IND120 (formerly EET171)

**AET140       Geothermal       4 Cr. Hrs.**
In this course the student will learn the basic concepts of geothermal energy production. The course will introduce the concept and applications of acquiring energy from the Earth's core through steam powered generators for large scale electricity generation. This will be followed by the study of commercial and residential heat pumps. The student will learn how heat transfer with the ground is utilized to reduce energy consumption in both heating and cooling. The various types of heat pumps and types of wells will be discussed. This material will be covered through both lecture and lab segments.
(3+2) F
Prerequisite: AET100

**AET200       Sustainable       3 Cr. Hrs.**
            **Building Design**
In this course the student will learn how to evaluate a site for the most efficient use of energy. The student will evaluate the building site for available energy sources. The student will evaluate current and new building constructions for energy efficiency and utilization of current energy sources. The student will utilize applicable data and software to determine improvements to existing construction or to design new energy efficient sustainable building structures.
(3+0) F
Prerequisite: AET110

**AET220       Solar Photovoltaics       4 Cr. Hrs.**
This course is a continuation, and more advanced study of Solar Energy. In this course the student will review how energy can be captured from the sun and converted into electrical energy for commercial or residential use. The student will learn the process of solar photovoltaic materials. The materials, types, components, construction, and basic installation of various photovoltaic cells will be discussed. They will also learn different techniques and equipment used for monitoring the energy produced from photovoltaic cells. Finally, new technologies in this area will be discussed. This material will be covered through both lecture and lab segments.
(3+2) F
Prerequisite: AET100 and either IND120 or EET121

**AET230       Hydrogen and       4 Cr. Hrs.**
            **Fuel Cell Technology**
In this course the student will learn what hydrogen is and its potential use as an energy carrier. The production, transportation, storage, and economics of hydrogen will be discussed. Basic thermodynamics and electrochemical cell construction will be studied. With this the student will then learn the basic fuel cell construction. Variations and materials used in fuel cell construction will be covered along with various applications for fuel cells. This material will be covered through both lecture and lab segments.
(3+2) S
Prerequisites: AET100 and CHM201

**AET240       Biofuels       4 Cr. Hrs.**
In this course the student will learn different sources of biomass and the relative energy potential of these fuel sources. The student will learn the processes that are required to convert biomass to fuels such as biodiesel, ethanol, and others. The course also will look at energy potential from directly burning biomass as an energy source such as wood and grains. The determination of energy per mass will be covered to use for comparison of different materials. his material will be covered through both lecture and lab segments.
(3+2) S
Prerequisites: AET100 and CHM201

**AET290       Alternative Energy       4 Cr. Hrs.**
            **Capstone**
In this course the student will have the opportunity to apply the knowledge gained through the AET program to relevant scenarios. Specific content may vary with each offering and will be related to the specific Alternative Energy program and electives chosen through the program.
(4+0) S
Prerequisites: AET110, and at least one other course with AET prefix

**ART103       Beginning Drawing       3 Cr. Hrs.**
A basic drawing class facilitating students' abilities to see objects rationally, developing expressive drawing skills using various approaches and a wide variety of graphic media. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH001 - Basic Drawing).
(0+6) S

**ART210       Oil/Acrylic Painting       3 Cr. Hrs.**
An introductory painting class emphasizing building stretcher frames, preparing painting surfaces, using oil/acrylic media, using color, and framing.
Transfer Assurance Guide (TAG) approved effective fall 2005 (OAH048 - Painting).
(0+6) F

**ART220       Beginning Sculpture       3 Cr. Hrs.**
A basic level studio sculpture course facilitating students' ability to see and create three- dimensional works of art. In this introductory class, clay, plastilene and plaster is used in creating manipulative, subtractive, and additive method sculptures, following examination of historical works and the guiding principles of design behind creation of sculpture.
(0+6)

**ATS101       Portfolio Development       3 Cr. Hrs.**
This course is designed for the student interested in developing a portfolio for submission and review for college credit. The student will work with his/her advisor in the development of the portfolio.
(3+0) On demand with approval of the appropriate Dean.

**BAN110       Bank Management       3 Cr. Hrs.**
A study of the commercial banking industry and the interrelationships between the various types of financial institutions. Special emphasis is given to branch banking, bank financial statements, methods of evaluating bank performance, lending policies, and the management of deposit liabilities and loan assets. The regulatory environment receives significant emphasis throughout.
(3+0) S

**BAN210       Credit Management       3 Cr. Hrs.**
An examination of the concept of credit with particular emphasis given to the process of credit management for both consumers and businesses. Also explored are the processes of granting and reviewing credit, collection practices, as well as the examination of financial statements leading to the credit decision. Dun and Bradstreet's business services, as well as those of the major consumer credit organizations, receive in-depth treatment.
(3+0) F

**BAN220      Investment Management      3 Cr. Hrs.**
A study of the types of investment vehicles available to the individual investor or business investment officer. The major emphasis of study is on various types of stocks and bonds, but convertibles, options, futures, commodities, and mutual funds are also studied. In addition, several special concepts receive emphasis, such as strategies associated with margin accounts and short-selling. Valuation of the firm and related financial analysis also receive appropriate treatment.  Algebra proficiency is recommended.
(3+0) S

**BIO101      Principles of Biology      4 Cr. Hrs.**
An introduction to principles and concepts of life, including topics on cell biology, genetics, diversity of life, and ecology. Laboratory work reinforces lecture.
(3+2) F, S, SU

**BIO115      Ecology      4 Cr. Hrs.**
An introduction to the field of ecology, including the organization, interrelationships and dynamitic of populations, communities and ecosystems. A major emphasis on the relationship of humans to the environment. Lab includes field trips and the study of local aquatic and terrestrial communities.
(3+2) S - even years
Prerequisites: High school biology, BIO101, or consent of instructor

**BIO131      Nutrition      3 Cr. Hrs.**
A study of nutrition and its role in promoting good health throughout the life span.  Includes the study of proper nutrients and the various functions of the nutrients in the body's metabolism. Transfer Assurance Guide (TAG) approved effective summer 2007 (OHL016 - Basic Nutrition).
(3+0) F, S, SU

**BIO150      The Human Body      4 Cr. Hrs.**
An integrated course in the normal structure and function of the human body. It forms a basis for the later understanding of dysfunctional conditions. Each body system is presented individually, then the interrelationships between body systems are studied.
(4+0) F, S, SU
Prerequisite: BIO101 or high school Biology and Chemistry with a grade of "C" or better

**BIO180      Principles of Genetics      4 Cr. Hrs.**
The fundamentals of classical genetics and the basic principles of human genetics are reviewed. Topics covered include plant and animal genetics, cancer genetics, genetic engineering, genetics in human medicine and criminology, and ethical issues raised by DNA technology such as eugenics.
(3+2) F - even years
Prerequisite: BIO101 or high school Biology and Chemistry with a grade of "C" or better

**BIO201      General Biology I      4 Cr. Hrs.**
The course is designed for students pursuing various disciplines of science, especially biology and allied health-related majors. The first course in a two-semester sequence Successful completion of this course is a pre-requisite to BIO 202 (General Biology II). Major topics covered include: the scientific method; basic chemistry, especially as it relates to biochemistry; cell structure and function, including the cell cycle and photosynthesis; genetics, including DNA structure and function; and evolution and natural selection. Transfer Assurance Guide (TAG) approved effective summer 2009 (OSC003 – General Biology I).
(3+3) F
Prerequisites: BIO 101, or high school biology and chemistry with a grade of "C" or better.

**BIO202      General Biology II      4 Cr. Hrs.**
The course is designed for students pursuing various disciplines of science, especially biology and allied health-related majors. Major topics include biological classification; animal, plant, fungi and microbial diversity and evolution; plant and animal systems and their form and function; ecosystems and ecology; and animal behavior. Transfer Assurance Guide (TAG) approved effective summer 2010 (OSC004 – General Biology II).
(3+3) S
Prerequisite: BIO201 with a grade of "C" or better or instructor's permission

**BIO231      Anatomy & Physiology I      4 Cr. Hrs.**
Anatomical and physiological aspects of cells and tissues and the integumentary, skeletal, muscular, and nervous systems of the human body. Lab emphasizes human anatomy and physiology and includes cat dissection.
(3+3) F, S, SU
Prerequisite: BIO101or high school Biology and Chemistry with a grade of "C" or better, or equivalent; strongly recommend CHM101

**BIO232      Anatomy & Physiology II      4 Cr. Hrs.**
A continuation of BIO231, which focuses on anatomical and physiological aspects of the endocrine, digestive, respiratory, circulatory, cardiovascular, lymphatic, urinary, and reproductive systems of the human body. Lab emphasizes human anatomy and physiology and includes cat dissection.
(3+3) F, S, SU
Prerequisite: BIO231 with a grade of "C" or better, or instructor's permission

**BIO257      Microbiology      4 Cr. Hrs.**
A study of anatomy, physiology, taxonomy, identification, growth, and control of micro-organisms, including bacteria, viruses, algae, fungi, and selected human parasites. Additional topics include bacterial metabolism, microbial genetics, immune responses, host defense mechanisms, and the  spread of infectious diseases. Laboratory includes culture staining and identification of micro-organisms.
(3+3) F, S, SU
Prerequisite: BIO101 or high school Biology and Chemistry with a grade of "C" or better

**BUS110      Business Math/Calculators      3 Cr. Hrs.**
Business Math/Calculators briefly reviews mathematical operations, then applies these fundamentals to realistic business problems involving discounts, markups/markdowns, payroll/deductions, simple interest, promissory/discount notes, compound interest and present value, installment buying, APR, Rule of 78, credit card accounts, mortgage payments/amortization schedules, and property taxes. In addition, 10-key skills are developed as well as the efficient use of table-model calculators.
(2+2) F, S, SU
Prerequisite: MTH050 or satisfactory score on Course Placement Test

**BUS160** **International/** **3 Cr. Hrs.**
 **Global Business**
This course focuses on the economics, social and cultural considerations of doing business overseas. The globalization of markets and the growth of overseas business ventures are explored. The need to develop varied techniques for managing people from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling operations will be stressed. Techniques to overcome international business barriers are covered. Upon completion, students should be able to demonstrate an understanding of the economic, social and cultural considerations of doing business worldwide.
(3+0) F

**BUS211** **Business Communications** **3 Cr. Hrs.**
This course introduces business communication principles and establishes communication standards in preparation for the real-world workplace. Students analyze a variety of writing situations, design the form and content of communications, and write in appropriate styles that range from informal to business formal style. Effective oral communication is emphasized, individually and as teams, utilizing appropriate appearance, hygiene, attitude, technology, strategy, and delivery.
(3 + 0)

**BUS221** **Business Law** **3 Cr. Hrs.**
This course is a study of the U.S. legal system and dispute resolution. Major units of study include: sources of law, torts and crimes, contract and sales law, personal property law, employment law, consumer credit/bankruptcy law, and a study of business organizations. In addition, units on ethics, cyber law, e-contracts, intellectual property law, and alternative dispute resolutions are presented. Cases and media presentations are used to highlight important concepts. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU004 - Legal and Social Environment of Business).
(3+0) F, S, SU

**BUS223** **Employment** **3 Cr. Hrs.**
 **Law, Safety & Security**
In this course we will address the need to understand and comply with employment law, the benefits of employee assistance programs, and compliance with occupational safety, health, and security programs within the workplace. Topics covered in the course include legal compliance, workplace violence, safety, security, emergency response plans, employee assistance programs, employee wellness programs, and chemical use and dependency.
(3+0) F

**BUS250** **Labor Relations** **3 Cr. Hrs.**
This is a study of unions and their relationship with management. Major topics include negotiating and administering labor contracts, wages, benefits, and working conditions, as well as their impact on contract negotiations.
(3+0) F - eve, S - day

**BUS260** **International Trade** **3 Cr. Hrs.**
This course is a study in how to do business internationally. Topics include international terms, credits, export/import paperwork, and currency exchange. International marketing, distribution, and financing are emphasized, as well as cultural effects and local customs.
(3+0) S

**CAD111** **CAD I** **4 Cr. Hrs.**
A course in the fundamentals of Computer-Aided Design, utilizing state-of-the-art microcomputer hardware and AutoCAD software. Covers fundamental Window system commands and AutoCAD application commands. Gives the student the opportunity to become proficient, in a hands-on environment, in developing fundamental 2D drawings and utilizing an industrial quality CAD system.
(3+3) F, S

**CAD112** **CAD II** **4 Cr. Hrs.**
A continuation of CAD I. The student progresses to more advanced commands and design features of the AutoCAD software. The student utilizes plotting equipment for finished projects. The goal is to become proficient in the operation of a CAD system to develop complex assemblies to learn the interrelationship of detailed and purchased parts and how it all comes together in a final set of working drawings. Transfer Assurance Guide (TAG) approved effective summer 2008 (OET012 - CAD).
(3+3) S
Prerequisite: CAD111 with a "c" or better
Recommended: IND103 (formerly MET103) and MET110

**CAD213** **CAD III** **4 Cr. Hrs.**
Students will develop and plot advanced 3D models, 2D detail drawings and 3D assembly drawings as used in the modern industry today. Students will also learn how to link their 3D models to develop design tables and bill of materials. This course is an advanced course in mastering the commands utilizing SolidWorks 3D feature-based parametric sold modeling design tool software.
(3+3) F
Recommend: MET110

**CAO110** **Career Decision Making** **2 Cr. Hrs.**
This class is designed for students' undecided in their career choice. They will investigate the world of work in relation to their career goals. Activities will include exploration of interests, values, personality, aptitudes and abilities as they relate to career decision making. By examining the results of these activities, students can learn how to effectively determine the right major and career options for them. Individual career plans will be designed.
(2+0) F

**CHM101** **Principles of Chemistry** **4 Cr. Hrs.**
This course provides students with an introduction to the fundamental chemistry underlying a variety of technologies and careers. Topics covered include various aspects of conducting measurements, chemical nomenclature and equations, molecular bonding, atomic structure, uses of radioactivity and analytical methodologies. In addition, the behavior of gases, solutions, acids and bases will be explored. The student will also learn how to classify chemical reactions, as well as determine quantities of reagents needed for and products resulting from such reactions. Laboratory reinforces and supplements lectures.
(3+3) F, S, SU

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**CHM138          Principles of Forensics          4 Cr. Hrs.**
Forensics is the application of the natural sciences to all phases of criminal investigation. The study of basic chemistry and biology are now an important aspect of modern forensic science. Current topics in forensics such as DNA investigation, hair analysis, blood, grass and soil, body fluids, fingerprint analysis, drug analysis, arson, accelerants, explosives, toolmarks and firearms. (3+2) F - even years

**CHM201          General Chemistry I          5 Cr. Hrs.**
 This is the first part of a two-semester program for technically-oriented students needing a solid foundation in general chemistry. Topics covered include an in-depth treatment of measurement, atomic and molecular structures, ionic behavior in solutions, and inorganic chemical nomenclature. Also, the types of chemical reactions (including acid-base and oxidation reduction) are reviewed, along with stoichiometric principles, the behavior of gases and thermochemistry. Additional topics covered include electronic structure, periodic law, chemical bonding and molecular geometry. Lab work reinforces basic principles, supplements lectures and emphasizes analytical techniques. Transfer Assurance Guide (TAG) approved effective summer fall 2009 (OSC008 – General Chemistry I).
(3+3+1 Recitation) F, SU
Prerequisites: MTH090 or equivalent and CHM101 or high school Chemistry in past 5 yrs.

**CHM202          General Chemistry II          5 Cr. Hrs.**
A continuation of CHM201, this is the second part of a two-semester general chemistry program. Topics covered include a detailed treatment of states of matter, intermolecular forces, and the properties of solutions. Chemical kinetics, chemical equilibria (including those of acid-base systems, complex ions and coordination compounds) and chemical thermodynamics are covered as well. Students are also introduced ;to electrochemistry, nuclear chemistry, and the chemistry of selected elements and materials (including polymers and organic substances). Lab work reinforces basic principles, supplements lectures, and emphasizes analytical techniques Transfer Assurance Guide (TAG) approved effective spring 2011 (OSC009 – General Chemistry II).
(3+3+1 Recitation Hour) F, S, SU
Prerequisites: CHM201 and MTH109 with a grade of "C" or better or instructor's permission

**CHM256          Principles of Biochemistry          3 Cr. Hrs.**
An introductory course that deals with inorganic and organic biomolecules. Emphasizes the synthetic and degradative reactions of carbohydrates, lipids, nucleic acids, and proteins. Examines the roles of water, buffers, enzymes, vitamins, minerals, and organic salts in cellular metabolism.  Laboratory reinforces and supplements lectures.
(2+2) F
Prerequisite: CHM101 or equivalent

**CIS104          Desktop Management          2 Cr. Hrs.**
This is a basic course in which the students learn to understand and operate the personal computer using the Microsoft Windows Environment. They will also learn how to communicate with others using Microsoft Outlook. The basic features for the latest operating system and Outlook will be covered.
(2+0) F, S - day, S - eve (odd years)
Prerequisites: CIS090 and OAS090, or satisfactory score on Course Placement Test

**CIS108          Internet Scripting          4 Cr. Hrs.**
This course is designed to teach programming to a student using a current Internet scripting language. The course will teach the student traditional programming concepts such as variable usage, program flow statements and designing loops. The class will focus on using the scripting language to solve programming problems using Internet applications.
(3+3) F

**CIS109          Database Management          4 Cr. Hrs.**
This course is designed to familiarize students with the concepts underlying client/server relational databases. This class will teach students the basics of using the SQL query language. It will also teach more advanced SQL concepts such as query optimization and using SQL in other high level  programming languages. This class will teach the student how to manage and maintain a server based database system. This will include tasks such as creating, backing up, repairing, optimizing, securing, localizing and internationalizing databases.
(3+3) S

**CIS111          Visual Basic Programming          4 Cr. Hrs.**
This is a computer programming course involving applications utilizing a Graphics User Interface (GUI) and serving the needs of users in an event driven environment. The course moves from fundamental input/output programs to applications accessing  a database for the purpose of adding, deleting, and/or updating records. The course also  covers user report processing needs and applications involving the Internet. Object Oriented techniques are introduced and important programming concepts are emphasized preparing students for C++.  Students will be required to complete several laboratory assignments during the semester.
(3+3) F - even years

**CIS112          Microsoft Word          3 Cr. Hrs.**
This course uses basic and advanced commands in Microsoft Word software to create, format, edit, and save documents including letters, tables, reports, and merged documents. Other topics covered include desktop publishing features, web pages, styles and templates, master documents, online forms, workgroups, and information integration with other office programs.  Keyboarding skills are required.
(3+0) F, S, SU
Prerequisites: CIS090 and OAS090, or satisfactory score on Course Placement Test

**CIS113          Microsoft Excel          3 Cr. Hrs.**
This course emphasizes beginning to advanced features of Microsoft Excel.  Some of the topics presented include handling multiple worksheets, as well as creating and using formulas, macros, range names, data lists, data protection, data validation, pivot tables, and linking and embedding.
(2+2) F, S
Prerequisites: CIS090 and OAS090, or satisfactory score on Course Placement Test

**CIS114          Microsoft Applications          3 Cr. Hrs.**
This course is a basic course in which the student learns to operate the personal computer using four components of Microsoft Office software-Microsoft Word, Excel, Access, and PowerPoint. All the basic program functions will be covered for each package, as well as many advanced functions. A basic knowledge of the keyboard is helpful.  Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU003 - Computer Applications).
(2+2) F, S, SU
Prerequisite: CIS090 and OAS090 or satisfactory score on Course Placement Test

**CIS117 Microsoft Publisher 1 Cr. Hr.**
This course will emphasize the basics of creating professional layouts, including flyers, newsletters, announcements, menus, etc. The student will learn the basics of desktop publishing using Microsoft Publisher.
(1+1) F, S
Prerequisite: CIS112 or CIS114

**CIS118 Access 1 Cr. Hr.**
This is a course in which students will use MS Access software to learn the basic concepts of database management. Creating databases, entering data, preparing a query, preparing graphs, and preparing forms and reports are all practiced in a lab setting.
(1+1) F - Day, S - Eve
Prerequisite: CIS090

**CIS119 PowerPoint 1 Cr. Hr.**
This is a course designed for the beginner in using a presentation graphics program. Slide creation; use of graphics, charts, tables, and color to enhance slides; and methods of automation and use of sound will be areas of study. Hands on experience and the ability to demonstrate usage of Power Point will be provided.
(1+1) F - Eve, S - Day, SU
Prerequisite: CIS090

**CIS121 Intermediate Word 1 Cr. Hr.**
A continuation of CIS114 emphasizing advanced features of Microsoft Word are presented including creating charts, formatting text into columns, formatting with styles, merging documents, sorting, creating tables, and linking and embedding.
(1+1) F, S
Prerequisite: CIS114 with grade of "C" or better

**CIS122 Intermediate Excel 1 Cr. Hr.**
A continuation of CIS114 emphasizing advanced features of Microsoft Excel are presented including handling multiple worksheets, as well as creating and using formulas, macros, range names, data lists, data protection, data validation, pivot tables, and linking and embedding.
(1+1) F, S
Prerequisite: CIS114 with a grade of "C" or better

**CIS129 Web Page Development 3 Cr. Hrs.**
The student will learn the concepts of web page design and layout, write HTML, XHTML, and CSS code in preparing web pages for the internet.
(2+2) F - online, S - Day & online

**CIS138 Intermediate Access 1 Cr. Hr.**
This course is a continuation of CIS118 Beginning Access and is designed for the student wanting to learn advanced functions of using a database program. Review of topics completed in CIS118 along with creation of custom forms and reports, action queries, table relationships, and integrating Access with other programs will be completed. Hands on experience and the ability to demonstrate use of Access will be provided.
(1+0) S

**CIS150 Programming C++ 4 Cr. Hrs.**
This is an introduction to structured programming using the Borland ANSI C/C++ programming environment. Use of the environment tools, logic structures, and primary library functions of the language is emphasized. Additional subjects covered include variable types and declarations, math and logical operators, parameter passing, arrays and string handling and pointers.
(3+3) F

**CIS155 Linux Networking I 4 Cr. Hrs.**
This course is the first in a series that will cover data communications and operating system technology as implemented in a Linux environment. Subjects covered include the history, theory, administration, and installation of Linux and its associated software. This class will focus on the administration of Linux workstations. This class makes extensive use of lab projects to reinforce essential concepts. This class utilizes course materials used to prepare for LPI (Linux Professional Institute) Certification.
(3+3) S
Co-requisite: CIS190 or CIS191

**CIS161 C# 4 Cr. Hrs.**
This course is an introductory programming course taught using Microsoft's C# language. The course makes extensive use of the .NET framework which is common in most of the Microsoft programming languages. Students will create both console and GUI programs in this course. Variables, decisions, loops, arrays, classes, inheritance, event-handling, exceptions, file input/output and database connectivity are some of the topics covered. This course includes hands on laboratory assignments.
(3+3) S - even years

**CIS165 Java Programming 4 Cr. Hrs.**
This course utilizes the Java Programming Language and emphasizes object-oriented programming concepts. As a general purpose programming language Java can be utilized in traditional programming environments and support applications developed for a variety of computers. This course includes hands on laboratory assignments requiring students to complete and submit programming projects.
(3+3) S

**CIS191 Computer Operations 3 Cr. Hrs.**
This course is an intensive study of operating systems and PC hardware. Topics include study of the theory and tasks commonly assigned to system software, basic disk and program commands, configuration and installation commands and techniques, as well as management of resources and security. Hardware issues are also addressed covering the theory, installation and maintenance of common personal computer hardware such as CPU's, memory, hard drives and peripheral devices. This course helps prepare the student for the CompTIA A+ Certification Exams.
(2+3) F

**CIS192 Microsoft Workstation 3 Cr. Hrs.**
**Technology**
This course teaches the basic and advanced concepts needed to manage a Microsoft Desktop Operating system in both a networked and standalone environment. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) F
Co-requisite: CIS190 or CIS191

**CIS193　　　　Microsoft Server　　　3 Cr. Hrs.**
　　　　　　　　**Technology**
This course teaches the basic and advanced concepts needed to manage a Microsoft Server Operating system in both a networked and standalone environment. This course makes extensive use of lab projects to reinforce essential concepts. (2+3) F
Co-requisite: CIS190 or CIS191

**CIS194　　　　IT Security Fundamentals　　3 Cr. Hrs.**
This course is an introduction to security as it applies to computers, local area networks and the Internet. This class covers both methods of attack and the prevention of those attacks. The course provides an introduction to cryptography. The course covers the creation and implementation of a comprehensive security policy. This course helps prepare the student for the CompTIA Security+ Certification Exams.
(2+3) S
Co-requisite: CIS 190 or CIS191

**CIS201　　　　Workplace Technologies　　3 Cr. Hrs.**
This is a hands-on course addressing technology's role in the work place. Projects will focus on processes and tools that are available to students to enhance technological office procedures. It will introduce various technologies and DigiTools necessary in the business environment. DigiTools will include, but not be limited to, Wacom Graphire ablet, Tablet PC, scanners, speech recognition, and podcasting. Various productivity software packages will also be included. Digital reputation management will be discussed.
(3+0) S
Prerequisite: CIS104 or CIS112 or CIS113 or CIS114

**CIS255　　　　Linux Networking II　　　4 Cr. Hrs.**
This course is the second in a series that will cover data communications and operating system technology as implemented in a Linux environment. Subjects covered include the history, theory, administration, and installation of Linux and its associated software in a networked environment. This class will focus on the administration of Linux servers. This class makes extensive use of lab projects to reinforce essential concepts. This class utilizes course materials used to prepare for LPI (Linux Professional Institute) Certification.
(3+3) S
Prerequisite: CIS155

**CIS284　　　　Microsoft Infrastructure　　3 Cr. Hrs.**
　　　　　　　　**Technology**
This course teaches the basic and advanced concepts needed to manage Microsoft Infrastructure Services such as DNS, DHCP and Remote Access Services. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) S
Prerequisite: CIS193 or CIS272

**CIS285　　　　Microsoft Directory　　　3 Cr. Hrs.**
　　　　　　　　**Services Technology**
This course teaches the basic and advanced concepts needed to manage a Microsoft Directory Services environment. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) S
Prerequisite: CIS193 or CIS272

**CIS290　　　　Information　　　　1-4 Cr. Hrs.**
　　　　　　　　**Technology Internship**
This is a job-related computer experience in which the student works for a department within the college, a business, or an industrial organization. The student is chosen for this course on the basis of academic progress or job experience. Enrollment only with instructor permission.
(1+30) F, S, SU

**CJT130　　　　Principles of　　　　3 Cr. Hrs.**
　　　　　　　　**Criminal Justice**
Students will become familiar with the criminal justice system by exploring theories of criminology, examining the development of criminal and procedural law, understanding the roles of law enforcement, court and correctional personnel, and by investigating critical issues surrounding criminal justice including multi cultural and gender issues.
(3+0) F, S

**CJT132　　　　Criminal Justice　　　3 Cr. Hrs.**
　　　　　　　　**Administration**
Students will be examining the role of management versus leaders in the American criminal justice system focusing on the organization of bureaucratic systems, their basic principles, and the interrelationships between the major players. Students will also become familiar with organizational theory, leadership skills, disciplinary action and union issues.
(3+0) S

**CJT134　　　　Criminal Law　　　　3 Cr. Hrs.**
This course is designed as a study of the development and implementation of criminal law. Emphasis will be placed on exploring elements of criminal statutes, understanding Ohio's criminal statutes, investigating affirmative defenses and sentencing practices. Students will analyze the law based on their own personal opinions and beliefs by critically examining and discussing certain laws, procedures, court cases, and case outcomes.
(3+0) S

**CJT136　　　　Juvenile Delinquency　　3 Cr. Hrs.**
　　　　　　　　**Principles**
This course examines the problems of today's "youth in trouble", with an emphasis placed on prevention, causes and methods of approach and disposition of cases.
(3+0) F
Prerequisite: CJT130

**CJT140　　　　Constitutional Law　　　3 Cr. Hrs.**
This course is a study of contemporary constitutional issues. Discussed are critical issues in criminal justice including detention, arrest, search and seizure, interrogations and confessions, self-incrimination, due process and right to counsel. Also included are constitutional aspects of criminal and civil liabilities of justice personnel, and constitutional and civil rights in the workplace.
(3+0) S
Prerequisite: CJT130

**CJT220　　　　Law Enforcement in　　　3 Cr. Hrs.**
　　　　　　　　**American Society**
Overview of the police role in modern American society; emphasis on problems and issues confronting police and solutions within an organizational framework.
(3+0) F - odd years
Prerequisite: CJT130

**CJT230**       **Corrections**       **3 Cr. Hrs.**

A survey of the general field of corrections, including the institutions and resources which are used. A historical overview of corrections is explored.

(3+0) S

Prerequisite: CJT130

**CJT240**       **Criminal Evidence**       **3 Cr. Hrs.**
      **& Procedure**

An overview of criminal procedure and law including constitutional provisions, rules of evidence, trial and pre-trial procedures, arrest, search and seizure, admissibility and confessions.

(3+0) F

Prerequisites: CJT130 and CJT134

**CJT242**       **Probation & Parole**       **3 Cr. Hrs.**

This course will explore the philosophies and guidelines utilized in both the juvenile and adult probation setting. The dilemma of surveillance involving custody/control factors verses supervision and treatment will be examined. A strong emphasis will be placed on developing citizen agency relationships in utilizing citizen volunteer programs to help rehabilitate offenders.

(3+0) S

Prerequisites: CJT130 and CJT230

**CJT244**       **Criminal Investigation**       **4 Cr. Hrs.**

A study of investigative procedures; initial contact by the investigator, interviewing, case development, follow-up investigation, handling of leads, hot or cold information, in custody interviews and procedures. Crime scene labs will be incorporated into this class.

(3+2) S

Prerequisites: CJT130 and CJT134

**CJT246**       **Technical Skills**       **3 Cr. Hrs.**
      **for Officers**

This course will focus on developing technical skills necessary for the performance of jobs in the Criminal Justice field. Topics covered will include Report Writing, Sketching, Interrogation, and Testifying in Court.

(3+0) F

Prerequisite: Admission to Law Enforcement Academy

**CJT250**       **Internet Security**       **4 Cr. Hrs.**
      **& Computer Crime Investigation**

This is a network and computer security-based course. The course will include securing networks as well as identifying techniques used by offenders who compromise them. The tracking of information as well as data retrieval will also be covered. This course will place special emphasis on tasks useful to investigation of criminal cases in the criminal justice field, and will include a laboratory component to assist the student in developing practical skills.

(3+2) S

Prerequisites: CIS 284, CIS190, and CIS 193

Co-requisite: CJT244

**CJT252**       **Seminar in Criminal**       **3 Cr. Hrs.**
      **Justice**

This course examines current critical issues in criminal justice. Topics to be considered for discussion and analysis include: terrorism, capital punishment, restorative justice, ethics, race and class issues, drugs, the decision making process, issues in policing and the future of crime and justice.

(3+0) F

Prerequisites: CJT130

**CJT281**       **Vehicle Patrol/**       **4 Cr. Hrs.**
      **Traffic Enforcement**

Police academy cadets will become familiar with O.P.O.T.C. requirements for proper patrol techniques including identifying traffic offenses and correct tactical procedures for stopping and approaching vehicles.

(3+3) F, S

Prerequisite: Admission to Law Enforcement Academy

**CJT282**       **Firearms/Driving**       **4 Cr. Hrs.**

Police academy cadets will become proficient in O.P.O.T.C. firearms techniques including identification of firearms and nomenclatures, secure handling of firearms, and will become certified in the firing of firearms. Students will also become adept in defensive and pursuit driving techniques and vehicle maneuverability.

(2+6) F, S

Prerequisite: Admission to Law Enforcement Academy

**CJT283**       **Defensive Tactics/**       **3 Cr. Hrs.**
      **Physical Fitness**

Police academy cadets will become experienced with several levels of defensive tactics including hand to hand and baton techniques as well as weapon retention. Students will also become physically ready to pass the O.P.O.T.C. physical fitness standards.

(1+6) F, S

Prerequisite: Admission to Law Enforcement Academy

**CJT284**       **Human Conditions**       **4 Cr. Hrs.**

Police academy cadets will become certified in first aid and CPR techniques. Students will also identify cultural differences and how to effectively interact and communicate in diverse settings. Cadets will also become knowledgeable in preventing and controlling civil disorders.

(3+3) F

Prerequisite: Admission to Law Enforcement Academy

**CJT289**       **Special Topics**       **1 Cr. Hr.**
      **CJ Professional**

This course will examine special topics within criminal justice including sociological, criminological and philosophical discussions of criminal justice. Topics within the course will challenge students to examine the underlying theory and assumptions behind many of their current beliefs.

(1+0)

Prerequisites: CJT132, CJT136, CJT230, and CJT240

Co-requisites: CJT242, CJT244, and HST214

**CJT290**       **Criminal Justice**       **4 Cr. Hrs.**
      **Practicum**

A basic exposure to a particular criminal justice agency through observation and limited participation. This course will provide an understanding of how this agency fits into the entire criminal justice system and local community.

(3+8) F, S

Prerequisites: CJT132, CJT136, CJT230, and CJT240

Co-requisites: CJT242 and CJT244

**ECD100**       **Principles of Early**       **2 Cr. Hrs.**
      **Childhood Education**

This course provides an overview of teaching young children in today's schools. An emphasis will be placed on the history of early childhood education and theories which influence program and curriculum development. Ohio's Early Learning Standards for Preschool children and Content and Achievement standards for K-3 will be introduced.

(2+0) F, S

**ECD101          Child Development Lab          2 Cr. Hrs.**
This lab experience places the student at a child care center observing the development of young children. The lab will consist of observation and gradually move the student into interaction experiences with preschoolers. Through the study and application of various observation methods the student will be able to understand how social groups function and to recognize factors and situations that are likely to promote student motivation and learning.
(1+3) F, S

**ECD150          Infant & Toddler          2 Cr. Hrs.**
                 **Development & Care**
An understanding of the important role of adults in controlling, intervening and interpreting the environment so that infants and toddlers receive protective care, stimulation, and relaxation necessary to enhance physical, social, emotional, cognitive, and language development.
(2+0) F

**ECD201          Pre Kindergarten          3 Cr. Hrs.**
                 **Curriculum & Methods**
This course focuses on the role of the teacher in connecting content, teaching and learning for preschool children when building curriculum based on best practices. Ohio's PreK Early Learning Standards will be used as students compare and contrast a variety of curriculum models. Students will apply understandings of how children learn to create healthy, respectful, supportive, and challenging learning environments for all children. Participation in a preschool classroom, seven hours each week, will give students an opportunity to develop, implement and reflect on lesson plans that they selected and prepared to meet the needs of individual children and the group.
(2+7) S
Prerequisites: ECD100, ECD101, and PSY230
Co-requisite: EDU120

**ECD202          Diversity in Education          3 Cr. Hrs.**
This lab will give students experience working with and interacting with toddlers (age 18 months - 36 months), preschool children in the Head Start program including going on home visits and children in the integrated special needs preschool programs. Students will develop an understanding of how their knowledge of student background and experiences are used to support planning of relevant learning experiences. Students will rotate through three different lab sites for a total accumulation of 105 lab hours.
(2+7) F
Prerequisites: ECD101, EDU120, and PSY230
Co-requisites: EDU220

**ECD250          Early Childhood          3 Cr. Hrs.**
                 **Program Administration**
The course reviews philosophy, organizational structure, personnel issues, policy formation, record keeping, and budgeting as related to start up of a child care program. Emphasis will be placed on understanding major differences in programs reflecting minimum licensing standards and accreditation standards. Students will develop a business plan for hypothetical program for children 0 - 6.
(3+0) S
Prerequisite: ECD100

**ECD270          Special Topics in          3 Cr. Hrs.**
                 **Early Childhood**
An independent study course permitting the student to explore issues affecting children and families. May be required by ECD faculty to assist students in meeting requirements for the Ohio Department of Education Pre-Kindergarten Associate License.
(3+0) S
Prerequisite: Determined by ECD Coordinator's recommendation

**ECD280          Child Care Field          3 Cr. Hrs.**
                 **Experience**
A 60-hour field experience appropriate to student's focused interest area. May be required by ECD faculty to assist students in meeting requirements for the Ohio Department of Education Pre-Kindergarten Associate License.
(1+4) F, S
Prerequisite: Determined by ECD Coordinator's recommendation

**ECD282          ECD Field Experience          2 Cr. Hrs.**
A 105-hour field experience appropriate to student's focused interest area. Placement of 8 weeks in two different sites will give the student a broad view of services available.
(1+7) S
Prerequisites:   ECD Coordinator Permission

**ECD290          Pre Kindergarten          3 Cr. Hrs.**
                 **Practicum**
Participation in a preschool center.   Planning and carrying out specific activities providing experiences in working with children individually and in groups. Principles are assimilated through practical experiences.
(1+14) S
Co-requisite: EDU 250
Prerequisite: Completed training in First Aid, CPR, Common Childhood Illness Recognition, Child Abuse Recognition; per ODJFS requirement; Practicum application and requirements filed with ECD coordinator by October 1; and attend practicum orientation meeting in December. Student must demonstrate that the PreK Associate Degree can be completed within 6 months of completing practicum.

**ECD291          Administrator Internship          3 Cr. Hrs.**
Directed field experience where the student participates in minimum of 14 hours per week at an early childhood program where the administrator's role is regulated by ODJFS Revised Code 5101:2-12-25. The student will have  two placement sites during the semester arranged by NSCC faculty.
(1+14) S
Prerequisite: 75% completion of degree requirements

**ECO211          Macroeconomics          3 Cr. Hrs.**
Macroeconomics is a study of the U.S. economy emphasizing supply and demand, total production, total employment, and the general price level. Issues of inflation, recession, international trade, and federal budget deficits are also investigated. Economic solutions through fiscal policy and monetary policy are included. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS005 - Macroeconomics).
(3+0) F - eve(odd years), S - Day

**ECO212          Microeconomics          3 Cr. Hrs.**
Microeconomics is a study of the U.S. economy emphasizing supply and demand, the individual firm, competition, and the industry. Issues of revenue, expense, profit, loss, and break-even are also investigated. Decisions such as price determination and production output are included. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS004 - Microeconomics).
(3+0) F - Day, S - Eve

**ECO257          Global Economics          3 Cr. Hrs.**
This course covers the economic analysis of international trade and foreign investment, including theories of international trade, balance of payments, exchange rates and international monetary arrangements, adjustments of payments disequilibrium, and government policies on trade and aid. Upon completion, students should be able to demonstrate an understanding of the international economic environment.
(3+0) F

**EDP150**      **Child & Classroom**      **2 Cr. Hrs.**
                 **Observation Skills**

The lab will consist of observation and gradually move the student onto interaction experiences with children. Through the study and application of various observation methods the student will be able to understand how social groups function and to recognize factors and situations that are likely to promote student motivation and learning.
(1+3) S
Prerequisite: Documentation File

**EDP200**      **Special Education Lab**      **2 Cr. Hrs.**

This special education lab experience is designed to give the student diverse experiences at different age and ability levels. These include early intervention, integrated pre-school, early childhood, middle school and secondary education through age 21. The student will obtain knowledge of and be given the opportunity to apply effective instructional strategies to assist teaching and learning in these various settings. Also stressed in this lab is the importance of family involvement and the IFSP and IEP process.
(1+7) F
Prerequisites: EDP150, EDU120, and PSY230
Co-requisite: EDU220

**EDP290**      **ParaProfessional**      **2 Cr. Hrs.**
                 **Internship**

This experience requires the student to be available for a continuous experience in a school system for not less than 14 hours per week. Assignments will be coordinated through local schools so that the student has the opportunity to apply knowledge and develop skills appropriate to the role of the educational paraprofessional.
(0+14) S
Prerequisites: 75% completion of degree requirements
Co-requisite: EDU250

**EDU100**      **Introduction to Teaching**      **2 Cr. Hrs.**

Students will investigate the teaching profession and the many reforms which affect teacher preparation and licensure. Philosophies and the organization of American schools will be viewed both historically and in contemporary society. Students must be available to make several school visits and access the internet to research relevant topics. Transfer Assurance Guide (TAG) approved effective fall 2007 (OED001 - Introduction to Education).
(2+0) F, S

**EDU110**      **Child and Youth**      **2 Cr. Hrs.**
                 **Health Education**

A multi-disciplinary approach to health, safety and nutrition education for children of all ages. Included in this class is an in-depth study of subject matter as well as health methods and classroom activities to give students the tools they need to become successful health educators. Course does not substitute for ODJFS rule 5101:2-12-27.
(2+0) F

**EDU120**      **Guidance & Classroom**      **3 Cr. Hrs.**
                 **Management**

Classroom management is a major concern of all educators from the preschool classroom through secondary education. This course explores various guidance theories providing a variety of techniques to be used in the development of a personal philosophy that can be put into practice in the classroom.
(3+0) S
Prerequisite: PSY110 or PSY230

**EDU130**      **Phonics & Early Literacy**      **2 Cr. Hrs.**

Emphasis is placed on the understanding of phonics and its role in beginning reading and writing instruction. Students will explore strategies to teach the relationship between letters and sounds.
(2+0) S

**EDU210**      **Creative Arts Curriculum**      **3 Cr. Hrs.**

This course is designed to teach theory and practice supporting play to develop children's creative expression in music, drama, art, and movement. Principles and elements of the arts are introduced as the student advances own understanding of the arts and their contribution to child development and learning.
(3+0) S
Prerequisite: PSY230

**EDU220**      **Special Education**      **3 Cr. Hrs.**

All students have the right to an effective education and the majority of students with disabilities can receive an appropriate education if programs are designed with the needs of individual student in mind. This Special Education teacher class addresses the teaching of the gifted and talented child, the preschooler with disabilities, the at-risk infant, as well as the child from a different culture or ethnic background and the adult with disabilities. Disabilities of different developmental areas are explored to prepare the future teacher for working with a variety of students. Transfer Assurance Guide (TAG) approved effective fall 2007 (OED004 - Individuals with Exceptionalities).
(3+0) F
Prerequisites: ECD100 or EDU100, and PSY230 or PSY110

**EDU230**      **Family, School**      **3 Cr. Hrs.**
                 **& Community**

This teacher preparation class prepares the teacher to work with students and their families. There is in-depth information focusing on the diversity of families and strategies for building partnerships with families. Emphasis will be placed on communication that results in collaboration, not conflict.
(2+0) F
Prerequisites: ECD100 or EDU100

**EDU240**      **Educational Psychology**      **3 Cr. Hrs.**

An introduction to educational psychology that provides a review of scientific information and practical ideas about instructional techniques. Theory, research, and application are all emphasized. Students will investigate applying the appropriate theories for specific learning situations. Learner differences are studied and instructional strategies are considered for a variety of learning environments. Transfer Assurance Guide (TAG) approved effective fall 2005 (OED003 - Educational Psychology).
(3+0) F
Prerequisites: PSY110 or PSY230

**EDU250**      **Education Seminar**      **2 Cr. Hrs.**

This class will meet once a week placing ECD 290 and EDP 290 students together for discussions of success in the classroom. Practical daily issues as well as professional development concerns will be the focus. Students will look ahead at what is necessary to present themselves for employment and be ready for that first teaching position Eligibility is determined through an application process with your advisor. Application must be completed by May 1 for Fall Semester and October 15 for Spring Semester participation.
(2+0) S
Prerequisites: EDU110, EDU120, EDU130, EDU220, EDU230, and EDU240
Co-requisite: ECD290 or EDP290

A B C D **E** F G H I J K L M N O P Q R S T U V W X Y Z

**EDU260          Instructional Technology          3 Cr. Hrs.**
This is a hands-on course addressing technology's role in education at all grade levels.  The focus is on processes and tools that are available to teachers to enhance classroom organization, instruction, and assessment. Students will research pedagogical issues regarding appropriate use of computers with young children and in the classroom. Transfer Assurance Guide (TAG) approved effective fall 2005 (OED002 - Educational Technology).
(2+2) S
Prerequisites: CIS114 and EDU100

**EET121          DC Circuits          3 Cr. Hrs.**
In this course the student will learn the fundamental principles of electricity with emphasis on DC (direct current) circuits.  The concepts of Ohm's Law, the Power Formula, and Kirchoff's Laws will be applied to series, parallel, and series-parallel circuits. Electrical quantities will be defined and the behavior of resistors, inductors, and capacitors under DC conditions will be studied. Complex circuits will be analyzed using the theorems of superposition, and Thevenin and Norton equivalent circuits. The relationship between electricity and magnetism will also be introduced. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) submission will be made for approval (OET001 – DC Circuits).
(2+2) F, S
Prerequisite: MTH090

**EET122          AC Circuits          3 Cr. Hrs.**
In this course the student will continue to learn the fundamental principles of electricity with emphasis on AC (alternating current) circuits. The concepts of Ohm's Law, the Power Formula, and Kirchoff's Laws will be expanded to include steady-state AC circuits. The behavior of filter circuits and transformers will be studied along with the theorems of Superposition, and Thevenin and Norton equivalencies applied to AC networks. Complex numbers and phasors will be used to represent sinusoidal AC quantities. The course concludes with an introduction to electric power systems, power factor analysis, and poly-phase systems. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) submission will be made for approval (OET003 – AC Circuits).
 (2+2) F, S
Prerequisite:  EET121

**EET131  Discrete Structures          3 cr. hrs.**
In this course the student will be introduced to the discrete structures used in computer science for software development including mathematical proof techniques, Boolean logic, graphs, trees, recurrence relations, and functions.  Topics will be learned through text, presentations, and various exercises.
(2 + 2)  S
Prerequisites:  MTH109, EET240 (or equivalent)

**EET141          Electronics I          3 Cr. Hrs.**
A study of discrete electronic devices including diodes, bipolar transistors, and field effect transistors. The characteristics of various diodes are studied. Also the biasing of various types of transistor circuits is studied along with the use of transistors as voltage and current amplifiers in various configurations. Extensive laboratory experience is included to help the student become familiar with constructing and troubleshooting electronic circuits and with various types of electronic laboratory equipment.
(2+3) S
Prerequisite: EET121

**EET221          Digital Electronics          4 Cr. Hrs.**
In this course the student will be introduced to the fundamentals of digital logic that forms the basis of digital electronic systems. Topics include number systems and codes, logic gates, Boolean algebra, and logic simplification using key theorems. Elementary digital circuits will be explored including: encoders, adders, multiplexers, flip-flops, counters, shift registers, and memory devices. Integrated circuit (IC) technologies and applications will also be discussed. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) submission will be made for approval (OET002 – Digital Circuits).
(3+3) F
Prerequisite:  MTH090

**EET231          Microprocessors          4 Cr. Hrs.**
In this course the student will gain a fundamental understanding of the microprocessor and microcontroller. Microprocessor architecture and hardware including bus structures, memory, and input/output (I/O) will be studied. Operation of the microprocessor/controller will be programmed by the student using hardware specific Assembly language. Real-world applications using the microprocessor and microcontroller will also be discussed. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) submission will be made for approval (OET004 – Microprocessors).
(3+2) F
Prerequisite:  EET221

**EET240          Engineering Programming          3 Cr. Hrs.**
This course is the study of the popular Visual Basic 6.0 programming language. The focus will be on the student learning statement language and visual programming. Projects and learning activities will include Engineering and Industrial Maintenance applications.
(2+2) S
Prerequisites:  IND110 (formerly IET105) and MTH090

**EET272          Cisco Networking I          4 Cr. Hrs.**
This class is designed to teach students the skills to configure and maintain a small to medium sized, multi-protocol, routed and/or switched network.  Specific topics covered include the OSI reference model and  how it relates to real world protocols such as Ethernet, Token Ring, TCP/IP, and others. Logical and physical network topologies are discussed.  TCP/IP addressing topics such as subnet masks are covered. Several TCP/IP routing protocols such as RIP and OSPF are covered.  The materials and labs cover the use of Cisco equipment and help to prepare the student for the testing needed to seek CCNA (Cisco Certified Network Administrator) certification.
(3+3) F

**EET277          Industrial Electronics          3 Cr. Hrs.**
This course is a study of the electronic devices used in modern day industrial machinery.  Solid state switching devices will be discussed, that includes transistors, SCRs and Triacs, as well as the firing devices used in current controlled circuits. Power supply circuits and basic amplifier circuits using Operational Amplifiers will also be discussed. Students will focus on operation, application and troubleshooting of the various electronic devices.
(2+2) F
Prerequisite: IND120 (formerly EET171)

**EET289**      **Systems Integration**      **3 Cr. Hrs.**
This course is a capstone for the Manufacturing Maintenance, Industrial Electrical, PLC Certificate and Maintenance Technician/Mechatronics Programs. Upon the completion of the requirements for the previously mentioned programs the learner will display his/her newly developed skills by designing an industrially related system, (electrical and pneumatic), install the appropriate electrical and mechanical devices and troubleshoot the system to 100% of the design specifications.
(2+2) On Demand
Prerequisites: PLC200 and IND134 (formerly MET232)

**EMS102**      **EMT Basic I**      **3.5 Cr. Hrs.**
This course provides an overview of the Emergency Medical Services system and the roles and responsibilities of the Basic EMT. Topics include basic medical emergency management, patient assessment and triage, multi-system trauma management, patient stabilization and transportation. This course, along with successful completion of EMT Basic II, follows state and national guidelines for certification as a Basic EMT. The course is taught at Four County Career Center and requires hands-on laboratory and clinical experiences. Students must submit verification of current certification to receive course credit.
(3+1.5) F

**EMS103**      **EMT Basic II**      **2.5 Cr. Hrs.**
This course provides training on special needs patients, including geriatric and pediatric patients as well as EMS Special Operations. Assessment based management of patients will be discussed. Laboratory experiences and clinical rotations are a required component of this course. Students must successfully complete EMT Basic I in order to enroll in this course. This course is taught at Four County Career Center. Students must submit verification of current certification to receive course credit.
(2 + 1.5) S
Prerequisite: EMS 102

**EMS105**      **Communications Skills**      **1 Cr. Hr.**
                **for the Health Care Professional**
The ability of health care professionals to communicate accurately and effectively in the context of a helping relationship is vital. The course provides tools with which to establish open therapeutic communication with clients, foster teamwork with colleagues, and deal with conflict and aggression in a constructive manner.
(1+0) F

**EMS202**      **EMT Intermediate I**      **3.5 Cr. Hrs.**
This course emphasizes the roles and responsibilities of the EMT-I and includes medical/legal considerations, basic pharmacology, medication administration, airway management, and advanced assessment techniques. The laboratory component includes procedures in IV therapy, shock management, cardiac management and EKG interpretation. This course, along with successful completion of EMT Intermediate II, follows state and national guidelines for certification as an EMT-I. The course is taught at Four County Career Center. Students must submit verification of current certification to receive course credit.
(3 + 1.5) F
Prerequisite: EMS103

**EMS203**      **EMT Intermediate II**      **2.5 Cr. Hrs.**
This course provides the Intermediate EMT advanced training on emergency care of special needs patients, including geriatric and pediatric patients as well as a review of EMS Operations. Laboratory experiences and clinical rotations are a required component of this course. Students must successfully complete EMT Intermediate I in order to enroll in this course. This course is taught at Four County Career Center. Students must submit verification of current certification to receive course credit.
(2 + 1.5) S
Prerequisite: EMS 202

**ENG111**      **Composition I**      **3 Cr. Hrs.**
An expository composition course emphasizing the expectations of college-level writing, including thesis development, support, and coherence. Students will gain experience using a variety of rhetorical modes. In addition to a number of full-length essays, a short documentd paper, based on research materials and using parenthetical references, is required.
(3+0) F, S, SU
Prerequisite: ENG090 or satisfactory score on Course Placement Test

**ENG112**      **Composition II**      **3 Cr. Hrs.**
Building on the skills learned in Composition I, this course further develops the student's writing and research experience, with an emphasis on analytical writing in response to critical reading and class discussion. Using MLA parenthetical documentation techniques, the student will write several short essays and a research paper.
(3+0) F, S, SU
Prerequisite: ENG111 with grade of "C" or better

**ENG113**      **Speech**      **3 Cr. Hrs.**
This course provides experience in public speaking in a small group situation and emphasizes interpersonal communications, the organization and presentation of a public speech, and group discussion skills. Improvement of listening skills and the use of visual aids are important parts of the course. Student speeches are analyzed and critiqued for effectiveness. Transfer Assurance Guide (TAG) approved effective summer 2007 (OCM004 - Basic Public Speaking/Oral Communication).
(3+0) F, S, SU

**ENG210**      **Technical Communications**      **3 Cr. Hrs.**
This course develops written and oral communication skills needed in technical fields, focusing on producing documents, effectively conducting group discussions, and giving presentations. It includes formal individual and group technical reports as well as shorter documents common to technical fields, emphasizing clear, concise, and logical communication strategies, format and visual aids.
(3+0) F
Prerequisite: ENG112 or instructor permission

**ENG214**      **Discussion &**      **3 Cr. Hrs.**
                **Conference Method**
Focuses on the elements of communication and small group theory as employed in a group discussion situation with emphasis on the individual's responsibility in the discussion setting. Focuses on the development of the leadership abilities within the group, including analysis of group interaction in the decision-making process for task-oriented groups. Transfer Assurance Guide (TAG) approved effective summer 2007 (OCM003 - Small Group Communication).
(3+0) F

**ENG220 Business Writing 3 Cr. Hrs.**
Using interpersonal and administrative communication skills, concise and organized business letters, memoranda, and reports are written, emphasizing tone, format, content, and use of graphic aids. The analytical, problem-solving report and oral presentation, based upon library research, field experience, and interviews and/or questionnaires, are required.
(3+0) S
Prerequisite: ENG112 or instructor permission

**ENG223 Interpretation 3 Cr. Hrs.**
**of Literature**
Introduces the elements of critical reading of literature, specifically fiction, poetry, and drama. Topics such as structure, character, point of view, style, theme, tone, and symbolism first are defined, then applied to selected pieces of literature. Examines the importance of historical, cultural, and literary contexts for understanding literature. **Writing intensive**.
(3+0) S
Prerequisite: ENG111

**ENG230 Children's Literature 3 Cr. Hrs.**
Reading and evaluation of nonfiction and fiction, folklore, myth, poetry, and illustrated books for children and adolescents from critical and multi-cultural points of view**. Writing intensive**.
(3+0) F, S
Prerequisite: ENG111

**ENG234 Narrative Literature 3 Cr. Hrs.**
**of the Old Northwest Territory**
Explores non-fiction narrative accounts from early travelers and settlers ranging from the Ohio River to the Upper Great Lakes as revealed through journals, diaries, oral histories, and novels by such writers as Schoolcraft, Thoreau, Eckhart, Edward, Dickens, Goldthwaite, and others. **Writing intensive**.
(3+0) S
Prerequisite: ENG111

**ENG240 Introduction to Poetry 3 Cr. Hrs.**
Introduces the elements of critical reading of poetry, including poetic language, imagery, and forms. Focuses on poems as expressions of important themes of human experience and as products of their historical and cultural contexts. **Writing intensive**.
(3+0)
Prerequisite: ENG111

**ENG241 Introduction to Fiction 3 Cr. Hrs.**
Focuses on a critical reading of fiction, particularly short stories, examining formal elements, including plot, character, setting, point of view, and theme. Introduces various critical perspectives for the interpretation of fiction, including the importance of historical, cultural, and literary contexts for understanding fiction. **Writing intensive**.
(3+0)
Prerequisite: ENG111

**ENG250 American Literature 3 Cr. Hrs.**
**Through the Mid-19th Century**
Surveys American literary works ranging from recorded Native American oral traditions through the literature of the Civil War period. Places works in historical and cultural contexts, focusing on the development of major themes and movements in American literature. Transfer Assurance Guide (TAG) approved effective spring 2009 (OAH053 – American Literature I). **Writing intensive**.
(3+0)
Prerequisite: ENG111

**ENG251 American Literature 3 Cr. Hrs.**
**Since the Mid-19th Century**
Surveys American literary works from the late nineteenth century through the contemporary period. Places works in historical and cultural contexts, focusing on the development of major themes and movements in American literature. Transfer Assurance Guide (TAG) approved effective spring 2009 (OAH054 – American Literature II). **Writing intensive**.
(3+0) S
Prerequisite: ENG111

**ENG260 British Literature 3 Cr. Hrs.**
**Through the 18th Century**
This course focuses on British literature from the Old English period through the Restoration and eighteenth century examining writers and representative literary texts, including poetry, drama, and prose fiction and non-fiction, as they reflect cultural and historical contexts. Transfer Assurance Guide (TAG) approved effective spring 2009 (OAH055– British Literature I). **Writing intensive**.
(3+0) F
Prerequisite: ENG111

**ENG261 British Literature 3 Cr. Hrs.**
**19th Century to Present**
This course focuses on British literature from the Romantic period through the twentieth century, examining writers and representative literary texts, including poetry, drama, and prose fiction and non-fiction, as they reflect cultural and historical contexts. Transfer Assurance Guide (TAG) approved effective spring 2009 (OAH056 – British Literature II). **Writing intensive**.
(3+0) S
Prerequisite: ENG111

**ENG271 Non-Western Literature 3 Cr. Hrs.**
Examines twentieth-century, non-western writers and literary works that contribute to an understanding of the experiences of non-Western peoples. It provides an overview of literary figures and forms in their historical and cultural contexts, with emphasis on their significance to our understanding of global issues. Reading selections emphasize examples from Asia, Africa, Latin America, and the Middle East**. Writing intensive**.
(3+0) F
Prerequisite: ENG111

**FRA100 Fraud Detection 3 Cr. Hrs.**
**& Deterrence**
The opportunity to commit and conceal fraud exists only when there are assets susceptible to misappropriation and a lack of internal controls to prevent or detect fraud. This course will focus on the high-risk fraud environments wherein assets are more vulnerable to misappropriation and fraud environments heightened by either a lack of, or non-functioning of, internal controls. Various fraud investigative methods and the process for communicating an expert report will play an essential role in these studies.
(3+0) S

**FRA200          Fraud Examination          3 Cr. Hrs.**
A study covering occupational fraud and abuse including asset misappropriation, corruption, and fraudulent statements. The course provides an understanding of fraud examination methodology, and sets forth the schemes used by executives, managers, and the employees to commit fraud against their organizations. It provides an analysis of various kinds of frauds and includes cases that illustrate and help the student understand each type of fraud. Based on extensive empirical research in forensic accounting, the course aids the student in identifying exposure to loss and appropriate prevention, detection, and investigation approaches.
(3+0) S
Prerequisite: ACC111

**FRA210          Legal Elements of Fraud          3 Cr. Hrs.**
There are four general elements under common law, all of which must be present for fraud to exist: (1) a material false statement, (2) intent, (3) reliance on the false statement by the victim, and (4) damages. This course takes an in-depth look at each of these components in relation to crimes that fall under the umbrella of fraud. It also emphasizes federal legislation related to fraud examinations including coverage of laws that preserve the rights of individuals suspected of committing fraud and laws that govern civil prosecutions, the admittance of evidence, and the testimony of expert witnesses.
(3+0) F
Prerequisite: ACC111

**FRA220          Corporate Internal          3 Cr. Hrs.**
                **Control & Governance**
Under the Sarbanes-Oxley Act of 2002, CEOs and CFOs must now sign on the dotted line, personally attesting to the accuracy of financial statements and to the fact that their companies have proper internal controls to prevent and detect fraud. This course helps in understanding complex compliance requirements, identify types of fraud, implement awareness and prevention training, and establish a robust fraud detection, investigation, and prevention program. More importantly, it will examine how companies can effectively establish an ongoing culture of compliance.
(3+0) S
Prerequisite: ACC111

**GEO110          World Geography          3 Cr. Hrs.**
This course conveys the nature, challenges, and component interrelatedness of the discipline of geography. The geographic method of inquiry is used to describe, explain, and analyze our environment.  The principal goal of the course is to give the student a global perspective from which he or she can view the uniqueness of the discipline. Thus the student is introduced to the tools, vocabulary, and the spatial orientation used by the geographer. Transfer Assurance Guide (TAG) approved effective fall 2005  (OSS008 - Geography).
(3+0) F, S, SU

**GEO210          Geography-U.S. & Canada          3 Cr. Hrs.**
A study of the human geography of the U.S. and Canada, covering the geographic influence on the demographic, economic, political, and cultural themes of these neighboring countries, which share a common geography and history in many respects. Major focus is on human patterns and the interaction among these patterns as well as the actual physical environment.
(3+0) F, S, SU

**GSD050          Bridges to Opportunity          3 Cr. Hrs.**
As part of Northwest State Community College's Bridges to Opportunity Initiative, this course is designed for students who are committed to (1) achieving Adult Basic Literacy Skills, (2) entering an associate degree program (3) completing a personalized academic action plan, and/or (4) reaching proficiency as a non-native speaker of the English language.
(4+0) On demand with the approval of the Dean of General Studies.

**GSD100          Success Seminar          1 Cr. Hr.**
This course teaches self-management principles and practices for life-long learning that increase a student's success in college and in life by enhancing the student's skills in time management, effective living and learning skills, technology skills, effective study habits, note taking, and test anxiety reduction. Students will examine factors which impact learning, select relevant methods of enhancing learning and thinking processes, and develop strategies for maximizing effectiveness in college, work, and community settings.
(1+0)
Required course for students who test into either MTH050 or MTH080 and either ENG080 or ENG090; required for students on Academic Probation; required for students returning from Academic Suspension. This course is open to any student and could be used as 1 credit General Studies elective.

**GSD120          Career and Life Planning          3 Cr. Hrs.**
This class assists the student in examining the components of career choice. The focus is on career awareness, personal awareness, and educational awareness as they relate to the process of career choice. Planning skills and self-assessment instruments will help identify tentative career options. Decision-making strategies, resume writing, interviewing skills, and job search techniques will be reviewed.
(3+0)

**HIS101          U.S. History Pre-1876          3 Cr. Hrs.**
A study of the social, political, and economic development of the United States through the Post Civil War  period.  Several critical periods in early American History are examined: colonization, settlement, rebellions, revolutions, constitution making, Jeffersonian and Jacksonian democracy, slavery, the westward movement, the Indian problems, and the Civil War. Transfer Assurance Guide (TAG) approved effective summer 2008 (OHS043 - U.S. American History I and OHS010 - U.S. American History Sequence, Course 1 of 2). **Writing intensive**.
(3+0) F, S - odd years, SU - even years
Co-requisite: ENG111

**HIS102          U.S. History Post-1876          3 Cr. Hrs.**
United States from the Reconstruction period to the present. Topics include reconstruction, impact of industrialization, agricultural revolution, populism, rise of monopoly capital in the "progressive" era, the age of imperialism, WWI, Great Depression, WWII, the New Deal, the Welfare State, the Vietnam War and the popular protests, the civil rights movement, the rejection of the welfare state and rise of  Neo-Conservatism. Transfer Assurance Guide (TAG) approved effective summer 2008 (OHS044 - U.S. American History II and OHS010 - U.S. American History Sequence, Course 2 of 2). **Writing intensive**.
(3+0) F, S - even years, SU - odd years
Co-requisite: ENG111

**HIS203** **U.S. Since 1945** **3 Cr. Hrs.**
A contemporary history of the United States which provides a balanced account of foreign affairs, domestic politics, and social and cultural change. Presents change from U.S. global hegemony to a truly global economy as the backdrop for the replacement of the liberal-welfare state with the neo-conservative state. Relates this important transition to the form and content of popular protest since l945. Topics include the New Deal, the Cold War, confronting the Third World, struggles for equality, and mass media effects on popular culture. **Writing intensive**.
(3+0) F, S, SU
Co-requisite: ENG111

**HIS210** **The Modern World** **3 Cr. Hrs.**
Joins a study of the history of the modern world with students' understanding of their place in the contemporary world. Competing histories of the modern world's origins are followed by a comparative study of western and non-western societies and the forces giving rise to modernism, reaction, revolution, and post modern tendencies from the 13th century to the present times. **Writing intensive**.
(3+0) S
Co-requisite: ENG111

**HIS234** **History of Old** **3 Cr. Hrs.**
**Northwest Territory**
Explores the many historical and cultural influences in this area beginning with the generations of Indian tribes through the Euro/American arrival beginning with early missionaries, explorers, traders and the multi-ethnic settlement that overwhelms the area in the early 20th. century. The course includes a coverage of the rapid transformation of this still rural landscape into the continents manufacturing core. The old Northwest and its development is still responsible for stamping the unique characteristics of what we call "American culture."
(3+0)
Strongly recommend ENG111.

**HIS290** **Historic Preservation** **3 Cr. Hrs.**
**Internship**
The Co-Op/Internship is an experience in which the student works in a position consistent with the program major. The student is expected to integrate skills learned in program courses with job responsibilities, while applying work experience to class activities. Primary work duties are documented through a work log, incident summary, focused report, and a site visit.
(1+20)
Prerequisite: Permission of Instructor

**HPF106** **Beginning Western/English** **1 Cr. Hr.**
**Horsemanship**
This course is designed for the novice or beginner who has had little or no exposure to horses or riding. Students will learn horses and riding from the "ground-up" in which the very basics of horsemanship is taught. The instructor tries to match each student's abilities with a specific horse while keeping in mind everyone's safety is of the highest concern. All classes are conducted at Sanderson Stables, located on the corner of Union and Washington Streets, Cygnet, Ohio 43413; phone 419-655-2253. Sanderson Stables owns and maintains horses, tack, and grounds specifically for appropriate instruction. This course can also be taken as many times as the student desires. This course is many times used to fulfill the physical education requirement at the university level
(1+0) F, S, SU

**HPF107** **Intermediate Rider** **1 Cr. Hr.**
This course is designed for Intermediate level riders who have mastered the HPF106 level skills and thus builds on those skills. The instructor tries to match each student's abilities with a specific horse while keeping in mind everyone's safety is the highest concern. The focus of this course is on handling the horse on the ground and in the saddle, as well as practicing the jog, lope and lead departures.
(1+0) F, S, SU

**HPF108** **Advanced Rider** **1 Cr. Hr.**
This course is designed for advanced level rider who has mastered the HPF107 level skills and thus builds on those skills. The focus of this course is on tack room procedures, as well as advanced riding methods, trail riding, trotting, buggies, carts and using a driving harness.
(1+0) F, S, SU

**HRM100** **Essentials of Human** **3 Cr. Hrs.**
**Resource Management**
This course is the first course in a series that prepares students for a career in human resource management. Students taking this course for credit must attend and successfully complete the SHRM Essentials of Human Resource Management seminar. In addition to the seminar students will complete a three page paper reflecting your Philosophy of Management. The final paper is a report of the benefits that you gained and can apply on the job as a human resource employee or if not employed in the human resource department how the information has affected your philosophy of management.
(3+0) F, S

**HST101** **Principles of** **3 Cr. Hrs.**
**Human Services**
An introduction to the field of human services, study of social work, social policy, and social welfare organizations, their history and fields of practice. This course includes an introduction to various practice settings, roles of the social worker and social work assistant, NASW Code of Ethics, as well as the knowledge base and skills required for culturally competent generalist social work practice. An overview of various public and private human service agencies in the community and their organizational structure, client services, and the role of social and economic justice in serving a diverse cross section of at-risk and vulnerable societal groups is also included.
(3+0) F, S

**HST105** **Cultural Competence** **3 Cr. Hrs.**
**with Diverse Populations**
This course describes special needs and diverse issues of the following populations: African American, Asian American, Native American, and Hispanic/Latin American in addition to persons with disabilities, diversity with sexual orientation, women, children/adolescence and the elderly. Special emphasis is placed on utilizing approaches that are culturally sensitive to and consistent with the values, norms, beliefs and experiences of these populations encountered by workers in Human Service settings.
(3+0) S
Prerequisites: HST101 and PSY110
Co-requisite: SSC101

**HST108**      **Principles of**      **3 Cr. Hrs.**
              **Developmental Disability**
A principles course in the field of Developmental Disabilities and the historical and legal perspectives within the field. Course includes service delivery models, current trends, prevention issues, causes, conditions and characteristics.
(3+0) F, S

**HST112**      **Group Work**      **3 Cr. Hrs.**
              **in Human Services**
This course in an introduction to basic knowledge, techniques, and skills used by Human Service workers in facilitating groups. Group dynamics, theory, leadership skills and techniques used in facilitating groups will be examined and applied to a variety of task and treatment groups utilized in Human Service settings with various target populations.
(3+0) S

**HST208**      **Interviewing Techniques**      **3 Cr. Hrs.**
Presents the basic principles and practices of interviewing clients, as well as crisis intervention in human services settings. The basic principles of oral communication are examined as the impact on effective interviewing techniques along with developing basic crisis intervention skills and techniques.
(3+0) F
Prerequisites: PSY110, HST101, and HST105

**HST210**      **Human Services Methods**      **6 Cr. Hrs.**
A practical, in-house lab experience meant to prepare students for their actual experience in a human service agency. Seminar format provides for discussion and integration of experiences with academic courses. Open only to Human Services Technology majors who have completed 18 credit hours of Human Services technical courses with a grade of "C" or better. Labs for this course will consist of supervised labs/lab hours to be arranged in-house along with field lab hours. Supervised by Master Level Social Worker, State Licensed.
(4+4) F
Prerequisites: HST101, HST105, PSY210, and HST112
Co-requisite: HST208

**HST212**      **Principles of Addiction**      **3 Cr. Hrs.**
Presents substance abuse and addictive problems from an addictions model approach. A historical, cultural, and social context is presented as well as an overview of the theories of addiction. Other major topics: recognizing early signs and symptoms of substance abuse, differences in counseling strategies with substance abusers, and other derivative problems. This is a foundation course with a scientific base. Family systems are reviewed.
(3+0) F, S

**HST214**      **Human Service**      **3 Cr. Hrs.**
              **Case Management**
Provides the experience and knowledge of the human service worker providing case management functions. Areas of concentration include service provisions when working with special populations. The provisions include, but are not limited to, client identification, individual assessment and diagnosis, determining service needs of the client, service planning and resource identification, linking the client to appropriate services, service implementation, how to monitor service delivery, how to advocate, and evaluation of service delivery. Special emphasis is on specific target populations, and services available.
(3+0) S
Prerequisites: HST101 and PSY210

**HST218**      **Introduction to**      **2 Cr. Hrs.**
              **Developmental Disabilities**
This course explores the effects of disability on individuals and families over the lifespan, including the categorical definitions of developmental disabilities, eligibility for services, causes, conditions, and prevention. A history of social services related to persons with developmental disabilities is reviewed along with concepts of advocacy, behavior support and self-determination.
(2 + 0) S- Odd years

**HST219**      **Principles of**      **2 Cr. Hrs.**
              **Self-Determination**
Students will be provided an introduction to the concepts and values of client self-determination as it relates to the service delivery system and persons with developmental disabilities.
(2 + 0) S –Odd Years

**HST220**      **Principles of Work**      **2 Cr. Hrs.**
This course will provide students with skills and knowledge for preparing persons with disabilities for productive work. The emphasis of the course will be on the development of supported work options. The course will address principles and practices of: supported work options, job analysis, job development, marketing, job training and relevant state and federal requirements. This course will satisfy Adult Services MR/DD Certification Program.
(2+0) F - even years
Prerequisite: HST108

**HST221**      **Principles of**      **2 Cr. Hrs.**
              **Habilitation Programming**
This course will provide the student with knowledge and performance objectives in the field of habilitation programming related to understanding the special needs of individuals with disabilities in relations to legal issues, community based training, habilitation programming, assessment and identification, and minority issues. This course will satisfy Adult Services MR/DD Certification Program.
(2+0) S - odd years
Prerequisite: HST108

**HST222**      **Ethics in the Helping**      **3 Cr. Hrs.**
              **Profession**
The practice of counseling and related helping professions is regulated both by law and by professional standards of practice or codes of ethics, which provide only general guidelines. This course will look at historical and contemporary theories of relevant ethical theories and provide exposure to real-life ethical issues from a multi disciplinary approach.
(3+0) F, S
Prerequisite: HST101

**HST240**      **Social Problems**      **3 Cr. Hrs.**
An examination of the major social problems existing in western society and how various conditions within society come to be defined as social problems. Topics include such areas as poverty, racism, sexism, unemployment, AIDS, and abusive behaviors (physical, psychological, sexual abuse, and neglect). Analysis of each of these problems along with the social welfare system's responses and the role of the human services worker. Transfer Assurance Guide (TAG) approved effective fall 2007 (OSS025 - Social Problems).
(3+0) F, SU
Prerequisite: SSC101

**HST242　　Marriage & Family　　3 Cr. Hrs.**
A comprehensive look at relationships in which the content includes: marriage, cohabitation, singles, family dynamics (parenting, adoption, etc.), historical and cultural differences in both traditional and contemporary settings; life span development, divorce, domestic violence, death and dying issues. Theoretical frame works as well as practical application of those theories will be covered. Transfer Assurance Guide (TAG) approved effective fall 2007 (OSS023 - Marriage and Family).
(3+0) F, S
Prerequisite: SSC101

**HST280　　Special Problems in　　1-6 Cr. Hrs.**
**　　　　　　Human Services I**
Permission of Human Services instructor required. Content, methodology, and purpose to be arranged on an individual basis. Credit will be determined by the nature and extent of the independent study.
F, S, SU
Prerequisite: Permission of Instructor

**HST282　　Special Problems　　1-6 Cr. Hrs.**
**　　　　　　in Human Services II**
An independent study which focuses on a topic or individual selected problems in Human Services. Subject to approval and supervision of an assigned Human Services instructor. Content, methodology, and purpose to be arranged on an individual basis. Credit will be determined by the nature and extent of the independent study.
F, S, SU
Prerequisite: Permission of Instructor

**HST290　　Practicum I　　6 Cr. Hrs.**
Practical experience in a human services agency. Two-hour seminar provides for discussion and integration of experiences with academic courses. Open only to Human Services Technology majors who have completed a minimum of 45 credit hours of work and have completed 24 credit hours of Human Services technical courses with a grade of "C" or better.
(2+16) S
Prerequisites: HST208 and HST210
Co-requisite: HST214

**HUM121　　Concert Band　　1 Cr. Hr.**
Provides an opportunity to experience music from easy  to difficult as a performing member of a large ensemble. Will be expected to perform portions of music literature during examination period. Course meets at Defiance College and will require Sunday afternoon concerts as well as rehearsals. Can be repeated for credit, but only 3 hours may be used toward Humanities requirement for AA and AS degrees.
(1+0) F, S
Prerequisite:  Ability to play band instrument

**HUM209　　Humanities and Cultures:　　3 Cr. Hrs.**
**　　　　　　Ancient and Medieval Worlds**
Surveys Western and non-Western humanities of the ancient and medieval worlds.  Examines creative expression, such as art, literature, and philosophy, as evidence of the evolution of ideas which serve as the roots of modern cultures. Transfer Assurance Guide (TAG) approved effective summer 2008 (OHS041 - Western/World Civilization I and OHS009 - Western/World Civilization Sequence, Course 1 of 2). **Writing intensive**.
(3+0) F
Co-requisite: ENG111

**HUM210　　Humanities and Cultures:　　3 Cr. Hrs.**
**　　　　　　Renaissance to Present**
Examines various Western and non-Western creative traditions, including art, literature, and philosophy, during and after the Renaissance. Focuses on the interaction of ideas and traditions in the modern world. Transfer Assurance Guide (TAG) approved effective summer 2008 (OHS042 - Western/World Civilization II and OHS009 - Western/World Civilization Sequence, Course 2 of 2). **Writing intensive**.
(3+0) S
Co-requisite: ENG111

**HUM221　　Music Appreciation　　3 Cr. Hrs.**
The study of vocal and instrumental music from the standard repertoire primarily through listening. Previous music training is not required, but regular listening is part of the course. **Writing intensive**.
(3+0) S
Co-requisite: ENG111

**HUM230　　Art Appreciation　　3 Cr. Hrs.**
Theories and philosophies of art history and aesthetics covering prehistoric art to modern art. Students will learn to analyze and respond actively to art, using appropriate artistic concepts and vocabulary. **Writing intensive**.
(3+0) F
Co-requisite: ENG111

**IND103　　Applied Geometry　　3 Cr. Hrs.**
**　　　　　　& Trigonometry**
**(Formerly MET103)** Geometry includes definitions and descriptions of geometric terms, axioms, theorems, propositions dealing with straight lines, triangles, polygons, and circles, as well as perpendicular and parallel relationships. Trigonometry includes definitions of basic trigonometric functions, use of trigonometric tables, solutions of right triangle and oblique triangle problems, use of sine, cosine, tangent and their reciprocals in the solutions of unknown angles, logarithms, and practical shop problems.
(2+2) F, S,
Prerequisite: MTH080

**IND105　　Industrial Safety　　2 Cr. Hrs.**
**(Formerly MET130)** This is a course in hazard recognition based on OSHA recommended standards. Although students learn to identify potential hazards in the workplace, they will also develop a greater awareness of hazards in their environment. Students will also certify in CPR through the American Heart Association.
(2+0) S

**IND110　　Industrial Computing I　　3 Cr. Hrs.**
**(Formerly IET105)**This course is a study of the application of computer systems as found in an industrial environment. The focus of this class will be on operating systems, networking and computer hardware. This class will be taught at an applied level for the Skilled Trades Person, Technician, and Engineer.
(2+2) F

**IND120　　Industrial Electricity I　　3 Cr. Hrs.**
**(Formerly EET171)** This is an introductory electricity course for skilled trade's personnel. The course is a study of DC and AC electricity principles, with a practical approach to applications in an industrial environment. The learner will obtain a knowledgeable understanding of the key symbols and abbreviations associated with the electrical trade, acquire a comprehensive understanding of basic electrical terminology, apply Ohm's Law to a number of relevant electrical applications, and synthesize a number of components into a working system involving series, parallel, and series parallel circuits.
(2+2) F
Prerequisite: MTH080

**IND121　　Industrial Electricity II　　3 Cr. Hrs.**
**(Formerly EET194)** This course is an advanced study of Industrial Electricity providing comprehensive coverage of the control devices used in contemporary industrial electrical systems. The focus of this course is to provide the architecture for acquiring the knowledge and skills required in an advanced manufacturing environment. The course continues with electrical and motor theory, building on circuit fundamentals and reinforcing these with practical hands-on labs designed to reinforce the concepts and provide control systems design experience. These topics will be learned through text, presentations, various exercises, and hands-on labs.
(2+2) S
Prerequisite: IND120 (formerly EET171)

**IND122　　Industrial Wiring (NEC)　　3 Cr. Hrs.**
**(Formerly EET281)** The primary purpose of this course is to acquaint the learner with a ready source of information relevant to the NEC (National Electric Code), IEC (International Electrotechnical Commission), AISI (American Iron and Steel Institute), NFPA, (National Fire Protection Association), ANSI (American National Standards Institute), UL (Underwriters Laboratories, Inc.), OSHA (Occupational Safety and Health Act), and various Local Codes. This information will focus primarily on the electrical design and engineering of most site work including, but not limited to, industrial, commercial, and residential occupancies**.**
(2+2)  S
Prerequisite: IND120 (formerly EET171)

**IND130　　Rigging and Erecting　　2 Cr. Hrs.**
**(Formerly MET221)** This course incorporates the basic laws of physics to moving, setting-up, and securing machinery. Leverage and mechanical advantage, and the care and selection of equipment are taken in consideration while calculating load weights based on various shapes and types of material. Upon completion learners will be able to calculate sling angle tension and how to apply relevant information to different rigging hitches while determining the correct size of rigging tools needed for the job. Learners will apply lecture material to lab applications including mobile crane safety, inspection, hand signals, and proper load chart usage.
(2+0) F

**IND131　　Industrial Pipefitting　　3 Cr. Hrs.**
**(Formerly MET133)** A study of the specifications, application, installation, and maintenance of various kinds of pipe, fittings, valves, pumps, and hand tools. The analysis of job requirements in terms of materials, time utilization and sequence of operation is discussed.
(2+2) F
Prerequisite:  MTH050

**IND132　　Bench Work　　2 Cr. Hrs.**
**(Formerly MET143)** This is the first basic machine shop course. Students learn the use of hand tools, hand work, and floor work. Students are required to read prints, layout, machine, and fabricate projects utilizing the lab environment with emphasis placed on safety, tooling, precision and accuracy. Topics include: materials, mechanical fasteners, measurement, tolerance, fit, layout, hand tools, power tools, drilling, grinding, sharpening, hardening, burring, filing, polishing, layout work on the bench, use of hand taps, and cutting threads with a die.
(2+0) F
Co-requisite: MET110

**IND133　　Applied Welding　　3 Cr. Hrs.
　　　　　　　Techniques**
**(Formerly MET181)** Welding includes a discussion of the welding processes with emphasis on shielded metal arc welding (SMAW), oxy-acetylene welding, gas metal arc welding (MIG – metal inert gas), and gas tungsten arc welding (TIG – tungsten inert gas). Safety, equipment, supplies, types of welds, welding symbols, welding procedures and techniques are some of the topics included. Hands on welding formulate the basis of the program which is geared to an introductory level.
(2+2) F
Co-requisite: MET110

**IND134　　Industrial Fluid　　3 Cr. Hrs.
　　　　　　　Power I**
**(Formerly MET232)** Fluid power is an efficient way to move energy without mechanical belts, chains, or levers. The physics of fluids, components, troubleshooting and design applications for hydraulic & pneumatic systems are covered in this class.
(2+3) F & S
Prerequisite:  IND103 (formerly MET103) with a "C" or better

**IND140　　Principles of Machining　　3 Cr. Hrs.**
**(Formerly MET122)** The focus of this course is to provide the student with a basic foundation in the skills needed to perform basic machining methods. The student will develop key techniques that will aid in proper selection, identification, and application of machines and machining methods.  Hands-on laboratory work with the lathes, mills, drills, grinders, fixture utilization, feeds and speeds, is emphasized.  Special emphasis will be placed on safety, precision, accuracy, and teamwork in completion of assigned lab projects. The student will be required to interpret basic blueprints and manufacture parts to print specifications**.**
(2+3) F
Co-requisite: MET110

**IND141　　Metallurgy　　2 Cr. Hrs.
　　　　　　　& Heat Treatment**
**(Formerly MET231)** A basic course covering the nature and behavior of metals, crystalline structure, theory of alloys, principles of heat treatment, properties of metals and alloys and testing applications. The Rockwell and Brinell hardness testers will be used.
(2+3), S -
Prerequisite:  MTH080

**IND220** **Electrical Prints** **3 Cr. Hrs.**
**& Troubleshooting**
**(Formerly EET174)** This course is a study of the systematic elimination of the various parts of a system or process to locate a malfunctioning part. The learner will obtain a knowledgeable understanding of the key symbols and abbreviations associated with the electrical trade, acquire a comprehensive understanding of the various devices associated with an electrical circuit, synthesize a number of electrical components associated with a viable sequence of operation, recognize a malfunctioning circuit through proper meter application, and apply informed terminology while troubleshooting and restoring a malfunctioning system to its original intention promptly but safely.
(2+2) S
Co-requisite: IND121 (formerly EET194)

**IND221** **Instrumentation** **3 Cr. Hrs.**
**& Controls I**
**(Formerly EET265)** This course is a study of the operation and troubleshooting of Industrial Instrumentation systems. The focus will be on analog monitoring and controlled devices, connected to stand alone and PLC based controller systems. The concepts of temperature, pressure, level and flow will be discussed, as well as the transmitters that connect the analog sensor signals to the analog I/O.
(2+2) S
Prerequisite: PLC200

**IND223** **Motors and** **3 Cr. Hrs.**
**Motor Controls**
**(Formerly EET276)** This course is an advanced study and laboratory for learners who have an understanding of electrical circuits, controls and desire practical hands-on experience of various motor and control devices. Coursework involves "hands-on" laboratory experience utilizing 120vac, 208/240 VAC as well as text study. Practical application of principles learned will be emphasized. Special topics in electricity will be introduced to the learners according to class interests. Topics of study will include ladder diagrams and their control of alternating and direct current motors. Motor starter sizing, circuit/overload protection, electrical motor branch wiring will also be introduced. The Variable Frequency Drive as a motor controller will also be introduced as well as the application of the programmable logic controller in motor control circuits. The learner will also be responsible for any outside assignments as well as the successful completion of all required laboratory demonstrations. These topics will be learned through text, presentations, various exercises, and hands on labs.
(2+2) F
Prerequisite: IND121 (formerly EET194)

**IND232** **Machine Repair** **3 Cr. Hrs.**
**(Formerly MET144)** Basic fundamentals of methods and means to rebuild a production machine such as realignment of columns of tables, scraping of ways, replacing spindles, gears, bearings, gibs, etc.
(2+2) S
Prerequisite: IND132 (formerly MET143)

**IND234** **Industrial Fluid** **3 Cr. Hrs.**
**Power II**
**(Formerly MET252)** In this class, the student will use electro-pneumatic and electro-hydraulic components controlled by a programmable logic controller (PLC). The student will be able to construct, write, and troubleshoot a complete electro-pneumatic or electro-hydraulic circuit controlled by a PLC. The students will build, design, and troubleshoot machines using – pneumatics, hydraulics, and electrical components.
(2+2) S
Prerequisite: IND134 (formerly MET232)

**IND240** **Machining Processes II** **3 Cr. Hrs.**
**(Formerly MET123)** This class is intended to better the student's skills learned in IND140. This class is focused on the student applying their ability to use machine shop equipment to machine projects that apply to the machining, tooling and print reading technologies. Students will focus on machining industrial parts from well documented and professional prints, as well as from documented sketches created on a factory floor on their own. Projects should be more advanced than projects developed in IND140. Students will be assessed by their accuracy, efficiency and finished product using their abilities.
(2+2) S
Prerequisite: IND140 (formerly MET122)

**IND241** **Tooling & Fixtures-** **3 Cr. Hrs.**
**Lubricants & Coolants**
**(Formerly MET150)** Tooling, Jigs & Fixtures, Dies, Lubricants and Coolants are an integral part of modern machine practices. This course will provide the student with a basic foundation in Tooling, Jigs & Fixtures, and Die application and theory. Tool selection, tool application, tooling speeds and feeds will be emphasized. Jig & Fixture application will introduce the student to the use of Jigs & Fixtures in machining practices, datums of Jigs & Fixtures, and choice of Jigs & Fixtures for specific applications. Basic Die theory and design will be studied. The function, use, and types of lubricants and coolants will be covered in depth.
(2+2) S
Prerequisite: IND140 (formerly MET122)

**INT120** **HVACR 1** **3 Cr. Hrs.**
An introductory Heating, Ventilation, Air Conditioning and Refrigeration course for skilled trades personnel. The course is a study of basic thermo-dynamic principles, with a practical approach to applications in a residential, commercial and industrial environment. The course will cover basic heating and cooling concepts, refrigerant properties, psychometrics, terminology, safety, troubleshooting and applications of basic mechanical heating and cooling components and their electric / mechanical control.
(2+2) F
Prerequisite: IND120 (formerly EET171)

**INT220** **HVACR II** **3 Cr. Hrs.**
An intermediate study of the HVAC field. Studies will include commercial and industrial designs and equipment, Load Calculations and System Sizing. Concepts of equipment control will be introduced featuring Low Voltage, High Voltage methodologies.
(2+2) S
Prerequisite: INT120

**INT221          HVAC III Heating Systems          3 Cr. Hrs.**
Learning outcomes to be developed in this course focus on the heating aspect of climate control.  Topics to be covered would include "forced air" heating applications including natural gas, propane, fuel oil, electric resistance and heat-pump systems and their controls.  Other heating topics would include Hydronics applications; i.e. residential, commercial and institutional boiler systems and their controls.  Heat-pump technology will feature both "air-to-air" and geothermal technologies.
(2+2)  S
Prerequisite:  INT120

**MEA101          Medical Assisting          3 Cr. Hrs.**
**                          Clinical I**
This course is designed to provide the basic knowledge assisting physicians, or medical office staff with medical exam room preparation, routine patient examination preparation, as well as assisting with basic clinical procedures and in-office diagnostic testing.
(1+4) S
Co-requisites: BIO150 and MEA105

**MEA105          Microbiology for          2 Cr. Hrs.**
**                          Medical Assistants**
This course is designed to introduce common medical laboratory procedures.  It involves the study of the interactions between microbes and humans and the practice of handling medically important microbes, blood and body fluids. Practical experiences include aseptic techniques in the collecting, handling, and testing of specimens.
(1+3) S
Prerequisite: High school Biology or BIO101

**MEA108          Administrative Medical          3 Cr. Hrs.**
**                          Office Procedure**
This course will provide a basic understanding of the administrative duties and responsibilities that pertain to the medical office.  This includes instruction and medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties, processing mail, collection practices, and financial practices.  This course will also familiarize the student with computer applications in the health care setting.  It is designed to provide the student with basics of operations and application of computer usage within the health care provider office.  This course includes simulated data entry for patient's record, appointment scheduling and day sheet transactions.
(2+2) S
Prerequisites: ENG111 and OAS101

**MEA110          Pharmacology for          3 Cr. Hrs.**
**                          Allied Health Professionals**
The most common medications used and prescribed in a physician's office are studied.  The actions, side effects, contraindications, and administration implications are emphasized.  Content related to writing prescriptions, storing of meds, handling of narcotics and searching of pharmaceutical references is included.
(3+0) F
Co-requisite: BIO150

**MEA200          Medical Assisting          4 Cr. Hrs.**
**                          Administrative Externship**
This course provides opportunities to observe, perform, and discuss various administrative competencies under supervision, with learning experiences obtained in selected physicians offices, clinics or hospitals.
(2+6) F
Prerequisites: MEA108, OAS110, and OAS227
Co-requisite: OAS281

**MEA201          Medical Assisting          3 Cr. Hrs.**
**                          Clinical II**
Clinical II is a continuation of Clinical I.  Following the Clinical II experience students will be able to administer various forms of medication, demonstrate proper technique for venipuncture for purpose of obtaining blood specimens and preparing intravenous medications and fluids and demonstrate skills in assisting with minor surgical procedures.
(1+4) S, F
Prerequisites: MEA101, MEA 105, MEA110, and MEA205

**MEA202          Medical Assisting Clinical          6 Cr. Hrs.**
**                          Externship/CMA Exam Review**
This course provides opportunities to observe, perform, and discuss various clinical competencies under supervision, with learning experiences obtained in selected physician's offices, clinics or hospitals.  This course will also review the following basic principles of psychology as they apply to the medical assistant: developmental stages of the life cycle, hereditary, cultural and environmental influences on behavior, mental health and applied psychology.
(2+6) S, F, SU
Prerequisite: MEA101, MEA 105, MEA 110
Co-requisite: MEA201

**MEA205          Disease Conditions          3 Cr. Hrs.**
This course presents the basic concepts of diseases, their courses and function disturbances as they relate to body systems. This course includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.
(3+0) F
Prerequisite: BIO150

**MEA207          Phlebotomy Externship          6 Cr. Hrs.**
This course provides the opportunity to discuss and perform phlebotomy procedures under supervision.  The learning experiences will be obtained in selected laboratories, physician offices, clinics or hospitals.
(3+9) S
Prerequisites: MEA105, MEA108, and BIO150 or BIO232

**MET/MTH099          Engineering Math          3.5 Cr. Hrs.**
The objective of this course is to increase students preparedness in basic algebra and trigonometry skills used in engineering. These concepts will be reviewed, refreshed, and mastered through application to engineering problems.  This course is designed for students who have had some algebra and need a review of specific mathematical topics to prepare them for the engineering technologies course sequence.
(3 + 1)  F, S
Prerequisite:  MTH080 or high school Algebra II with a "C" or better.

A
B
C
D
E
F
G
H
I
J
K
L
**M**
N
O
P
Q
R
S
T
U
V
W
X
Y
Z

**MET100**      **Intro to Engineering**      **2-3 Cr. Hrs.**
         **Technology**
This course introduces the field of engineering to the student who is interested in engineering technologies. It explores multiple disciplines and careers available. Additionally, the student will solidify knowledge of basic mathematics, measurement systems, and computer skills necessary to succeed in an engineering environment.
(2 or 3+0) F
Prerequisite:  MTH050

**MET110**      **Print Reading & Sketching**      **3 Cr. Hrs.**
Print reading and sketching includes the alphabet of lines, orthographic projection, ordinary views, section views, auxiliary views, pictorial sketching, dimensioning, tolerancing, screw threads and fasteners, mathematics for design and an introduction to geometric dimensioning and tolerances.
(2+2) F,

**MET121**      **Manufacturing Processes**      **3 Cr. Hrs.**
The focus of this course is to provide the student with an introduction to the theory of the common major manufacturing processes. The major manufacturing processes (methods used to convert raw materials into finished products) are described and compared. Emphasis is placed on how each process works and its relative advantages and disadvantages. Students will have the opportunity to observe processes via field trips as such opportunities are available.
(3+0) S

**MET134**      **Engineering Materials**      **3 Cr. Hrs.**
This course combines major elements of ferrous and non-ferrous metallurgy with polymeric materials, organics and refractories. Student learns basic physical and chemical properties of common engineering materials and their design considerations.
(3+0) S

**MET222**      **Programming Computer**      **3 Cr. Hrs.**
         **Numerical Control**
The student will view a blueprint of a mechanical part to determine the datum, the order of operations and appropriate fixtures to make the part in a CNC machine. G & M code programs will be written and loaded to the CNC mill or lathe which will create the machined surfaces of the part. Conversational programming will be demonstrated.  A familiarity with geometry, trigonometry, computers, and CAD is helpful.
(2+3) S
Prerequisites: IND140 (formerly MET122), IND105 (formerly MET103) and IND110 (formerly IET105) or instructor permission

**MET223**      **CAM I**      **4 Cr. Hrs.**
This course is a study in the basic fundamentals of Computer-Aided-Manufacturing-Machining (CAM). The student will become proficient in the use of manipulating CAM software in a hands-on environment. Datums, tool selection, speeds, feeds, and part identification will be emphasized.
(3+3) F
Prerequisites:  IND140 (formerly MET122) and MET222 or instructor permission

**MET234**      **Strength of Materials**      **3 Cr. Hrs.**
Learn how to analyze the mechanical and thermal loads on structures, beams, and columns, and how to calculate stress, strain, and deflection. Application of formulas and design considerations are stressed. Transfer Assurance Guide (TAG) approved effective spring 2008 (OET008 - Strength of Materials).
(3+0) F
Prerequisites: MET235 and PHY251

**MET235**      **Statics**      **3 Cr. Hrs.**
A study of resolution of forces on rigid bodies using conditions of equilibrium and vector analysis. Includes the analysis of trusses, friction, and moments of inertia. Transfer Assurance Guide (TAG) approved effective spring 2008 (OET007 - Statics).
(2+2) F
Prerequisite: PHY251

**MET255**      **Fluid Mechanics**      **3 Cr. Hrs.**
Fluid power is an efficient way to move energy without mechanical belts, chains, or levers. The physics of fluids, components, troubleshooting, and design applications for hydraulic and pneumatic systems are covered in this class. This class will introduce the student to both hydraulic and pneumatic components. This course will simulate an industrial environment; following all safety procedures will be required. Everyone will wear safety glasses while working in the lab! Failure to comply will result in not being able to work in lab and therefore lowering your lab grade(s). Transfer Assurance Guide (TAG) approved effective spring 2009 (OET009 - Fluid Mechanics).
(2+2)  S
Prerequisite: PHY251

**MET260**      **CAM II**      **3 Cr. Hrs.**
CAM II is a continuation of CAM I.  This is an advanced course that introduces the student to Advanced milling, Solids, Surfaces, and 3D cutter-pathing. Lathe and 4th and 5th axis programming will be introduced as time allows. 3D drawings, solids and surfaces will be created by the student. Toolpaths and NC files will be created to the 3D drawings, solids and surfaces. The tool paths created will be used to create a part on a CNC machining center.
(2+2) S
Prerequisite: MET223

**MET262**      **CAD/CAM Project**      **4 Cr. Hrs.**
This is a capstone class that requires the student to design, fabricate and test a working machine component. Solid Modeling and CAM technology will be the focus, with supporting CMM technology. The students will be required to apply the technology they learned in individual technology classes.
(3+2) S
Prerequisites: CAD213, MET223, and QCT141

**MET265**      **Machine Design**      **3 Cr. Hrs.**
This course is designed to assist students with the basic approach to machine design through the analysis of static and dynamic stresses. The course will focus on the strength of materials and how they relate to machine design. Design projects will be included.
(3+0) S
Prerequisite: PHY251

**MET290**     **Engineering Technology**     **1-4 Cr. Hrs.**
                **Co-op/Internship**
The Co-op/Internship is a job-related experience in which the student works in a position consistent with the program major. The student is expected to integrate skills learned in the educational program with job responsibilities, while applying work experience to classroom activities. Primary work duties are documented through a work log, incident summary, and a focused report. Enrollment only with permission of the instructor.
F, S, SU

**MGT110**     **Management**     **3 Cr. Hrs.**
Management is an introductory course in the principles of coordinating an organization's objectives. Major emphasis is devoted to planning, organizing, directing, and controlling skills. Issues such as decision making, communication, motivation, and leadership are addressed.
(3+0) F, S, SU

**MGT120**     **Supervision**     **3 Cr. Hrs.**
This course focuses on the supervisor/employee relationship. Primary topics include motivation, goal setting, performance appraisal, and management of a team of employees.
(3+0)

**MGT210**     **Human Resource**     **3 Cr. Hrs.**
                **Management**
This course is a study of personnel management. Major topics include planning, job design, recruitment, employee selection, training, performance appraisal, and contract administration. Safety and government regulations are included.
(3+0) F - day, S - eve, SU

**MGT221**     **Entrepreneurship**     **3 Cr. Hrs.**
This course is a study of opportunities and challenges facing entrepreneurs in a dynamic marketplace. Topics include Recognizing and Exploiting viable business opportunities, Writing a Business Plan, Managing Inventory, Cash Management, Employee Management (including Hiring, Training, and Evaluation), Marketing, and using technology. Emphasis is placed on Self Employment and the issues of efficiently and effectively running a business.
(3+0) S
Prerequisite: MGT110

**MGT230**     **Retail Management**     **3 Cr. Hrs.**
Retail management is an overview of retailing functions. Major topics include organizational structure, merchandising practices and procedures, physical layout, buying, and store control. Issues of chain stores and franchising are included.
(3+0) F - day (odd years), S - eve (even years)

**MGT280**     **Business Climate**     **3 Cr. Hrs.**
                **Analysis**
This course includes research, analysis, and summary of the business climate in a specific region. Students will assess regional, cultural, political, commercial, and financial issues. They will also investigate availability of manufacturing, transportation, labor, and technological resources. Students are required to travel to the region and develop a Business Climate Summary. The finished product will be developed and presented by a team of students.
(3+0) S

**MGT281**     **Global Business**     **3 Cr. Hrs.**
                **Climate Analysis**
This course includes research, analysis, and summary of the business climate in a specific region. Students will assess regional, cultural, political, commercial, and financial issues. They will also investigate availability of manufacturing, transportation, labor, and technological resources. Students are required to travel to the international region and develop a Business Climate Summary. The finished product will be developed and presented by a team of students.
(3+0)

**MGT290**     **Business Management**     **1-3 Cr. Hrs.**
                **Internship**
This is a management experience related to the student's program of study. The student is accepted on the basis of academic progress and available work site. Enrollment only with instructor permission.
(1+20) F, S, SU

**MKT110**     **Marketing**     **3 Cr. Hrs.**
Marketing is an introductory course that exposes the student to the "marketing mix" (Product, price, promotion, distribution) Topics include the global environment and social and ethical responsibilities; using technology and information to build customer relationships; target markets and customer behavior; product decisions; distribution decisions; promotion decisions; and pricing decisions. The topics are looked at from the profit and nonprofit viewpoint. Global as well as domestic strategies are examined. The student is introduced to the above topics through lecture, textbook readings, electronic media presentations, classroom discussions, and a team marketing project. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU006 - Principles of Marketing Management).
(3+0) F - Eve, S- Day
Co-requisite: ECO212

**MKT111**     **Entrepreneurial**     **1 Cr. Hr.**
                **Marketing I**
This course introduces the fascinating field of marketing for a small business. It is the first of a series of three classes exploring marketing for the entrepreneur. Students will learn the role of marketing in a successful enterprise. Topics include understanding marketing terminology, concepts and components of a sound marketing strategy. Students will learn about the 5 Ps of marketing: people (customers), product, promotion, place (distribution), and price. Guerilla marketing will be discussed and students will learn to begin to recognize these types of marketing opportunities for their own enterprises. The course will utilize lecture, student readings and independent research, videos, class discussions, and guest speakers, as well as student written and oral assignments to master the class material.
(1+0) F, S, SU
Prerequisite: CIS090

**MKT112**     **Entrepreneurial**     **1 Cr. Hr.**
**Marketing II**

This course continues the study of marketing for the small business, and is the second of a series of three classes exploring marketing for the entrepreneur. Students will study the various types of marketing and marketing media. Topics include Marketing objectives, advertising in traditional media, advertising in print, advertising on radio and advertising on TV, person-to-person marketing, networking, word-of-mouth marketing, trade shows and public relations, marketing in print, print collateral, and direct mail. Students will be introduced to online marketing. Students will learn how to distinguish between the types of marketing and advertising and gain an understanding of how to evaluate and select marketing venues for their small business. The course will utilize lecture, student readings and independent research, videos, class discussions, and guest speakers, as well as student written and oral assignments to master the class material.
(1+0) F, S, SU
Prerequisite: MKT111

**MKT113**     **Entrepreneurial**     **1 Cr. Hr.**
**Marketing III**

This course continues the study of marketing for the small business, and is the third of a series of three classes exploring marketing for the entrepreneur. In this section, students will study the online marketing and marketing media, social media and marketing trends, marketing budgets and ROI, and advanced and current marketing topics. Students will be introduced to selling on e-Bay and Craig's List. Students will learn how to use online marketing and advertising and gain an understanding of how to evaluate the return on marketing expenditures. The course will utilize lecture, student readings and independent research, videos, class discussions, and guest speakers, as well as student written and oral assignments to master the class material.
(1+0) F, S, SU
Prerequisite: MKT112

**MKT210**     **Advertising**     **3 Cr. Hrs.**

This is a study of sales promotion. Major topics include audience identification, ad preparation, media selection, budgeting, and research. Emphasis is placed upon coordination of advertising efforts and sales promotion.
(3+0) F - day (even years), S - eve (odd years)

**MKT230**     **Salesmanship**     **3 Cr. Hrs.**

This course focuses upon persuasion and personal promotion. Major topics include the preparation of a presentation and the techniques of effective delivery. Students will develop and participate in a sales presentation.
(3+0) F - eve (odd years), S - day, SU

**MTH109**     **College Algebra**     **3 Cr. Hrs.**

This course is designed for those students who have mastered the fundamental manipulations of algebra. Algebraic topics include: non-linear equations and inequalities; linear, quadratic, polynomial, rational, exponential and logarithmic functions; complex numbers; systems of equations, matricies and determinates. (Ohio Transfer Module TMM001 approved)
(3+0) F, S, SU
Prerequisite: MTH090 or satisfactory score on the Course Placement Test

**MTH112**     **Trigonometry**     **3 Cr. Hrs.**

This course is designed to follow MTH109 and replaces MTH110. Topics include both right triangle and circle definitions, solving all types of triangles, trigonometric identities and equations, selected vector and complex number problems, and the polar coordinate system. (Ohio Transfer Module TMM003 approved)
 (3+0) F, S
Co-requisite: MTH109 or satisfactory score on the Course Placement Test.

**MTH170**     **Survey of Mathematics**     **3 Cr. Hrs.**

This course presents a variety of mathematical ideas and concepts to give students an idea of the breadth and vitality of mathematics. Among others, topics will include geometry, number theory, statistics and probability. Although some manipulation techniques will be reviewed, this course in not intended for improvement of algebra skills or other specific content. Instead the emphasis is on understanding how fundamental concepts of mathematics work together as a unified whole.
(3+0) S
Prerequisite: MTH080, high school equivalent, or satisfactory score on Course Placement Test

**MTH213**     **Calculus I**     **5 Cr. Hrs.**

Designed for those students who have mastered algebra and trigonometry and who are planning to pursue a four-year degree program. Topics include a review of functions, limits, derivatives of algebraic and transcendental functions, applications of derivative, and an introduction to integrals. Transfer Assurance Guide (TAG) approved effective fall 2005 (OMT005 - Calculus I and OMT017 - Calculus I and II Sequence, Course 1 of 2). (Ohio Transfer Module TMM005 approved)
(5+0) F
Prerequisites: MTH112 or MTH122, or satisfactory score on the Course Placement Test

**MTH214**     **Calculus II**     **5 Cr. Hrs.**

This course is designed for those students who have completed MTH213. Topics include techniques of integration, applications of integrals, sequences and series, introduction to differential equations, conics, and parametric and polar graphing. Transfer Assurance Guide (TAG) approved effective fall 2005 (OMT006 - Calculus II and OMT017 - Calculus I and II Sequence, Course 2 of 2). (Ohio Transfer Module TMM006 approved)
(5+0) S
Prerequisite: MTH213

**MUS120**     **Chorus**     **3 Cr. Hrs.**

This course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term.
(3+0) F, S

**MUS121**     **Beginning Chorus**     **1 Cr. Hr.**

This beginning course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term.
(1+0) F, S

**MUS122 Intermediate Chorus 1 Cr. Hr.**
This intermediate course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term.
(1+0) F, S

**MUS123 Advanced Chorus 1 Cr. Hr.**
This advanced course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term.
(1+0) F, S

**NRS100 Nurse Aide Cert 4 Cr. Hrs.**
This course will prepare students for employment as a nurse aide. Students are eligible to take the state certification exam upon successful completion of program. This course is taught in cooperation with Four County Career Center and Vantage Career Center and includes 24 clinical hours held at a local long term healthcare facility.
(3.5+0.5)

**NRS105 Math for Nurses 1 Cr. Hr.**
This math course is designed for the student who will be in a nursing health care technology. It includes study of metric, apothecary, and household systems of weights and measures relating to the calculation and administration of medications. The course emphasizes solving oral and parental drug dosage problems as they might occur in the clinical area.
(1+0) F, S
Prerequisite: MTH080

**NRS106 Nursing Perspectives 2 Cr. Hrs.**
This course introduces the student to concepts related to the history of nursing, selected roles of the nurse, the nursing process, selected professional issues and educational trends. Included in this course is an examination of theory based nursing concepts with an emphasis on the Roy Adaptation Model.
(2+0) F, S
Prerequisite: Admission to the Nursing Program
Co-requisites: BIO231, ENG111, PSY110, and NRS107

**NRS107 Basic Concepts In Nursing 6 Cr. Hrs.**
This course introduces the student to concepts of theory based nursing with the emphasis on the nursing process and application of the Roy Adaptation Model. Included will be presentation and application of basic care concepts, use of computers in nursing and related medical terminology in dealing with common stimuli experienced by the adult client.
(3+9) F, S
Prerequisite: Admission to the Nursing Program
Co-requisites: BIO231, ENG111, PSY110, and NRS106

**NRS108 Nursing Care of Clients with 6 Cr. Hrs.**
**Physiological Health Needs I**
The course provides for the development and application of concepts of nursing for assisting clients in adapting to the physiological mode and related health needs.
(3+9) F, S
Prerequisites: NRS106, NRS107, BIO231, PSY110 and ENG111
Co-requisites: NRS110, NRS131, BIO232, and PSY230

**NRS110 Pharmacology 3 Cr. Hrs.**
This course focuses on pharmacological theory of broad classifications of common medications in current use with application to nursing. This course includes federal drug legislation and the responsibility of drug administration.
(3+0) F, S, SU
Prerequisite: NRS106 and NRS107 or PNE120 or permission of Nursing Department

**NRS111 Pharmacology I 1.5 Cr. Hrs.**
Pharmacological theory of broad classifications of common medications in current use with application to nursing. Includes federal drug legislation and the responsibility of drug administration. This is the first part of a 2-course sequence equating to NRS110.
(1.5+0) SU
Prerequisite: PNE120

**NRS112 Pharmacology II 1.5 Cr. Hrs.**
Pharmacological theory of broad classifications of common medications in current use with application to nursing. Includes federal drug legislation and the responsibility of drug administration. This course is the 2nd part of a 2-course sequence equating to NRS110.
(1.5+0) F
Prerequisite: PNE120 and NRS111

**NRS131 Health Assessment 2 Cr. Hrs.**
**in Nursing**
The course focuses on the application of the nursing process related to physical assessment and history taking skills with emphasis on the adult client.
(1+3) F, S
Prerequisites: NRS106, NRS107, BIO231, and ENG111
Co-requisite: BIO232

**NRS133 Cardiopulmonary 1 Cr. Hrs.**
**Resuscitation**
A basic course in cardiopulmonary resuscitation for cardiac arrest and respiratory emergencies. Includes infant, child, adult, and two-man CPR. Certificate issued upon completion.
(1+0) F, S

**NRS150 Concepts in End of 1 Cr. Hrs.**
**Life Care**
This course provides an overview of the knowledge necessary to provide optimal holistic care to clients at the end of life. Content covers the essential aspects of physical, psychosocial, and emotional nursing care as applied to clients and their families.
(1+0) F, S

**NRS207 Nursing Care of the 2 Cr. Hrs.**
**Family Throughout Pregnancy**
This course will substitute for NRS213 for the LPN graduate who is not successful on the Nursing Care During Child-bearing NLN Mobility Profile Exam I, but is successful on the Pediatric component. This course focuses on the development and application of knowledge and skills in providing care for the pregnant woman and childbearing family throughout pregnancy: prenatal, intrapartal, postpartal and neonatal periods. The nursing process is used to assist in providing nursing care for clients and their families throughout the maternity cycle in adapting to their changing roles.
(2+0) SU
Prerequisite: Permission by Nursing Department

**NRS208**     **Nursing Care of the**     **2 Cr. Hrs.**
**Family with Children**

This course is designed for the LPN graduate who was successful on the Nursing Care During Child-bearing portion but not the Nursing Care of the Child NLN Mobility Profile Exam I. This course will focus on the development and application of knowledge and skills in providing family-centered care for well and sick children as well as anticipatory guidance for their families. Application of Growth and Development principles within the nursing process is emphasized.
(2+0) SU
Prerequisite: Permission by Nursing Department

**NRS209**     **Nursing Care During**     **3 Cr. Hrs.**
**Childbearing and Childhood**

This course will substitute for NRS213 & NRS214 for the LPN graduate who is not successful on the Nursing Care During Childbearing and Nursing Care of the Child NLN ACE I. This course focuses on the development and application of knowledge and skills in providing care for the child-bearing family. The nursing process is used to assist clients of the developing family to adapt to their changing role.
(3+0) F, S
Prerequisite: Permission by Nursing Department

**NRS211**     **LPN to RN Transition**     **3 Cr. Hrs.**
This three-credit hour 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 experience, the student learns through the application of concepts. The student will demonstrate the ability to solve problems though the use of the nursing process with a focus on client assessment and to communicate more effectively. This course meets requirements of the Ohio Nursing Articulation Model.
(2+2) F – Archbold, S - Van Wert

**NRS212**     **LPN to RN Bridge Course**     **1 Cr. Hr.**
This course is designed to meet the needs of the LPN who will be entering the Associate Degree Program at the second level. The focus of the course will be on the Roy Adaptation Model for Nursing and its use within the nursing process. Utilization of computers within nursing.
(1+0) F - Archbold, S - Van Wert

**NRS213**     **Nursing Care**     **3 Cr. Hrs.**
**of the Childbearing Family**

This course focuses on the development and application of knowledge and skills in providing care for the mother/parents and newborn. The nursing process is used to assist clients of the developing family to adapt to their changing role.
(3+9) SU
Prerequisites: NRS108, PSY230, NRS131, and NRS110

**NRS214**     **Nursing Care of the**     **5 Cr. Hrs.**
**Childrearing Family**

This course focuses on the development and application of knowledge and skills in providing care for the child and the child-rearing family. The nursing process is used to assist clients of the developing family to adapt to their changing role.
(3+9) SU
Prerequisites: NRS108, PSY230, NRS131, and NRS110

**NRS215**     **Nursing Care of Clients with**     **5 Cr. Hrs.**
**Psychosocial Health Needs**

The focus is on the development and application of knowledge and skills in providing nursing care to clients with common psychological health needs within a variety of settings.
(3+6) F, S
Prerequisites: NRS108 or NRS211/212, PSY110, NRS110 and NRS131

**NRS216**     **Nursing Care**     **3 Cr. Hrs.**
**Physiological Health II**

The focus is on the development and application of knowledge and skills in providing nursing care to clients with common long-term physiological health needs within a variety of settings.
(1+6) F, S
Prerequisite: NRS108 or NRS211/212, NRS110 and NRS131
Co-requisite: BIO257 and PHI220

**NRS217**     **Nursing Care**     **5 Cr. Hrs.**
**Physiological Health III**

The course provides for further development and application of concepts of nursing for assisting clients in adapting to the physiologic mode and related health needs.
(3+6) F, S
Prerequisites: NRS213, NRS214, NRS215, and NRS216
Co-requisite: STA12, and ENG1120

**NRS218**     **Concepts in Management**     **4 Cr. Hrs.**
**of Groups of Clients**

This course provides an introduction to the skills and knowledge necessary to manage care of a group of clients in a cost effective manner. Content includes organization of care, principles of working with others, concepts of leadership, research, management and organizational structure. Current issues in the political and cultural systems which impact the nursing profession are examined. The transition from student to practitioner is facilitated through course concepts and clinical placement.
(1+9) F, S
Prerequisites: NRS213, NRS214, NRS215, and NRS216
Co-requisites: NRS217, STA120, and ENG112

**NRS220**     **Special Problems**     **1-4 Cr. Hrs.**
**in Nursing I**

An independent study which focuses on a topic or selected problem in nursing, subject to the approval and supervision of an assigned nursing instructor. Content and methodology to be arranged on an individual basis. Credit will be determined by the nature and extent of the independent study.
F, S, SU
Prerequisite: Permission of the Dean of Nursing

**NRS221**     **Special Problems**     **1-4 Cr. Hrs.**
**in Nursing II**

An independent study which focuses on a topic or selected problem in nursing, subject to the approval and supervision of an assigned nursing instructor. Content and methodology to be arranged on an individual basis. Credit will be determined by the nature and extent of the independent study.
F, S, SU
Prerequisite: Permission of Dean of Nursing

**NRS298**     **Special Topics in Nursing**     **1 Cr. Hr**
This course is an elective course designed to supplement the learning of current nursing students. It is a seminar course which focuses on current trends or issues affecting nursing practice.
(1+0) F,S
Prerequisites: Enrollment in Nursing Clinical Course

**OAS101    College Keyboarding    3 Cr. Hrs.**
This is a mandatory course for OAS majors which introduces students to basic keyboarding and formatting techniques, editing and proofreading of keyed copy, and the development of key stroking accuracy and speed. Correct format for keying business documents will be stressed.
(3+0) F, S - day, eve (odd years), SU
Prerequisite: OAS090 or satisfactory score on Course Placement Test

**OAS102    Keyboarding Applications    3 Cr. Hrs.**
This keyboarding course on the computer leads students toward higher speed, greater accuracy, improved communication skills, and refinement of formatting ability using computer software. The Cortez Peters method for developing keyboarding accuracy and speed is introduced.
(3+0) F - day, S, SU
Prerequisite: OAS101 within the previous five years

**OAS104    Voice Recognition    1 Cr. Hr.**
This is a hands-on course introducing the student to the use of speech recognition technology in the office. Topics include but are not limited to setting up the speech recognition software, building vocabulary files, basic dictation skills, creating and editing documents, cursor control, and detecting recognition errors.
(1+1)
Prerequisites: OAS090 and CIS090, or satisfactory score on Course Placement Test

**OAS105    Document Editing    2 Cr. Hrs.
          & Proofreading**
This is a   course in which the students develop skills in proofreading, editing, and formatting written business communications. Topics covered include use of possessives, spelling, capitalization, subject-verb agreement, pronouns, adjectives, verbs, sentence structure and wording, as well as proper use of punctuation marks. The student will be more proficient in proofreading documents keyed in any word processing program on the computer. Editing of documents using proofreader's marks will also be stressed. There is no prerequisite, although basic computer knowledge will be helpful in completing at-the-computer editing projects.
(2+0) F - eve (odd years), S, SU

**OAS110    Records Management    3 Cr. Hrs.**
This is a course  in the field of records management emphasizing principles and practices for manual and automated records systems.  A practice set is used in which student's practice card filing and correspondence filing using the alphabetic, subject, numeric and geographic filing systems. Computer applications are used in applying alphabetic indexing rules to a computer records database.
(3+0) F - day, S - eve (odd years), SU

**OAS111    Electronic Health    3 Cr. Hrs.
          Records**
This course will give students an understanding of practical knowledge of managing Electronic Health Records (EHR). It will give students a hands-on experience using *SpringCharts EHR™*. This course will also familiarize students with the basic operations utilizing managerial features of *SpringCharts* including patient scheduling, tracking patient activity, and sending and receiving reminders, messages, and e-mails.
(3+0) F, S
Prerequisite:  OAS227

**OAS160    Administrative Technology    3 Cr. Hrs.
          and Procedures**
This is a comprehensive course based on the knowledge and skills necessary to perform duties in a modern office. Practical experiences and simulated work experiences are included. Telephone techniques, mail processing, creation of other business document information, and case studies are addressed. Development of the career professional will be included.
(3+0) F - eve (even years), S - day
Co-requisite: ENG111

**OAS180    Medical Terminology    3 Cr. Hrs.**
This is a study of prefixes, suffixes, and word roots used in developing a medical vocabulary. Special emphasis is placed upon the usage, spelling, and pronunciation of these terms as they apply to the major body systems in terms of health and disease. Transfer Assurance Guide (TAG) approved effective summer 2007 (OHL005 - Medical Terminology).
(3+0) F, S

**OAS200    Speedbuilding    1 Cr. Hr.**
This course emphasizes the development of speed and accuracy at the keyboard through timed writings and corrective drills at the computer. This course may be repeated for further improvement in keying speed and accuracy.
(1+0) F, S, SU
Prerequisite: OAS102

**OAS227    Diagnostic Coding    3 Cr. Hrs.**
This course gives the student an introduction to the process of diagnostic coding for health insurance reimbursement purposes using the International Classification of Diseases (ICD) system. Students learn the format and organization of the ICD system. They learn to identify abbreviations, symbols and modifiers used in the ICD coding system. Students learn to analyze medical documents to locate and identify primary, principle, secondary and concurrent diagnoses. Students then use their knowledge of anatomy, physiology, disease conditions, pharmacology, along with medical terminology with the ICD process to accurately assign diagnostic codes for insurance reimbursement and later correctly link diagnoses to procedures performed.
(3+0) F – day, S, SU
Prerequisite:  OAS180
Co-requisite:  BIO150

**OAS228    Procedural Coding    3 Cr. Hrs.**
This course gives the student an introduction of the process of procedural coding for health insurance reimbursement purposes using the CPT system developed and updated yearly by the American Medical Association. Students explore the history of and uses for procedural coding. They develop an understanding of the organization of the CPT manual and the conventions that guide its use. They then use their understanding of CPT along with knowledge of medical terminology, pharmacology, disease conditions, anatomy and physiology to correctly assign procedural codes that document and justify charges for procedures and treatments performed.
(3+0) F, S – day, SU
Prerequisite:  OAS227 or instructor permission
Co-requisite:  MEA110, MEA205

**OAS223**      **CCA Coding Exam Review**      **3 Cr. Hrs.**
This course is for students who have already learned the basics of procedural and diagnostic coding. Students can utilize this course to review the subject matter briefly, as it relates to overall coding issues. A Certified Coding Associate candidate will want to take this course prior to the national CCS-P) and CCS exam courses.
(3+0) S
Prerequisites: OAS180, OAS227, OAS228
Co-requisite: OAS283

**OAS224**      **CCS Hospital**      **3 Cr. Hrs.**
               **Coding Exam Review**
This course is for students who have already learned the basics of procedural and diagnostic coding. Students can utilize this course to review the subject matter briefly as it relates to the hospital reimbursement process, and complete abstracting exercises. The exercises will simulate the day-to-day coding in the hospital setting.
(3+0) S
Prerequisites: OAS180, OAS227, OAS228
Co-requisite: OAS283

**OAS225**      **CCS-P Physician Office**      **3 Cr. Hrs.**
               **Code Exam**
This course is for students who have already learned the basics of procedural and diagnostic coding. Students can utilize this course to review the subject matter briefly as it relates to the physician's office, and then complete abstracting exercises. The exercises will simulate the day-to-day coding in a physician's office.
(3+0) S
Prerequisites: OAS180, OAS227, and OAS228
Co-requisite: OAS283

**OAS226**      **Home-Based Independent**      **3 Cr. Hrs.**
               **Medical Coder**
This course is for students who have already learned the basics of procedural and diagnostic coding. In addition, students should have earned the CCA, CCS, and/or CCS-P credential prior to attempting the material in this course. This course will provide useful information regarding business start-ups, resource and alternative coding opportunities for coding specialists to utilize while pursuing successful independent careers.
(3+0) S
Prerequisites: OAS180, OAS227, OAS228, OAS281
Co-requisite: OAS283
Recommended: Certification as CCA, CCS, CCS-P

**OAS230**      **Transcription**      **3 Cr. Hrs.**
This course is designed to develop skill in listening and transcribing recorded dictation using the computer. A variety of business correspondence is transcribed at the computer with an emphasis on developing language arts skills such as grammar, spelling, word usage, and vocabulary. The importance of mailable documents is stressed.
(3+0) S
Prerequisites: ENG111, OAS101, and CIS112

**OAS249**      **Advanced Microsoft Suite**      **3 Cr. Hrs.**
This is a comprehensive course stressing the refinement of word processing, spreadsheet, database management, and presentation concepts and procedures; along with reviewing workplace requirements, updating of skills, and prioritizing work assigned. The assignments will go beyond the mechanics of the software. Students will learn design layout, writing, problem solving, analysis, critical thinking, and information management skills. This course is based on prior experience in Microsoft Office: Word, Excel, Access, PowerPoint, Outlook; keyboarding; records management; and office procedures.
(3+0) S
Prerequisites: CIS112 and CIS113

**OAS282**      **Medical Transcription**      **3 Cr. Hrs.**
This course uses transcription equipment to develop skill for accurately transcribing medical dictation on a computer. Dictation will cover patient history and physical examinations, discharge summaries, surgical, pathology, and laboratory reports. Knowledge of medical terminology, keyboarding accuracy, and speed of transcription will be expanded.
(3+0) F - day, S
Prerequisites: ENG111, OAS180, OAS101, and CIS112

**OAS283**      **Computerized**      **3 Cr. Hrs.**
               **Medical Insurance**
This is a course that will cover the fundamentals of using medical office management software which includes: inputting patient data, processing insurance claims and payments, scheduling appointments, and printing medical reports. The computer skills gained will enable students to cross over to the workplace and use medical software in the health environment.
(3+0) F, S
Prerequisite: OAS227

**OAS291**      **Internship I**      **1 Cr. Hr.**
This internship is a continuation of the job-related office services experience. The student is responsible for actively seeking the position within the College or for an outside organization. Second-year student or instructor permission expected.
(1+10) F, S, SU
Prerequisite: ENG111

**PAR100**      **Introduction to Paralegal**      **3 Cr. Hrs.**
This course covers the basics of legal assisting, emphasizing the fundamental concepts of the legal system. The course includes an overview of the legal assistant career and ethical considerations related to the job.
(3+0) F - day (odd years), eve (even years)

**PAR101**      **Law Office Management**      **3 Cr. Hrs.**
This is an introduction to the day-to-day operation of a law office. Emphasis is placed on the development of accurate management systems, common procedures and structures of various law firms emphasizing time keeping, client files, record maintenance and retrieval, planning, billing, collections, and software usage.
(3+0) F - day (odd years), eve (even years)

**PAR110**      **Civil Procedures**      **3 Cr. Hrs.**
This is a study of the Federal and State Rules of Evidence and civil procedures. The basic elements of civil claims will be discussed and the initial phase of an action, the complaint, and the discovery process are examined. Emphasis is placed on the role and responsibilities of paralegals in discovery procedure and trial practice.
(3+0) S - day (even years), eve (odd years)

**PAR115        Family Law        3 Cr. Hrs.**
This course covers domestic relations law including marriage, divorce, annulment, separation, adoption, and the rights of children. The paralegal is introduced to the various documents and procedures used pertaining to these family matters.
(3+0) S - day (even years), eve (odd years)

**PAR205        Real Estate Transactions        3 Cr. Hrs.**
This course introduces the student to the law and terminology involved in real estate and real estate conveyances. The course also examines various contracts, mortgages, deeds, and leases. A case project is included in which students prepare an abstract of title by examining recorded documents. The course is designed to acquaint students with basic real property law, ownership, easement, and mortgages. Course also covers problems arising from sales agreements.
(3+0) F - eve

**PAR210        Legal Research        3 Cr. Hrs.**
                **and Writing**
This course provides the student with the basic research abilities which are necessary in law offices. Students use a law library including reporter systems, legal encyclopedias, codes, and computer searching systems.
(3+0) F - day (even years), eve (odd years)

**PAR215        Tort Law        3 Cr. Hrs.**
This course covers the traditional civil wrongs, from both the plaintiff and defendant standpoints. Actual cases will be briefed and discussed. The course stresses the importance of preparation prior to trial.
(3+0) F - day (even years), eve (odd years)

**PAR220        Criminal Law        3 Cr. Hrs.**
The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pretrial procedures in a criminal case. Students are exposed to the criminal justice system from the elements of offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters are included.
(3+0) S - day (even years), eve (odd years)

**PAR221        Bankruptcy        3 Cr. Hrs.**
This course focuses on the procedures required and forms necessary to file in bankruptcy. The course identifies the skills necessary to gather information and assemble materials for a typical client file.
(3+0) S - eve

**PAR222        Estates, Trusts, & Wills        3 Cr. Hrs.**
This is a practical examination of the procedures for drafting wills and probating estates in Ohio. It is a study of the law as applied to the more common forms of wills, trusts, and intestacy. Organization and jurisdiction of the probate court are examined. The documents that must be prepared for the courts, the mechanics of probating the estate, and related accounting matters are examined.
(3+0) S - day (odd years), eve (even years)

**PAR290        Paralegal Internship        3 Cr. Hrs.**
This is a legal work experience related to the student's program of study. The student is accepted on the basis of academic progress and available work site. Enrollment only with instructor permission.
(1+20) F, S, SU

**PET110        Principles of Plastics        4 Cr. Hrs.**
This class is an overview of the plastics industry. Topics covered include basic polymer construction, types, and properties. Different plastic manufacturing processes and the equipment used both primarily and for secondary operations. Quality, defects, causes and monitoring methods including testing. Safety and environmental issues affecting the plastics industry will also be covered.
(3+2) F, S,

**PET210        Injection Molding        4 Cr. Hrs.**
A hands-on study of plastics injection molding techniques. The study of the theory of injection molding will be supplemented by extensive laboratory exercises using plastics injection molding machines. The operation, set-up, optimization, and programming of the injection molding process will be performed using several different molds which students will remove and install. Injection molding molds will be discussed, including basic mold design principles.
(3+2) S
Prerequisite: PET110
Co-requisite: MTH080

**PET220        Advanced Injection Molding        4 Cr. Hrs.**
This class is a continuation of the basic injection molding class. Topics covered are process optimization and troubleshooting. Special injection molding processes including co-injection, lost core, gas-assisted, injection-compression, structural foam, and others will be discussed also. Knowledge of these topics will be gained through text, computer simulations and hands-on lab exercises.
(3+2) S
Prerequisite: PET210
Co-requisite: MTH090

**PET225        Plastic Extrusion        3 Cr. Hrs.**
This class is a basic overview of the plastics extrusion, blow molding, and thermoforming processes. Topics covered will include the materials and properties important to the process, the equipment used in extrusion, blow molding, and thermoforming processes, both primary and secondary, and basic dies, molds, and tooling used for those processes. Job setting and establishing the process will be a large focus of the class. Knowledge of these topics will be gained through text, hand-outs, computer simulations, and hands-on lab exercises.
(2+2) S
Prerequisite: PET110
Co-requisite: MTH080

**PET231        Plastic Materials Testing        4 Cr. Hrs.**
This class is an overview of the more common plastic material properties and performance tests used in industry today. The properties covered will include: mechanical, physical optical, and other properties including a section on color specification and color testing. ASTM and ISO standard test methods will be used to establish and document tests and results. The class will also cover methods of determining an unknown material and general quality standards. Knowledge of these topics will be gained through text, demonstrations and hands-on lab exercises.
(3+2) F
Prerequisites: PET110 and MTH090

**PET240　　　Injection Mold Tooling　　　4 Cr. Hrs.**
An overview of the tooling used in injection molding. The study will cover general mold construction and materials used in the mold. Topics will include the different mold styles such as 2-plate, 3-plate, hot runner, and cold runner. The different systems of a mold including runners, gates, vents, cooling, and ejection will be studied. Part design for acceptable tooling along with tooling practices used in current industry will also be studied. Knowledge of these topics will be gained through text, lecture, and some lab time.
(3+2) F
Prerequisites: PET210 and IND103 (formerly MET103) with a "C" or better

**PET250　　　Plastics Secondary Operations　4 Cr. Hrs.**
This course is an overview of the different secondary processes and equipment used in the plastics industry. Topics will include thermoforming equipment and processes. Fabrication methods including welding and bonding will be covered. Processes such as hot stamping, pad printing, and other methods of decorating will be covered. Also, secondary operations such as trimming and forming will be discussed. The course will be taught as a lecture with some demonstration and hands-on labs.
(3+2) S
Prerequisite: PET110
Co-requisite: MTH090

**PHI110　　　Critical Thinking & Logic　　　3 Cr. Hrs.**
An introduction to the principles of valid reasoning, emphasizing both deductive and inductive logic. Includes analyzing and evaluating arguments, as well as creating arguments in the form of the short, argumentative essay. **Writing intensive**.
(3+0) S
Co-requisite: ENG111

**PHI201　　　Introduction to Philosophy　　　3 Cr. Hrs.**
Examines enduring human concerns such as religion, science, knowledge, identity, morality, and justice, using a variety of philosophical perspectives. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH045 - Introduction to Philosophy). **Writing intensive**.
(3+0) F
Co-requisite: ENG111

**PHI210　　　Ethics　　　3 Cr. Hrs.**
An introduction to basic ethical theories and their applications. Students examine the relationship between personal and social values in particular cultural contexts.
Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH046 - Introduction to Ethics). **Writing intensive**.
(3+0)
Co-requisite: ENG111

**PHI220　　　Ethics in Health Care　　　3 Cr. Hrs.**
Ethics in health-related issues will be explored. Includes the impact of scientific and technological advances on health care decisions. **Writing intensive**.
(3+0) F, S
Co-requisite: ENG111

**PHI222　　　Ethics in the Helping　　　3 Cr. Hrs.**
**　　　　　　　　Professions**
The practice of counseling and related helping professions is regulated both by law and by professional standards of practice or codes of ethics, which provide only general guidelines. This course will look at historical and contemporary theories of relevant ethical theories and provide exposure to real-life ethical issues from a multi disciplinary approach. **Writing intensive.**
(3+0) F, S
Prerequisite: HST101
Co-requisite: ENG111

**PHI230　　　World Religions　　　3 Cr. Hrs.**
Study and comparison of the major attitudes toward life, human existence and the world embodied in major religions of the world. Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam will be several of the religions examined along with the cultural backgrounds of lands of their development. **Writing intensive**.
(3+0) F
Co-requisite: ENG111

**PHY101　　　Principles of Physical　　　4 Cr. Hrs.**
**　　　　　　　　Science**
An introduction to the basic principles of the physical sciences. Includes subjects of physics, chemistry, geology, astronomy, and meteorology. Understanding of basic concepts is developed through emphasis on scientific methods and basic laboratory procedures and report writing. Includes simple problem solving, lab work and a research paper.
(3+2) F
Prerequisite: MTH080 or satisfactory score on Course Placement Test

**PHY140　　　Astronomy　　　4 Cr. Hrs.**
An introduction to the science of astronomy. The course will cover elements of the history and development of astronomy, our new understanding of the solar system, stellar astronomy, the galaxies and the structure of the universe. Laboratory reinforces and supplements lectures.
(3+2) S

**PHY150　　　Principles of Geology　　　4 Cr. Hrs.**
An introduction to the field of geology and the study of the earth. Covers minerals and rocks and their formation within the context of the earth's geologic history. Emphasis on rocks, soils, and land formations, plate tectonics and natural disasters such as earthquakes. Lab includes field trips and the identification of rocks and minerals. Some chemistry is recommended.
(3+2) F

**PHY251　　　Physics: Mechanics & Heat　　　4 Cr. Hrs.**
2An algebra based course covering mechanics including force, work, energy, and simple machines, heat and basic thermodynamic concepts, wave motion and sound. It includes problem solving, laboratory work and the writing of technical lab reports. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSC014 - General Physics I - Not for Physics majors and OSC021 - General Physics Sequence - Not for Physics Majors, course 1 of 2).
(3+3) F
Prerequisites: MTH109 and MTH112

**PHY252**        **Physics: Electricity        4 Cr. Hrs.**
                    **& Magnetism**
An algebra based course covering electricity and magnetism, light and optical concepts, and basic concepts of modern physics. It includes problem solving, laboratory work and the writing of technical lab reports. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSC015 - General Physics II - Not for Physics majors and OSC021 - General Physics Sequence - Not for Physics Majors, course 2 of 2).
(3+3) S
Prerequisites: MTH109 and MTH112

**PLC200**        **Programmable        3 Cr. Hrs.**
                    **Controller I**
A study of the installation, programming and troubleshooting of programmable controlled systems, currently used in an industrial environment. The primary PLC used for this class will be the Allen Bradley SLC-500 and PLC-5 units, using RSLogix and RSLinx software. The focus will be on Engineering and Maintenance tasks performed with PLC systems.
(2+2) F
Prerequisite:  IND120 (formerly EET171)

**PLC210**        **Programmable        3 Cr. Hrs.**
                    **Controller II (AB)**
   This course is an advanced study of the Programmable Automation Controller (PAC) instruction set, and programming of Allen Bradley Control Logix Processors, and hardware interface systems. The PLCs used in this course will be the Allen Bradley Control Logix and Compact Logix Programmable Automation Controllers.   PAC networks such as DeviceNet and ControlNet are discussed, as well as Ethernet interfaces. Students will study industrial applications of the PACs focusing on problem solving and project completion.  The topics presented will be learned through text, presentations, various exercises and hands-on labs.
(2+2) S
Prerequisite: PLC200

**PLC230**        **Servo/Robotic Systems        3 Cr. Hrs.**
Servo/Robotics Systems is an introductory course in industrial robotics with emphasis on The Fanuc R-J3 series robot. The course is intended for students who wish to gain insight into robot operations in order to setup, test, run, and refine application programs for production. Students successfully completing the course will be able to: power up and jog the robot, execute production operations and recover from common faults, create and modify material handling programs and macros, and utilize robot input and output signals. The course consists of lectures, demonstrations, and a series of laboratory exercises using the Fanuc CERT training modules.
(2+2) S
Prerequisites: PLC200, IND223 (formerly EET276)

**PNE105**        **Effective Communication Skills   1 Cr. Hr.**
The ability of health care professionals to communicate accurately and effectively in the context of a helping relationship is vital.  The course provides tools with which to establish open therapeutic communication with clients, foster teamwork with colleagues, and deal with conflict and aggression in a constructive manner.
(1+0) SU

**PNE110**        **Special Topics in PN        1-4 Cr. Hrs.**
An independent study which focuses on a topic or selected problem in nursing, subject to approval and supervision of an assigned nursing instructor.    Content and methodology to be arranged on an individual basis.  Credit will be determined by the nature and extent of the independent study.
F, S, SU
Prerequisite: Permission of the Dean of Nursing

**PNE120**        **Essentials of Practical        8 Cr. Hrs.**
                    **Nursing**
An introduction to the body of nursing knowledge and skills essential for safe and accurate delivery of care utilizing the nursing process. Basic therapeutic communication, multicultural concepts, IV therapy, fluid and electrolyte balance, and ethical concepts are introduced.
(4+12) F, S
Prerequisite: Admission to the Practical Nursing Program
Co-requisites: BIO150 or BIO232, ENG111, and PSY110

**PNE121**        **Nursing Care        2.5 Cr. Hrs.**
                    **Mother and Newborn**
This course focuses on nursing care of women related to reproductive health patterns.  Emphasis is placed on pregnancy, childbirth, postpartum, and the newborn with nursing care directed in a family-centered holistic approach.    Selected women's health issues and potential complications are included that pertain to the childbearing cycle.   Legal and ethical directives are reviewed.
(3+6) F, S
Prerequisites: PNE120
Co-requisites: PSY230, NRS110 or NRS112, and PNE122

**PNE122**        **Nursing Care of the Child        2.5 Cr. Hrs.**
This course focuses on nursing care of the child from infancy through adolescence with health care needs. Emphasis is placed on growth and developmental concepts with nursing care directed in a family-centered holistic approach.   Health promotion, maintenance, and restoration of the child are examined.  Legal and ethical directives are reviewed.
(3+6) F, S
Prerequisites: PNE120
Co-requisites: PSY230, NRS110 or NRS112, and PNE121

**PNE123**        **Nursing Care: Adults I        4.5 Cr. Hrs.**
Focuses on the care of adults with both acute and chronic medical and surgical conditions.  A body systems approach is utilized. Mental health concepts and basic concepts of bioterrorism are introduced.   Students continue to develop skills in problem solving through the use of the nursing process as applied to individual situations.
(6+10) S, SU
Prerequisite: PNE120
Co-requisite: NRS110 or NRS111

**PNE124**        **Nursing Care Adults II        5.5 Cr. Hrs.**
This course builds on previous knowledge and concepts. Acute and chronic conditions of adults are presented over the remaining body systems.  Legal issues in practical nursing are discussed as well as the leadership/management role of the practical nurse in caring for groups of individuals.
(6+15) F, SU
Prerequisites: NRS110 or NRS112, PNE121, PNE122, PNE123
Co-requisite: BIO131

**PSY110** **General Psychology** **3 Cr. Hrs.**
This course examines the complex individual, the many factors believed to drive the individual and the resulting behavior. Students discuss empirical investigation and learn how to use these methods as tools in the discovery of individual functioning. This class also explores specific area of inquiry such as cognition, social and developmental psychology, learning, perception, consciousness, organizational, and health psychology. Personality, abnormal behavior, and psychological therapies are discussed. **Writing intensive.** Transfer Assurance Guide (TAG) approved effective summer 2007 (PSS015 - Introduction to the Fundamentals of Psychology).
(3+0) F, S, SU
Co-requisite: ENG111

**PSY210** **Abnormal Psychology** **3 Cr. Hrs.**
This course is designed to provide students with an understanding of maladaptive behavior, its causes and consequences. Emphasis is on research methods and clinical assessment skills. Utilizing the DSMIV, special emphasis is placed on symptom recognition and treatment planning of psychological disorders. The impact of mental illness on the client's interpersonal relationships as well as cultural differences and societal response to mental illness will be explored. **Writing intensive**. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS017 - Social Psychology).
(3+0) F, S, SU
Prerequisite: PSY110, ENG111

**PSY220** **Social Psychology** **3 Cr. Hrs.**
This course provides students with the opportunity to explore the influences of other people, groups, and situations on the individual. Students should also gain a basic understanding of the research process and how it is used to investigate social psychological issues. Topics covered in this class include social perception and cognition, social influence, social relationships and applied social psychology. Students will have many opportunities to apply their new knowledge to critical thinking exercises and group projects. **Writing intensive**. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS016 - Social Psychology).
(3+0) S
Prerequisite: PSY110, ENG111

**PSY230** **Human Growth** **3 Cr. Hrs.**
**& Development**
This course addresses the study of human development over the entire life span. Topics included in this course are emotional, cognitive, moral, social, and biological development. In addition to these topics, this course offers an analysis of the interaction of human characteristics within the individual and the relationship between individuals, environment and culture at various stages of development. **Writing intensive**. Transfer Assurance Guide (TAG) approved effective spring 2008 (OSS048 - Life Span).
(3+0) F, S, SU
Prerequisite: PSY110

**PSY260** **Forensic Psychology** **3 Cr. Hrs.**
This course allows students to appreciate the interaction between psychology and the criminal justice field. Students will become familiar with the application of psychological theory, principles, and concepts to both the civil and criminal justice system.
(3+0) F
Prerequisites: PSY110

**PUA110** **Introduction to Public** **3 Cr. Hrs.**
**Administration**
This course offers students an introductory overview of Public Administration including the purpose of, scope of, impact of and relevance within our culture.
(3+0) F

**PUA115** **State and Local** **3 Cr. Hrs.**
**Governments**
This course offers students an introductory overview of state and local governments and how they function. Topics covered include Federalism, State Structures, State-Local Relations, Budgeting, etc.
(3+0) S

**PUA250** **Public Budgeting** **3 Cr. Hrs.**
This course offers students an introductory overview of fiscal administration within governments. Topics cover fundamental principles, structure, methods, systems, reform and analysis.
(3+0) S

**PUA260** **Grant Writing** **3 Cr. Hrs.**
**& Management**
You will become familiar with the elements of grant writing, as well as, actively participate in developing a grant submission.
F, S, SU
(3+0)

**QCT100** **Quality Concepts** **3 Cr. Hrs.**
This class examines reasons for and philosophies leading to quality. We will look at quality from management, practitioner, and customer perspectives. Students concentrate on quality problem solving and process control tools. Course work includes measurement system analysis and control charting principles. In addition, the student is introduced to probability and studies philosophies espoused by Deming, Crosby, and Juran.
(3+0) S
Prerequisite: MTH090

**QCT131** **Quality for Lean** **3 Cr. Hrs.**
**Manufacturing**
This course deals with managing production operations in manufacturing plants. Two topics, "The 5S's: Workplace Organization" and "Mistake-Proof It!" prepare the student for a "Lean Manufacturing" project. Course is web based. Instructor is available for consultation via e-mail and telephone. Must have the ability to access web courses.
(2+2) On Demand
Prerequisites: QCT100 and ability to access web courses

**QCT141** **Precision Measurement** **3 Cr. Hrs.**
This course provides the student with theory and skills needed to perform dimensional inspections. Students will learn to study a part print, select, and use the proper measuring tool(s). Concepts introduced include precision, discrimination, accuracy and calibration. Previously learned print reading skills are expanded to include Geometric Dimensioning and Tolerancing.
(2+2) F, S,
Prerequisites: MET110, and IND103 (formerly MET103) with a "C" or better

**QCT142**     **Advanced Concepts**     **3 Cr. Hrs.**
              **of GD & T**
This second course in geometric dimensioning and tolerancing requires the student to already have an understanding of the basics of GD&T. There are more in depth discussions on select topics not covered in detail in fundamentals classes. Examples are more complex and include explanations of concepts that create problems in the workplace. A method for dealing with tolerance stacks, another layer of GD&T expertise, will be demonstrated and practiced.
(2+2) On Demand
Prerequisite: MET110 or QCT141

**QCT243**     **Advanced Quality**     **3 Cr. Hrs.**
              **Improvement**
This course is one of a series of quality classes. The student learns more complex quality improvement methods by studying at least three of the following distinct topics: Advanced SPC; Six Sigma Start-Up; DOE: Screening Experiments; Measurement Systems Analysis; and Problem Solving. Topics are selected based on student's work experience and previously completed quality course content. All but two sessions may take place via the internet. Two, 3-hour laboratory workshops are planned for Design of Experiment and Cp, CpK practice. Must have the ability to access web courses.
(2+3) On Demand
Prerequisite: QCT100 and ability to access web courses

**QCT250**     **Certified Quality**     **3 Cr. Hrs.**
              **Technician**
Review of the requirements and topics to become certified as an American Society for Quality Control Technician or Mechanical Inspector.
(3+0) On Demand
Prerequisites: QCT100 and QCT141

**REA210**     **Real Estate Principles**     **3 Cr. Hrs.**
This is an introductory course taught in accordance with guidelines set by the National and Ohio Real Estate Associations, and the Ohio Real Estate Commission. It is designed for professional real estate people, as well as the general public. The course covers elementary characteristics of real estate and various influences on real estate values and basic real estate math. It also is a foundation for further study and preparation of securing a sales license.
(3+0) Weekends - F, S

**REA220**     **Real Estate Law**     **3 Cr. Hrs.**
This is a study of all the areas of law dealing with real estate. Emphasis is on the law of agency as applied to real estate brokers and salespersons. Law of fixtures, estates, leases, conveying of real estate, real estate managers, license laws of Ohio, zoning, cooperatives, and condominiums are also included. This prepares students for sales license testing.
(3+0) Weekends - F, S

**REA230**     **Real Estate Finance**     **3 Cr. Hrs.**
This is an examination of the nature of financing real estate. Primary consideration is understanding mortgage loans and the mortgage market. The effects of governmental monetary and fiscal policies are also considered. Qualifying applicants and loan procedures are discussed throughout. This is a required course to prepare students for sales license testing.
(3+0) Weekends - F, S

**REA240**     **Real Estate Appraisal**     **3 Cr. Hrs.**
Theory and principles of appraising urban real property using the three basic techniques of appraising are studied in depth. A term project is assigned to give the students practical experiences in applying these techniques. This is a required course to prepare students for sales license testing.
(3+0) Weekends - F, S

**SCM200**     **Supply Chain**     **3 Cr. Hrs.**
              **Management**
This course focuses on the flow of information and goods between a business, its suppliers and its customers. Special attention is given to the development of relationships with a firm and its suppliers. Both internal and external aspects of the supply chain are analyzed.
(3+0) F
Prerequisite: SCM220 or instructor permission

**SCM210**     **Purchasing**     **3 Cr. Hrs.**
              **& Materials Management**
This course focuses on supplier identification, evaluation, selection, and measurement. The relationship between the purchasing function and the rest of the organization is explored along with the correlation between supplier performance and inventory levels.
(3+0) F
Prerequisite: SCM220 or instructor permission

**SCM220**     **Operations Management**     **3 Cr. Hrs.**
This course focuses on the internal production process found in manufacturing facilities. Critical areas such as production planning, production line balancing, TOC analysis, lean, quality, MRP/MRPII, and inventory management are explored.
(3+0) F
Prerequisite: MTH080

**SCM230**     **Physical Distribution**     **3 Cr. Hrs.**
              **& Logistics**
This course focuses on the management of the movement of goods between local, national and international locations. Shipping documentation and packaging requirements are explored. The various modes of transportation are examined in detail.
(3+0) F
Prerequisite: SCM220 or instructor permission

**SPN111**     **Spanish I**     **4 Cr. Hrs.**
Introduction to Spanish through oral-aural drills, controlled conversations, reading and writing, with attention paid to grammatical structures and cultural awareness. Spanish I is the first half of a two-semester sequence designed primarily for beginners.
(4+0) F

**SPN112**     **Spanish II**     **4 Cr. Hrs.**
Continuation of Introduction to Spanish with practice in speaking, reading, writing, and listening comprehension conducted within a culturally significant framework.
(4+0) S
Prerequisite: SPN111 or instructor permission

**SSC101 Sociology 3 Cr. Hrs.**
An introduction to the sociological perspective with a focus on the United States. "Order" and "conflict" theories are applied to broad areas of sociological concern, such as social inequality, sexual inequality, work and family, law and crime, race and ethnic relations, education and popular culture, modern urbanism, politics of food, health care, and the global society. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS021 - Introduction to the Fundamentals of Sociology). **Writing intensive**.
(3+0) F, S, SU

**SSC102 Sociology – 3 Cr. Hrs.**
**Sustainable World**
This course introduces sociology through the lens of sustainability. How best can today's societies sustain a flourishing of life on this planet? Natural scientists document soil loss, water scarcity, species extinction, diminishing fossil fuel supplies, and a human induced climate crisis. Meanwhile, social scientists track the social systems and cultural patterns that spur an expanding use of these diminishing resources, accelerating decline and disrupting the planet's natural cycles. A broad array of sociological tools is employed in the study of culture, economy, politics, religion, race, gender, population and development, and social change to analyze unsustainable social patterns and explore new, more sustainable directions. As SSC102 is interchangeable with SSC101, students wishing to complete both introductory-level sociology courses should check with their advisor at the receiving institution. **Writing intensive**.
(3+0) F, SP
Co-requisite: ENG111

**SSC110 General Anthropology 3 Cr. Hrs.**
Introduction to anthropological theory and observation. Topics will include a range of cultural phenomena, including evolution, adaptation, ecology, language, kinship, religion, and status systems. Emphasis is placed on cross-cultural perspectives. Transfer Assurance Guide (TAG) approved effective spring 2008 (OSS001 - Cultural Anthropology). **Writing intensive**.
(3+0) S

**SSC120 American Government 3 Cr. Hrs.**
A study of power as it occurs in the formation and implementation of public policy in the United States; based on the recognition that politics is an activity that creates the "realm of we" and molds personal identities. Special attention is given to the concepts of politics, justice, and democracy as a basis for examining our responsibility in the public realm. Topics covered are media, interest groups, political parties and campaigns, federal government structure and process, effects of power in domestic and foreign affairs, and making democracy. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS011 - American Politics and Government). **Writing intensive**.
(3+0) F, SU

**SSC130 Comparative Government 3 Cr. Hrs.**
A study of contemporary political systems, processes and policies of Western and non-Western countries. This will include aspects of political processes such as interest groups, political parties, elections, political socialization, and political culture. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS013 - Comparative Government). **Writing intensive**.
(3+0) S

**SSC210 Cultural Diversity 3 Cr. Hrs.**
Explores ways that our society has served as a context for either more or less "cultural diversity." Emphasizes how historical relations among different people have affected images of "self" and "others" in U.S. society. Topics include thinking about culture, historical patterns and methods, the "American dilemma," race and class, and culture and gender. **Writing intensive**.
(3+0) F, S, SU

**SSC220 Interpersonal Violence 3 Cr. Hrs.**
Study the social reality of interpersonal violence within families, partnerships, dating, religious organizations, peer groups and the work place. Types of violence such as bullying, sexual violence, and hate crimes will be explored. Worldviews, and sociological theories are introduced and applied to understand the causes and perpetuation of interpersonal violence. In addition to understanding the social origins of interpersonal violence, students are introduced to assessment tools for use by allied health and public service professionals. Stories told through films, interviews, student presentations, and literature may be very graphic in nature. Every effort will be made to promote human dignity, yet students should be advised that the class content may be sobering and offensive**. Writing intensive.**
(3+0) S
Co-requisite: ENG111

**STA120 Introduction to Statistics 3 Cr. Hrs.**
An introductory course introducing the student to the collection, analysis, and presentation of data. Presentation includes appropriate graphic, tabular, and numeric summaries of data. Major topics include Correlation and Regression, Hypothesis Testing, Analysis of Variance (ANOVA), and CHI Square analysis. Use the standard normal distribution to determine probabilities from z-values. Understand the Central Limit Theorem and apply the addition and multiplication rules of probability.
(3+0) F, S, SU
Prerequisite: MTH090

**STA220 Statistics 3 Cr. Hrs.**
This is an introductory course in the principles of collecting, presenting, and analyzing data. Major topics of study include mean, median, mode, standard deviation, proportion, probabilities, and sampling. Methods of statistical analysis involve estimation, hypothesis testing, regression, correlation, and analysis of variance (ANOVA).
(3+0) F, S, SU
Prerequisite: MTH109

**TRN130 CDL Preparation 2 Cr. Hrs.**
This is a preparation course for those becoming a licensed commercial driver. The focus of the class will be on component identification, and preparation for the state issued CDL learner permit. The students will. This is a 32 contact hour course
(2+0) F, S, SU
Prerequisites: 18 years of age, valid driver's license issued in state of residence, D.O.T. Physical and drug screen.

**TRN131** **Tractor-Trailer** **4 Cr. Hrs.**
**Operations I**
Introduces students to the trucking industry, federal and state regulations, records and forms, industrial relations, and other non-driving activities. This course provides an emphasis on safety that will continue throughout the program. familiarizes students with truck instruments and controls and on performing basic maneuvers required to drive safely in a controlled environment. In addition, students acquire basic coupling and uncoupling skills.
(4+0) F, S, SU

**TRN132** **Tractor-Trailer** **3 Cr. Hrs.**
**Operations II**
A continuation of the study of the trucking industry, federal and state regulations, records and forms, industrial relations, and other driving activities. This course provides an emphasis on safety that will continue throughout the program. This class familiarizes the students with truck instruments and controls and on performing basic maneuvers required to drive safely in a controlled environment. In addition, students acquire basic coupling and uncoupling skills. Development of driving skills under actual road conditions, safe operating practices are integrated into the development of driving skills. A focus on the CDL driving requirements will be practiced.
(3+0) F, S, SU
Prerequisite: TRN131

**TRN201** **Tractor-Trailer** **4 Cr. Hrs.**
**Driving I**
Introduces students to the trucking industry, federal and state regulations, records and forms, industrial relations, and other non-driving activities. This course provides an emphasis on safety that will continue throughout the program. The students will get familiar with truck instruments and controls and on performing advanced maneuvers required to drive safely in an employer's environment. In addition, students will be employed by a motor carrier and will receive compensation. The student will be observed and under the strict supervision of the instructor.
(3+1) F, S, SU
Prerequisite: TRN132

**TRN202** **Tractor-Trailer** **4 Cr. Hrs.**
**Driving II**
An advanced study of the trucking industry, federal and state regulations, records and forms, industrial relations, and other driving activities. This course provides an emphasis on safety that will continue throughout the program. This course familiarizes students with truck advanced instruments and controls and on performing advanced maneuvers required to drive safely in an employer's environment. In addition, students will be employed by a motor carrier and will receive compensation. The student will be observed and under the strict supervision of the instructor.
(2+2) F, S, SU
Prerequisite: TRN201

**VCT108** **Photo Editing** **2 Cr. Hrs.**
This course introduces the student to the fundamental process of creating camera-ready copy and art, color separation and proofing, image manipulation, scanning, and photo conversion methods. Various software packages, including Photoshop, will be investigated. Basic computer knowledge required. Should be taken in conjunction with Photography. Lab Fee.
(1+2) F

**VCT111** **Layout & Design** **3 Cr. Hrs.**
This course covers the relationship among various design elements: balance, proportion, typography, and layout. Message composition, art presentation, copy layouts, the design process, and page makeup will be analyzed using current layout software. Lab Fee.
(2+2) S

**VCT182** **Photography** **3 Cr. Hrs.**
VCT182 is an introductory course, teaching basic camera and PhotoShop skills. The main emphasis of this course will be on camera operations and the capture of visual situations on film. PhotoShop techniques will be limited to cropping, contrast and brightness, removal of unwanted flaws, and other correcting procedures. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH002 - Photography, Digital).
(1+4) F - Day, S - Eve

**VCT204** **Concepts of** **3 Cr. Hrs.**
**Visual Communication**
This is an overview of advanced visual communication concepts including problem solving, research, ideation, design, script writing, storyboarding, training techniques, proposal preparation, cost estimating, and analysis. Overall project management techniques and environmental factors are covered in depth.
(2+2) S

**VCT205** **Visual Communication** **2 Cr. Hrs.**
An overview designed to teach the student about the world of visual communication: how visual communication changes the world, how to use it effectively, and how it impacts the way we live.
(1+2) S

**VCT260** **3D Computer Animation** **3 Cr. Hrs.**
An introduction of the basics necessary to create 3-dimensional images and animated presentations. The student will be able to create realistic still images and animated presentations using 3-dimensional modeling, rendering, and animation. Computer experience required. Lab Fee.
(2+2) F

**VCT266** **Multimedia Production** **3 Cr. Hrs.**
This is the study of multimedia through student exploration and experimentation in various visual presentation technologies including digital media. Emphasis will be on design and production of total presentations by planning content and using a variety of software and hardware.
(2+2) S
Prerequisites: CIS129

**VCT268** **Video Production** **3 Cr. Hrs.**
The study of video production is to provide a basic knowledge of the process used in pre-production, production, and post-production activities. Video recording theory, concept planning, and production techniques, and linear and non-linear editing will be studied using a variety of hardware and software to accomplish the project objectives. Transfer Assurance Guide (TAG) approved effective summer 2007 (OCM008 - Introduction to Single Camera Production).
(2+2) F

**VCT289** **VCT Co-Op Experience** **3 Cr. Hrs.**
This is a work experience in visual communications. The student is accepted on the basis of academic progress and available work site at the College or an outside organization. Enrollment with instructor permission.
(1+20) F, S, SU

**F = Fall S = Spring SU = Summer**

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
**V**
W
X
Y
Z

# Personnel Directory

## BOARD OF TRUSTEES

Marilyn Bergstedt ……………........ Napoleon
Sue Derck…………………….....Antwerp
Philip Ennen………………………….Bryan
Michael Faber……………………...Defiance
Robert Hall………………………Napoleon
Vond Hall…………………………Archbold
Philip McCartney…………………….Bryan
Joseph O'Neil…………………….. Defiance

## FACULTY

**PATTI ALTMAN**, Instructor - Nursing
   B.S.N., Bowling Green State University
   M.S.N., Medical College of Ohio
   05/29/90

**WENDY BAUMLE**, Instructor - Nursing
   B.S.N., University of Toledo
   M.S.N., Medical College of Ohio
   08/16/10

**DIANE BECHTEL**, Instructor - Business Technologies
   B.A., California State College
   B.S., Bowling Green State University
   M.B.A., Bowling Green State University
   12/10/79

**GERALD BERGMAN**, Instructor - Arts & Sciences
   A.A., Oakland Community College
   B.S., Wayne State University
   M.Ed., Wayne State University
   M.A., Bowling Green State University
   Ph.D., Wayne State University
   Ph.D., Columbia Pacific University
   M.S.B.S., Medical College of Ohio
   M.P.H., NW Ohio Consortium (Bowling Green State
   University, Medical College of Ohio, and University of Toledo)
   M.S., Medical College of Ohio
   09/02/86

**ALLEN BERRES**, Instructor - Arts & Sciences
   B.A., University of Notre Dame
   M.A., Ohio State University
   Ph.D., Ohio State University
   08/16/08

**AARON BLOOMFIELD,** Instructor - Engineering Technologies
   B.S., Bowling Green State University
   M.A., University of Toledo
   08/16/09

**SHARON BRUBAKER**, Instructor - Nursing
   A.D.N., Owens Community College
   B.S.N., Spring Arbor College
   M.S.N., Michigan State University
   01/14/08

**THOMAS CARR,** Instructor - Arts & Sciences
   B.S., Elizabethtown College
   M.B.A., University of Toledo
   M.S., Case Western Reserve University
   Ph.D., Case Western Reserve University
   08/16/09

**WILLIAM CHAPLIN**, Industrial Training Specialist
   A.A.S., Owens Community College
   B.A., University of Toledo
   M.B.A., University of Toledo
   08/18/98

**CYNTHIA CONAWAY MAVROIDIS**, Instructor - Arts & Sciences
   B.S., Eastern Michigan University
   M.S., Cleveland State University
   08/25/03

**CHRISTINE COPPLE**, Instructor - Arts & Sciences
   B.S., Valparaiso University
   M.S., Indiana University
   01/12/04

**CYNTHIA CRIST**, Medical Assisting Lab/Externship Coordinator
   A.A.B., Northwest State Community College
   L.P.N., Bowling Green Area School of Practical Nursing
   08/16/10

**WILLIAM CULBERTSON**, Instructor - Arts & Sciences
   B.S., Bowling Green State University
   M.A., Bowling Green State University
   Ph.D., University of Toledo
   09/02/86

**STEVE DICK**, Instructor - Engineering Technologies
   B.S., Eastern Michigan University
   M.L.S., Eastern Michigan University
   08/25/03

# Personnel Directory

**PAMELA DONALDSON**, Instructor - Human Services
B.S.S.W., Bowling Green State University
M.S.S.A., Case Western Reserve University
08/23/94

**COLIN DOOLITTLE**, Instructor - Engineering Technologies
A.T.S., Northwest State Community College
B.S., Bowling Green State University
08/16/06

**MELANIE DUSSEAU**, Instructor - Arts & Sciences
B.A., Ohio University
M.A., University of Toledo
M.F.A., Southern Illinois University
01/10/11

**WILLIAM EICHENAUER**, Instructor - Business Technologies
A.A.B., Northwest Technical College
B.S., Defiance College
M.B.A., Indiana University
01/05/99

**MELISSA FABER**, Instructor - Arts & Sciences
B.S., Defiance College
M.A., University of Toledo
Ph.D., University of Toledo
08/16/08

**SHERRIE GEITGEY**, Instructor - Business Technologies
B.S., Bowling Green State University
M.O.D., Bowling Green State University
09/02/86

**DEBORAH HARTZELL**, Instructor - Nursing
R.N., Parkview Hospital
B.S.N., Bowling Green State University
M.S.N., Medical College of Ohio
09/03/91

**DONNA HERSHBERGER**, Instructor - Early Childhood Development
B.S., West Virginia University
M.A., West Virginia University
08/30/88

**CHRISTINE HIGBIE**, Instructor - Nursing
A.A.S., Owens Community College
B.S., University of Phoenix
M.S.N., Walden University
01/09/06

**TONY HILLS**, Instructor - Business Technologies
A.A.B., Northwest State Community College
B.S., Defiance College
M.B.O.L., Defiance College
08/18/94

**PATRICIA HOFBAUER**, Instructor - Early Childhood Development
B.S., Bowling Green State University
M.Ed., Bowling Green State University
09/01/87

**SHERRY HOWARD**, Instructor - Arts & Sciences
B.A., Harvard and Radcliffe Colleges
M.A., Bowling Green State University
08/23/94

**BETTE HUGHES**, Clinical Teaching Assistant
A.D.N., Northwest Technical College
B.S.N., Bowling Green State University
M.S.N., Medical College of Ohio
08/16/04

**GARY KADESCH**, Instructor - Engineering Technologies
A.A.S., Stautzenberger College
09/02/86

**ANDREW KOZAL**, Instructor - Criminal Justice
B.A., Siena Heights University
M.S., Bowling Green State University
08/19/02

**DANIEL LIGHT**, Instructor - Business Technologies
B.S., Ohio State University
M.A., Asbury Seminary
09/02/86

**JO McCORMICK**, Instructor - Arts & Sciences
B.A., Adrian College
M.A., Western Illinois University
M.S.Ed., Western Illinois University
Kellogg Certified Developmental Educator
01/14/02

**DEBRA MIGNIN**, Instructor - Nursing
B.S.N., Bowling Green State University
M.S.N., Medical College of Ohio
08/20/96

**DAVID MOHRING**, Instructor - Engineering Technologies
A.A.S., Northwest State Community College
B.S.M.E.T., University of Toledo
08/16/09

# PERSONNEL DIRECTORY

**CAROL MOORE**, Instructor - Business Technologies
B.S., University of Toledo
M.B.E., Bowling Green State University
09/14/83

**TERA NEWTON**, Instructor - Office Administrative Services
A.A.B., University of Toledo
B.A., University of Toledo
M.Ed., University of Toledo
M.Ed., Bowling Green State University
08/16/10

**ANNETTE OBERHAUS**, Clinical Teaching Assistant
B.S., Bowling Green State University
M.S.N., Lourdes College
08/16/06

**MARTHA PHILLIPS**, Instructor - Human Services
B.S., Otterbein College
M.S.S.A., Case Western Reserve University
09/04/91

**SYLVIA REYNOLDS-BLAKELY,** Clinical Teaching Assistant
B.S.N., Northern Michigan University
M.S., Ohio State University
08/16/09

**CHRISTINE ROBINSON**, Instructor - Business Technologies
A.A.B., Northwest Technical College
B.S., Defiance College
M.A., Bowling Green State University
09/19/96

**KAREN SHORT**, Instructor - Nursing
B.S.N., Goshen College
M.S.N., Medical College of Ohio
09/01/89

**EDWARD SINGER**, Instructor - Arts & Sciences
B.A., University of Notre Dame
M.S., Ohio State University
Ph.D., Ohio State University
09/02/86

**JON SPEER**, Instructor - Arts & Sciences
B.S., Ohio Northern University
Ohio Professional Engineer
09/03/85

**MINDY STAYNER**, Instructor - Nursing
A.A.S. Northwest State Community College
B.S.N. Bowling Green State University
M.S.N., Medical College of Ohio
08/20/01

**JEAN SULLIVAN**, Instructor - Nursing
B.S.N., Bowling Green State University
M.S.N., Regis University
08/16/10

**GREG TEFFT**, Instructor - Arts & Sciences
B.A. Kentucky Christian College
B.S., Bowling Green State University
M.S. University of Toledo
08/18/98

**DIANNE WENDT**, Instructor - Nursing
B.S.N., Ohio State University
M.S.N., Medical College of Ohio
11/30/92

**KAREN WYLIE**, Instructor - Engineering Technologies
B.S., University of Missouri-Rolla
08/16/09

## STAFF

**CHARLENE ALLOWAY**, Food Preparation Worker
08/18/08

**BEN ARMSTRONG**, Library Supervisor
B.A., Taylor University
09/29/08

**ROBERT AUSTERMILLER**, Custodian
07/01/83

**HOLLY BARTON**, Allied Health Department Chair
A.A.S., Michigan College
B.S., Tri-State University
M.S., Indiana Wesleyan University
01/03/06

**CARRIE BAYNES**, Admissions Secretary - Office of Admissions
A.A.B., Northwest State Community College
10/11/10

**DEBRA BEACH**, Coordinator of Instructional Support & Distance Learning
B.A., Bluffton University
M.Ed., Bowling Green State University
Ph.D., Capella University
08/24/09

# Personnel Directory

**CARLING BELKNAP**, Financial Aid Counselor
A.A.B., Northwest State Community College
06/12/08

**KRISTINE BELTZ**, Custodian
12/08/92

**LISA BEVER**, Food Preparation Worker
03/04/10

**LORI BIRD**, Dean of Nursing
B.S.N., University of Cincinnati
M.S., Ball State University
08/29/88

**MICHAEL BISHOP**, Facilities Technician
10/01/10

**KAREN BLEEKS**, Director - Tech Prep
B.A., Bowling Green State University
M.A., Bowling Green State University
08/02/99

**AMANDA BONNESS**, Library Assistant - Circulation
B.A., Cornell College
05/17/10

**GRETCHEN BOOSE**, Retention Coordinator
B.A., University of Oklahoma
M.A., Heidelberg College
07/17/00

**NATALIE BRANDON**, Coordinator - Career Services
B.S., Defiance College
M.A., Bowling Green State University
09/18/86

**SANDRA BUCHHOP**, Custodian
02/10/97

**MARSHA BUEHRER**, Division Secretary - Nursing
A.A.B., Northwest State Community College
03/22/93

**DANIEL BURKLO**, Dean of Engineering Technologies
A.A.S., University of Toledo
B.S., I.P.F.W. Purdue University Branch
M.S., University of Toledo
01/14/02

**ERICH BUSER,** Manager of Data Systems - Information
Technology
B.S., Bowling Green State University
10/22/08

**LORI CAIN,** Staff Accountant
A.A.B., Bowling Green State University
06/09/08

**DAVID CHESTER**, Working Custodial Supervisor
A.A.B., Northwest State Community College
08/16/10

**DENIS CIACIUCH**, Director of Human Resources - Office of
Human Resources
B.S., University of Toledo
09/07/05

**RACHEL COBB**, Food Preparation Worker
10/09/06

**JENNIFER CORDES**, Assistant - Copy Center
04/02/97

**JULIE CURRY**, Financial Aid Counselor
A.A.S., Northwest State Community College
08/16/07

**ROBIN DIAZ**, Custodian
11/10/10

**JAMES DREWES**, Director of Workforce Development
A.A.S., Northwest Technical College
B.S., Defiance College
01/04/09

**ROBERT DUNCAN**, Network/Systems Administrator -
Information Technology
A.A.B., Northwest State Community College
08/13/07

**NANCY DUNSON**, Accountant
A.A.B., Northwest State Community College
B.A., Bluffton University
08/29/90

**ANGELA DURHAM**, Copy Center Operator/Mailroom Clerk
Diploma, International Business College
10/02/86

**DREAMA ECK**, Food Preparation Worker
09/18/06

**JOSIE ESQUIBEL**, Food Preparation Worker
08/26/09

# Personnel Directory

**LANA EVANS**, Dean of Arts & Sciences
   B.B.A., Marshall University
   M.Ed., University of Toledo
   Kellogg Certified Developmental Educator
   07/22/02

**CHERYL GEER**, Internal Admissions and Alumni Relations Coordinator
   A.A., Lourdes College
   B.I.S., Lourdes College
   05/01/06

**DENNIS GIACOMINO**, Director - Office of Admissions
   B.A., Walsh College
   M.B.A., City University of Seattle
   07/13/09

**JULIE GILGENBACH**, Bookstore Clerk, Office
   08/20/90

**JODY GLASER**, Food Preparation Worker
   07/01/08

**JUAN GONZALEZ**, Financial Aid Assistant
   B.S., CESA - Colegio de Estudios Superiores de Administracion
   09/03/07

**LEVI GOOD**, Office Assistant - Office of Human Resources
   B.S.B.A., Ohio Northern University
   08/09/10

**GLORIA GRABER**, Division Secretary - Engineering Technologies
   A.A.B., Northwest State Community College
   12/02/85

**VICKI GRIESER**, Cook
   09/18/06

**BRADLY HATHAWAY**, Network/Systems Technician - Information Technology
   B.A., Bowling Green State University
   06/27/02

**DAVID HEER**, Maintenance Technician
   01/24/05

**C. ANN HELM**, Coordinator of Practical Nursing
   A.S.N., Indiana University/Purdue University
   B.S.N., Ball State University
   M.S.N., Medical College of Ohio
   07/22/04

**LOU HELSEL**, Registrar's Assistant - Office of the Registrar
   A.A.B., Northwest Technical College
   09/01/88

**TODD HERNANDEZ**, Database Applications Training Coordinator
   B.S., DeVry Institute of Technology
   09/13/10

**LOU HISSONG**, Switchboard Operator
   A.A.B., Northwest Technical College
   10/11/04

**KIM HURTUBISE**, Accounts Payable - Business Office
   B.S., Central Michigan University
   08/07/07

**MARGARET (MAGGIE) HUSTON**, Food Preparation Worker
   03/04/10

**MICHAEL JACOBS**, Admissions Recruiter – Office of Admissions
   B.S., Defiance College
   M.A., Defiance College
   07/07/08

**NICHOLAS KELLER,** Help Desk Technician - Information Technology
   A.A.B., Northwest State Community College
   09/28/09

**TERRY KING**, Senior Data Systems Administrator - Information Technology
   Certificate, Electronic Computer Programming Institute
   02/01/78

**CONNIE KLINGSHIRN**, Registrar - Office of the Registrar
   B.S., Defiance College
   M.B.O.L., Defiance College
   08/16/06

**LISE' KONECNY**, Director - Facilities, Construction, and Renovation
   B.S., Bowling Green State University
   M.P.A., Bowling Green State University
   04/27/10

**KATHY KRAMER**, Division Secretary - Arts & Sciences
   A.A.B., Northwest Technical College
   07/11/78

# Personnel Directory

**JOHN KROCHMALNY**, Industrial Training Specialist
  A.T.S., Terra Community College
  B.S., Bowling Green State University
  10/15/01

**CINDY KRUEGER**, Vice President for Academics
  A.D.N., Owens Technical College
  B.S.N., Bowling Green State University
  M.S.N., Medical College of Ohio
  08/01/89

**MARY KRUSE**, Division Secretary - Student Resources
  A.A.B., University of Toledo Community & Technical College
  06/09/99

**AMBER LEE**, Kitchen Helper
  03/04/10

**GARY LEISER**, Data Systems & Integration Analyst - Information Technology
  B.B.A., University of Toledo
  M.B.A., University of Dayton
  06/23/09

**PAT MAASSEL**, Food Preparation Worker
  08/07/95

**SANDRA MARKLEY-DICK**, Division Secretary - Office of Institutional Advancement
  A.A.B., University of Toledo Community & Technical College
  10/01/08

**KELLY MATTIN**, Student Accounts Assistant - Business Office
  A.A.B., Northwest State Community College
  09/30/91

**JANE MAUS**, Division Secretary - Van Wert Center
  A.A.B., University of Northwestern Ohio
  05/18/10

**LINDA MAXCY**, Food Preparation Worker
  08/26/09

**GAYLE McINTOSH**, Food Preparation Worker
  A.A.B., Northwest State Community College
  04/21/03

**ANGELA MILLER,** Financial Aid Assistant
  A.A.S., Indiana Business College
  12/02/09

**ANDREA MORROW**, Office Secretary - Student Resources
  A.A.B., Northwest State Community College
  09/29/09

**TIMOTHY NELSON**, Manager of Plant Operations
  A.A.S., Northwest Technical College
  12/6/10

**DAVID NIESE**, Custodian
  02/23/98

**TAMARA NORRIS**, Computer Training Coordinator
  B.Ed., University of Toledo
  M.B.A., University of Toledo
  10/17/05

**ROBERTA OBERLIN**, Food Service Working Supervisor
  10/06/06

**MICHELLE O'DELL**, Coordinator of Public Relations and Marketing
  B.S., Bowling Green State University
  01/03/11

**JOHN ORDWAY**, Maintenance Technician
  02/04/91

**MATTHEW OSBORN**, Executive Director of Information Technology
  B.S., Bowling Green State University
  06/16/10

**ROBERT OVERSTREET**, Technical Training Coordinator
  A.A.S., Terra State Community College
  09/10/07

**TERRY PHILLIPS**, Director of Industrial Certifications
  B.S., University of Findlay
  08/25/03

**VON PLESSNER**, Dean of Business Technologies
  A.A.B., Northwest Technical College
  B.S., Defiance College
  M.B.A., University of Toledo
  09/03/85

**AMANDA POTTS**, Coordinator of Communications and Publications
  B.S., Bowling Green State University
  03/27/06

# Personnel Directory

**LISA RAMIREZ**, Employment and Benefits Supervisor - Office of Human Resources
    A.A.B., Owens Community College
    B.S., Franklin University
    10/18/04

**ERIKA RUFENACHT**, Administrative Assistant to the CFO
    A.A.B., Northwest State Community College
    09/20/10

**JASON RICKENBERG**, Transfer Coordinator - Student Resources
    B.B.A., Tiffin University
    M.B.O.L., Defiance College
    M.B.A., Defiance College
    03/07/05

**JENNIFER RIGDON**, Division Secretary - Van Wert Center
    A.A.B., James A. Rhodes State College
    05/11/10

**MINERVA RIVAS**, Library Assistant
    A.A.B., Northwest Technical College
    11/22/88

**CHERIE RIX**, Success Center Coordinator
    A.A.B., Northwest Technical College
    B.S., Defiance College
    08/23/04

**BEVERLY ROBINSON**, Division Secretary - Business Technologies
    A.A.B., Northwest Technical College
    09/02/86

**LORI ROBISON**, Dean of Allied Health and Public Services
    B.A., Malone College
    M.S.W., University of Illinois at Chicago
    07/01/09

**ROSALIE ROSEBROCK**, Administrative Assistant to the President - Office of the President
    B.S.C., International Business College
    A.T.S. Northwest Technical College
    11/17/87

**KRISTIANA ROTROFF**, Director of Student Resources
    B.S., Ohio State University
    M.L.I.S., Kent State University
    10/28/02

**MELISSA RUPP**, Director of Grant Development & Administration - Office of Institutional Advancement
    B.A., Goshen College
    M.A.E.D., Defiance College
    11/12/10

**KELLY SCHULTE**, Sales Account Manager
    A.A.B., Owens Community College
    10/27/08

**CHRISTINA SCHWIEBERT**, Multimedia Systems Technician - Information Technology
    B.S., Wright State University
    08/24/09

**BRENDA SHORT**, Food Preparation Worker
    08/26/09

**REBECCA SLATTMAN**, Switchboard/Receptionist/Scheduler
    03/04/02

**BETHANY SMITH**, Administrative Assistant to Vice President for Academics
    A.A.B., Northwest State Community College
    10/23/06

**DEBBIE SMITH**, Bookstore Clerk
    09/05/00

**KATHY SOARDS**, Chief Fiscal Officer
    A.A.B., Northwest Technical College
    03/30/98

**CHARLOTTE SORG**, Director of Financial Aid - Office of Financial Aid
    B.S, Montana State University
    01/09/09

**LYNN SPEISER**, Director of Finance and Business Services - Business Office
    B.S., Bowling Green State University
    04/23/03

**LAURIE STORRER**, Office Secretary - Community Workforce and Development
    A.A.B., Northwest State Community College
    01/03/11

**JULIE STOUT**, Division Secretary - Allied Health & Public Services
    A.A.B., Northwest State Community College
    08/18/08

# Personnel Directory

**THOMAS STUCKEY**, President
 B.S., Goshen College
 M.S., Bowling Green State University
 Ph.D., Bowling Green State University
 08/10/98

**GUILLERMINA TIJERINA**, Student Accounts - Business Office
 A.A.B., Northwest Technical College
 05/23/83

**JILL VANHORN**, Bookstore Clerk
 01/03/94

**KEITH VANHORN**, Coordinator of Extracurricular Student Programs
 B.A., College of Wooster
 M.S., St. Francis College
 11/03/86

**LYNDA VONDEYLEN**, Executive Administrative Assistant to the President - Office of the President
 A.A.B., Northwest Technical College
 10/10/83

**LOREN WEITH**, Manager of Network Systems - Information Technology
 B.S., University of Toledo
 12/21/09

**MELISSA WELKER-FITZGERALD**, Admissions Recruiter - Office of Admissions
 B.S., Bowling Green State University
 M.Ed., Bowling Green State University
 08/18/08

**ROBBIN WILCOX**, Director of Development - Office of Development
 A.A.B, Jackson Community College
 B.A., Tri-State University
 08/01/06

**PETER WILHELM**, Program Coordinator for Arts and Historic Preservation Program
 B.S., Bowling Green State University
 M.A., Bowing Green State University
 07/01/00

**MARY ANN WINTERS**, Custodian
 10/06/06

**ALAN WORD**, Chief of Police - Campus Police
 B.S., Defiance College
 01/03/06

**THOMAS WYLIE**, V.P. of Workforce Development – Community Workforce and Development
 A.S., Terra State Community College
 B.S., Bowling Green State University
 M.Ed., Bowling Green State University
 09/01/00

**AMBER YOCOM**, Financial Aid Associate Director
 A.A.B., Northwest State Community College
 02/13/07

**LORI YODER**, Division Secretary - Community Workforce and Development
 A.A.B., Northwest State Community College
 B.A., Bluffton University
 03/07/05

**MARI YODER**, Vice President of Institutional Advancement
 B.A., Bowling Green State University
 05/05/08

**LAWRENCE ZACHRICH**, Program Coordinator for Continuous Improvement
 B.S., Bowling Green State University
 M.Ed., Bowling Green State University
 Ph.D., Bowling Green State University
 03/27/78

**LARRY ZUVERS**, Bookstore Manager
 B.S., Defiance College
 M.B.O.L, Defiance College
 07/09/90

# Index

# GLOSSARY

**Academic Advisor** - Students are assigned an academic advisor. An advisor can provide guidance regarding class scheduling and program requirements.

**Academic Divisions** - There are four divisions at NSCC - Allied Health and Public Services, Business, Engineering Technology, Nursing and Arts and Science.

**Academic Probation** - Students are placed on academic probation at the end of any semester, including summer term, in which their cumulative grade point average falls below the minimum levels.

**Academic Suspension** - A student on academic probation will be suspended at the end of any semester, including summer, if the minimum cumulative grade point average is not reached while on probation.

**Accreditation** - NSCC is accredited by the Higher Learning Commission and a member of the North Central Association of Colleges and Schools.

**Admissions** - the department to which you submit an application.

**Audit** - the term "audit" refers to a course which is taken without credit and must be defined on date of registration.

**Cost of Attendance** - The total amount it will cost a student to go to school. This amount includes, but is not limited to, tuition and fees, books, living expenses, transportation, and supplies. The students' direct cost is tuition, fees, and books.

**Credit Hour** - a unit of academic credit measured in semester hours; one credit hour usually represents one hour of class time per week.

**COMPASS Testing** - assessment of a student's reading, writing, and mathematical skills.

**CRN** - a course reference number, which is four-digits.

**Cumulative Grade Point Average** - a student's grade point average for all college work based on a total number of quality points earned and the total numbers of semester hours.

**Dean** - this administrator directs an academic division (such as "Business") at the college.

**Dean's List** - a list honoring students for academic achievements.

**Developmental Courses** - any course that is below a 100 level (e.g. MTH080, CIS090, etc). These pre-college courses in reading, mathematics, science, and English help develop basic skills and prepare students for college level course work. These courses are graded pass/fail (S/U) and do not meet course requirements for graduation.

**Drop/Add** - If students want to add a course after the term has begun, they must complete an add form and obtain signatures from the instructor and dean of that division. To drop a course after the refund period is a "withdrawal" and can be completed on the web.

**Estimated Family Contribution (EFC)** - this amount is generated from a student's Free Application for Federal Student Aid (FAFSA) and is used to determine all financial aid eligibility.

**Federal Parent Loan (PLUS loan)** - a federally guaranteed loan program that allows parents to borrow funds to help pay educational expenses. The program requires the borrower to pass a credit check.

**Federal Stafford Loan** - a federal loan program that enables students to borrow money for his/her education costs. Students must complete a FAFSA and be enrolled in at least six credit hours a semester. This is a loan that must be paid back upon graduation or enrollment of less than six credits. Repayment is usually based on a ten-year schedule.

**Federal Supplemental Educational Opportunity Grant** - a grant that is available to undergraduate students who demonstrate exceptional financial need according to the results of the FAFSA.

**Federal Work Study Program** - a program that allows students the opportunity to work and earn dollars on or off campus.

**Free Application for Federal Student Aid** (FAFSA) - application to apply for federal/state grants, loans, and work study programs at www.fafsa.ed.gov.

**Financial Aid** - a combination of scholarships, awards, loans, grants, and work study programs to help students meet education costs.

**Fresh Start Policy** - a student may apply to change a D, F, U or WF grade to a W in a maximum of two courses which are not program requirements. Specific requirements apply.

**Full-time Ohio Instructional Grant (OIG)** - State grant monies for Ohio residents.

**Full-time Student** - Carries 12 or more credit hours in a full term (fall or spring), or carries 6 or more credit hours during the summer term.

**First-Year Student** - a student with 29 or less earned credit hours.

**myNSCC** - allows online access to student registration and account information.

**National Student Loan Database System (NSLDS)** - centralized database for student financial aid records.

**NSCC ID Card** - a student ID card issued by the College.

**Ohio College Opportunity Grant (OCOG)** - state grant monies awarded to part-time and full-time students.

**Part-time Student** - Carries 11 credit hours or less in a full term (fall or spring), or carries 5 or less credit hours during the summer term.

**PELL** - a federal program where free monies are awarded to undergraduate students with the highest amount of financial need and have not earned a bachelor degree.

**Satisfactory Academic Progress (SAP)** - level of academic standing that a student must maintain in order to continue receiving federal student aid.

**Second-Year Student** - has earned at least 30 credit hours.

**Student ID number** - a computer generated number issued to students upon admission to the College. The number begins with an "N" and contains 8-digits.