Foreword

The college catalog is published by Washington State Community College every other year. This volume contains official information for the academic years 2013-14. The contents are presented for information only and are neither a contract nor an offer to contract.

Students are governed by the rules and regulations set forth in the college policy and procedures manual and published in the catalog and student handbook, including amendments, which are in effect at the time of the student’s enrollment. Washington State reserves the right to repeal, change or amend rules, regulations and fees, as well as withdraw, add to or modify programs described herein without notice. Students are advised to consult with the academic advisor or appropriate college official for current official requirements and program requirements.

Statement of Non-Discrimination

Washington State Community College embraces human diversity and is committed to equal employment opportunities, affirmative action, and eliminating discrimination. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited. Equal access to employment opportunities, admission, educational programs, and all other university activities is extended to all persons.

ACCREDITED

Higher Learning Commission
North Central Association

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College Accreditation

Washington State Community College is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604. Phone: 800.621.7462 Fax: 312.263.7462. http://www.hlcommission.org

Washington State has successfully completed its first seven-year accreditation cycle using AQIP (Academic Quality Improvement Program) and is fully accredited through 2018.
Mission

Washington State Community College responds to the education and workforce needs of our community by providing dynamic and affordable programs within an atmosphere that promotes student success.

Vision

Our vision is to inspire individual excellence and success.

We Value

In creating an environment of trust and respect for faculty, staff, and students, the WSCC community strives to live by a set of values to be practiced each day and in each encounter.

- **Respect** - To acknowledge the humanity of all individuals through compassionate action.
- **Ethics** - To demonstrate honesty, integrity, responsibility, and accountability.
- **Inspiration** - To provide an atmosphere that encourages our campus community to develop, grow, and succeed as lifelong learners.
- **Inclusion** - To provide an atmosphere that fosters respect and acknowledges, explores, and embraces the diversity and uniqueness of all regional and global cultures.
- **Success** - To enable all students, faculty, and staff to be successful academically, personally, and professionally.
- **Excellence** - To reach our maximum potential as a community college through continuous improvement, institutional growth, excellence in teaching, and community engagement.
- **Teamwork** - To foster a culture of collaboration within the campus community that supports our mission, our students, our employees, and the surrounding area.
- **Stewardship** - To be responsible stewards of college resources: human, fiscal, natural, physical, and virtual.

Senior Administration

Bradley J. Ebersole, Ph.D.
President

Amanda K. Herb, MBA
Chief Enrollment and Student Success Officer

Laurene K. Huffman, B.A.
Executive Director, Foundation & Business Development

Claudia Y. Owens, M.A., C.E.D.
Executive Director, Marketing & Public Relations

Jess N. Raines, CPA
Chief Financial Officer & Treasurer

John W. Tigue, Ph.D.
Vice President for Academic Affairs

Board of Trustees

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Davis K. Powers - Vice Chair

Randall T. Barengo

Shoshanna M. Brooker

Holly A. Dexter

R. John Lehman

Daniel L. Pennock

Kenneth J. Schilling

Larry J. Unroe
# 2013 - 2014 WSCC Academic Calendar

## Fall Semester 2013

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester classes begin</td>
<td>August 19</td>
<td>Monday</td>
</tr>
<tr>
<td>Additional Registration for day/evening classes</td>
<td>August 19-21</td>
<td>Monday-Wednesday</td>
</tr>
<tr>
<td>Labor Day-Campus closed</td>
<td>September 2</td>
<td>Monday</td>
</tr>
<tr>
<td>Mid-term exams</td>
<td>October 7-11</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Winter Intersession/Spring Advisement/Registration begins</td>
<td>November 4</td>
<td>Monday</td>
</tr>
<tr>
<td>Veteran’s Day Observed-Campus closed</td>
<td>November 11</td>
<td>Monday</td>
</tr>
<tr>
<td>Deadline to withdraw from Fall Semester</td>
<td>November 27</td>
<td>Wednesday</td>
</tr>
<tr>
<td>Thanksgiving Break-Campus Closed</td>
<td>November 28-29</td>
<td>Thursday-Friday</td>
</tr>
<tr>
<td>Final Exam period</td>
<td>December 4-10</td>
<td>Wednesday-Tuesday</td>
</tr>
<tr>
<td>Fall Semester ends</td>
<td>December 10</td>
<td>Tuesday</td>
</tr>
</tbody>
</table>

## Winter Intersession 2013-2014

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Intersession classes begin</td>
<td>December 16</td>
<td>Monday</td>
</tr>
<tr>
<td>Deadline to withdraw from Winter Intersession</td>
<td>January 6</td>
<td>Monday</td>
</tr>
<tr>
<td>Winter Intersession ends</td>
<td>January 10</td>
<td>Friday</td>
</tr>
</tbody>
</table>

## Spring Semester 2014

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Semester classes begin</td>
<td>January 13</td>
<td>Monday</td>
</tr>
<tr>
<td>Additional registration day/evening</td>
<td>January 13-15</td>
<td>Monday-Wednesday</td>
</tr>
<tr>
<td>Martin Luther King Day-Campus closed</td>
<td>January 20</td>
<td>Monday</td>
</tr>
<tr>
<td>President’s Day-Campus closed-(evening classes meet)</td>
<td>February 17</td>
<td>Monday</td>
</tr>
<tr>
<td>Mid-term exams</td>
<td>March 3-7</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Spring Break</td>
<td>March 10-14</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Summer/Fall advisement-registration begins</td>
<td>March 31</td>
<td>Monday</td>
</tr>
<tr>
<td>Deadline to withdraw from Spring Semester</td>
<td>April 28</td>
<td>Monday</td>
</tr>
<tr>
<td>Final exam period</td>
<td>May 5-9</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Spring Semester ends</td>
<td>May 9</td>
<td>Friday</td>
</tr>
<tr>
<td>Spring Graduation</td>
<td>May 10</td>
<td>Saturday</td>
</tr>
</tbody>
</table>

Updated December 13, 2013
Program Listing

Baccalaureate Preparation

Designed to transfer to a four-year college or university as the first two years of a baccalaureate degree.

- Biological Sciences Transfer
- Business Administration Transfer
- Education Transfer
  - Early Childhood
  - Middle Childhood
  - Young Adult
- Engineering Transfer
- Fine Arts Transfer
  - Graphic Design
  - Studio Art
- General Sciences Transfer
- Geosciences Transfer
- Liberal Arts Transfer
- Mathematics Transfer
- Physical Sciences Transfer
- Social Services Transfer

Business Technologies

- Accounting Technology
  - Accounting
  - Accounting (1-Year Certificate)
  - Business Computing
- Business Management Technology
  - Business Management
- Digital Technology
  - Computer Graphics
  - Computer Support Technician
  - Computer Systems (1-Year Certificate)
  - Digital Media
  - Web Application Programming
- Office Administrative Services
  - Executive Administrative Assistant
  - Executive Office Support (1-Year Certificate)
  - Medical Administrative Assistant
  - Medical Coding (1-Year Certificate)

Associate of Individualized Studies

See details in the Online Catalog

Associate of Technical Studies

- Cyber Security & Investigation

Engineering and Industrial Technology

- Automotive Technology
  - Automotive Service *
  - Automotive Technician (1-Year Certificate)
- Diesel Truck Systems *
- Electrical Engineering Technology
  - Instrumentation Control & Electrical
- Industrial Technology
  - Chemical Operator Online (1-Year Certificate)
  - Design Drafting
  - Drafting (1-Year Certificate)
  - Geotechnical Drafting
  - Industrial Technology *
  - Process Technician
- Mechanical Engineering Technology
  - Mechanical Engineering
  - Pre-Engineering Technology

Health Sciences

- Health & Wellness Technology
  - Advanced Emergency Medical Technician (Certificate)
  - Basic Emergency Medical Technician (Certificate)
  - EKG Technology (Certificate of Completion)
  - Fitness and Exercise (Certificate of Completion)
  - Pharmacy Technician (Certificate of Completion)
- Massage Therapy * (1-Year Certificate)
- Medical Laboratory Technology *
- Nursing (Associate Degree)
- Physical Therapist Assistant Technology *
- Practical Nursing (1-Year Certificate)
- Radiologic Technology *
- Respiratory Therapy Technology *

Public Services

- American Sign Language Interpreter *
- Criminal Justice Technology
  - Corrections
  - Law Enforcement
  - Peace Officer Basic Academy
- Early Childhood Development Technology
- Social Services Technology

Programs lead to an Associates Degree unless otherwise noted.

* Tuition reciprocity with West Virginia counties: Brooke, Hancock, Jackson, Marshall, Ohio, Pleasants, Ritchie, Roane, Tyler, Wetzel, Wirt and Wood.

A variety of certificates of completion (4 to 14 classes in a related area) can be earned – see details in the online catalog.
ASSOCIATE DEGREE REQUIREMENTS

What is the Associate Degree?

Students who complete two-year academic programs at Washington State are awarded an associate degree.

- **Associate of Applied Business (A.A.B.)** is awarded to Business Technologies graduates.
- **Associate of Applied Science degree (A.A.S.)** is awarded to graduates in Public Service, Health Sciences, Engineering, and Industrial Technologies.
- **Associate of Arts (A.A.) or Associate of Science (A.S.)** is awarded to graduates planning to transfer to baccalaureate degree programs.
- **Associate of Individualized Studies (A.I.S.)** is awarded to graduates of a two-year program tailored to specific educational needs not met by other standard programs.
- **Associate of Technical Studies (A.T.S.)** is awarded to graduates of a two-year program tailored to an individually planned technical education to respond to needs for specialized technical education not available in the formal degree programs.

The A.A.S. and A.A.B. degrees are designed specifically to lead to career entry or advancement. Applied Degree programs offer courses directly related to the technology major. Students become quickly involved in technical courses and continue to receive advanced education in upper level courses throughout the second year.

New opportunities for transfer with A.A.S and A.A.B are constantly evolving. See an advisor in the Admissions Office for current information.

The A.A. and A.S. degrees are designed specifically for transfer to a four-year college or university. Degree programs are composed of courses normally required during the freshman and sophomore years of a baccalaureate program. Students complete most of the general education requirements during two years at Washington State, adding some program-specific courses during the second year.

The Associate of Individualized Studies (A.I.S.) allows students to tailor their studies to specific educational needs not met by standard programs. In this way, the student can gain up to 40 credit hours of the 60 required by using transfer college credit and life experience credit. Individuals who wish to develop an individualized program of study should contact the appropriate academic division for assistance.

The Associate of Technical Studies (A.T.S.) allows students to tailor their studies to respond to needs for specialized technical education not available in the formal degree programs. The program leading to an A.T.S. must have an area of concentration which is equivalent to 30 semester credit hours in technical studies and clearly identifiable with a career objective. Individuals who wish to develop an individualized technical program of study should contact the appropriate academic division for assistance.

College-wide Associate Degree Graduation Requirements

A candidate for an associate degree from Washington State Community College must have satisfied the following requirements, as well as have earned a minimum of 60 semester hours of credit together with at least a 2.0 grade point average:

A. Communication skills (minimum of nine credit hours): three courses in communication to include: one course in speech communication; written communication courses to include at least two from ENGL 1510, ENGL 1513, ENGL 1515, ENGL 1520, or ENGL 1530.

B. Social and behavioral sciences (minimum of three credit hours) a minimum of one course in the social/behavioral sciences.

C. Arts and humanities (minimum of three credit hours) a minimum of one arts or humanities course of at least three credit hours.

D. Mathematics and natural sciences (minimum of three credit hours) a minimum of one course in mathematics or the natural sciences.

E. Computer applications (minimum of three credit hours) a minimum of one course in computer applications or may be included in a non-technical or major area course if documented.

F. Residency requirement: A student who wishes to apply credits earned at other colleges toward the degree must successfully complete a total of at least 20 semester hours of credit in graded courses (A,B,C,D) under the supervision of the college, with at least a 2.00 (“C”) GPA.

G. Have completed the requirements of one of the degree program as outlined in the catalog, and its addenda in effect at the time of the beginning of the student’s most recent period of continuous enrollment.

H. The Associate of Arts and Associate of Science degrees require completion of the Transfer Module resulting in a substantial number of additional general education courses beyond those noted above.

I. Complete at least 15 of the last 20 credit hours at the college, unless this requirement is waived with the approval of the appropriate academic dean and the Vice President for Academic Affairs.

J. Graduating students are expected to attend commencement exercises. Degrees may be conferred in absentia.
ASSOCIATE DEGREE REQUIREMENTS

General Education Goals

In addition to preparing graduates for careers or additional education, Washington State seeks to ensure a breadth of knowledge and promote intellectual inquiry for all students. Upon completion of an associate degree program, a Washington State graduate will demonstrate knowledge and skills in five key areas.

1. Communication: Use various forms of communication effectively as a communicator and as an observer.

2. Critical Thinking: Select and use effective approaches to solving a wide variety of problems as demonstrated by the ability to think critically, draw reasonable conclusions, and defend those conclusions rationally.


4. Science and Technology: Use current technology and scientific principles to adapt to a changing world.

5. Understanding Values and Cultures: Demonstrates an awareness of the similarities and differences which express the human experience globally.

These general education goals are integrated into the degree requirements of each associate degree program and achieved through completion of general education courses and courses in the technical major or major concentration.

General Education Course Requirements for Applied Degrees (A.A.B., A.A.S., A.I.S. & A.T.S.)

COMMUNICATION REQUIREMENTS (minimum of 9 credit hours):
Three courses in communication to include:
- One course in speech communication (SPCH)
- English Composition I (ENGL 1510)
- One writing capstone course (ENGL 1515, ENGL 1513, ENGL 1520 or ENGL 1530)

SOCIAL AND BEHAVIORAL SCIENCES REQUIREMENT (minimum of three credit hours):
A minimum of one course in the social/behavioral sciences, selected from the following areas: anthropology, economics, geography, history, languages, political science, psychology, sociology.

ARTS & HUMANITIES REQUIREMENT (minimum of three credit hours):
A minimum of one arts and humanities course of at least three credit hours, selected from the following areas: art, foreign language, literature, philosophy, humanities, music, theater.

The same course cannot count toward both the social and behavioral sciences requirement and the arts and humanities requirement. Courses meeting the requirement in the arts or humanities may include studio courses and special topics courses. Non-transfer module courses may count in either category (but not both).

COMPUTER APPLICATIONS (minimum of three credit hours):
A minimum of one course in computer applications, often PC Applications (BUSM 1600), or the equivalent may be included in a non-technical or major area course if documented.

NATURAL SCIENCES AND MATHEMATICS REQUIREMENT (minimum of three credit hours):
A minimum of one course in mathematics or the natural sciences, selected from the following areas: biology, chemistry, geology, mathematics, physics and astronomy.

Catalog in Effect

The curriculum requirements for graduation are those in effect at the time the student enrolls. Those requirements will govern the student’s eligibility to graduate as long as the student remains in continuous enrollment. If the student does not attend class for one semester (excluding summer), the curriculum requirements in effect at the time of re-admission will govern graduation.

Students should save a .pdf copy of this catalog as a reference and guide while enrolled at Washington State Community College.

These general education goals are integrated into the degree requirements of each associate degree program and achieved through completion of general education courses and courses in the technical major or major concentration.
ASSOCIATE DEGREE REQUIREMENTS

Associate of Applied Business Course Distribution Requirements

The Associate of Applied Business (A.A.B.) is awarded to students who successfully complete one of the prescribed curricula in business or public service technologies. The degree is designed to prepare technicians and para-professionals for immediate entry into the workforce upon graduation. Both technical and non-technical courses are required for the A.A.B.

A.A.B. Non-technical Course Requirements

The A.A.B. degree requires 28 semester credits of non-technical studies. Courses may be in two categories:

1. General education requirements consisting of courses in written communication, oral communication, social and behavioral sciences, and arts and humanities. These requirements may also include courses in the natural sciences and in mathematics.

2. Basic related courses include a core of courses basic to the technical field and closely related to the specialty.

Since the non-technical course requirements vary with each program, the student should check the courses required in each program or major.

A.A.B. Technical Course Requirements

For graduation, 32-45 credit hours in technical courses clearly identified with the technical skills, proficiency, and knowledge required for career competency, as prescribed by the academic program. A minimum of 60 up to a maximum of 73 total credit hours is required for graduation depending upon the specific requirements of each degree program.

Associate of Applied Science Course Distribution Requirements

The Associate of Applied Science (A.A.S.) is awarded to students who successfully complete one of the prescribed curricula in industrial engineering, health or public service. The degree is designed to prepare technicians and para-professionals for immediate entry into the workforce upon graduation. Both technical and non-technical courses are required for the A.A.S.

A.A.S. Non-technical Course Requirements

The A.A.S. requires a minimum 28 semester credits of non-technical studies. Courses may be in two categories:

1. General Education requirements consisting of courses in written communication, oral communication, social and behavioral sciences, and arts and humanities. These requirements may also include courses in the natural sciences and in mathematics.

2. Basic Related Courses include a core of courses basic to the technical field and closely related to the specialty.

Since the non-technical course requirements vary with each program, the student should check the courses required in each program or major.

A.A.S. Technical Course Requirements

For graduation, 32-45 credit hours is required in technical courses clearly identified with the technical skills, proficiency, and knowledge required for career competency, as prescribed by the academic program. A minimum of 60 up to a maximum of 73 total credit hours is required for graduation depending upon the specific requirements of each degree program.

Associate of Arts Degree Course Distribution Requirements

The Associate of Arts (A.A.) degree is awarded to students who successfully complete the requirements for the degree with a concentration in arts, humanities, business or education, or other areas. The degree is designed for students wishing to complete the first two years of a Bachelor of Arts degree, as well as those desiring two years of a general education with emphasis in the arts, social sciences or humanities. To earn an A.A., a total of 60-73 credit hours of work must be completed, including the 36-40 hours earned in the Transfer Module.

General Education Course Requirements for the A.A. (includes Transfer Module)

- Communication Skills: Two Transfer Module courses in English composition, plus a minimum of one course in speech communication for a total of 9 semester hours.
- Mathematics and Computer Science: At least one course in mathematics that meets Transfer Module criteria of building on three years of college preparatory or equivalent mathematics. In addition, a minimum of one course in computer science (Transfer Module or Non-Transfer Module), either a microcomputer applications or a computer programming course to total at least 6 semester hours.
- Natural Sciences: A minimum of 6 Transfer Module credit hours, including at least one laboratory course.
- Social and Behavioral Sciences: A minimum of 9 Transfer Module credit hours, selected from at least two subject areas.
- Arts and Humanities: A minimum of 9 Transfer Module credit hours selected from at least two areas.
- Additional electives to make up 36-40 total hours of Transfer Module Courses.
ASSOCIATE DEGREE REQUIREMENTS

Associate of Arts Degree Course Distribution Requirements (continued)

Major Concentration Requirement for the A.A.
Students in an A.A. program must take at least 12 credit hours in an area of major concentration other than science, engineering, or mathematics, as prescribed by the chosen curriculum and approved by the student’s academic advisor.

Recommended Electives for the A.A. Degree
The remaining courses to meet the 60-73 credit hours required for the degree should be selected based on the chosen curriculum, the academic requirements of the institution to which the student plans to transfer, and the approval of the academic advisor. One to three credits in physical activity/recreation courses may be applied to the degree.

Based on foreign language courses completed in high school and requirements of the chosen program at the transfer institution, students may choose to complete one to two years of foreign language at Washington State.

Associate of Individualized Studies Course Distribution Requirements

The Associate of Individualized Study (A.I.S.) is awarded to students who successfully complete an individually designed curricula prescribed to meet specific career goals. Students must satisfactorily complete a minimum of 60 semester credit hours in a well-planned, unique program to serve an educational objective that could not be served through another degree program at the college.

General Education Requirements for the A.I.S.
The five general education goals will be included in each individually-designed curriculum, for a minimum of 28 semester credits of general and basic related course work including the general education course requirements.

Major Concentration Requirement for the A.I.S.
The program leading to the A.I.S. must contain an area of concentration consisting of a minimum of 32 up to a maximum of 45 semester credit hours formed either by:

1. An intra-college, interdisciplinary, but coherent combination of courses drawn from a minimum of two and a maximum of four instructional areas of study; or
2. Up to 45 semester credit hours awarded by the college for documentable educational experiences or courses completed at another college judged by Washington State to be of college level; or
3. An unusual but academically coherent combination of technical and general studies courses.

Upon petitioning for acceptance into the A.I.S. program, a representative of Enrollment Management, the student’s committee, and the student will determine the remaining required courses. Once students are accepted into the program, they must complete at least 20 credit hours within the approved A.I.S. program with at least half in the area of the approved concentration. Students with less than 30 credit hours remaining toward a degree must have the approval of the Non-traditional Learning Committee to enroll in the program.
ASSOCIATE DEGREE REQUIREMENTS

Associate of Science Degree Course Distribution Requirements

The Associate of Science (A.S.) degree is awarded to students who successfully complete the requirements for the degree with a concentration in mathematics, science or engineering. The degree is designed for students wishing to complete the first two years of a Bachelor of Science degree, as well as those desiring two years of a general education with emphasis in natural science or mathematics. For a student to earn an A.S. degree, a total of 60-73 credit hours of work must be completed, including the 36-40 hours earned in the Transfer Module. Total course requirements for the A.S. degree are described below.

General Education Course Requirements for the A.S. Degree (includes Transfer Module)

- Communication Skills: Two Transfer Module courses in English composition, plus a minimum of one course in speech communication for a total of 9 semester hours.
- Mathematics and Computer Science: At least one course in mathematics that meets Transfer Module criteria of building on three years of college preparatory or equivalent mathematics. In addition, a minimum of one course in computer science (Transfer Module or Non-Transfer Module), either a microcomputer applications or a computer programming course to total at least 6 semester hours.
- Natural Sciences: A minimum of 6 Transfer Module credit hours, including at least one laboratory course.
- Social and Behavioral Sciences: A minimum of Transfer Module 9 credit hours, selected from at least two subject areas.
- Arts and Humanities: A minimum of 9 Transfer Module credit hours selected from at least two areas.
- Additional electives to make up 36-40 total hours of Transfer Module Courses.

Major Concentration Requirement for the A.S. Degree

Students in an A.S. program must take at least 12 credit hours in an area of major concentration in science, engineering, or mathematics, as prescribed by the chosen curriculum and approved by the student’s academic advisor.

Recommended Electives for the A.S. Degree

The remaining courses to meet the 60-73 credit hours required for the degree should be selected based on the chosen curriculum, the academic requirements of the institution to which the student plans to transfer, and the approval of the academic advisor. One to three credits in physical activity/recreation courses may be applied to the degree.

Based on foreign language courses completed in high school and requirements of the chosen program at the transfer institution, students may choose to complete one to two years of foreign language at Washington State.

Associate of Technical Studies Course Distribution Requirements

The Associate of Technical Studies (A.T.S.) is awarded to students who successfully complete a minimum of 60 semester credit hours of an individually planned technical education program designed to respond to needs for specialized technical education not currently available in the formal degree programs available at the college. The program leading to an Associate of Technical Studies must have an area of concentration which is equivalent to 30 semester credit hours in technical studies and clearly identifiable with a career objective. The actual degree awarded must contain the name of the area of concentration, e.g., Associate of Technical Studies in Cyber Security and Investigation. Both technical and non-technical courses are required for the A.T.S.

A.T.S. Non-technical Course Requirements

The A.T.S. degree requires 30 semester credits of non-technical studies. Courses may be in two categories:

1. General education requirements consisting of courses in written communication, oral communication, social and behavioral sciences, and arts and humanities. These requirements may also include courses in the natural sciences and in mathematics.
2. Basic related courses include a core of courses basic to the technical field and closely related to the specialty.

A.T.S. Technical Course Requirements

For graduation, 30-43 credit hours in technical courses clearly identified with the technical skills, proficiency, and knowledge required for career competency, as prescribed by the academic program. A minimum of 60 up to a maximum of 73 total credit hours is required for graduation depending upon the specific requirements of each degree program.

Graduates of the A.T.S. program who wish to extend their studies to baccalaureate-level programs may need to complete a substantial amount of lower division coursework at the transfer institution. Students satisfactorily completing this degree must assume that four-year institutions may evaluate their credits on a course-by-course basis.
OTHER PROGRAM REQUIREMENTS

Advanced Placement

The State of Ohio, Working through the University System of Ohio, has initiated policies to facilitate the ease of transition from high school to college as well as between and among Ohio’s Public colleges and universities.

1. Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credit(s) for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.
3. If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.
5. In academic disciplines containing highly dependent sequences (Mathematics, Sciences, etc.) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

A complete listing of credit awarded for an AP score of 3 or above for all University System of Ohio colleges and universities can be found at uso.edu

Prior Learning Assessment

Credit Alternatives

College Level Examination Program

Washington State Community College participates in the nationally recognized College Level Examination Program (CLEP), offered by the College Entrance Examination Board, a testing program which permits students to earn college credits by demonstrating knowledge equal to a particular college-level course.

Proficiency Testing

The faculty of the College offer proficiency credit by examination for some courses. Through testing, students may demonstrate proficiency in a course and receive appropriate credit. Specific information about proficiency credit can be obtained through the academic divisions of the College.

There are a number of procedures that should be followed when seeking proficiency credit.

1. The student must show evidence of successful completion of all prerequisites to the course for which the proficiency examination is being requested.
2. Proficiency examinations are conducted during the first five days of any academic term. An “Application for Proficiency,” the proficiency fee according to the schedule of fees, and the examination must be completed and results submitted to the records office by the end of the fifth day in the academic term.
3. A proficiency examination can be administered only by departmental faculty specifically responsible for the course subject area requested for proficiency.
4. Failed proficiency exams may not be repeated.
5. A student may not request a proficiency examination for any course in which they have received an F or from which he or she has withdrawn.
6. A student who has taken a lower numbered course in a sequential series of courses will not be permitted to take a proficiency examination in a higher numbered course in that same series of courses.

7. A student who has received credit for a higher numbered course in a sequential series of courses will not be permitted to take a proficiency examination in a lower numbered course in that same series.

To apply for proficiency examination, the following procedures need to be followed.

1. Request proficiency examination from the academic department.
2. Obtain the Application for Proficiency form from the records office, fill out the form, and pay all fees.
3. Present the completed form to the academic department and arrange for a testing date. A score of 85 percent or more is required for successful proficiency.

Successful proficiency will result in transcript credit for the course, and the course will apply toward degree requirements. The records office will notify the student of the results. Students earning proficiency credit should be aware that credits earned by means of proficiency are seldom transferable to any other institution.

Assessment of Credit for Life/Work Experience

Students can receive credit for prior relevant college-level learning acquired either through formal schooling or some types of occupational experience. Each student works with an advisor to define his or her program of study, giving careful consideration to high school background, test results, interests, talents, attitudes and goals.

Credit may be granted for satisfactory performance on examinations; successful completion of military courses and experiences; and appropriate work experience. The student contacts the student services office, then meets with an advisor to determine if the life experience evaluation is appropriate to his or her educational program.

The student must submit a portfolio which consists of all documentation he or she considers relevant.

Required are:

1. A cover letter stating the number of credits requested, the areas in which the credit is being requested, and names,
Other Program Requirements

titles, addresses and phone numbers of persons to be consulted regarding each experience;  
2. A detailed description of each experience for which credit is requested; and  
3. A letter from on-site supervisors or employers confirming the nature, duration and quality of the work. Students who wish to develop life-experience portfolios must enroll in “Life Experience Portfolio Preparation”, a two-credit hour class, offered by the College.
4. The student then has a personal interview with a committee of faculty/staff members consisting of the appropriate academic dean and faculty appropriate to the subject area, if needed.
As documentation, the applicant may be asked to:
1. Complete written and/or performance tests; up to 40 credit hours may be from outside sources such as National Auto Mechanics Tests, CLEP Examinations, or College Board Advanced Placement tests which can be utilized to demonstrate an appropriate level of ability or knowledge.
2. Complete in-house tests such as placement and/or proficiency examinations prepared by faculty members at WSCC.

In summary, the primary assessment techniques for life experience credit are documents, reports and testimony from external sources along with faculty evaluation at WSCC.
The committee will decide how many credits will be awarded and in what particular areas the credit will be granted. The student will be notified of the committee’s decision as soon as possible; however, the credit is not actually awarded until the student has successfully completed a minimum of 12 semester hours at WSCC.
The cost to the student includes enrollment in the “Life Experience Portfolio Preparation” course and the cost of any tests from outside sources.
All documents, reports and the testimony from internal and external sources are returned to the student.
The transfer of Life Experience Credit to another college is determined by the receiving institution. Each college has a policy which determines the transfer of credit.

Certificate of Completion Requirements

A candidate for a Certificate of Completion must have satisfactorily completed all courses required for the certificate with a C or better. At least 75% of the courses must be taken at Washington State.

One-Year Certificate Requirements

A candidate for a one-year certificate from Washington State must have earned 30 credit hours or more based on the requirements listed in the student’s certificate program. A transfer student must have earned at least 10 semester hours of credit with at least 2.00 (C) cumulative grade point average under the supervision of the college, and have been officially registered in the college during the final semester.

Requirements for a Second Major

Students who wish to pursue more than one major in a degree program must consult with the appropriate department chair or dean and must meet the following requirements:
1. All degree requirements for both majors must be met.
2. A minimum of 12 semester hours of credit must be earned in addition to the requirements for the first major.

Requirements for a Second Degree

Students who have earned an associate degree from Washington State and wish to earn an associate degree in a second program must consult with the appropriate department chair or dean and must meet the following requirements:
1. A minimum of 18 semester hours of credit must be earned in addition to the total compiled for the first degree.
2. All requirements for the second degree must be met.
3. An additional degree will not be granted in the same program in which the first degree was earned, but an additional major may be earned in the same degree program.

West Virginia Reciprocity Agreement

Washington State and West Virginia University at Parkersburg have an agreement that permits some West Virginia residents to pay Ohio resident tuition fees, instead of the out-of-state charge. Residents of Jackson, Pleasants, Ritchie, Roane, Tyler, Wirt and Wood Counties are eligible for this low in-state tuition when they enroll at Washington State in any of the following programs:
• American Sign Language Interpreter
• Automotive Service Technology
• Deaf Studies Certificate
• Diesel Truck Systems Technology
• Geosciences Transfer
• Geotechnical Drafting Technology
• Industrial Technology
• Massage Therapy Certificate
• Medical Laboratory Technology
• Physical Therapist Assistant Technology
• Radiologic Technology
• Respiratory Therapy Technology
OTHER PROGRAM REQUIREMENTS

College Tech Prep

College Tech Prep is a nationally recognized program that partners two-year colleges with area high schools to prepare young people for the technical jobs of the future. College Tech Prep high school students:

1. Learn college preparatory academics in applied, real-world contexts that make the content more meaningful and accessible to them;

2. Develop technological literacy, including the basics of computer usage; and,

3. In grades 11 and 12, immerse themselves in the occupational skills needed to enter and succeed in a two-year college technical program.

At the end of high school, College Tech Prep graduates are ready to enter an advanced skills College Tech Prep associate degree program at a community or technical college. They also can enter the world of work with an array of stronger basic and occupational skills than graduates of general education programs.

Others who wish to enroll in a College Tech Prep associate degree program, but who did not participate in the high school program, may be required to complete several bridge courses first.

In our area, the Washington-Morgan-Meigs College Tech Prep Consortium works with the Washington County Career Center, Meigs High School, Morgan High School and their associate schools to prepare students for College Tech Prep associate degree programs at Washington State.

Current College Tech Prep associate degree programs at Washington State:

- Nursing: Associate Degree Nursing
- Automotive and Diesel Truck Systems
- Business Management Technology
- Digital Technology - Computer Graphics
- Digital Technology - Media
- Electrical Engineering Technology
- Medical Laboratory Technology
- Digital Tech. - Computer Support Technician
- Physical Therapist Assistant Technology
- Nursing: Practical Nursing - Day
- Digital Technology - Web App. Programming
- Radiologic Technology
- Respiratory Therapy Technology

Additional programs may be implemented. For information contact the college’s Outreach Center or local high school counselors.
**Transfer and Articulation**

**Baccalaureate Transfer Programs**

In many cases, the career needs of Washington State students can only be met by a four-year bachelor’s degree. For these, the college offers transfer programs in addition to its career-oriented technical education programs. The transfer programs at Washington State enable the student to complete the majority of freshman and sophomore college course requirements close to home. Degree programs designed for transfer to a baccalaureate program fall into two categories: Associate of Arts (AA) degree and Associate of Science (AS) degree.

**Associate of Arts (AA)**
- Business Administration Transfer
- Education Transfer
- Fine Arts
- Liberal Arts Transfer
- Social Services Transfer

**Associate of Science (AS)**
- Biological Sciences Transfer
- Engineering Transfer
- General Science Transfer
- Geoscience Transfer
- Mathematics Transfer
- Physical Science Transfer

**Articulation Agreements**

To assist students in transfer, articulation agreements continue to be developed with nearby public and private colleges and universities. The articulation agreements clearly indicate which courses offered by Washington State will be accepted by the receiving institution. Articulation agreements have been developed or are in progress with the following:
- Belmont Technical College
- Marietta College
- Muskingum University
- Ohio University
- West Virginia University at Parkersburg

**Ohio Articulation and Transfer Policy**

The Ohio Board of Regents, following the directive of the Ohio General Assembly, developed a statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the state policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio’s higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

**Ohio Articulation and Transfer Policy – Transfer Module**

The Ohio Board of Regents’ Transfer and Articulation Policy also established the Transfer Module, which is a specific subset or the entire set of a college’s or university’s general education requirements. The Transfer Module contains 36–40 semester hours of specified course credits in English, composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science, and interdisciplinary coursework.

A transfer module completed at one college or university will automatically meet the requirements of the transfer module at the receiving institution, once the student is accepted. Students may be required, however, to meet additional general education requirements that are not included in the Transfer Module.

The Ohio Board of Regents also has established Transfer Assurance Guides (TAGS) to insure that specific courses will count toward the major concentration at the receiving institution. Specific TAG information can be found at the OBR Web site. (http://www.ohiohighered.org/)

This site provides a “TAG Bulletin Board” with information on how courses transfer among Ohio’s public colleges and universities.
Conditions for Transfer Admission

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts (AA) or the Associate of Science degrees (AS). These students will be able to transfer all courses in which they received a passing grade of “D” or better.

2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade of “D” or better in each course and 60 semester hours. Only courses for which a “D” or better has been earned will transfer.

3. The policy encourages receiving institutions to admit on a non-preferential consideration basis students who complete the Transfer Module with less than 60 semester hours. These students will be able to transfer all courses in which they received a grade of “D” or better.

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

Responsibilities of Student

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that meets the requirements of a degree program at the receiving institution. Students should identify early in their collegiate studies an institution and major to which they desire to transfer. Students also should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore years. 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 for Transfer Credit

A multi-level, broad-based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. 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 institution appeal levels 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.

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

Credit When It’s Due/Reverse Transfer

Ohio is participating in a national grant initiative, Credit When It’s Due, designed to implement “reverse-transfer,” which is a process to award associate degrees to students who earned credits that satisfied residency requirements at Washington State Community College, did not earn their associate degree, and transferred to a four-year institution where they are currently enrolled. Thirteen public universities, five regional campuses, and all 23 community colleges in Ohio are participating in this initiative. Consult WSCC's registrar for more information.
Washington State Transfer Module

The Washington State transfer curricula are designed around the Ohio Transfer Module (OTM). This module provides the foundation of the Ohio Articulation and Transfer Policy adopted by the Ohio Board of Regents. All colleges and universities have a general education requirement which comprises much of the freshman and sophomore years. The college’s Transfer Module contains courses which satisfy many of these requirements at any state university in Ohio.

The purpose of this module is to ease transfer to any of Ohio’s state universities if the student takes the courses as prescribed in the module. The OTM at Washington State consists of a core of 36-40 credit hours in English composition, mathematics, natural sciences, arts and humanities, and social and behavioral sciences.

Responsibility of the Student

Washington State offers the courses to fulfill the requirements of the Transfer Module. It is the responsibility of the student to be familiar with the requirements of the module and to follow them exactly. Any deviation from the requirements of the Transfer Module will require that the student’s transfer take place on a course–by–course basis at the discretion of the receiving institution.

It is also the responsibility of the student to make choices about baccalaureate majors and four-year institutions to which he or she wishes to transfer.

Academic advising decisions concerning course selections are made based on the student’s anticipated major and the institution he or she will attend. Therefore, it is important that the student make these decisions and communicate them to his or her academic advisor as early as possible.

The following distribution of courses will fulfill the requirements of the Transfer Module. Descriptions, including credit hours and prerequisites, are included in the course descriptions section of this catalog.

- **English Composition** – a minimum of 6 credit hours is required in English composition.
- **Mathematics** – a minimum of 3 credit hours is required in mathematics.
- **Natural Sciences** – a minimum of 6 credit hours is required in biology, geology, chemistry, or physics. One course must include a lab component.
- **Arts and Humanities** – a minimum of 9 credit hours is required in art, music, literature, philosophy, or specified history courses. Courses must be taken in at least two subject areas.
- **Social and Behavioral Sciences** – a minimum of 9 credit hours is required in sociology, political science, psychology, economics, or specified history courses. Courses must be taken in at least two subject areas.
- **Transfer Module Electives** – a minimum of 3 credit hours selected from approved Transfer Module courses in any of the above categories, or from the approved list of interdisciplinary and elective courses.

Each of these requirements is detailed in the following sections. Credit hours for each course are in parentheses.

**Arts and Humanities**

Nine credit hours are required in Arts and Humanities. Courses should be taken from at least two of the subject areas listed.

**Art**
- ARTS 1000 Art Appreciation (3)
- ARTS 2010 Art History I (3)
- ARTS 2020 Art History II (3)
- ARTS 2050 American Art (3)
- ARTS 2090 History of Photography (3)
- ARTS 2340 Pre-Columbian Art (3)

**Humanities**
- HUMN 1200 Introduction to Film (3)
- HUMN 1300 Survey of Mythology (3)
- HUMN 2480 Science of Science Fiction (3)

**Literature**
- LITR 2010 Introduction to Fiction (3)
- LITR 2020 Introduction to Poetry (3)
- LITR 2030 Introduction to Drama (3)

- LITR 2040 Introduction to World Literature I (3)
- LITR 2050 Introduction to World Literature II (3)
- LITR 2100 Survey of American Literature I (3)
- LITR 2110 Survey of American Literature II (3)
- LITR 2200 Survey of British Literature I (3)
- LITR 2210 Survey of British Literature II (3)
- LITR 2700 Introduction to Shakespeare (3)

**Music**
- MUSC 1200 Music Appreciation (3)
- MUSC 1250 Survey of American Music (3)

**Philosophy**
- PHIL 1010 Introduction to Philosophy (3)
- PHIL 1200 Principles of Reasoning (3)
- PHIL 1300 Introduction to Ethics (3)

**Theatre**
- THEA 1200 Introduction to the Theatre (3)
## Transfer and Articulation

### Communication Skills

The student should place an emphasis on written composition. At a minimum, a student must complete English Composition I plus one course from the approved list. Speech (SPCH 1510) may not count as a written communication course but may serve as a Transfer Module elective.

- ENGL 1515 Technical Writing (3)
- ENGL 1513 Business Writing (3)
- ENGL 1510 English Composition I (3)
- ENGL 1520 English Composition II (3)
- ENGL 1530 English Composition III (3)
- SPCH 1510 Speech (3)

### Mathematics

At least one course in mathematics must be taken. Mathematics courses for the Transfer Module build on three years of college preparatory mathematics or the equivalent.

- MATH 2120 Trigonometry (3)
- MATH 2130 College Algebra (4)
- MATH 2150 Precalculus (5)
- MATH 2110 Principles of Statistics (3)
- MATH 2173 Survey of Math I (4)
- MATH 2175 Survey of Math II (3)
- MATH 2250 Elementary Linear Algebra (3)
- MATH 2260 Introduction to Calculus (3)
- MATH 2263 Analytic Geometry and Calculus I (4)
- MATH 2264 Analytic Geometry and Calculus II (4)
- MATH 2270 Differential Equations (3)

### Natural Sciences

Six credits or more should be taken in the natural sciences. One course must be a laboratory course which includes at least one laboratory meeting per week.

Courses should be taken from at least two of the subject areas listed.

#### Biology

- BIOL 1010 Principles of Biology (3)
- BIOL 101L Principles of Biology Lab (1)
- BIOL 1100 General Biology I (3)
- BIOL 110L General Biology I Lab (1)
- BIOL 1110 General Biology II (3)
- BIOL 111L General Biology II Lab (1)
- BIOL 1310 Anatomy and Physiology I *(2)
- BIOL 131L Anatomy and Physiology I Lab* (1)
- BIOL 1320 Anatomy and Physiology II *(2)
- BIOL 132L Anatomy and Physiology II Lab * (1)
- BIOL 2010 Basic Microbiology (2)
- BIOL 201L Basic Microbiology Lab (1)
- BIOL 2110 Environmental Biology (3)
- BIOL 211L Environmental Biology Lab (1)
- BIOL 2310 Human Anatomy & Physiology I** (3)
- BIOL 231L Human Anatomy & Physiology I Lab ** (1)
- BIOL 2320 Human Anatomy & Physiology II** (3)
- BIOL 232L Human Anatomy & Physiology II Lab ** (1)
- BIOL 2600 Introduction to Ecology (3)
- BIOL 260L Introduction to Ecology Lab (1)

*This anatomy and physiology series is recommended for non-science majors and students in Practical Nursing.

**This human anatomy and physiology series is recommended for health and science majors only.

#### Chemistry

- CHEM 1210 Principles of Chemistry I* (3)
- CHEM 121L Principles of Chemistry I Lab* (1)
- CHEM 1220 Principles of Chemistry II (3)
- CHEM 122L Principles of Chemistry II Lab* (1)
- CHEM 1510 Fundamentals of Chemistry I** (3)
- CHEM 151L Fundamentals of Chemistry I Lab** (1)
- CHEM 1520 Fundamentals of Chemistry II (3)
- CHEM 152L Fundamentals of Chemistry II Lab (1)

*This principles of chemistry is for technical education students and others pursuing programs requiring only one year of chemistry.

**This fundamentals of chemistry series is for students planning to pursue a major in biological sciences, chemistry, physics, pre-professional studies, or mechanical and chemical engineering.
# Transfer and Articulation

## Natural Sciences (continued)

### Geology
- GEOL 2310 Environmental Geology (3)
- GEOL 231L Environmental Geology Lab (1)

### Physics/Astronomy
- PHYS 1100 Principles of Physical Science I (3)
- PHYS 110L Principles of Physical Science I Lab (1)
- PHYS 1200 Principles of Physical Science II (3)
- PHYS 120L Principles of Physical Science II Lab (1)
- PHYS 1210 Survey of Astronomy (3)
- PHYS 121L Survey of Astronomy Lab (1)
- PHYS 2010 Introduction to Physics I* (3)
- PHYS 201L Introduction to Physics I Lab* (1)
- PHYS 2030 Introduction to Physics II (3)
- PHYS 203L Introduction to Physics II Lab (1)
- PHYS 2510 General Physics I** (4)
- PHYS 251L General Physics I Lab** (1)
- PHYS 2530 General Physics II (4)
- PHYS 253L General Physics II Lab (1)

*This introduction to physics series is for arts, humanities, social sciences, and technology majors.

**This general physics series is for science & engineering majors.

### Social and Behavioral Science

Nine credit hours are required in the social and behavioral sciences. Courses should be taken from at least two of the subject areas listed.

#### Anthropology
- ANTH 1510 Cultural Anthropology (3)

#### Economics
- ECON 2120 Principles of Macroeconomics (3)
- ECON 2130 Principles of Microeconomics (3)

#### Geography
- GEOG 1210 Cultural Geography (3)

#### History
- HIST 1010 Civilization I Early World Culture (3)
- HIST 1020 Civilization II Early Modern Period (3)
- HIST 2110 American History to 1828 (3)
- HIST 2120 American History 1828 to Present (3)

### Political Science
- POLS 1020 American National Government (3)
- POLS 1030 State and Local Government (3)

### Psychology
- PSYC 1010 General Psychology (3)
- PSYC 2100 Social Psychology (3)
- PSYC 2320 Abnormal Psychology (3)
- PSYC 2700 Developmental Psychology (3)
- PSYC 2750 Educational Psychology (3)

### Sociology
- SOCI 1010 Sociology (3)
- SOCI 2010 Social Problems (3)
- SOCI 2200 Sociology of the Family (3)
- SOCI 2250 The Sociology of Race and Ethnicity in America (3)

## Washington State Community College Transfer Assurance Guide Courses (TAG)

The Transfer Assurance Guide (TAG) courses are approved to transfer state-wide to public colleges and universities as the first courses in a major area of study. Washington State has received approval for courses in eleven of the TAG areas of concentration: Arts & Humanities, Business, Communication, Education, Engineering Technologies, English Composition, Health, History, Mathematics, Natural & Physical Sciences, and Social Sciences. The specific list of approved courses is available on the college website.

## Career Technical Assurance Guides (CTAGs)

Students who successfully complete specified programs in technical programs are eligible to have technical credit transfer to public colleges and universities. This transfer credit is described in Career Technical Assurance Guides (CTAGs). CTAGs are advising tools that assist students moving from Ohio secondary and adult career-technical institutions to Ohio public institutions of higher education.
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# Biological Sciences Transfer

## ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

## FIRST SEMESTER

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
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<tr>
<td>MATH 2130</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1100</td>
<td>General Biology I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 110L</td>
<td>General Biology I Lab</td>
<td>1</td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>General Psychology</td>
<td>3</td>
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<td>—</td>
<td>Arts &amp; Humanities Elective</td>
<td>3</td>
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## SECOND SEMESTER

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<td>ENGL 1530</td>
<td>English Composition III</td>
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<td>BUSM 1600</td>
<td>PC Applications</td>
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<td>MATH 2263</td>
<td>Analytical Geometry &amp; Calculus I</td>
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<td>Fundamentals of Chemistry I Lab</td>
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<td>PHYS 2510</td>
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<td>SPCH 1510</td>
<td>Speech</td>
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<td>PHYS 2530</td>
<td>General Physics II</td>
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<td>PHYS 253L</td>
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<tr>
<td>BIOL 2600</td>
<td>Introduction to Ecology</td>
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<td>BIOL 260L</td>
<td>Introduction to Ecology Lab</td>
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<td>—</td>
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<tr>
<td><strong>Credit Hours</strong></td>
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**Total Credit Hours**: 71

Prerequisites are required for some courses. Evening courses may be required to complete this program.

The Biological Sciences Transfer program provides the foundation courses needed to transfer into four-year science-related programs in fields such as biological sciences, environmental sciences, medicine, microbiology, and pharmacy.

The Biological Sciences Transfer curriculum leads to the Associate of Science degree, and meets the transfer module requirements for transfer to Ohio state colleges and universities.

**Graduates of the program will be able to:**

- Transfer to four-year bachelor's degree programs with junior status.
- Demonstrate knowledge and understanding regarding the structure and function of cells, the molecular basis of heredity, biological evolution, interdependence among organisms, energy and the organization of living things, and the behavior of organisms.
- Construct full-scale scientific investigations, including: formulate questions to be answered; design approaches that incorporate appropriate variables and controls; implement solutions; and collect and record qualitative and quantitative data.
- Problem solve, think critically, and communicate effectively using both written and oral form.
- Develop a working knowledge of the relationships among sciences and society.
BUSINESS ADMINISTRATION TRANSFER

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
</tr>
<tr>
<td>BUSM 1550</td>
<td>Business Management I</td>
<td>3</td>
</tr>
<tr>
<td>---</td>
<td>Arts &amp; Humanities Elective</td>
<td>3</td>
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<tr>
<td>ECON 2120</td>
<td>Principles of Macroeconomics</td>
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Credit Hours: 15

SECOND SEMESTER

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<td>ENGL 1520</td>
<td>English Composition II or</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1530</td>
<td>English Composition III</td>
<td></td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>General Psychology or</td>
<td>3</td>
</tr>
<tr>
<td>---</td>
<td>Social/Behavioral Science Elective</td>
<td></td>
</tr>
<tr>
<td>MATH 2130</td>
<td>College Algebra or</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 2260</td>
<td>Introduction to Calculus</td>
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<tr>
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<td>Arts &amp; Humanities Elective</td>
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Credit Hours: 15-16

THIRD SEMESTER

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<thead>
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<th>Title</th>
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<tbody>
<tr>
<td>ACCT 1510</td>
<td>Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 1510</td>
<td>Speech</td>
<td>3</td>
</tr>
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<td>---</td>
<td>Arts &amp; Humanities Elective</td>
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<tr>
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<td>Business Elective</td>
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<tr>
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<td>Natural Science Elective</td>
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Credit Hours: 15-16

FOURTH SEMESTER

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<tr>
<td>ECON 2130</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>---</td>
<td>Business Elective</td>
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</table>

Credit Hours: 14

Total Credit Hours: 60-61

The Business Administration Transfer program is designed to provide basic coursework that will enable transfer to baccalaureate programs in business administration, accounting, finance, management, and marketing. The program allows the flexibility needed to transfer into the four-year institution of their choice. The emphasis is on completion of general education requirements and courses in economics, accounting, and mathematics to prepare for work in a chosen major at the four-year institution.

If you plan to transfer to a baccalaureate program in business (including accounting, management, marketing, finance and other related areas) you should be aware of significant differences between course requirements and the application of transfer credits at the various institutions in this region.

Students should work closely with an academic advisor, department chair and/or the director of advising and transfer to tailor the academic programs for transfer to the institution of choice.

The Business Administration Transfer curriculum leads to the Associate of Arts degree and meets the transfer module requirements for transfer to Ohio state colleges and universities.

Graduates of the program will be able to:

- Show they have fulfilled requirements of the program by completing a degree audit sheet.
- Problem solve, think critically and communicate effectively through the use of accounting practice sets, business simulations, and presentations.
- Analyze business data and forecasts through the use of technology, i.e., spreadsheets, graphs, databases, ledgers, and the Microsoft Office suite.
- Successfully prepare an up-to-date working resume for use after graduation.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
## Education Transfer - Early Childhood

### Associate of Arts Degree for Transfer

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
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</tr>
<tr>
<td>EDUC 1000</td>
<td>Introduction to Teaching</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1510</td>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
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<td>BUSM 1600</td>
<td>PC Applications</td>
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#### Second Semester

<table>
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<tbody>
<tr>
<td>ENGL 1520</td>
<td>English Composition II or III</td>
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</tr>
<tr>
<td>ENGL 1530</td>
<td>English Composition III</td>
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<tr>
<td>EDUC 1510</td>
<td>Early Childhood Education Seminar &amp; Field Work</td>
<td>1</td>
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<tr>
<td>EDUC 1400</td>
<td>Introduction to Instructional Planning</td>
<td>2</td>
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<tr>
<td>MUSC 1010</td>
<td>Fundamentals of Music or</td>
<td>3</td>
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<td>—</td>
<td>Arts &amp; Humanities Elective</td>
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<tr>
<td>MATH 2173</td>
<td>Survey of Math I</td>
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<td>PSYC 2700</td>
<td>Developmental Psychology</td>
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#### Third Semester

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<td>MATH 2175</td>
<td>Survey of Mathematics II</td>
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<tr>
<td>ARTS 1000</td>
<td>Art Appreciation</td>
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<td>BIOL 1010</td>
<td>Principles of Biology or</td>
<td>3-4</td>
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<tr>
<td>PHYS 1100</td>
<td>Principles of Physical Science I</td>
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</tr>
<tr>
<td>EDUC 2100</td>
<td>Exceptional Learners</td>
<td>3</td>
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<tr>
<td>EDUC 2110</td>
<td>Exceptional Learners Education</td>
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<tr>
<td>EDUC 2400</td>
<td>Multicultural Education or</td>
<td>2-3</td>
</tr>
<tr>
<td>ECDV 2210</td>
<td>Art, Music and Movement</td>
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#### Fourth Semester

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<tr>
<td>EDUC 1700</td>
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<tr>
<td>PSYC 2750</td>
<td>Educational Psychology</td>
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<tr>
<td>EDUC 2950</td>
<td>Education Capstone - Foundations of the Profession</td>
<td>3</td>
</tr>
<tr>
<td>ECDV 1130</td>
<td>ECD Health &amp; Safety</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 1200</td>
<td>Principles of Physical Science II or</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1210</td>
<td>Astronomy</td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>Social/Behavioral Science Elective</td>
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### Total Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>

- **70-72**

Prerequisites are required for some courses. Evening courses may be required to complete this program.

The Education Transfer - Early Childhood curriculum provides for a major concentration in early childhood (three to eight years old) that will transfer to a variety of institutions offering four- and five-year degree programs that lead to teacher licensure. Graduates of Washington State’s education transfer program have successfully transferred to Marietta College, West Virginia University-Parkersburg, Ohio University, Ohio Valley University, The Ohio State University, Muskingum University, and many other institutions. To increase the likelihood that smooth transfer occurs, students should work closely with their academic advisors to select specific courses which meet the requirements of the teacher education program they intend to pursue.

To complete degree and/or certification requirements in middle school, adolescent/young adult, or K–12 art, music, physical education, or special education, consult with an academic advisor to meet the requirements of the selected four-year institution. The Education Transfer curriculum leads to the Associate of Arts degree and meets the Transfer Module requirements for transfer to Ohio state colleges and universities. A group of education transfer program courses have been approved to meet the Ohio Transfer Assurance Guide (TAG) for education.

An associate degree is required to work as an educational paraprofessional (teacher’s aide). The following associate’s degree programs are recommended and will provide the knowledge and skills necessary for passing the qualifying test: education transfer (any of the three levels), early childhood development, liberal arts, or social services.

### Graduates of the program will be able to:

- Meet the general education requirements of the college.
- Be prepared to pass the Praxis I, Pre-Professional Skills Test.
- Gain knowledge of the historical and philosophical foundations of education, school structure, government, and effective school operation in a pluralistic society.
- Investigate career expectations and current educational issues.
- Participate in and begin to make personal decisions concerning the appropriateness of a career in education.
- Demonstrate the ability to develop and execute a detailed lesson plan.
- Gain knowledge about the characteristics, identification, and needs of exceptional individuals and how to adapt instruction to meet their needs.
- Work with exceptional individuals in a school or agency setting to see how theory is put into practice.
- Learn how to operate and implement technology in the classroom and in instructional planning.
- Have the opportunity to begin in-depth study in selected areas of concentration.
### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 1000</td>
<td>Introduction to Teaching</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1510</td>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
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<td><strong>Credit Hours</strong></td>
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### SECOND SEMESTER

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ENGL 1520</td>
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<td>ENGL 1530</td>
<td>English Composition III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2130</td>
<td>College Algebra or Math Elective</td>
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<tr>
<td>EDUC 1530</td>
<td>Middle Childhood Education Seminar &amp; Field Work</td>
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<tr>
<td>EDUC 1400</td>
<td>Introduction to Instructional Planning</td>
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<tr>
<td>PSYC 2700</td>
<td>Developmental Psychology</td>
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<td>Arts &amp; Humanities Elective</td>
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### THIRD SEMESTER

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>EDUC 2100</td>
<td>Exceptional Learners</td>
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<tr>
<td>EDUC 2110</td>
<td>Exceptional Learners Education Seminar &amp; Field Work</td>
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<tr>
<td>—</td>
<td>Course in Area of Concentration I</td>
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<td>—</td>
<td>Social/Behavioral Science Elective</td>
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<td>Arts &amp; Humanities Elective</td>
<td>3</td>
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<tr>
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<td>Natural Science Elective</td>
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### FOURTH SEMESTER

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<tr>
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<td>Natural Science Elective</td>
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<td>—</td>
<td>Arts &amp; Humanities Elective</td>
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<tr>
<td>PSYC 2750</td>
<td>Educational Psychology</td>
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<tr>
<td>EDUC 2950</td>
<td>Educ. Capstone - Foundations of the Profession</td>
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<td>EDUC 1700</td>
<td>Educational Technology</td>
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<tr>
<td>—</td>
<td>Course in Area of Concentration II</td>
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</table>

**Total Credit Hours** 70-72

Prerequisites are required for some courses. Evening courses may be required to complete this program.

The Education Transfer program is designed to provide the general education courses needed to transfer into four and five-year programs in teacher education. The Middle Years program prepares you to teach children nine to 13 years old. In addition to general education courses and a core of professional education courses, students enrolled in this program should begin taking courses in two areas of concentration chosen from language arts, sciences, mathematics, and/or social studies.

The goals of the Education Transfer program at Washington State focus on providing instruction and experience that will allow graduates to successfully transfer to four- and five-year institutions offering degrees that lead to teacher licensure at the early years, middle years, or young adult levels. Graduates of Washington State’s Education Transfer program have successfully transferred to Marietta College, West Virginia University-Parkersburg, Ohio University, Ohio Valley University, The Ohio State University, Muskingum University, and many other institutions.

To complete degree and/or certification requirements in middle school, adolescent/young adult, or K–12 art, music, physical education, or special education, consult with an academic advisor to meet the requirements of the selected four-year institution. The Education Transfer curriculum leads to the Associate of Arts degree and meets the Transfer Module requirements for transfer to Ohio state colleges and universities. A group of education transfer program courses have been approved to meet the Ohio Transfer Assurance Guide (TAG) for education.

**Graduates of the program will be able to:**

- Meet the general education requirements of the college.
- Be prepared to pass the Praxis I, Pre-Professional Skills Test.
- Gain knowledge of the historical and philosophical foundations of education, school structure, government, and effective school operation in a pluralistic society.
- Investigate career expectations and current educational issues.
- Participate in and begin to make personal decisions concerning the appropriateness of a career in education.
- Develop and execute a detailed lesson plan.
- Gain knowledge about the characteristics, identification, and needs of exceptional individuals and how to adapt instruction to meet their needs.
- Work with exceptional individuals in a school or agency setting to see how theory is put into practice.
- Operate and implement technology in the classroom and in instructional planning.
- Begin in-depth study in selected areas of concentration.
The Education Transfer program is designed to provide the general education courses needed to transfer into four and five-year programs in teacher education. The Adolescent/Young Adult program prepares you to teach those 12 to 21 years old. In addition to general education courses and a core of professional education courses, students enrolled in this program should begin taking courses in two areas of concentration chosen from language arts, sciences, mathematics, and/or social studies.

The goals of the Education Transfer program at Washington State focus on providing instruction and experience that will allow graduates to successfully transfer to four- and five-year institutions offering degrees that lead to teacher licensure at the early years, middle years, or young adult levels. Graduates of Washington State’s Education Transfer program have successfully transferred to Marietta College, West Virginia University-Parkersburg, Ohio University, Ohio Valley University, The Ohio State University, Muskingum University, and many other institutions.

To complete degree and/or certification requirements in middle school, adolescent/young adult, or K–12 art, music, physical education, or special education, consult with an academic advisor to meet the requirements of the selected four-year institution. The Education Transfer curriculum leads to the Associate of Arts degree and meets the Transfer Module requirements for transfer to Ohio state colleges and universities. A group of education transfer program courses have been approved to meet the Ohio Transfer Assurance Guide (TAG) for education.

Graduates of the program will be able to:

- Meet the general education requirements of the college.
- Be prepared to pass the Praxis I, Pre-Professional Skills Test.
- Know the historical and philosophical foundations of education, school structure, government, and effective school operation in a pluralistic society.
- Investigate career expectations and current educational issues.
- Participate in and begin to make personal decisions concerning the appropriateness of a career in education.
- Develop and execute a detailed lesson plan.
- Gain knowledge about the characteristics, identification, and needs of exceptional individuals and how to adapt instruction to meet their needs.
- Work with exceptional individuals in a school or agency setting to see how theory is put into practice.
- Operate and implement technology in the classroom and in instructional planning.
- Begin in-depth study in selected areas of concentration.
## Associate of Science Degree for Transfer

### Engineering Transfer

#### First Semester
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
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<tr>
<td>MATH 2263</td>
<td>Analytical Geometry &amp; Calculus I</td>
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<tr>
<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
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<tr>
<td>CHEM 1510</td>
<td>Fundamentals of Chemistry I</td>
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<tr>
<td>CHEM 151L</td>
<td>Fundamentals of Chemistry I Lab</td>
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#### Second Semester
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<td>English Composition II or III</td>
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<td>ENGL 1530</td>
<td>English Composition III</td>
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<tr>
<td>MATH 2264</td>
<td>Analytical Geometry &amp; Calculus II</td>
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<tr>
<td>CHEM 1520</td>
<td>Fundamentals of Chemistry II</td>
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<td>CHEM 152L</td>
<td>Fundamentals of Chemistry II Lab</td>
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<td>SPCH 1510</td>
<td>Speech or Interpersonal Communication</td>
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<tr>
<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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#### Third Semester
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<th>Course Title</th>
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<td>PHYS 2510</td>
<td>General Physics I</td>
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<td>PHYS 251L</td>
<td>General Physics I Lab</td>
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<td>SPCH 1510</td>
<td>Speech or Interpersonal Communication</td>
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#### Fourth Semester
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</tr>
<tr>
<td>PHYS 2530</td>
<td>General Physics II</td>
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<tr>
<td>PHYS 253L</td>
<td>General Physics II Lab</td>
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<tr>
<td>MATH 2250</td>
<td>Elementary Linear Algebra</td>
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</tr>
<tr>
<td><strong>Credit Hours</strong></td>
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</table>

**Total Credit Hours**: 67

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Prerequisites are required for some courses. Evening courses may be required to complete this program.

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The Engineering Transfer program provides the basic core requirements for transfer into a university or college engineering baccalaureate program. Program emphasis is on completion of mathematics and science sequences, as well as humanities, social, and behavioral electives.

In order to facilitate the transfer process to a four-year college or university, consultation with an advisor, department chair or the director of advising and transfer is recommended during the first academic year. Seeking the necessary information and advice from both the transfer and the prospective receiving institution is encouraged. Prerequisite courses in mathematics or science may need to be completed before attempting prescribed courses required for the transfer degree. This coursework is necessary for success and may increase the time required to earn the associate’s degree.

Completion of the Associate of Science Degree in Engineering Transfer meets the requirements in completing the Ohio Transfer Module. This guarantees the application of a minimum of 57 hours to the general education requirements of all state supported institutions in Ohio. Receiving institutions are encouraged to award preferential consideration for admission to students completing the module.

**Graduates of the program will be able to:**
- Apply mathematics, physics, and reasoning skills to solve problems.
- Use, apply, and program a computer.
- Analyze and adopt a defensible position on historical or current issues.
- Articulate into a Bachelor of Science Degree in Engineering with the necessary background in Calculus and Physics.
- Successfully apply methods of engineering mechanics.
# Fine Arts Transfer - Studio Art

## Associate of Arts Degree for Transfer

### First Semester
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 1210</td>
<td>Drawing I</td>
<td>4</td>
</tr>
<tr>
<td>ARTS 1110</td>
<td>Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2010</td>
<td>Art History I</td>
<td>3</td>
</tr>
<tr>
<td>—</td>
<td>Math Elective (2110 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Credit Hours</strong></td>
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</table>

### Second Semester
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ARTS 2230</td>
<td>Figure Drawing</td>
<td>4</td>
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<tr>
<td>ARTS 2410</td>
<td>Painting I</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2610</td>
<td>Graphic Design I</td>
<td>4</td>
</tr>
<tr>
<td>ARTS 2020</td>
<td>Art History II</td>
<td>3</td>
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<tr>
<td>—</td>
<td>Social/Behavioral Science Elective</td>
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<tr>
<td>SPCH 1510</td>
<td>Speech</td>
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### Third Semester
<table>
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<tr>
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<th>Course Title</th>
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<tr>
<td>ARTS 2210</td>
<td>Drawing II</td>
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<tr>
<td>ARTS 1800</td>
<td>Photography I</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1120</td>
<td>Three Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1520</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>—</td>
<td>Natural Science Elective</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Credit Hours</strong></td>
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</tr>
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</table>

### Fourth Semester
- Social/Behavioral Science Elective | 3
- Arts & Humanities Elective | 3
- ARTS 2420 | Painting II | 3
- ARTS 2200 | Special Problems in Art | 1
- ARTS 2370 | Contemporary Art | 3
- — | Natural Science Elective | 4
|             | **Credit Hours**              | **17**  |

**Total Credit Hours** 73

Prerequisites are required for some courses. Evening courses may be required to complete this program.

The Studio Art major leads to the Associate of Arts degree in Fine Arts Transfer. This degree provides a foundation for further study in visual art, including studio art, graphic art, computer graphics, game design, and industrial design.

To transfer as a true junior into a baccalaureate program in fine arts may require more than two years of preparation. Therefore, students should work closely with an academic advisor, department chair, or the director of advising and transfer to tailor their program for transfer to the institution of choice, and should consult that institution’s catalog requirements early in the program.

The goals of the Fine Arts Transfer program at Washington State focus on providing instruction and experience that will allow graduates to successfully transfer to institutions that offer either the four-year Bachelor of Arts or the five-year Bachelor of Fine Arts degree.

**Graduates of the program will be able to:**
- Meet the general education requirements of the college and be prepared to transfer as a junior in their area of concentration.
- Apply a system or methodology for art making.
- Define, explain, and apply the perceptual and conceptual skills used in art making.
- Possess analytical skills necessary for problem solving, critical thinking, and art making.
- Make, communicate, and defend critical judgments based on knowledge of historical and contemporary practice.
- Demonstrate development toward a personal image, i.e., artwork containing a personal or unique point of view.
### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ARTS 1210</td>
<td>Drawing I</td>
<td>4</td>
</tr>
<tr>
<td>ARTS 1110</td>
<td>Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2010</td>
<td>Art History I</td>
<td>3</td>
</tr>
<tr>
<td>—</td>
<td>Math Elective (2110 or higher)</td>
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</tr>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
<td>3</td>
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<td><strong>Credit Hours</strong></td>
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### SECOND SEMESTER

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<thead>
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<td>ARTS 1800</td>
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<td>—</td>
<td>Natural Science Elective</td>
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<tr>
<td>ARTS 2610</td>
<td>Graphic Design I</td>
<td>4</td>
</tr>
<tr>
<td>ARTS 2050</td>
<td>American Art</td>
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<td>ECON 2120</td>
<td>Macroeconomics</td>
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### THIRD SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>ARTS 2230</td>
<td>Figure Drawing</td>
<td>4</td>
</tr>
<tr>
<td>ARTS 2020</td>
<td>Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1220</td>
<td>Color Theory</td>
<td>3</td>
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<tr>
<td>ENGL 1520</td>
<td>English Composition II</td>
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</tr>
<tr>
<td>SPCH 1510</td>
<td>Public Speaking</td>
<td>3</td>
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<td>—</td>
<td>Social/Behavioral Science Elective</td>
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<td><strong>Credit Hours</strong></td>
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### FOURTH SEMESTER

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<tr>
<td>ARTS 2620</td>
<td>Graphic Design II</td>
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<td>POLS 2050</td>
<td>Global Issues</td>
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<td>ARTS 1120</td>
<td>3-D Design</td>
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<tr>
<td>ARTS 2370</td>
<td>Contemporary Art</td>
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<td>Natural Science Elective</td>
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<tr>
<td><strong>Credit Hours</strong></td>
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</tbody>
</table>

**Total Credit Hours**: 72

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Prerequisites are required for some courses. Evening courses may be required to complete this program.

The Graphic Design major leads to the Associate of Arts degree in Fine Arts Transfer. This degree provides a foundation for students to pursue further study in the visual arts, including studio art, graphic art, computer graphics, game design, and industrial design.

Students should be aware that to transfer as a true junior into a baccalaureate program in fine arts may require more than two years of preparation. Therefore, they should work closely with their academic advisor, department chair, or the director of advising and transfer to tailor their program for transfer to the institution of their choice, and should consult that institution’s catalog requirements early in their program.

The goals of the Fine Arts Transfer program at Washington State focus on providing instruction and experience that will allow graduates to successfully transfer to institutions that offer either the four-year Bachelor of Arts or the five-year Bachelor of Fine Arts degree.

Graduates of the program will be able to:

- Meet the general education requirements of the college and be prepared to transfer as a junior in their area of concentration.
- Apply a system or methodology for art making.
- Define, explain, and apply the perceptual and conceptual skills used in art making.
- Possess analytical skills necessary for problem solving, critical thinking, and art making.
- Make, communicate, and defend critical judgments based on knowledge of historical and contemporary practice.
- Demonstrate development toward a personal image, i.e., artwork containing a personal or unique point of view.
ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

FIRST SEMESTER
ENGL 1510 English Composition I 3
BUSB 1600 PC Applications 3
MATH 2130 College Algebra or 4-5
MATH 2150 Pre Calculus
— Social/Behavioral Science Elective 3
— Natural Science Elective 4-5
Credit Hours 17-19

SECOND SEMESTER
ENGL 1520 English Composition II 3
— Arts & Humanities Elective 3
— Social/Behavioral Science Elective 3
— General Science Elective 4-5
— Additional Elective 3
Credit Hours 16-17

THIRD SEMESTER
SPCH 1510 Speech or 3
SPCH 2060 Interpersonal Communication 3
GEOG 1210 Cultural Geography 3
— Natural Science Elective 4-5
— General Science Concentration 4-5
— Arts & Humanities Elective 3
Credit Hours 17-19

FOURTH SEMESTER
— Social/Behavioral Science Elective 3
— Arts & Humanities Elective 3
— General Science Concentration 4-5
— General Science Concentration 4-5
Credit Hours 14-16

Total Credit Hours 64-71

If a career in medicine, veterinary medicine, dentistry or zoology is in your future, then Washington State’s General Sciences Transfer might be the right option for you. This program meets the Transfer Module requirements for transfer to any Ohio state college or university.

The General Sciences Transfer program curriculum leads to the Associate of Science degree and meets the Transfer Module requirements for transfer to Ohio state colleges and universities. This program provides the foundation courses needed to transfer into a four-year program in science and science-related fields such as medicine, dentistry, pharmacy, astronomy, meteorology, and environmental science.

Graduates of the program will be able to:
• Transfer to an accredited college or university with junior status.
• Propose, consider, analyze, and evaluate alternative explanation to scientific phenomena.
• Conduct scientific investigations, formulate questions, and design approaches that incorporate appropriate variables and controls.
• Implement solutions, collect and record qualitative and quantitative data, and communicate the results.
• Know and apply the concepts, principles, and processes of technological design.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
The Associate of Individualized Studies (A.I.S.) is awarded to students who successfully complete an individually designed curricula prescribed to meet specific career goals.

Students must satisfactorily complete a minimum of 60 semester credit hours in a well-planned, unique program to serve an educational objective that could not be served through another degree program at the college.

Five general education goals will be included in each individually-designed curricula, for a minimum of 28 semester credits of general and basic related course requirements.

The program leading to the A.I.S. must contain an area of concentration consisting of a minimum of 32 to maximum of 45 semester credit hours formed either by:

- An intra-college, interdisciplinary, but coherent combination of courses drawn from a minimum of two and maximum of four instructional areas of study; or
- Up to 45 semester credit hours awarded by the college for documentable educational experiences or courses completed at another college judged by WSCC to be of college level; or
- An unusual but academically coherent combination of technical and general studies courses.

Upon petitioning for acceptance into the A.I.S. program, a representative of Enrollment Management, the student’s committee, and the student will determine the remaining required courses. Once students are accepted into the program, they must complete at least 20 credit hours within the approved A.I.S. program with at least half in the area of the approved concentration. Students with less than 30 credit hours remaining toward a degree must have the approval of the Dean of Arts & Sciences to enroll in the program.

Prerequisites are required for some courses. Evening courses may be required to complete this program.

### GENERAL & BASIC COURSES

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<tr>
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<th>Credit Hours</th>
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<td>English Elective</td>
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<tr>
<td>English Elective</td>
<td>3</td>
</tr>
<tr>
<td>Speech Elective</td>
<td>3</td>
</tr>
<tr>
<td>Social/Behavioral Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Arts &amp; Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Computer Applications Elective</td>
<td>3</td>
</tr>
<tr>
<td>Math Elective or</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Elective</td>
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<tr>
<td>General Education Elective</td>
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Credit Hours 28+

### MAJOR CONCENTRATION COURSES

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<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Major Concentration Elective</td>
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<tr>
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Credit Hours 32+

Total Credit Hours 60+
**LIBERAL ARTS TRANSFER**

**ASSOCIATE OF ARTS DEGREE FOR TRANSFER**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MATH 2130 College Algebra or Math Elective</td>
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<tr>
<td>ENGL 1510 English Composition I</td>
<td>3</td>
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<tr>
<td>BUSM 1600 PC Applications</td>
<td>3</td>
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<tr>
<td>— Social/Behavioral Sciences Elective</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200 Principles of Reasoning</td>
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**SECOND SEMESTER**

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<td>3</td>
</tr>
<tr>
<td>ENGL 1520 English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>— Arts &amp; Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>— Social/Behavioral Sciences Elective</td>
<td>3</td>
</tr>
<tr>
<td>— Natural Sciences Elective</td>
<td>3-4</td>
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<td><strong>Credit Hours</strong></td>
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**THIRD SEMESTER**

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>ENGL 1530 English Composition III or English Elective</td>
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<tr>
<td>— Arts &amp; Humanities Elective</td>
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<tr>
<td>— Social/Behavioral Sciences Elective</td>
<td>3</td>
</tr>
<tr>
<td>— Liberal Arts Major</td>
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<tr>
<td>— Liberal Arts Major</td>
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<td><strong>Credit Hours</strong></td>
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**FOURTH SEMESTER**

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</tr>
<tr>
<td>— Social/Behavioral Sciences Elective</td>
<td>3</td>
</tr>
<tr>
<td>— Natural Science Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>— Liberal Arts Major</td>
<td>3</td>
</tr>
<tr>
<td>— Liberal Arts Major</td>
<td>3</td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td><strong>15-16</strong></td>
</tr>
</tbody>
</table>

**Total Credit Hours** | **61-63**

Prerequisites are required for some courses. Evening courses may be required to complete this program.

Employers today demand workers who can integrate knowledge from a variety of areas and communicate complex ideas effectively. As a result they are looking more and more for candidates with strong liberal arts backgrounds. Businesses, industries, and public and private agencies are hiring liberal arts graduates because these graduates learn quickly, think critically and independently, communicate effectively, and easily adapt to the global workplace. A Liberal Arts Transfer degree is so diverse that graduates can fill positions from finance to public administration, government to recreation, administration to education and beyond.

The Liberal Arts Transfer program leads to the Associate of Arts degree in Liberal Arts. A minimum of 16 credits is required for a major concentration, with recommended areas of study including: art, business, history, literature, music, mathematics, philosophy, political science, sciences, sociology, and Spanish. Other major concentrations may be possible but are subject to the approval of the Dean of Arts & Sciences. Washington State Liberal Arts graduates have successfully transferred to Marietta College, West Virginia University – Parkersburg, Ohio University, The Ohio State University, Muskingum University, and many other institutions.

You should work closely with an academic advisor and/or department chair to tailor an academic program for transfer to the institution of your choice. If studying liberal arts, you should strongly consider taking foreign languages through the 2130 level. For transfer to most Bachelor programs, four years of the same foreign language in high school or four semesters of the same foreign language in college is recommended or required for graduation. The liberal arts transfer curriculum meets the Transfer Module requirements for transfer to Ohio state colleges and universities.

**Graduates of the program will be able to:**

- Meet the general education requirements of Washington State Community College and be prepared to transfer to a four-year institution as a junior.
- Demonstrate specific knowledge within their discipline of study through analysis, evaluation, and communication of information from within the discipline.
- Demonstrate methods for critically acquiring and evaluating information, drawing conclusions between and among various disciplines, and defending those conclusions rationally in effective oral and written communications.
- Apply decision-making processes by synthesizing ideas drawn from broad areas of knowledge.
- Demonstrate an understanding of the world beyond their immediate experience.
### Mathematics Transfer

**ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER**

#### FIRST SEMESTER
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
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<tr>
<td>MATH 2263</td>
<td>Analytical Geometry &amp; Calculus I</td>
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<td>Social/Behavioral Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>—</td>
<td>Arts &amp; Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1510</td>
<td>Speech or</td>
<td>3</td>
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<tr>
<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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</tr>
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<td><strong>Credit Hours</strong></td>
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#### SECOND SEMESTER
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<th>Title</th>
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<td>English Composition II or III</td>
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<td>English Composition III</td>
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<td>Analytical Geometry &amp; Calculus II</td>
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<td>Arts &amp; Humanities Elective</td>
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<td>—</td>
<td>Natural Sciences Elective</td>
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<tr>
<td><strong>Credit Hours</strong></td>
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#### THIRD SEMESTER
<table>
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<th>Title</th>
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<tbody>
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<td>Analytical Geometry &amp; Calculus III</td>
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<td>Social/Behavioral Science Elective</td>
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</tr>
<tr>
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<td>Natural Science Elective</td>
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<tr>
<td>MATH 2250</td>
<td>Elementary Linear Algebra</td>
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#### FOURTH SEMESTER
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<tbody>
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<td>Differential Equations</td>
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<td>Computer Science Elective</td>
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<tr>
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</tr>
</tbody>
</table>

**Total Credit Hours** 61

Prerequisites are required for some courses. Evening courses may be required to complete this program.

If you like mathematical analysis and applications, spatial relations and data analysis, or are interested in teaching mathematics, then Washington State’s Mathematics Transfer program might be the right option for you. Career opportunities include but are not limited to: teacher, professor, computer scientist, actuary, finance manager, financial advisor, pharmacist, and statistics/data analyst.

The Mathematics Transfer program provides preparation for transfer to four-year colleges and universities to pursue a baccalaureate degree in an area of mathematics or computer science. The Mathematics Transfer curriculum leads to the Associate of Science degree, and meets the Transfer Module requirements for transfer to Ohio state colleges and universities. The required math courses are part of the transfer assurance guide (TAG). If prerequisite courses in mathematics and science are not already completed, the necessary courses may be taken at Washington State, but more time may be required to complete the degree.

**Graduates of the program will be able to:**

- Demonstrate competency in mathematics through Calculus III.
- Problem solve, think critically, and communicate effectively.
- Use technology (graphing calculator) to analyze equations, data and graphs.
- Show that they have fulfilled the requirements of the program by completing the degree audit sheet for an Associate of Science Degree.
The Physical Sciences Transfer program provides the foundation courses needed to transfer into a four-year college or university for a bachelor’s degree in chemistry or physics. Also, the program can prepare for transfer into such fields as: medicine, dentistry, pharmacy, astronomy, meteorology, and environmental science.

Successful completion of the physical sciences transfer program leads to the Associate of Science degree and meets the Transfer Module requirements for transfer to Ohio state colleges and universities. If prerequisite courses in mathematics and science are not already completed, the necessary courses may be taken at Washington State, but more time may be required to complete the degree.

### Graduates of the program will be able to:

- Transfer to an accredited college or university with junior status.
- Demonstrate basic competency in a science field through CHEM 1520, and/or MATH 2265, and/or PHYS 2530.
- Solve problems, think critically, and communicate effectively in both written and oral forms.
- Effectively use various types of technology related to science, including but is not limited to: Mathematica software, graphing calculators, computers, Microsoft Excel, graphics analysis, and word processing programs.
- Evaluate and interpret results of experiments, calculations, and technological devices.

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### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
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<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
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<tr>
<td>MATH 2263</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>4</td>
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<tr>
<td>CHEM 1510</td>
<td>Fundamentals of Chemistry I</td>
<td>3</td>
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<tr>
<td>CHEM 151L</td>
<td>Fundamentals of Chemistry I Lab</td>
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<td>Arts &amp; Humanities Elective</td>
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### THIRD SEMESTER

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<td>GEOG 1210</td>
<td>Cultural Geography</td>
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<td>PHYS 2510</td>
<td>General Physics I</td>
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<td>PHYS 251L</td>
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<td>MATH 2265</td>
<td>Analytic Geometry &amp; Calculus III</td>
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<td>Natural Science Elective</td>
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<td>PHYS 2530</td>
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**Total Credit Hours**: **69-70**

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Prerequisites are required for some courses. Evening courses may be required to complete this program.
ASSOCIATE OF ARTS DEGREE FOR TRANSFER

The Social Service Transfer program leads to the ASSOCIATE of Arts Degree with a social service major for transfer. A minimum of 12 credits in specific Social Service courses are required for a major concentration. There are 24 credits in natural science, mathematics, arts & humanities and social/behavioral science; some of these courses require prerequisites. No practicum field work courses are required. There are fewer social service courses in this option since the goal is not immediate entry into direct employment.

You should work closely with an academic advisor to structure a program for transfer into a social or behavioral science, human services, or social work bachelors program. For transfer to most bachelors programs, four years of the same foreign language in high school or four semesters in college is recommended. The Social Service Transfer curriculum meets the Transfer Module requirements for transfer to Ohio state colleges and universities.

Graduates of the program will be able to:

- Meet the general education requirements of Washington State Community College and be prepared to transfer to a four-year institution as a junior.
- Demonstrate specific knowledge within their discipline of study through analysis, evaluation, and communication of information from within the discipline.
- Critically acquire and evaluate information, drawing conclusions between and among various disciplines, and defending those conclusions rationally in effective oral and written communications.
- Apply decision-making processes by synthesizing ideas drawn from broad areas of knowledge.
- Demonstrate an understanding of the world beyond their immediate experience.

---

**FIRST SEMESTER**

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<th>Course Title</th>
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<td>SOCI 1010</td>
<td>Introduction to Sociology</td>
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<tr>
<td>SOSV 1110</td>
<td>Introduction to Social Work &amp; Social Welfare</td>
<td>3</td>
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<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
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<tr>
<td>SOSV 1140</td>
<td>American Social Welfare Institution</td>
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<td>ENGL 1510</td>
<td>English Composition I</td>
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<td>Arts &amp; Humanities Elective</td>
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**SECOND SEMESTER**

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<td>Arts or Music Elective</td>
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<td>SPCH 1510</td>
<td>Speech or</td>
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<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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<td>English Composition II or</td>
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<td>English Composition III</td>
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<td>PSYC 1010</td>
<td>Psychology</td>
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<td>SOCI 2010</td>
<td>Social Problems</td>
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<td>MATH 2110</td>
<td>Principles of Statistics</td>
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**THIRD SEMESTER**

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<td>SOSV 2100</td>
<td>Crisis Intervention</td>
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<td>BIOL 1010</td>
<td>General Biology I</td>
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<td>—</td>
<td>History Elective</td>
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<td>SOCI 2200</td>
<td>Sociology of Family</td>
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**FOURTH SEMESTER**

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<td>PSYC 2320</td>
<td>Abnormal Psychology</td>
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</tr>
<tr>
<td>SOSV 1120</td>
<td>Interview Techniques</td>
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<tr>
<td>GEOG 1210</td>
<td>Cultural Geography</td>
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<tr>
<td>—</td>
<td>Natural Science Elective or</td>
<td>3-4</td>
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<tr>
<td>—</td>
<td>Math Elective</td>
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<tr>
<td>SOCI 2250</td>
<td>Sociology of Race &amp; Ethnicity in America</td>
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<tr>
<td>Credit Hours</td>
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</table>

**Total Credit Hours** 70-71

Prerequisites are required for some courses. Evening courses may be required to complete this program.
The Associate of Technical Studies (A.T.S.) is awarded for successful completion of a minimum of sixty semester credit hours of an individually planned technical education program designed to respond to needs for specialized technical education not currently available in the formal degree programs on a particular campus.

As with all technical associate degrees, the program leading to an Associate of Technical Studies must have an area of concentration which is equivalent to thirty semester credit hours in technical studies and clearly identifiable with a career objective.

The area of concentration can be formed either by:

- A coherent combination of technical courses drawn from two or more technical programs currently offered by the awarding institution to service a career objective which would not be adequately addressed by one of those existing programs; or

- Courses completed or training received by a student at other institutions of higher education, career centers, or other educational enterprises judged by the institution to be of college level and for which the institution awards degree credit, to a maximum of thirty semester credit hours, prior to the declaration of candidacy for the degree.

The actual degree awarded must contain the name of the student’s area of concentration, e.g., Associate of Technical Studies in Diesel Technology. Extensive individualized academic advisement may be necessary for the planning of such programs, and each candidate for this degree must complete an A.T.S. application which identifies the area of concentration and designates courses to be taken to complete the degree. Such a plan will generally be completed prior to the student’s having earned forty semester credit hours at the awarding institution. Plans submitted after forty semester credit hours are completed must be approved by the Vice President for Academic Affairs.

Graduates of the A.T.S. programs who wish to extend their studies to baccalaureate-level programs may need to complete a substantial amount of lower division coursework at the transfer institution. Students satisfactorily completing this degree must assume that four-year institutions may evaluate their credits on a course-by-course basis.

See: Ohio Board of Regents Operating Manual for Two Year, Campus Programs.

The following distribution of courses will fulfill the requirements of the Transfer Module, which is made of the core courses:

- English Composition - minimum of six credit hours is required
- Mathematics - minimum of three credit hours is required
- Natural Sciences - minimum of six credit hours is required in biology, geology, chemistry, or physics. One course must include a lab component.
- Arts & Humanities - minimum of nine credit hours is required in art, music, literature, philosophy, or specified history courses. Courses must be taken in at least two subject areas.
- Social/Behavioral Sciences - minimum of nine credit hours is required in sociology, political science, psychology, economics, or specified history courses. Courses must be taken in at least two subject areas.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
The Associate of Technical Studies in Cyber Security combines the education and skills training of both criminal investigation and computer support technology to prepare students for entry-level positions in cyber security and investigations, computer network infrastructure and security, managing networks and operating systems, and IT criminal investigation.

The core course work required in the computer support curriculum includes work with operating systems, such as Windows XP Professional, Windows 7, Windows Server 2003, Windows Server 2008, Linux, and the Cisco IOS. Students work with networking hardware including copper and fiber optic media, switches, routers, firewalls, and wireless access points. Additional course work directly relates to the Cisco Academy, Security+ classes, and network security.

The computer support course work is enhanced by select criminal justice course work in criminal investigation, criminal evidence and procedures, criminal law, and computer forensics training.

Washington State’s Cyber Security program also features practical hands-on learning in computer diagnostics and networking. These team-based lab exercises will put your skills to work out in the field during practicum assignments.

The goal of this program is to prepare students for entry level positions in the cyber security field. Students are encouraged to prepare for CompTIA certification exams, including A+, Network+, and Security+ certifications, and Cisco CCENT Certification. Additional certifications may be pursued that are particular to the specialized field of cyber-security.

Successful completion of the cyber security curriculum leads to an Associate of Technical Studies for pursuit of direct employment or advanced degree studies. The program can be completed in four (4) semesters. High School students in College Tech Prep may complete the program in less time if they have taken equivalent courses.


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### ASSOCIATE OF TECHNICAL STUDIES

#### FIRST SEMESTER

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<thead>
<tr>
<th>Course</th>
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<td>ENGL 1510</td>
<td>English Composition I</td>
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<td>MATH —</td>
<td>MATH 1110 or higher</td>
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<td>BUSM 1600</td>
<td>PC Applications</td>
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<tr>
<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
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<tr>
<td>CRJU 1120</td>
<td>Criminal Law</td>
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<tr>
<td>DTCS 1230</td>
<td>OS Concepts and Customizing</td>
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<th>Title</th>
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<tr>
<td>ENGL 1520</td>
<td>English Composition II or</td>
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<tr>
<td>ENGL 1515</td>
<td>Technical Writing</td>
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<td>Social &amp; Behavioral Science</td>
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<td>Speech</td>
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<tr>
<td>CRJU 1110</td>
<td>Criminal Evidence and Procedures</td>
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<tr>
<td>ELEC 2410</td>
<td>Microcomputer Diagnostic and</td>
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<tr>
<td>ELEC 1950</td>
<td>CISCO Semester I</td>
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<td>DTCS 2100</td>
<td>Database Management</td>
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<td>Microcomputer Diagnostic and</td>
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<td>ELEC 1950</td>
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<td>Social &amp; Behavioral Science</td>
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<td>CRJU 2580</td>
<td>Criminal Justice Practicum</td>
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<td>CRJU 2590</td>
<td>Criminal Justice Seminar</td>
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<td>ELEC 2900</td>
<td>Introduction to Computer Forensics</td>
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<td>ELEC 2610</td>
<td>Introduction to Linux</td>
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<td>ELEC 2450</td>
<td>Security +</td>
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**Total Credit Hours** 68

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Business Technology

Accounting Technology ....................... 36
Accounting - Business Computing ............ 37
Business Management Technology .......... 38
Digital Technology - Web Application Programming 39
Digital Technology - Computer Support Technician 40
Digital Technology - Digital Media .......... 41
Digital Technology - Computer Graphics .... 42
OAST - Medical Administrative Assistant .... 43
OAST - Executive Administrative Assistant .... 44
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<tbody>
<tr>
<td>ACCT 1510</td>
<td>Principles of Accounting I</td>
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<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
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<tr>
<td>MATH 1106</td>
<td>Business Math or</td>
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<tr>
<td>MATH 2110</td>
<td>Principles of Statistics</td>
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<td>BUSM 1550</td>
<td>Business Management</td>
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<td>BUSM 1600</td>
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<td>BUSM 1660</td>
<td>Business Law</td>
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<td>Introduction to Finance</td>
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<td>ACCT 2820</td>
<td>Spreadsheet Accounting</td>
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<td>ACCT 2810</td>
<td>Microcomputer Accounting</td>
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<td>ACCT 1610</td>
<td>Payroll Accounting</td>
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<tbody>
<tr>
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<td>Intermediate Accounting</td>
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<td>ACCT 2320</td>
<td>Managerial Accounting</td>
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<td>ENGL 1520</td>
<td>English Composition II</td>
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<td>ACCT 2190</td>
<td>Principles of Federal Income Tax</td>
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<td>Principles of Macroeconomics</td>
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<tbody>
<tr>
<td>ACCT 2900</td>
<td>Fraud Examination or</td>
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<tr>
<td>ACCT 2340</td>
<td>Governmental Accounting or</td>
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<tr>
<td>ACCT 2730</td>
<td>Auditing</td>
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<tr>
<td>ACCT 2210</td>
<td>Cost Accounting</td>
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<td>ECON 2130</td>
<td>Principles of Microeconomics</td>
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<td>SPCH 1510</td>
<td>Speech</td>
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<tr>
<td>BUSM 1570</td>
<td>Small Business Entrepreneurship</td>
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<tr>
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<td>Social/Behavioral Science Elective</td>
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</tbody>
</table>

**Total Credit Hours: 72**

Prerequisites are required for some courses. Evening courses may be required to complete this program.

The Accounting Technology curriculum prepares for various accounting positions using different types of applications. You will learn to use manual and computerized accounting systems and also will study accounting principles as applied to financial, managerial and cost accounting.

The Accounting Technology program is designed to provide a concentration of financial and cost accounting with related business and computer courses, plus general and basic courses to help succeed at a job in accounting or related areas, and/or transfer to a four-year college. Successful completion of the program leads to the Associate of Applied Business degree.

**Graduates of the program will be able to:**

- Demonstrate written, oral, and nonverbal communication.
- Think independently and develop critical thinking skills.
- Develop independent learning skills.
- Develop a continuing commitment to personal, professional and community growth.
- Demonstrate math skills to the academic level they wish to achieve.
- Demonstrate college level preparation for employment in both public and private accounting.
- Prepare and maintain books for business and industry, including year-end closing and preparation of all necessary statements required by management.
- Apply internal control principles.
- Perform cost analysis.
- Apply theory and practical application of job order cost accounting, process accounting, activity based cost accounting and standard cost accounting systems.
- Develop and present understandable, reliable analysis of financial positions.
- Apply knowledge of current computer technology to the business environment.
- Demonstrate ability to use manual and computerized accounting systems.
Accounting - Business Computing

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER
ACCT 1510 Principles of Accounting I 4
ENGL 1510 English Composition I 3
MATH 1106 Business Math or 3
MATH 2110 Principles of Statistics 3
DTCS 2650 Internet & Web Design I 4
BUSM 1600 PC Applications 3
Credit Hours 17

SECOND SEMESTER
ACCT 1520 Principles of Accounting II 4
BUSM 1660 Business Law 3
DTCS 2100 Database Management 3
ACCT 2820 Spreadsheet Accounting 3
ACCT 2810 Microcomputer Accounting 2
Credit Hours 15

THIRD SEMESTER
DTCS 1230 O/S Concepts & Customizing 3
ACCT 2320 Managerial Accounting 3
ENGL 1520 English Composition II 3
ACCT 2190 Principles of Federal Income Tax 3
— Arts & Humanities Elective 3
ECON 2120 Principles of Macroeconomics 3
Credit Hours 18

FOURTH SEMESTER
ACCT 2210 Cost Accounting 4
SPCH 1510 Speech 3
BUSM 1570 Small Business Entrepreneurship 3
— Social/Behavioral Science Elective 3
ACCT 2910 Capstone: Computer Accounting 3
ELEC 2410 Microcomputer Diagnostics & Upgrading I 3
Credit Hours 19

Total Credit Hours 69

Computers are an integral part of modern society; they touch all aspects of our lives. The world is quickly becoming divided between the computer-literate and the computer-illiterate, with the elite being in the literate group. For these reasons, computer competency is an important part of all curriculum.

The purpose of the Business Computing major is to respond to the needs of local businesses by preparing competent workers. The ever-changing environment in the computer field necessitates continued evaluation of the curriculum. Successful completion of the program leads to the Associate of Applied Business degree.

Graduates of the program will be able to:

• Demonstrate effective written, oral, and nonverbal communication with employers, employees, coworkers and the public.
• Think independently, clarify values, understand fundamental theory, and develop critical thinking skills.
• Demonstrate self-directed learning skills and a commitment to continued personal and professional growth.
• Interact with clients and customers in a manner that indicates recognition of cultural and socioeconomic differences.
• Demonstrate understanding of the technologies basic to the field of computers including:
  o Word processing
  o Spreadsheets
  o Databases
  o Programming
  o Web Pages/Internet
  o Networks
  o Operating Systems
  o Desktop Publishing

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Washington State Community College’s Business Management Technology program provides students with a general business background. They receive instruction in all phases of business operations, including: management, communication, economics, entrepreneurship, business law, marketing, finance, international business and accounting. The curriculum leads to the Associate of Applied Business Degree. A three-year evening program is also available.

Graduates of the program will be able to:

- Demonstrate technologies basic to the field of business management including:
  - Management
  - Accounting
  - Computer applications
  - Quantitative methods of analysis
  - Principles of economics
  - Marketing
  - Entrepreneurship
  - Finance
  - Business ethics

- Know applicable federal and state laws.

- Demonstrate, through role play, the ability to take the text and lecture information and apply it to the following management areas: job selection interview and the discipline and discharge interview.

- Write and produce product advertisements and advertisements for company job openings.

- Gather, organize, interpret, write, and present research on a current topic related to marketing.

- Be aware of the importance of confidentiality that is necessary in the field of management.

- Demonstrate effective written, oral, and nonverbal communication with employees, coworkers, and the public.

- Think independently, clarify values, understand fundamental theory, and develop critical thinking skills.

- Interact with coworkers, subordinates, and customers in a manner that provides the desired psychological and social support including the recognition of cultural and socioeconomic differences.

- Demonstrate awareness in the importance of international understanding in an increasingly interdependent global community.
If you like working on computers and building websites or web applications, this may be the field for you. Computer programmers develop, test, and maintain the detailed instructions called software, that computers must follow to perform their functions. The many innovations in programming—advanced technologies, sophisticated new languages, and programming tools—have redefined the role of a programmer many times over.

The purpose of the Web Application Programming major is to respond to the needs of local businesses by preparing competent workers. The ever-changing environment in the computer field necessitates continued evaluation of the curriculum. Successful completion of the Web Application Programming program leads to the Associate of Applied Business degree and prepares the graduate to achieve employment in a field with competitive starting salary and a job market with continuous growth projected.

Graduates of the program will be able to:

- Demonstrate effective written, oral, and nonverbal communication with employees, coworkers, and the public.
- Think independently, clarify values, understand fundamental theory, and develop critical thinking skills.
- Demonstrate self-directed learning skills and a commitment to continued personal and professional growth.
- Interact with clients and customers in a manner that indicates recognition of cultural and socioeconomic differences.
- Understand the technologies basic to the field of computers and programming including:
  - Word processing
  - Spreadsheets
  - Databases
  - Procedural programming
  - Object-oriented programming
  - Web page development/Internet
  - Networks
  - Operating systems
  - Computer graphics

### First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>DTCS 1010</td>
<td>Intro to Digital Technology</td>
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<td>DTCS 2650</td>
<td>Internet &amp; Web Page Design</td>
<td>3</td>
</tr>
<tr>
<td>DTWP 1200</td>
<td>Programming Logic and Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>DTCS 2100</td>
<td>Database Management</td>
<td>3</td>
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<td>BUSM 1660</td>
<td>Business Law</td>
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### Second Semester

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<td>Java Programming</td>
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<td>DTGR 2620</td>
<td>Computer Graphics Design II</td>
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<td>POLS 2050</td>
<td>Global Issues</td>
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<td>MATH 1106</td>
<td>Business Mathematics</td>
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<td>DTWP 1300</td>
<td>Introduction to PHP</td>
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### Third Semester

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<td>MySQL Database Design &amp; Programming</td>
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<td>DTWP 2600</td>
<td>.NET Programming</td>
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<tr>
<td>DTCS 2850</td>
<td>Flash</td>
<td>3</td>
</tr>
<tr>
<td>DTCS 1230</td>
<td>O/S Concepts &amp; Customizing</td>
<td>3</td>
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<tr>
<td>ENGL 1520</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1510</td>
<td>Speech or</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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### Fourth Semester

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<td>ELEC 2610</td>
<td>Introduction to Linux</td>
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<tr>
<td>DTWP 2320</td>
<td>Javascript</td>
<td>3</td>
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<td>DTWP 2910</td>
<td>Capstone: Web Programming</td>
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<tr>
<td>ECON 2120</td>
<td>Principles of Macroeconomics or</td>
<td>3</td>
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<tr>
<td>ECON 2130</td>
<td>Principles of Microeconomics</td>
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<td>Arts &amp; Humanities Elective</td>
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### Total Credit Hours

**64**

Prerequisites are required for some courses. Evening courses may be required to complete this program.
**ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT**

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**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>DTCS 1010</td>
<td>Intro to Digital Technology</td>
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</tr>
<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
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<td>DTCS 1230</td>
<td>O/S Concepts &amp; Customizing</td>
<td>3</td>
</tr>
<tr>
<td>DTCS 2650</td>
<td>Internet &amp; Web Design</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
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<tr>
<td>DTWP 1200</td>
<td>Programming Logic and Problem Solving</td>
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**SECOND SEMESTER**

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<tr>
<td>ELEC 2410</td>
<td>Microcomputer Diagnosis &amp; Upgrading I</td>
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<td>ELEC 1950</td>
<td>CISCO I - Network Fundamentals</td>
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<tr>
<td>MATH 1110</td>
<td>Intermediate Algebra or</td>
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<td>MATH 1106</td>
<td>Business Math</td>
<td>3</td>
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<td>——</td>
<td>Arts &amp; Humanities Elective</td>
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<tr>
<td>INDT 1310</td>
<td>Basic Electricity or</td>
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**THIRD SEMESTER**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>ELEC 2050</td>
<td>CISCO II - Routing Protocols &amp; Concepts</td>
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<td>Microcomputer Diagnosis &amp; Upgrading II</td>
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<td>DTCS 2100</td>
<td>Database Management</td>
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<td>ENGL 1520</td>
<td>English Composition II</td>
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<tr>
<td>SPCH 1510</td>
<td>Speech or</td>
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<tr>
<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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**FOURTH SEMESTER**

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<td>DTCS 2550</td>
<td>Network Administration</td>
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<tr>
<td>ELEC 2610</td>
<td>Introduction to Linux</td>
<td>3</td>
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<td>POLS 2050</td>
<td>Global Issues</td>
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<tr>
<td>BUSM 1660</td>
<td>Business Law</td>
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<tr>
<td>DTCS 2810</td>
<td>Capstone: Computer Support Technician</td>
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<tr>
<td>DTCS 2800</td>
<td>Computer Repair &amp; Diagnosis Practicum</td>
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</table>

**Total Credit Hours** 65

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Do you enjoy working on computers? Are you the “go to” person all your friends and family turn to for help with their computers and home networks? The Computer Support Technician major is your chance to perfect these skills, pursue your interests in working with technology, and begin a new career. Computers have been integrated into every aspect of our personal and professional lives. As a society we are dependent on qualified technicians to keep our personal computers and network infrastructures functioning efficiently.

Successful completion of the Computer Support Technician program leads to the Associate of Applied Business degree and prepares the graduate to obtain employment as a PC support technician, a network support technician, or network administrator. Course work prepares students to take the CompTIA A+ and Network+ certification exams, and the Cisco CCENT certification exam.

**Graduates of the program will be able to:**
- Demonstrate effective written, oral, and nonverbal communication with employers, coworkers, and the public.
- Think independently, understand fundamental PC and networking theory and implementation, and develop critical thinking and problem solving skills.
- Prepare for CompTIA A+, Network+, and Cisco CCENT certification exams.
- Interact with clients and customers in a manner that indicates recognition of cultural, religious, and socio-economic differences.
- Demonstrate understanding and application of the technologies basic to the field of PC and network support including:
  - Word processing
  - Spreadsheets
  - Databases
  - Web page design/development
  - Computer diagnostics and upgrading
  - PC operating systems
  - Various network operating systems
  - Network administration
  - Network cabling
  - Network hardware
  - Basic network security

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Graduates of the Digital Media major have career opportunities that emphasize visual and audio production and computer-based skills. Though the program’s focus is primarily geared toward broadcast production, some emphasis is placed on preparing students for on-camera careers, media management, graphic design, web design, and media sales careers.

Careers include, but are not limited to: multimedia artists and animators, actors, producers and directors, music directors and composers, radio and television announcers, broadcast news analysts, public relations specialists, technical writers, audio and video equipment technicians, broadcast technicians, radio operators, sound engineering technicians, photographers, camera operators for television, video, and motion picture, film and video editors. With experience and education, career opportunities could include becoming a creative services director, Web manager, or production company owner.

The Digital Media program provides the opportunity to gain a general knowledge of the industry and the basis to specialize in a chosen field. The major includes communication, 2-D animation, audio and video production, Web development, graphic design, sales techniques, management techniques, along with other courses and skills. The curriculum assures that graduates have experience on both the Windows and Mac platforms.

This program should also be considered as a supplement to a more traditional telecommunication Business, Marketing or Public Relations major. The skills learned in the Digital Media environment will be a valuable asset in other types of business settings.

Graduates of the program will be able to:

- Apply skills in a variety of video and audio production environments.
- Communicate effectively using a variety of traditional and new media.
- Evaluate fundamental electronic media laws and regulations.
- Utilize a variety of computer skills.
- Construct an effective portfolio.
- Operate or manage a media-based business.
- Understand the need for lifelong learning to maintain and gain skills.
- Demonstrate the ability to solve problems.
- Effectively utilize design concepts and tools to provide digital media communication.
- Provide a multimedia Web site.
- Demonstrate basic skills in 2-D animation and motion graphics.
- Incorporate skills learned in audio and video production into the operation of the College’s television channel, TV22.
ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>DTGR 1600</td>
<td>Computer Graphics Design I</td>
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<tr>
<td>DTGR 1200</td>
<td>Color Theory</td>
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<tr>
<td>DTCS 1010</td>
<td>Intro to Digital Technology</td>
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<tr>
<td>DTIN 1600</td>
<td>3D Graphics</td>
<td>3</td>
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<tr>
<td>DTCS 2650</td>
<td>Internet &amp; Web Design</td>
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<tr>
<td>DTGR 1550</td>
<td>Interface Design</td>
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**SECOND SEMESTER**

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<td>ARTS 1210</td>
<td>Basic Drawing</td>
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<td>MATH 1106</td>
<td>Business Math</td>
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<td>DTME 1330</td>
<td>Digital Video Effects</td>
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<td>DTIN 2150</td>
<td>Simulation I (Maya Fundamentals)</td>
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**THIRD SEMESTER**

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<tr>
<td>DTCS 2850</td>
<td>Flash</td>
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<td>DTIN 2100</td>
<td>3D Animation</td>
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<tr>
<td>DTGR 2620</td>
<td>Computer Graphic Design II</td>
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<td>SPCH 1510</td>
<td>Speech or</td>
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<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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<td>BUSM 1660</td>
<td>Business Law</td>
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**FOURTH SEMESTER**

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<td>Simulation II (Adv. Maya)</td>
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<td>Selected Topics - Computer Graphics Design</td>
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<td>DTGR 2800</td>
<td>Introduction to ZBrush</td>
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<td>Principles of Macroeconomics or</td>
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**Total Credit Hours** 71

Graphics are an integral part of designing for the Internet/Intranet/World Wide Web and print industries. The Digital Technology - Computer Graphics program will help to develop your technical ability to design for all of these mediums.

The purpose of the Computer Graphics program is to respond to the needs of local businesses by supplying a pool of qualified candidates who can design for multiple mediums. The program offers hands-on computer experience with state-of-the-art software so that the students can acquire the best possible position upon graduation. Recognizing the ever-changing environment in the graphics field, the program’s technology and curriculum is continually evaluated.

Successful completion of the Digital Technology - Computer Graphics program leads to the Associate of Applied Business degree and prepares the graduate to achieve employment in a graphics position in advertising, newspaper, magazine, and/or Web design/development industries.

Graduates of the program will be able to:

- Understand and apply the emerging technologies basic to the field of computer graphics including:
  - Web page design/development
  - Animations
  - Databases
  - Programming
  - Vector and raster graphics
  - Page layout/desktop publishing/picture editing
  - Digital video/audio fundamentals
  - 3D modeling and sculpting
- Effectively operate in a graphics position on either Windows or Macintosh platforms.
- Produce a portfolio consisting of print and Web design examples.
- Determine and design interface design for products.
- Demonstrate effective written and oral communication with employees, co-workers, and the public.
- Think independently, clarify values, understand fundamental theory and design principles, and further develop critical thinking skills.
- Incorporate skills learned in audio and video production into the operation of the College’s television channel, TV22.
- Develop and mode realistic 3D models for media use.

Prerequisites are required for some courses.
Evening courses may be required to complete this program.
# OAST - Medical Administrative Assistant

**ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT**

## First Semester

<table>
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<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OAST 1510</td>
<td>Keyboarding I</td>
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<td>OAST 2550</td>
<td>Windows Concepts</td>
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<td>OAST 1880</td>
<td>Practicum Orientation</td>
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<td>ENGL 1510</td>
<td>English Composition I</td>
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<td>HLTH 1120</td>
<td>First Aid/Personal Safety</td>
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<td>BIOL 1330</td>
<td>Survey of Anatomy &amp; Physiology I</td>
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## Second Semester

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<tr>
<td>OAST 1200</td>
<td>Voice Recognition</td>
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<td>OAST 1520</td>
<td>Keyboarding II</td>
<td>3</td>
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<tr>
<td>OAST 2210</td>
<td>Microsoft Word</td>
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<tr>
<td>OAST 2610</td>
<td>Medical Transcription</td>
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<tr>
<td>OAST 2890</td>
<td>OAST Practicum/Seminar I</td>
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<tr>
<td>HLTH 1350</td>
<td>ICD 10-CM Coding</td>
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<tr>
<td>BIOL 1340</td>
<td>Survey of Anatomy &amp; Physiology II</td>
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## Third Semester

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<thead>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OAST 1810</td>
<td>Business Editing and Proofreading</td>
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<tr>
<td>OAST 2220</td>
<td>Microsoft Excel</td>
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<tr>
<td>OAST 2330</td>
<td>Medical Office Procedures</td>
<td>2</td>
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<tr>
<td>OAST 2891</td>
<td>OAST Practicum/Seminar II</td>
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<td>ENGL 1520</td>
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<td>CPT Coding</td>
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<td>HLTH 2310</td>
<td>Principles of Reimbursement</td>
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<th>Course Code</th>
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<td>—</td>
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<tr>
<td>OAST 2520</td>
<td>Workplace Technology</td>
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<td>OAST 2892</td>
<td>OAST Practicum/Seminar III</td>
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<tr>
<td>OAST 2960</td>
<td>Capstone Seminar</td>
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<td>Interpersonal Communication</td>
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<td></td>
<td>Social &amp; Behavioral Science Elective</td>
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**Total Credit Hours** | 70.5

Prerequisites are required for some courses. Evening courses may be required to complete this program.

The administrative assistant in a medical setting requires special understanding of medical terminology, medical office procedures, coding, and computerized medical billing. Emphasis is also placed on current software packages and voice recognition. Program graduates will find careers in a wide variety of medical settings including: physicians’ offices, hospitals, rest homes, emergency care facilities, and clinics.

Practicums provide students the opportunity to gain hands-on experiences with local employers. Students will utilize skills and knowledge to build the bridge from classroom to profession. The office setting emphasizes the importance of an administrative assistant as an integral part of the office team.

Students holding current Microsoft Office Specialist (MOS) certification may be eligible for advanced placement. The Medical Administrative Assistant curriculum leads to the Associate of Applied Business degree. A certificate in Medical Coding is also available to those who complete a one-year program. Consult an advisor for curriculum requirements.

**Graduates of the program will be able to:**

- Demonstrate keyboarding skills necessary to secure employment in a medical office environment.
- Create and compile documents which demonstrate proficiency in Microsoft Word, Excel, PowerPoint, Windows, and medical billing software.
- Create and compile a variety of medical documents which include medical and pharmacological terminology.
- Effectively use office technology including but not limited to: scanners, digital cameras, fax machines.
- Adapt to professional work ethic habits such as: attendance, performance, preparedness, and teamwork.
- Discuss job search skills and techniques necessary for employment in a medical office environment.
- Explain awareness of global/cultural issues as related to today’s world.

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## OAST - Executive Administrative Assistant

**ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT**

### First Semester
- **OAST 1200** Voice Recognition 2
- **OAST 1510** Keyboarding I 3
- **OAST 2210** Microsoft Word 3
- **OAST 2250** Windows Concepts 3
- **ENGL 1510** English Composition I 3
  - Arts & Humanities Elective 3
- **Credit Hours** 17

### Second Semester
- **OAST 1300** Records Management 3
- **OAST 1520** Keyboarding II 3
- **OAST 2490** Desktop Publishing 3
- **ENGL 1520** English Composition II 3
- **OAST 2890** OAST Practicum/Seminar I 1.5
  - Math or Science Elective 4
- **Credit Hours** 17.5

### Third Semester
- **OAST 2220** Microsoft Excel 3
- **OAST 2760** Office Procedures 2
- **OAST 2910** Microsoft PowerPoint 3
- **OAST 1810** Business Editing and Proofreading 2
- **OAST 2891** OAST Practicum/Seminar II 1.5
  - Social & Behavioral Science Elective 3
- **Credit Hours** 14.5

### Fourth Semester
- **BUSM 1660** Business Law 3
- **OAST 2230** Microsoft Access 3
- **OAST 2520** Workplace Technology 2
- **OAST 2892** OAST Practicum/Seminar III 1.5
- **OAST 2960** Capstone Seminar 2
- **SPCH 2060** Interpersonal Communication 3
- **Credit Hours** 14.5

**Total Credit Hours** 63.5

Prerequisites are required for some courses. Evening Courses may be required to complete this program.

Graduates with the skills and poise to cope with the rapid pace of today's office will find careers as administrative executives, administrative assistants, secretaries, receptionists, word processing specialists, or office managers.

Washington State’s Office Administrative Services Technology (OAST) - Executive Administrative Assistant program emphasizes administrative skills essential to any professional office, with a strong emphasis on current software packages, voice recognition, business editing and proofreading, and records management. Students explore the areas of communication and business law to round out their education.

Practicums provide students the opportunity to gain hands-on experiences with local employers. Students will utilize skills and knowledge to build the bridge from classroom to profession. The office setting emphasizes the importance of an administrative assistant as an integral part of the office team.

Students holding current Microsoft Office Specialist (MOS) certification may be eligible for advanced placement. Successful completion of the Office Administrative Services Technology program leads to the Associate of Applied Business degree. A certificate in Executive Office Support is available to those who complete a one-year program.

**Graduates of the program will be able to:**

- Demonstrate keyboarding skills necessary to secure employment in an executive office environment.
- Create and compile documents which demonstrate proficiency in Microsoft Word, Excel, Access, PowerPoint, and Windows software.
- Effectively use office technology including but not limited to: scanners, digital cameras, and fax machines.
- Adapt to professional work ethic habits such as: attendance, performance, preparedness, and teamwork.
- Discuss job search skills and techniques necessary for employment in an executive office environment.
- Explain awareness of global/cultural issues as related to today's world.
Engineering & Industrial Technologies

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# Automotive Technology - Automotive Service

## First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AUTO 1100</td>
<td>Vehicle Service &amp; Maintenance</td>
<td>3</td>
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<tr>
<td>AUTO 1110</td>
<td>Electrical Circuitry</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1120</td>
<td>Automotive Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1130</td>
<td>Electrical Components</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>BUSM 1710</td>
<td>Auto/Diesel Bus. Computer App.</td>
<td>3</td>
</tr>
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## Second Semester

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<tr>
<td>AUTO 1140</td>
<td>Automotive Chassis</td>
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<tr>
<td>AUTO 1150</td>
<td>Manual Drive Trains</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1160</td>
<td>Fuel &amp; Emissions Controls</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 1170</td>
<td>Upper Engine Design &amp; Service</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1515</td>
<td>Technical Writing</td>
<td>3</td>
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<tr>
<td>MATH 1104</td>
<td>Technical Mathematics</td>
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## Third Semester

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<tbody>
<tr>
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<td>Automatic Drive Trains</td>
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<tr>
<td>AUTO 2110</td>
<td>Computerized Engine Controls</td>
<td>3</td>
</tr>
<tr>
<td>AUTO 2130</td>
<td>Cylinder Block &amp; Lower Engine</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>BUSM 1800</td>
<td>Personal Finance</td>
<td>3</td>
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## Fourth Semester

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<thead>
<tr>
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<tbody>
<tr>
<td>TRCK 2140</td>
<td>Practicum Truck/Auto</td>
<td>2</td>
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<tr>
<td>AUTO 2150</td>
<td>Principles of Air Conditioning</td>
<td>3</td>
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<tr>
<td>TRCK 2150</td>
<td>ASE Technician Preparation</td>
<td>3</td>
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<tr>
<td>PHYS 1010</td>
<td>Applied Physics</td>
<td>2</td>
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<tr>
<td>PHYS 101L</td>
<td>Applied Physics Lab</td>
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<td>POLS 2050</td>
<td>Global Issues</td>
<td>3</td>
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<tr>
<td>BUSM 1660</td>
<td>Business Law</td>
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<tr>
<td><strong>Credit Hours</strong></td>
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**Total Credit Hours**: 71

Prerequisites are required for some courses. Evening courses may be required to complete this program.

Today’s automotive technicians are skilled in all aspects of vehicle service and maintenance, as well as the business operations of current service facilities. Employers in the automotive field are looking for well-trained employees with management and mechanical skills.

Job opportunities in automotive technology include automotive technician, field-test technician, repair and maintenance of natural gas compressor stations and electrical generator sets, service technician, parts manager, service manager, or technical trainer. There are even possibilities in sales and engineering for qualified technicians.

Washington State’s Automotive Service Excellence (ASE) certified Automotive Service major features a large laboratory for practical, hands-on experience. The entire program is reinforced with business management skills, including the use of the microcomputer in the service and parts area. The program follows the task list in the ASE certification manual. The curriculum leads to the Associate of Applied Science degree.

**Graduates of the program will be able to:**
- Demonstrate professional work habits such as punctuality, productivity, verbal and written communication skills, cooperation with coworkers and customers, and perform operations in a safe manner.
- Diagnose and repair electrical and mechanical problems using the appropriate service information.
- Diagnose, repair, and rebuild automatic transmissions, manual transmissions, and drive lines with a live chassis dyno.
- Measure engine parts using proper measuring instruments.
- Perform complete brake service, including anti lock brake systems.
- Diagnose and repair steering and suspension problems, including alignment procedures.
- Perform duties of a service writer and service technician.
- Disassemble, inspect, and rebuild gas engines using the appropriate service information.
- Demonstrate the ability to adapt to new technology and pass ASE certification tests.
- Perform duties in a 100 hour practicum experience.
# Automotive Technology - Diesel Truck Systems

**Associate of Applied Science Degree for Direct Employment**

## First Semester
- **TRCK 1100** Introduction to Truck Systems  
- **AUTO 1110** Electrical Circuitry  
- **TRCK 1120** Medium & Heavy Brakes  
- **AUTO 1130** Electrical Components  
- **ENGL 1510** English Composition I  
- **Credit Hours** 18

## Second Semester
- **TRCK 1130** Medium & Heavy Truck Chassis  
- **TRCK 1140** Diesel Engine Design & Service  
- **AUTO 1170** Upper Engine Design & Service  
- **ENGL 1515** Technical Writing  
- **MATH 1104** Technical Mathematics  
- **BUSM 1660** Business Law  
- **Credit Hours** 18

## Third Semester
- **TRCK 2100** Diesel Engine Tune Up & Main.  
- **TRCK 2110** Diesel Fuel Systems & Hydr.  
- **TRCK 2120** Diesel Truck Drive Trains  
- **BUSM 1800** Personal Finance  
- **—** Arts & Humanities Elective  
- **SPCH 2060** Interpersonal Communication  
- **Credit Hours** 18

## Fourth Semester
- **TRCK 2130** Electronic Diesel Engines  
- **TRCK 2140** Practicum Truck/Auto  
- **TRCK 2150** ASE Technician Preparation  
- **AUTO 2150** Principles of Air Conditioning  
- **PHYS 1010** Applied Physics  
- **PHYS 101L** Applied Physics Lab  
- **POLS 2050** Global Issues  
- **Credit Hours** 17

**Total Credit Hours** 71

---

Today’s diesel truck technicians are skilled in all aspects of vehicle service and maintenance as well as the business operations of current service facilities. Employers in the automotive and diesel truck fields are looking for well trained employees with management as well as mechanical skills.

Job opportunities in diesel technology include diesel technician, field-test technician, repair and maintenance of natural gas compressor stations and electrical generator sets, service technician, parts manager, service manager, or technical trainer. There are even possibilities in sales and engineering for qualified technicians.

Washington State’s Diesel Truck Systems major features a large laboratory with state-of-the-art equipment for practical, hands-on experience. Successful completion of the diesel truck systems program leads to the Associate of Applied Science degree.

**Graduates of the program will be able to:**
- Demonstrate professional work habits such as: punctuality, productivity, verbal and written communication skills, cooperation with co-workers and customers, and perform operations in a safe manner.
- Diagnose and repair electrical and mechanical problems using the appropriate service information.
- Diagnose and repair manual transmissions and drive lines.
- Measure engine parts using proper measuring instruments.
- Perform complete brake service, including anti-lock brake systems.
- Diagnose and repair steering and suspension problems.
- Perform duties of a service writer and service technician.
- Disassemble and inspect diesel engines using the appropriate service information.
- Adapt to new technology and pass Automotive Service Excellence (ASE) Certification tests.
- Perform duties in a 100 hour practicum experience.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Our industrialized society relies on electricity for everything from household use to manufacturing processes. To design, operate, and maintain power systems, employers need technicians skilled in the specifics of electrical engineering technology.

There are a variety of careers for qualified individuals. Persons with an associate degree in Electrical Engineering Technology might find careers in instrumentation, power plant operation, quality control, computer maintenance, and even broadcasting.

Washington State’s Electrical Engineering Technology program prepares students to install, operate or service electrical equipment. Students learn about digital controls, A.C. and D.C. equipment, electronics, hydraulics and pneumatics, and computer-aided drafting. Their studies also include a solid math and science background. The electrical engineering technology curriculum leads to the Associate of Applied Science degree.

Graduates of the EET/ICE program will be able to:

- Produce and present both oral and written technical reports.
- Apply circuit analysis methods to solve D.C. and A.C. networks.
- Determine line and phase currents, voltages, and powers (average, reactive, apparent) in single and polyphase circuits.
- Use multi meters and oscilloscopes to measure various D.C. and A.C. circuit parameters.
- Design and troubleshoot basic analog and digital electronic devices and circuits.
- Apply computer software including word processing, spreadsheet, and presentation programs.
- Use proper soldering and construction techniques.
- Appreciate the similarities and differences pertaining to the values and characteristics of various cultures.
- Explain the concept of feedback control.
- Read piping and instrumentation diagrams.
- Measure the dynamic parameters of a process.
- Select performance criteria and tune feedback controllers.
- Detail the importance of calibration with respect to plant instruments.
- Work and brainstorm in a team environment.
- Set up an instrument calibration and complete a five-point check.
- Tune simple control loops and document actions and results.
- Study a process graphically.
This two-year associate’s degree program has multiple exit avenues for potential graduates. The Geosciences Transfer program is designed to give students a fundamental knowledge base of advanced earth sciences, as well as equip them with some of the latest skills used in Geosciences today. The Geosciences curriculum contains a good mix of hands-on, “in-the-field” work, as well more traditional classroom work. Students will learn important workplace skills such as map reading, basic surveying techniques, surveying systems, aerial photography interpretation, Global Positioning Systems (GPS), and Geographic Information Systems (GIS).

Included in the Geosciences Transfer degree program is the GIS Certificate. In this three-course certificate program, students will learn ArcGIS 10, the industry standard mapping software. Students will use ArcGIS to create professional, poster-sized maps depicting a myriad of geographic information.

Geosciences graduates will be excellent candidates for entry level positions in the oil and gas business, government agencies, surveying companies, and other land-based organizations. Graduates will also be able to seamlessly transition into a geology, geography, or environmental science baccalaureate program elsewhere if they so choose. Successful completion of the Geosciences Technology degree program leads to an Associate of Applied Science Degree for transfer.

### Graduates of the program will be able to:
- Read, listen, and think critically.
- Work well with others in a team-oriented environment.
- Demonstrate a general computer literacy, including the use of MS Word, Excel, PowerPoint, and Access.
- Communicate effectively.
- Describe and explain the physical world around them in basic geological terms.
- Recognize, read, and effectively interpret different types of maps, aerial photography, and surveys.
- Utilize GPS technology effectively.
- Utilize ArcGIS to open, create, and manipulate complex maps and mapping projects.
- Give insightful critiques of maps.
- Articulate into a Bachelor of Science Degree in geography, geology, environmental science, or similar field, or to a job in the Geosciences.
This two-year Industrial Technology program is designed to provide local industries with job applicants who have a solid science background, good problem solving skills, and specific training related to manufacturing. This is the enterprise concerned with converting raw materials into finished products. It also includes classes with up-to-date technology for the worker that is trying to upgrade his/her skills for advancement on the job.

With a mix of “hands-on” and theory classes, this curriculum prepares graduates to work with engineering personnel and production people. Team problem solving skills, communication skills, and computer competencies make the industrial technology graduate highly competitive in today’s job market.

The Industrial Technology associate degree provides students with a strong foundation of technical skills and experience working on state-of-the-art equipment. Graduates report that the mix of classes they took prepared them for the workplace and contributed to their success. Job placement rates are high and salaries reported are above average. Successful completion of the industrial technology program leads to the Associate of Applied Science degree.

Graduates of the program will be able to:

- Follow prescribed strategies to recognize technical problems, identify direct causes, and make corrections when they are indicated.
- Perform appropriate mathematical functions and apply them to technical projects.
- Be accomplished with the use of industrial computerized numerical control (CNC) equipment.
- Apply basic scientific principles in learning new techniques and procedures.
- Utilize a variety of communication skills (verbal, written and graphics) to communicate effectively.
- Work effectively with engineering and production personnel in the operation of a manufacturing facility.
- Work in a team environment to develop a collective hypothesis on the causes and solutions to problems.
- Demonstrate computer literacy and use word processing and presentation applications.
INDUSTRIAL TECHNOLOGY - DESIGN DRAFTING

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

<table>
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<tr>
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<tbody>
<tr>
<td>DRFT 1510 Design Drafting</td>
<td>3</td>
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<td>ENGL 1510 English Composition I</td>
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<td>ENGR 1010 Fundamentals of Engineering</td>
<td>3</td>
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<tr>
<td>INDT 1150 Machining Processes</td>
<td>3</td>
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<tr>
<td>INDT 1210 Industrial Safety/ Hazmat</td>
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<tbody>
<tr>
<td>DRFT 2530 Engineering Drafting</td>
<td>3</td>
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<tr>
<td>ENGL 1515 Technical Writing</td>
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<td>INDT 1170 Computer Numerical Control</td>
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<td>MATH 1104 Technical Mathematics</td>
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<td>DRFT 1430 Advanced CAD</td>
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<tr>
<td>DRFT 2610 Civil Drafting</td>
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<td>SPCH 1510 Speech</td>
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<td>— Arts and Humanities Elective</td>
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<tbody>
<tr>
<td>DRFT 1560 Structural Drafting</td>
<td>3</td>
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<td>INDT 2180 Manufacturing Processes</td>
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<td>INDT 2800 Industrial Capstone Seminar</td>
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<td>— Technical Elective</td>
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<td>— Technical Elective</td>
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<tr>
<td>— Social &amp; Behavioral Science Elective</td>
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<tr>
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</table>

Total Credit Hours 68-69

Prerequisites are required for some courses. Evening courses may be required to complete this program.

Everything made in today’s society, from large commercial buildings to fast-food packaging, has to be designed before creation. Design drafters assist with this design and communicate the ideas graphically with engineers, architects, contractors, fabricators, and all of the others involved in the various stages of product development.

Because of the wide variety of fields in which a design drafter may be involved, this degree program contains elements of many types of design. Students will become familiar with disciplines such as machining, piping, electricity, construction, design, fabrication, and manufacturing.

Washington State’s Design Drafting Technology major equips the student with the ability to design, as well as the tools to perform this work, both on paper and on computer-aided drafting (CAD) systems. Throughout the program CAD is integrated at all levels, from basic to advanced operation, including three-dimensional, customizing, and various applications. Successful completion of the Design Drafting Technology program leads to the Associate of Applied Science degree. A Drafting certificate is available through a two-semester curriculum.

Graduates of the program will be able to:

- Create and edit CAD drawings to produce professional quality industry drawings.
- Utilize both two- and three-dimensional CAD commands to design and display engineering and architectural models.
- Produce professional quality working drawings using correct symbology to represent geometric tolerancing, welding, fasteners, electrical and electronic components, architectural features, and in-dimensioning sizes.
- Construct appropriately descriptive two-dimensional views of any object, manually or on CAD, using any of the various projection techniques.
- Perform appropriate mathematical functions and apply them to various design problems.
- Produce technical reports, both orally and written, and present results.
- Interpret machining, electrical, manufacturing, architectural, and surveying drawings and apply the information to an actual situation.
- Compare and contrast engineering and surveying methods used in this country to those found abroad, currently and historically.
The recent increase in shale exploration in the region is resulting in an increased demand for many related technical disciplines. Horizontal drilling and fracturing technology has opened new fields of expertise for our community, creating many new job possibilities. The Geotechnical Drafting major is designed to fill the needs of those companies that must plan locations of well sites, roadways, pipelines, drainage, and utilities. Students in this program will learn computer drafting, civil design, surveying, geographic information systems, and environmental design.

Washington State Community College’s Geotechnical Drafting major provides a unique blend of design drafting and geoscience courses to prepare students for an array of jobs relating to shale exploration and development. The program builds on a solid foundation of basic design drafting and engineering skills, as well as physical and cultural geography, environmental biology, and geology. Students will apply this knowledge through experiences in civil drafting, surveying, computer-aided drafting (CAD), and geographic information systems (GIS). The Geotechnical Drafting curriculum leads to the Associate of Applied Science degree.

Graduates of the program will be able to:

- Utilize both two- and three-dimensional CAD commands to design and display engineering and civil design models, using an appropriate projection technique.
- Produce professional quality working drawings using conventional symbology to represent design features, dimensioning sizes, and locations.
- Perform appropriate mathematical functions and apply them to various design problems.
- Produce technical reports, both orally and written, and present results.
- Interpret engineering and construction drawings and apply the information to the actual situation.
- Identify different types of maps, map elements, and map scales.
- Use CAD and GIS to create a variety of topologies.
- Load and incorporate GPS data into GIS and CAD.
- Discuss and evaluate geological processes and how they relate to environmental systems.

**ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT**

| FIRST SEMESTER |  
|----------------|---|
| BUSM 1600 PC Applications | 3 |
| DRFT 1510 Design Drafting I | 3 |
| GEOS 1010 Physical Geography | 4 |
| ENGR 1010 Fundamentals of Engineering | 3 |
| MATH 1104 Technical Mathematics | 3 |
| **Credit Hours** | **16** |

| SECOND SEMESTER |  
|----------------|---|
| DTCS 2100 Database Management | 3 |
| DRFT 1430 Advanced CAD | 4 |
| GEOS 2510 Intro to Mapping & GIS | 4 |
| MECH 1100 Engineering Materials | 4 |
| ENGL 1510 English Composition I | 3 |
| **Credit Hours** | **18** |

| THIRD SEMESTER |  
|----------------|---|
| DRFT 2610 Civil Drafting | 3 |
| SPCH 1510 Speech | 3 |
| ENGL 1515 Technical Writing | 3 |
| GEOL 2310 Environmental Geology | 3 |
| GEOL 231L Environmental Geology Lab | 1 |
| GEOG 1210 Cultural Geography | 3 |
| **Credit Hours** | **16** |

| FOURTH SEMESTER |  
|----------------|---|
| DRFT 2530 Engineering Drafting or Structural Drafting | 3 |
| DRFT 1560 Arts & Humanities Elective | 3 |
| GEOS 2520 GIS Applications | 4 |
| PHYS 1010 Applied Physics | 2 |
| PHYS 101L Applied Physics Lab | 1 |
| DRFT 2800 Capstone Seminar | 3 |
| **Credit Hours** | **16** |

**Total Credit Hours** 66

Prerequisites are required for some courses. Evening courses may be required to complete this program.
The recent increase in shale exploration in the region is resulting in an increased demand of many related technical disciplines. Horizontal drilling and fracturing technology has opened new fields of expertise for our community, creating many new job possibilities.

Petroleum technicians provide support to scientists and engineers in exploring and extracting natural resources, such as minerals, oil, and natural gas.

Washington State Community College’s Petroleum Technology program provides a wide range of oil, gas, industrial, and engineering technology courses as well as geoscience courses to prepare students for an array of jobs relating to shale exploration and development. The program builds on a solid foundation of basic petroleum and engineering skills as well as being able to apply this knowledge through experiences in civil drafting, surveying, computer-aided drafting (CAD), and geographical information systems (GIS).

Graduates of the program will be able to:

- Identify the steps of problem-solving as they relate to engineering and evaluate problems using these steps.
- Apply word processor, spreadsheet, and presentation software to engineering applications and use dimensional metrology in the process of engineering analysis.
- Differentiate the different facets of oil and natural gas industry from the formation of hydrocarbons, and their products being marketed.
- Illustrate common drilling practices including setup, moving, evaluating, and factors that affect drilling problems and apply legal regulations to land use in petroleum exploration.
- State the types of surface facilities, equipment, systems, fields, and pipelines and contrast methods of lift including natural, gas, and sucker rod.
- Evaluate processes of refining petroleum products and pricing and marketing each.
- Differentiate between the different types of casing designs and uses of drillbits.
- Apply the concepts of directional planning including tools, measurements, and methods.
- Examine the common issues of drilling fluids and types of mud and their environmental aspects.
- State the types of cementing programs and formation evaluations.
- Examine oil well test results to determine their implications on production.
- Explain the processes used in gas, hydraulic, and sucker-rod lifting systems.
- Interpret the results of measurements done while drilling and producing oil and gas.
- Summarize the principles, tools, and techniques used in the exploration of natural gas.
- Differentiate between the different philosophies of drill site selection.
- Examine physical and chemical properties of petroleum and their relation to petroleum formation.

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>GEOS 1010 Physical Geography</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 1010 Fundamentals of Engineering</td>
<td>3</td>
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<tr>
<td>INDT 1020 Intro to the Petroleum Industry</td>
<td>3</td>
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<tr>
<td>INDT 1150 Machining Processes</td>
<td>3</td>
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<tr>
<td>INDT 1210 Industrial Safety/Hazmat</td>
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<td>DRFT 2530 Engineering Drafting</td>
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<tr>
<td>ENGL 1510 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>INDT 2040 Production of Oil &amp; Gas</td>
<td>4</td>
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<tr>
<td>MATH 1104 Technical Mathematics</td>
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<tr>
<td>GEOS 2510 Intro to Mapping &amp; GIS</td>
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<tr>
<td>MECH 2150 Instrumentation I</td>
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<tr>
<td>PHYS — Physics Elective</td>
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<tr>
<td>SPCH 1510 Speech</td>
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<tr>
<td>ENGL 1515 Technical Writing</td>
<td>3</td>
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<tr>
<td>INDT 1030 Well Planning &amp; Drilling Operations</td>
<td>3</td>
</tr>
<tr>
<td>— Arts &amp; Humanities Elective</td>
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<tr>
<td>MECH 2170 Instrumentation II</td>
<td>4</td>
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<tr>
<td>INDT 2180 Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>INDT 2800 Industrial Capstone Seminar</td>
<td>3</td>
</tr>
<tr>
<td>INDT 2050 Introduction to Petroleum Geology</td>
<td>3</td>
</tr>
<tr>
<td>— Social &amp; Behavioral Sciences Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
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</tr>
</tbody>
</table>

**Total Credit Hours** 67-68

Prerequisites are required for some courses. Evening courses may be required to complete this program.
If using science, engineering and mathematics to solve technical problems sounds exciting, then Washington State’s Process Technician program might be the right option for you. This program, designed in conjunction with local industries, will provide you with the skills and education needed to be considered for employment. Training on up-to-date computers with the latest software, and training on modern machine tools, will help you succeed in the workplace.

Process technicians inspect and maintain equipment, take samples, record, troubleshoot problems and analyze products on a routine basis, as well as maintain regulatory and environmental standards. Chemical operators work in control rooms to monitor and maintain the safe manufacture of all kinds of products. Plants may use batch and/or the continuous manufacture process. Process technicians and chemical operators may find jobs in many industries including, but not limited to: plastics, pharmaceutical, petroleum, paint, electrical power plants, cosmetics, etc.

Successful completion of the Process Technician program leads to an ASSOCIATE of Applied Science degree. A Chemical Operator one-year certificate is also available through a two-semester program. All courses are offered face-to-face or online.

Graduates of the program will be able to:
• Work effectively with engineering and production personnel in the operation of a chemical plant.
• Work in a team environment to develop a collective hypothesis on the causes of problems and meet project deadlines.
• Assist in the design and implementation of a comprehensive Safety Program.
• Be computer literate and accomplished on word processing and PowerPoint programs to produce technical reports and present results.
### FIRST SEMESTER
- ENGR 1010 Fundamentals of Engineering: 3 credit hours
- MATH 2120 Trigonometry or Pre-Calculus: 3 credit hours
- ENGL 1510 English Composition I: 3 credit hours
- INDT 1150 Machining Processes: 4 credit hours
- CHEM 1210 Principles of Chemistry I: 3 credit hours
- CHEM 121L Principles of Chemistry I Lab: 1 credit hour
- OAST 2220 Microsoft Excel: 3 credit hours
- Total Credit Hours: 20

### SECOND SEMESTER
- PHYS 2010 Introduction to Physics I: 3 credit hours
- PHYS 201L Introduction to Physics I Lab: 1 credit hour
- INDT 1170 Comp. Num. Controls: 4 credit hours
- DRFT 2530 Engineering Drafting: 3 credit hours
- MECH 1100 Engineering Materials: 4 credit hours
- MATH 2130 College Algebra: 4 credit hours
- (if took MATH 2120)
- Total Credit Hours: 19

### THIRD SEMESTER
- ENGR 2210 Statics: 4 credit hours
- ENGL 1515 Technical Writing: 3 credit hours
- MECH 2060 Statistical Quality Control: 2 credit hours
- MATH 2263 Analytical Geometry & Calculus I: 4 credit hours
- ECON 2400 Economics for Tech. and Eng.: 3 credit hours
- Total Credit Hours: 16

### FOURTH SEMESTER
- SPCH 2060 Interpersonal Communication: 3 credit hours
- ENGR 2220 Strength of Materials: 3 credit hours
- PHIL 1300 Introduction to Ethics: 3 credit hours
- MECH 2230 Hydraulics & Pneumatics: 3 credit hours
- MECH 2800 Capstone Seminar: 3 credit hours
- INDT 1330 Industrial Electricity: 2 credit hours
- Total Credit Hours: 17

Total Credit Hours: 72

Washington State’s Mechanical Engineering Technology program prepares students to support mechanical engineering activities with practical applications and experience utilizing hands-on learning, as well as provides experiences in working together on teams.

The overall curriculum is designed to provide students with the ability to apply a basic knowledge of mathematics, scientific and engineering principles, current engineering practice and methods, in combination with technical skills, in support of engineering activities. Laboratory courses and student projects are an integral component of this program and curriculum is driven by local industry.

Successful completion of the Mechanical Engineering Technology program leads to the Associate of Applied Science degree and provides recipients with the skills necessary to succeed as an engineering technologist in an industrial environment. Students are also well versed in general and basic courses to meet employers’ expectations.

### Graduates of the program will be able to:
- Communicate effectively through speaking, writing, and graphics.
- Use a computer for spreadsheet application, word processing, data analysis, research, performing rote mathematical calculations, and to retrofit experimental or actual data.
- Work as a team member in a variety of environments and contribute to brainstorming sessions for problem solving.
- Prepare and interpret mechanical drawings using AutoCAD.
- Identify, analyze and solve practical problems making use of appropriate technology in a simple and logical manner.
- Use knowledge of a material’s properties and performance in the selection of design components.
- Solve structural engineering problems.
- Understand professional, societal, and global issues as well as awareness and respect for diverse cultures.
- Demonstrate a commitment of life-long learning.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
The Mechanical Engineering Technology (MET) Pre-Engineering major prepares students to support engineering activities with practical applications, hands-on learning, and experiences in team work.

The overall curriculum is designed to provide students with the ability to apply advanced knowledge of mathematics, scientific and engineering principles, current engineering practice and methods, and technical skills in support of engineering activities. Laboratory courses and student projects are an integral component of their program, and curriculum is driven by local industry.

The MET Pre-Engineering program provides recipients with the skills necessary to succeed as an engineering technologist in an industrial environment, as well as an excellent foundation to continue on to a four-year engineering degree. Successful completion of the MET Pre-engineering major leads to the Associate of Applied Science degree.

Graduates of the program will be able to:

• Communicate effectively through speaking, writing, and graphics.
• Use a computer for spreadsheet applications, word processing, data analysis, research, performing rote mathematical calculations, and to retrofit experimental or actual data.
• Work as a team member in a variety of environments and contribute to brainstorming sessions for problem solving.
• Prepare and interpret mechanical drawings using AutoCAD.
• Identify, analyze and solve practical problems making use of appropriate technology in a simple and logical manner.
• Use knowledge of a material’s properties and performance in the selection of design components.
• Solve structural engineering problems.
• Demonstrate an understanding of professional, societal, and global issues as well as awareness and respect for diverse cultures.
• Show a commitment to life-long learning.
• Enter engineering-related employment.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
<table>
<thead>
<tr>
<th>Program</th>
<th>Page</th>
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</thead>
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<tr>
<td>Emergency Medical Technician (Basic/Advanced)</td>
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<tr>
<td>Health and Wellness Technology</td>
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<tr>
<td>Massage Therapy</td>
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<tr>
<td>Medical Laboratory Technology</td>
<td>62</td>
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<tr>
<td>Nursing - Associate Degree Nursing</td>
<td>63</td>
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<tr>
<td>Nursing - Practical Nursing Day</td>
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<tr>
<td>Nursing - Practical Nursing Evening</td>
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<tr>
<td>Physical Therapist Assistant Technology</td>
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</tr>
<tr>
<td>Radiologic Technology</td>
<td>67</td>
</tr>
<tr>
<td>Respiratory Therapy Technology</td>
<td>68</td>
</tr>
</tbody>
</table>
ADMISSIONS REQUIREMENTS

Because of the accreditation and licensing requirements and limited enrollment capacities, admission to health science programs at Washington State Community College is on a selective basis. Prospective students are encouraged to review all admissions requirements to the program they are interested in and apply early for acceptance.

Always contact the Admissions Office at 740.568.1900 for the most up-to-date and detailed information for applying to WSCC Health Sciences programs.

PROGRAM ACCREDITATIONS

The Medical Laboratory Technology program is fully accredited by:
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 N. River Road
Suite 720
Rosemont, IL 60018-5119
PHONE: 773.714.8880

The Radiologic Technology program is fully accredited by:
Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 North Wacker Drive
Suite 2850
Chicago, IL 60606-3182
PHONE: 312.704.5304
email@jrcert.org
www.jrcert.org

The Respiratory Therapy Technology program is fully accredited by:
Committee on Accreditation for Respiratory Care (CoARC)
1248 Hardwood Road
Bedford, TX 76021-4244
PHONE: 817.283.2835
www.coarc.com

The Physical Therapist Assistant Technology program is fully accredited by:
Commission on Accreditation in Physical Therapy Education (CAPTE)
1111 North Fairfax Street
Alexandria, VA 22314
PHONE: 703.706.3245
www.capteonline.org

The Associate Degree Nursing program has been granted full approval by:
Ohio Board of Nursing
17 South High Street, Suite 400
Columbus, OH 43215-7410
PHONE: 614.466.3947

The Practical Nursing Program has been granted full approval by:
Ohio Board of Nursing
17 South High Street, Suite 400
Columbus, OH 43215-7410
PHONE: 614.466.3947

The Massage Therapy program is recognized by the State of Ohio and a "school of good standing" with the Ohio Medical Board.
Ohio State Medical Board
30 East Broad St., 3rd Floor
Columbus, OH 43215
PHONE: 614.466.3934
EMERGENCY MEDICAL TECHNICIAN (BASIC/ADVANCED)

Washington State Community College affiliates with the Emergency Training Academy of Southern Ohio, which is accredited by Ohio Accreditation #411. Students who complete the Basic or Advanced Emergency Medical Technician (EMT) program at WSCC, and are approved by the program coordinator, may take the National Registry Exam. The State of Ohio requires the student to pass the National Registry in order to receive state certification to practice as an EMT at any level.

Both EMT-Basic and EMT-Advanced programs consist of 130 hours of training. Most of these hours, approximately 98-120, will be classroom hours. A portion of the class time will be hands-on practice of new skills. The remaining 10-32 hours will be time spent in a local hospital or rescue unit working alongside proficient individuals who will guide the student through treatment of actual patients. You will be expected to dress and act professionally as you are a representative of the College and the Emergency Medical Services community.

Admission Requirements

The EMT programs at Washington State Community College have a selective acceptance policy. The maximum class size will be twenty students at any one time. Students meeting the following requirements are eligible for consideration of acceptance into the EMT program.

1. Washington State Community College application completed and handed into the Admissions Office.
2. Completion of placement assessment
3. A scheduled meeting with the program coordinator, supplying:
   a. Proof of age
   b. Official transcript from high school or college, or a copy of GED.
   c. One personal and one professional recommendation.
   d. Completed copy of your Health Examination form.

Students of the AEMT program must also have:
   e. Current CPR card.
   f. Current EMT-Basic card from the State of Ohio
   g. Recommendation form filled out by your squad chief or other appropriate officer
   h. One year experience as an EMT
   i. Passing a knowledge-based EMS pre-test with no less than an 80%. This test may be taken twice. The student will be told where their area(s) of weakness are prior to taking the test a second time.

4. A criminal background check which must show that the applicant can qualify to become an EMT.
HEALTH AND WELLNESS TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

The Health and Wellness Technology program provides a broad knowledge in health and wellness management and its effects on health, first aid and emergency procedures, as well as a specialization in one or more health care skills.

Students are required to select one or more specialization areas (Fitness & Exercise, Emergency Medical Technician, Medical Billing, Massage Therapy, Nursing, Radiologic Technology, Respiratory Therapy, Physical Therapist Assistant, Medical Laboratory Technology) in addition to the general education and health core major courses.

Many of the specialization areas have national certification or state licensure. Students who complete these specialization area requirements will be eligible to sit for the appropriate certification or licensure examination. Successful completion of the Health and Wellness Technology program leads to an Associate of Applied Science degree.

Graduates of the program will be able to:

- Demonstrate knowledge of the structure and function of the human body.
- Use appropriate medical terminology.
- Describe how nutrients are utilized by the body for proper body functioning.
- Provide first aid and CPR for injuries or sudden illness.
- Know basic computer functions and applications.
- Use various forms of communication more effectively as a communicator and an observer.
- Use appropriate and effective problem-solving tools.
- Think critically by evaluating information from multiple perspectives, drawing reasonable conclusions, and defending them rationally.
- Show competency in a selected area of specialization.

## FIRST SEMESTER

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>ENGL 1510</td>
<td>English Composition I</td>
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<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
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**Credit Hours:** 18

## SECOND SEMESTER

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**Credit Hours:** 18

## THIRD SEMESTER

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<td>SPCH 2060</td>
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**Credit Hours:** 15

## FOURTH SEMESTER

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**Credit Hours:** 15

**Total Credit Hours:** 66

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Massage Therapy is a one-year, three semester education program. All of the courses listed in the curriculum must be successfully completed in order to earn a Massage Therapy certificate and to be eligible to take the Massage & Bodywork Licensing Examination (MBLEx) test.

Graduation and passing the test will then allow the student to apply for an Ohio, and/or West Virginia license. Massage therapists licensed in Ohio are able to practice in accordance with the Ohio Medical Board rules and regulations for massage therapists.

The Massage Therapy program is in good standing with the Ohio Medical Board. For gainful employment disclosure information, go online to www.wscc.edu/programs/gainful-employment.html.

Graduates of the program will be able to:

- Provide safe, competent, intentional and systematic manipulation of the soft tissues of the human body to treat disorders as deemed in the Ohio Practice Act for Massage Therapy, and to promote a more holistic, rounded approach to wellness.
- Demonstrate appropriate and effective written, verbal and non-verbal communication, which will reflect your sensitivity to your patient’s individual and cultural differences.
- Perform data collection techniques including health history, observation and palpation of soft tissues of the human body, to provide a basis for soft tissue mobilization of the human body.
- Demonstrate personal and professional development, reflecting competencies and conduct expectations as outlined by the American Massage Therapy Association (AMTA) and the Ohio Medical Board’s Code of Ethics.
- Code of Ethics.
# Medical Laboratory Technology

**ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT**

Graduates of the Medical Laboratory Technology (MLT) program are eligible to take the American Society for Clinical Pathology (ASCP) Board of Certification examination. They find careers in hospital laboratories, clinics, independent labs, industrial and environmental labs, and with manufacturers of medical and laboratory products.

The MLT program will prepare entry-level medical laboratory technicians who have the ability to provide accurate results of diagnostic laboratory tests in accordance with established laboratory procedures and professional standards of practice.

The program curriculum leads to the Associate of Applied Science degree. The Medical Laboratory Technology program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), which can be contacted at 5600 North River Road, Suite 720, Rosemont, IL 60018, phone number 773.714.8880.

**Graduates of the program will be able to:**

- Apply their knowledge in laboratory medicine to real-life situations.
- Completely perform diagnostic laboratory tests according to established procedures.
- Accept and react appropriately to the responsibilities of their profession.
- Effectively use various forms of communication with patients, laboratory personnel, other health care professionals, and with the public.
- Think critically as demonstrated by evaluating information from multiple perspectives, drawing reasonable conclusions, and defending them rationally.
- Behave in a manner which reflects positively upon their profession.

### First Semester

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<tr>
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<td>MMLT 1610</td>
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**Total Credit Hours: 73**

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Associate of Applied Science Degree for Direct Employment

Nursing - Associate Degree Nursing

Associate Degree Nursing program graduates are known for their competence and caring in providing safe, effective nursing services in a variety of health care settings. Students value their small classes, highly-prepared faculty, and strong preparation in the sciences. The program also provides a rich variety of clinical settings, including acute care hospitals, long-term care facilities, clinics or selected community health settings.

The capstone (preceptor) clinical experience is designed to ease the transition in juggling the multiple responsibilities of a registered nurse, and involves final semester students pairing with a registered nurse in clinical practice.

The program may be completed in four semesters by licensed practical nurses (LPN) who have met all advanced placement requirements*, or in five semesters by students new to the program. All students have the option of completing most non-nursing courses prior to admission to the program, in consultation with their pre-ADN program advisor.

After earning the Associate of Applied Science degree, graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN), which can lead to licensure as a registered nurse (RN). Once licensed, graduates may practice in a wide variety of nursing positions. The Associate Degree Nursing program provides an excellent foundation for a Bachelor of Science in Nursing degree.

The Associate Degree Nursing program operates under full approval of the Ohio Board of Nursing, 17 South High Street, Suite 400, Columbus Ohio, 43215, phone number 614.466.3947.

*Three semesters by Washington State Practical Nursing program graduates, directly transferring to the ADN program, who have met all the requirements and who have been accepted.

NOTE: Practical nurses should contact the program director for specific details of the advanced placement program.

Graduates of the program will be able to:

- Utilize the nursing process, incorporate health patterns to promote, maintain, and restore client health.
- Make decisions concerning nursing care based upon client values, as well as cultural and spiritual beliefs.
- Demonstrate legal and ethical accountability for nursing care given by self and/or delegated to others.
- Exercise clinical judgment, using evidence-based practice, to integrate increasingly complex knowledge, skills, and technologies as they relate to the client.
- Use critical thinking in adjusting priorities for nursing interventions as client situations change.
- Plan and deliver nursing care to a group of clients in collaboration with another registered nurse.
- Demonstrate caring behavior towards the client, significant support person(s), peers, and other members of the health care team.
- Apply principles of therapeutic communication to develop effective relationships with clients, peers, families, significant support persons, and agencies within the community.
- Develop, implement, evaluate, and modify teaching plans that are specific to the client’s level of development, knowledge, learning needs, and resources.
- Practice nursing within the parameters of individual knowledge and experience, while enlarging practice with continuing education and discovery learning.
- Utilize the role of the nurse as coordinator of nursing care, delegating aspects of client care to assistive personnel.
- Serve as a positive role model within health care settings and the community at large.
- Participate in lifelong learning which enhances professional development.
- Utilize awareness of interdependent global patterns of illness, and related implications in promoting, maintaining and restoring clients’ health.

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

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Evening courses may be required to complete this program.

Prerequisites are required for some courses.

Updated December 13, 2013

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The health care industry is growing, and along with it is the need for qualified Practical Nurses. Whether in a hospital, extended care facility, or home health, employers look for skilled, compassionate people to handle one of the most important aspects of client care – bedside nursing. As a Practical Nurse, your primary role will be bedside nursing, as well as assisting physicians and Registered Nurses in client care. You are an important part of the health care team and your skills have a direct effect on the client’s health and well-being.

During the program, your studies will include both classroom and clinical experiences. Your classroom instruction will be enhanced by concurrent clinical experiences at Marietta Memorial Hospital, Selby General Hospital, and Harmar Place Rehabilitation & Extended Care. You will also gain experience through observational time with home nursing, nursery schools, physicians’ offices, and clinics. Upon successful completion of the program, the graduate will be eligible to sit for the National Council Licensure Examination for Practical Nurses (NCLEX-PN) and become a licensed nurse.

The Practical Nursing - Day education curriculum is a 12-month, full-time day course of study. All of the courses listed in the curriculum must be successfully completed in order to earn the practical nursing certificate and to be eligible to take the licensing examination. After successfully passing the NCLEX-PN, graduates of Washington State’s Practical Nursing education program may consider enrolling in an Associate of Applied Science degree in Nursing (ADN) program. For gainful employment disclosure information, go online to www.wscc.edu/programs/gainful-employment.html.

The Practical Nursing education program is fully approved by the Ohio Board of Nursing and accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

Graduates of the program will be able to:

- Recognize optimal health and normal function for self and individuals across the lifespan, practicing and teaching this knowledge to family and community members.
- Collect and record objective and subjective data.
- Perform basic nursing skills with dexterity, competency, insight and safety.
- Develop communication and listening skills which can assist clients across the lifespan to cope with problems which affect health and rehabilitation.
- Contribute to the evaluation of the effectiveness of nursing actions and to establishing a new nursing approach as needed.
- Communicate effectively with clients and co-workers both orally and in writing.
- Develop skills which promote appropriate interpersonal relationships, effective communication and mental health.
The health care industry is growing, and along with it is the need for qualified Practical Nurses. Whether in a hospital, extended care facility, or home health, employers look for skilled, compassionate people to handle one of the most important aspects of client care – bedside nursing. As a Practical Nurse, your primary role will be bedside nursing, as well as assisting physicians and Registered Nurses in client care. You are an important part of the health care team and your skills have a direct effect on the client’s health and well-being.

During the program, your studies will include both classroom and clinical experiences. Your classroom instruction will be enhanced by concurrent clinical experiences at Marietta Memorial Hospital, Selby General Hospital, and Harmar Place Rehabilitation & Extended Care. You will also gain experience through observational time with home nursing, nursery schools, physicians’ offices, and clinics. Upon successful completion of the program, the graduate will be eligible to sit for the National Council Licensure Examination for Practical Nurses (NCLEX-PN) and become a licensed nurse.

The Practical Nursing - Evening education curriculum is a 24-month, part-time evening course of study. All of the courses listed in the curriculum must be successfully completed in order to earn the practical nursing certificate, and to be eligible to take the licensing examination. After successfully passing the NCLEX-PN, graduates of Washington State’s Practical Nursing education program may consider enrolling in an Associate of Applied Science degree in nursing (ADN) program. For gainful employment disclosure information, go online to www.wscc.edu/programs/gainful-employment.html.

The Practical Nursing education program is fully approved by the Ohio Board of Nursing and accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

**FIRST SEMESTER**

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<td>PN Trends &amp; Ethics</td>
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**Total Credit Hours** **41-44**

**Must take BIOL 1310/131L & BIOL 1320/132L OR BIOL 2310/231L & BIOL 2320/232L**

Prerequisites are required for some courses. Evening courses are required to complete this program.
Physical Therapist Assistant Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

Physical therapist assistants are specially trained health care professionals who contribute to the welfare of patients under the supervision of a licensed physical therapist. While under this supervision, physical therapist assistants (PTAs) assist with pain relieving modalities, therapeutic exercise, and assist in the daily assessment of a patient’s progress. PTAs interact daily with not only patients and patients’ families, but also with other professionals including, but not limited to, physicians, nurses, and respiratory therapists.

Excellent communication skills are essential to becoming a successful physical therapist assistant. Having the desire to help people regain their previous function as well as having empathy for their conditions are characteristics that will allow one to succeed in this profession. Further, these characteristics will provide job satisfaction and ensure a long career as a physical therapist assistant.

The two-year Physical Therapist Assistant (PTA) Program at Washington State begins each fall and consists of five consecutive semesters of study. Students complete the program in May of their second year, with successful completion leading to an ASSOCIATE of Applied Science Degree. Graduates of the program must sit for the National Board Exam. If the student decides to work in Ohio, a state law exam also must be taken to be eligible for employment.

The PTA program at Washington State is accredited by the Commission of Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, VA 22314; telephone: 703.706.3245; e-mail: accreditation@apta.org; website: www.capteonline.org. Currently, most states require licensure and the student must have graduated from a CAPTE accredited program to be eligible to sit for the board exam.

Graduates of the program will be able to:

• Gain written and verbal communication skills.
• Utilize skills, through practice, to perform the following:
  o Ultrasound
  o Hot pack, cold pack application
  o Electrical stimulation
  o Traction
  o Ultraviolet light and laser
  o Whirlpool and wound care
  o Intermittent compression
• Gain gait training skills and use of assistive ambulation devices
• Know joint range of motion and manual muscle testing
• Understand physiologic conditions associated with certain populations
• Understand neurological and musculoskeletal dysfunctions
• Gain detailed knowledge of anatomy
• Utilize critical thinking skills

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<tbody>
<tr>
<td>PTAT 1010 Introduction to Physical Therapy</td>
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<td>BIOL 231L Human Anatomy &amp; Physiology I Lab</td>
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<td>PHYS 1320 Physics for Physical Therapy</td>
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<td>HLTH 1810 Medical Terminology</td>
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<td>PTAT 2540 Neurological Conditions in Physical Therapy</td>
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<td>PTAT 2620 Physical Therapy and Special Populations</td>
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<td>PTAT 2450 Directed Practice I</td>
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<tr>
<td>PTAT 2500 PTA Seminar I</td>
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<tbody>
<tr>
<td>PTAT 2550 Directed Practice II</td>
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<td>PTAT 2600 PTA Seminar II</td>
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| **Total Credit Hours** | 73 |

Prerequisites are required for some courses. Evening courses may be required to complete this program.
In articulation with Marietta Memorial Hospital’s School of Radiologic Technology, Washington State offers an Associate of Applied Science degree in radiologic technology. The School of Radiologic Technology is sponsored by Marietta Memorial Hospital and holds accreditation with the Joint Review Committee on Education in Radiologic Technology (J.R.C.E.R.T). To contact J.R.C.E.R.T., write to 20 N. Wacker Drive, Suite 2850, Chicago IL 60606, call 312.704.5304, or email mail@jrcert.org, or visit their website at www.jrcert.org.

Radiologic Technology program graduates earn a certificate award from the sponsoring institution (Marietta Memorial Hospital) and the Associate of Applied Science degree concurrently during the two year program.

Graduates are eligible to sit for the American Registry of Radiologic Technology’s (ARRT) national certification exam, and possess the knowledge and skills to enter the profession. Students in radiologic technology will be fully admitted to the college, and entitled to participate in all activities of the college with equal access to all college services. Admission to the program is selective, with student selection to the program made in March.

Graduates of the program will be able to:
- Apply positioning skills.
- Select technical factors.
- Utilize radiation protection.
- Demonstrate written and oral communication skills.
- Adapt standard procedures for non-routine patients.
- Critique images to determine diagnostic quality.
- Demonstrate work ethics.
- Summarize the value of life-long learning.

### FIRST SEMESTER

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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
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<td>Human Anatomy &amp; Physiology I</td>
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<td>Human Anatomy &amp; Physiology I Lab</td>
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<tr>
<td>HLT 1710</td>
<td>Medical Terminology</td>
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<tr>
<td>RADT 1010</td>
<td>Intro to Rad. Tech. and Proced. I</td>
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<td>RADT 1110</td>
<td>Radiographic Exposure I</td>
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<tr>
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Credit Hours: 14

### SECOND SEMESTER

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<td>Human Anatomy &amp; Physiology II</td>
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<td>BIOL 232L</td>
<td>Human Anatomy &amp; Physiology II Lab</td>
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<tr>
<td>MATH 1110</td>
<td>MATH 1110 or equivalent</td>
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<td>RADT 1120</td>
<td>Radiographic Exposure II</td>
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<td>Applied Radiography II</td>
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Credit Hours: 15

### THIRD SEMESTER

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<td>Applied Radiography III</td>
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<tr>
<td>RADT 1230</td>
<td>Radiographic Procedures III</td>
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Credit Hours: 7

### FOURTH SEMESTER

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<td>RADT 2170</td>
<td>Radiographic Physics</td>
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<tr>
<td>RADT 2190</td>
<td>Special Procedures/Imaging</td>
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<tr>
<td>RADT 2310</td>
<td>Applied Radiography IV</td>
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<tr>
<td>ENGL 1510</td>
<td>English Composition I</td>
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<td>Arts and Humanities Elective</td>
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Credit Hours: 15

### FIFTH SEMESTER

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<tbody>
<tr>
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<td>Radiobiology/Rad. Prot/Pathology</td>
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<td>SPCH 2060</td>
<td>Interpersonal Communication</td>
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<td>RADT 2320</td>
<td>Applied Radiography V</td>
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<td>ENGL 1515</td>
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Credit Hours: 15

### SIXTH SEMESTER

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<tr>
<td>RADT 2330</td>
<td>Applied Radiography VI</td>
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<tr>
<td>RADT 2420</td>
<td>Selected Topics</td>
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<tr>
<td>RADT 2430</td>
<td>Kettering ARRT Review</td>
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Credit Hours: 7

Total Credit Hours: 73

Prerequisites are required for some courses. Evening courses may be required to complete this program.
**ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT**

Respiratory care deals with the treatment, management, and care of patient respiration and circulation. Following physician’s orders, respiratory care personnel work closely with other members of the health care team. A respiratory therapist may work as a clinician in hospitals, clinics, laboratories, and sleep labs; or may choose to work in other areas such as management, medical research, or education in the hospital, college, or university setting.

Washington State’s Respiratory Therapy Technology program covers ventilator and airway management, cardiopulmonary resuscitation, patient assessment, treatment and care in the emergency department, critical care units, home care, skilled extended care, neonatal intensive care, and other areas of health care delivery. It consists of five semesters of professional and support courses. Students who complete all required courses will be scheduled to enter the hospital portion of the program beginning with the second semester.

Following completion of the program, the graduate is qualified for immediate employment and for application to the National Board for Respiratory Care (NBRC) for the entry-level certification examination to become a Certified Respiratory Therapist (CRT). After passing the CRT exam the graduate is immediately eligible for exams to be a Registered Respiratory Therapist (RRT).

The curriculum leads to the Associate of Applied Science degree. Certified respiratory therapy technicians who are interested in the possibility of advanced placement should contact the director of respiratory therapy. The program is accredited by The Commission on Accreditation for Respiratory Care, which can be contacted at 1248 Harwood Road, Bedford TX, 76021, http://www.coarc.com/47.html.

**Graduates of the program will be able to:**

- Comprehend, apply and evaluate clinical information relevant to the role of an advanced respiratory care practitioner.
- Demonstrate the technical proficiency in all skills necessary.
- Demonstrate professional and personal behaviors consistent with professional and employer expectations.
- Communicate with patients, physicians, and health care workers, demonstrating an understanding of medical terminology and effective written and verbal communication skills.
- Continue as an independent learner, by demonstration of upgraded job skills and keeping pace with the changing health field with continuing education.
- Demonstrate a general understanding of the procedures used in respiratory therapy departments to manage and evaluate personnel and departmental productivity.
- Demonstrate a knowledge and understanding of the following procedures and demonstrate clinical skills to assess patients’ response to therapy:
  - Medical Gas therapy
  - Humidification therapy
  - Deep breathing and other hyperinflation therapy
  - Aerosol therapy
  - Medications
  - Coughing techniques and other Bronchopulmonary hygiene
  - Cardiopulmonary resuscitation
  - Advance Life Support therapy
  - Airway management
  - Heart and lung testing
  - Blood gas analysis
  - Mechanical ventilation management
  - Other vital physiological monitoring

---

**PREREQUISITES (“C” OR HIGHER)**

- **HIGH SCHOOL CHEMISTRY OR**
  - CHEM 1210 Principles of Chemistry I 3
  - CHEM 121L Principles of Chemistry I Lab 1

- **HIGH SCHOOL BIOLOGY OR**
  - BIOL 1010 Principles of Biology 3
  - BIOL 101L Principles of Biology Lab 1

- **HIGH SCHOOL ALGEBRA OR**
  - MATH 0950 Elementary Algebra 4

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENGL 1510 English Composition I</td>
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<tr>
<td>BIOL 2310 Human Anatomy &amp; Physiology I</td>
<td>3</td>
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<tr>
<td>BIOL 231L Human Anatomy &amp; Physiology I Lab</td>
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<tr>
<td>PHYS 1310 Physics for Resp. Therapy I</td>
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<tr>
<td>PHYS 131L Physics for Resp. Therapy I Lab</td>
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<tr>
<td>SPCH 2060 Interpersonal Communication or</td>
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<tr>
<td>SPCH 1510 Speech</td>
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**SECOND SEMESTER**

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<tr>
<td>RESP 1210 Cardiopulmonary Pharmacology</td>
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<tr>
<td>RESP 1330 Cardiopulmonary Ana. &amp; Phys.</td>
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<tr>
<td>RESP 1350 Clinical Practice I</td>
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<tr>
<td>BIOL 2320 Human Anatomy &amp; Physiology II</td>
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<tr>
<td>BIOL 232L Human Anatomy &amp; Physiology II Lab</td>
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**THIRD SEMESTER**

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<tbody>
<tr>
<td>RESP 2450 Clinical Practice II</td>
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<tr>
<td>RESP 2610 Respiratory Pediatrics &amp; Neonatology I</td>
<td>2</td>
</tr>
<tr>
<td>RESP 2550 Respiratory Critical Care I</td>
<td>2</td>
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<tr>
<td>ENGL ___ Technical Writing or Higher</td>
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<tr>
<td>HLTH 2400 EKG/Cardiovascular Technician</td>
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**FOURTH SEMESTER**

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<tr>
<td>RESP 2600 Respiratory Critical Care II</td>
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<tr>
<td>RESP 2510 Cardiopulmonary Pathology I</td>
<td>3</td>
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<tr>
<td>RESP 2550 Clinical Practice III</td>
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<tr>
<td>RESP 1360 Adv. Cardiopulmonary Resuscitation</td>
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<tr>
<td>RESP 2620 Resp. Pediatrics &amp; Neonatology II</td>
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<tr>
<td>RESP 2460 Arterial Blood Gases</td>
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<tr>
<td>BIOL 2010 Basic Microbiology</td>
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<td>BIOL 201L Basic Microbiology Lab</td>
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**FIFTH SEMESTER**

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<tbody>
<tr>
<td>RESP 2520 Cardiopulmonary Pathology II</td>
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<tr>
<td>RESP 2700 Assessment of Pul. Functions</td>
<td>2</td>
</tr>
<tr>
<td>RESP 2750 Clinical Practice IV</td>
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<tr>
<td>RESP 2730 Pulmonary Rehab &amp; Subspec.</td>
<td>2</td>
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<tr>
<td>RESP 2800 Cardiology &amp; Hemodynamic Monitoring</td>
<td>2</td>
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<tr>
<td>RESP 2990 Respiratory Care Capstone</td>
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<tr>
<td>RESP 2850 Polysomnography</td>
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<td>Credit Hours</td>
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**Total Credit Hours 73**

This is subject to change without notice. Prerequisites are required for some courses. Some Evening Courses or Online Courses may be required to complete this program.
Public Services

American Sign Language Interpretation ............ 70
Criminal Justice - Corrections ..................... 71
Criminal Justice - Law Enforcement ............... 72
Criminal Justice - Basic Academy .................. 73
Early Childhood Development ..................... 74
Social Services Technology ........................ 75
American Sign Language Interpretation

The American Sign Language (ASL) Interpretation program leads to an Associate of Applied Science degree and prepares graduates for educational ASL interpreting positions, particularly in the educational setting. ASL interpreters enable communication between hearing individuals and deaf or hard-of-hearing individuals.

The program offers extensive coursework in American Sign Language, training in interpreting practices, ethics, theory, and first-hand interpreting experience through a practicum supervised by a professional interpreter. An on-campus ASL lab provides for further practice of ASL skills and use of a variety of ASL support materials.

Graduates of the program will be able to:

- Demonstrate accurate American Sign Language skills using vocabulary and sentence structure necessary to support educational interpreter skills.
- Demonstrate skills with finger spelling and numbers.
- Demonstrate American Sign Language conversational skills.
- Voice interpret, at an entry level, American Sign Language to English, as well as various English sign varieties to English.
- Transliterate, at an entry level, spoken English into various types of English-related signs.
- Comprehend, sign, and interpret entry-level medical, educational, legal terminology, and other technical vocabulary.
- Articulate differences among American Sign Language and other varieties of English sign.
- Explain a variety of aspects of Deaf Culture.
- Know the history of interpreting.
- Explain the ethics associated with interpreting, as well as the rights of deaf people in the United States.
- Demonstrate professional demeanor and values.
- Demonstrate knowledge of environmental effects while interpreting.
- Demonstrate the skills and knowledge expected of an educational interpreter.

First Semester

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<tr>
<th>Course</th>
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<tr>
<td>PSYC 1010</td>
<td>General Psychology</td>
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<tr>
<td>LANG 1010</td>
<td>Beginning ASL I</td>
<td>3</td>
</tr>
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<td>BUSM 1600</td>
<td>PC Applications</td>
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<tr>
<td>LANG 1900</td>
<td>Fingerspelling &amp; Numbers</td>
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<tr>
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<td>English Composition I</td>
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Second Semester

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<td>Psycho-social Aspects of Deaf Culture</td>
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<td>Interpersonal Communications</td>
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<td>PHIL 1200</td>
<td>Principles of Reasoning</td>
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<td>Beginning ASL II</td>
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<td>English Composition III</td>
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<td>LANG 2100</td>
<td>Introduction to Interpreting</td>
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Third Semester

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<td>LANG 2800</td>
<td>Educational Interpreting</td>
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<td>LANG 2160</td>
<td>Intermediate Interpreting</td>
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<tr>
<td>LANG 2600</td>
<td>Transliterating</td>
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<td>LANG 2500</td>
<td>Interpreting Practicum I</td>
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<tr>
<td>LANG 2510</td>
<td>Interpreting Seminar I</td>
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<tr>
<td>LANG 2010</td>
<td>Intermediate ASL</td>
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<td>Natural Sciences Elective or Math Elective</td>
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Fourth Semester

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<td>LANG 2400</td>
<td>Non-educational Interpreting</td>
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<td>LANG 2210</td>
<td>Advanced ASL</td>
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<td>LANG 2170</td>
<td>Advanced Interpreting</td>
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<td>LANG 2520</td>
<td>Interpreting Practicum II</td>
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<td>LANG 2530</td>
<td>Interpreting Seminar II</td>
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Total Credit Hours 63-64

Prerequisites are required for some courses. Evening courses may be required to complete this program.

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT
Criminal Justice - Corrections

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

The Corrections major, under the associate degree in Criminal Justice, provides preparation for careers in probation, parole, correctional institutions, community-based correctional programs, and social service agencies. The curriculum of the Corrections major leads to the Associate of Applied Science degree.

Federal, state and local law enforcement and correctional agencies generally have requirements and/or guidelines for individuals seeking employment. These may include, but are not limited to: physical fitness standards, medical, and/or psychological requirements. In addition, individuals seeking employment in the law enforcement or correctional fields are subjected to a thorough background and criminal records check prior to being considered for employment.

Graduates of the program will be able to:

- Develop a knowledge base of the three elements of the criminal justice system (courts, corrections, and law enforcement) and the ability to effectively collaborate with each for the benefit of society.
- Apply issues of criminal law and constitutional law to situations and events in employment to ensure that the civil and constitutional rights of citizens are preserved.
- Effectively communicate with individuals from various racial, cultural, ethnic, and socioeconomic groups.
- Produce various types of written communications to target diverse audiences.
- Maximize the effectiveness of the criminal justice agency through the use of technological advances (i.e. computers/forensic science).
- Aid in the rehabilitative efforts of individuals who have come in contact with the criminal justice system to reduce the incidence of recidivism.

Prerequisites are required for some courses. Evening courses may be required to complete this program.

**First Semester**

<table>
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<td>MATH 1106</td>
<td>Business Mathematics (or higher)</td>
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<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>General Psychology or</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 1010</td>
<td>Intro to Sociology</td>
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<tr>
<td>CRJU 1010</td>
<td>Introduction to Criminal Justice</td>
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<td>CRJU 1120</td>
<td>Criminal Law</td>
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**Second Semester**

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<tbody>
<tr>
<td>ENGL 1520</td>
<td>English Composition II</td>
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<td>POLS 1020</td>
<td>American National Government or</td>
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<td>POLS 1030</td>
<td>State &amp; Local Government</td>
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<tr>
<td>SPCH 2060</td>
<td>Interpersonal Communication or</td>
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</tr>
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<td>SPCH 2500</td>
<td>Cross-Cultural Communication or</td>
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<tr>
<td>SPCH 1510</td>
<td>Speech</td>
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<td>Corrections in the Criminal Justice System</td>
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<tr>
<td>CRJU 1110</td>
<td>Crim. Evid. &amp; Procedures</td>
<td>3</td>
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<tr>
<td>HLTH 1120</td>
<td>First Aid &amp; Personal Safety</td>
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**Third Semester**

- **Arts & Humanities Elective** 3
- **Social/Behavioral Science Elective** 3
- CRJU 2520 Community Based Corrections 3
- CRJU 2550 Juvenile Justice Procedures 3
- CRJU 2850 Criminal Justice Careers 2
- Recreation & Phys. Ed. Elective 1
| **Total Credit Hours** |                              | **15**       |

**Fourth Semester**

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<tr>
<td>SOSV 2150</td>
<td>Domestic Violence or</td>
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<tr>
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<td>Addictive Behavior</td>
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<tr>
<td>CRJU 2560</td>
<td>Corrections Counseling &amp; Treatment</td>
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<td>CRJU 2530</td>
<td>Criminal Justice Administration</td>
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<tr>
<td>SOCI 2300</td>
<td>Introduction to Criminology</td>
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<tr>
<td>CRJU 2580</td>
<td>Criminal Justice Practicum</td>
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<tr>
<td>CRJU 2590</td>
<td>Criminal Justice Seminar</td>
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**Total Credit Hours** 65
Criminal Justice - Law Enforcement

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

The Criminal Justice associate degree in Law Enforcement provides preparation for a variety of careers in state or local law enforcement agencies. The program provides the necessary background for positions with police, private security, and other related criminal justice work, or for transfer to a baccalaureate program. The curriculum of the Law Enforcement major leads to the Associate of Applied Science degree.

Federal, state and local law enforcement and correctional agencies generally have requirements and/or guidelines for individuals seeking employment. These may include, but not be limited to: physical fitness standards, medical, and/or psychological requirements. In addition, individuals seeking employment in the law enforcement or correctional fields are subjected to a thorough background and criminal records check prior to being considered for employment.

Graduates of the program will be able to:

- Develop a knowledge base of the three elements of the criminal justice system (courts, corrections, and law enforcement) and the ability to effectively collaborate with each of the respective elements for society’s benefit.
- Apply issues of criminal law and constitutional law to situations and events in employment to ensure that the civil and constitutional rights of citizens are preserved.
- Effectively communicate with individuals from various racial, cultural, ethnic, and socioeconomic groups.
- Recognize emergency situations that necessitate law enforcement intervention, medical intervention, or intervention by social services agencies.
- Analyze information, evidence, or clues received from various sources and develop theories for the prevention or solving of crimes.
- Maximize the effectiveness of the criminal justice agency through the use of technological advances (i.e. computers/forensic science).

**FIRST SEMESTER**

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<td>MATH 1106</td>
<td>Business Mathematics</td>
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<tr>
<td>BUSM 1600</td>
<td>PC Applications</td>
<td>3</td>
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<tr>
<td>PSYC 1010</td>
<td>General Psychology or</td>
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<tr>
<td>SOCI 1010</td>
<td>Intro to Sociology</td>
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<td>Introduction to Criminal Justice</td>
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<td>CRJU 1120</td>
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**SECOND SEMESTER**

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<td>POLS 1020</td>
<td>American National Government</td>
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<td>Interpersonal Communication</td>
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<td>Cross-Cultural Communication</td>
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<td>SPCH 1510</td>
<td>Speech</td>
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<td>CRJU 1110</td>
<td>Criminal Evidence &amp; Proc.</td>
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<td>CRJU 1310</td>
<td>Police Operations</td>
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<tr>
<td>HLTH 1120</td>
<td>First Aid &amp; Personal Safety</td>
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**THIRD SEMESTER**

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<td>Social/Behavioral Science Elective</td>
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<td>CRJU 1210</td>
<td>Criminal Investigation</td>
<td>3</td>
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<tr>
<td>CRJU 2550</td>
<td>Juvenile Justice Procedures</td>
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<td>CRJU 2850</td>
<td>Criminal Justice Careers</td>
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<td>—</td>
<td>Recreation &amp; Phys. Ed. Elective</td>
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**FOURTH SEMESTER**

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<td>Crisis Intervention or</td>
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<tr>
<td>SOSV 2150</td>
<td>Domestic Violence or</td>
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<tr>
<td>SOSV 2310</td>
<td>Addictive Behavior</td>
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<tr>
<td>—</td>
<td>Criminal Justice Tech. Elective</td>
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<tr>
<td>CRJU 2210</td>
<td>Criminalistics</td>
<td>3</td>
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<td>CRJU 2530</td>
<td>Criminal Justice Administration</td>
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<tr>
<td>SOCI 2300</td>
<td>Introduction to Criminology</td>
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</tr>
<tr>
<td>CRJU 2580</td>
<td>Criminal Justice Practicum</td>
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<td>CRJU 2590</td>
<td>Criminal Justice Seminar</td>
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<tr>
<td><strong>Credit Hours</strong></td>
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</table>

**Total Credit Hours** 65

Prerequisites are required for some courses. Evening courses may be required to complete this program.
The Peace Officer Basic Academy (POBA) major, under the associate degree in Criminal Justice, provides preparation for careers in law enforcement. POBA also helps students prepare for the Ohio Peace Officer Training Commission (OPOTC) examination. All certified law enforcement officers in the State of Ohio are required to possess an OPOTC certification.

Washington State’s POBA program is sanctioned and governed under the Office of the Ohio Attorney General and the Ohio Peace Officer Training Commission (OPOTC). The commission establishes uniform courses of training for law enforcement officers and private security throughout Ohio, and regulates the basic training curriculum for prospective officers.

All individuals seeking to participate as cadets in the Academy must apply and pay tuition and fees four weeks prior to the beginning of the Academy and pass a criminal background investigation to the satisfaction of the Ohio Attorney General’s office. Physical fitness is an important element of the academy. All cadets must be able to pass a physical fitness test based on the “Cooper Standard.” Failure to pass this test prohibits a cadet from sitting for the OPOTC examination and prevents state certification as a peace officer.

Graduates of the program will be able to:
- Successfully complete the Ohio Peace Officer Basic Academy and be awarded certification as a law enforcement officer from the Ohio Attorney General’s Office.
- Develop a knowledge base of the three elements of the criminal justice system (courts, corrections and law enforcement) and the ability to effectively collaborate with each of the respective elements for the benefit of society.
- Apply issues of criminal law and constitutional law to situations and events in employment to ensure that the civil and constitutional rights of citizens are preserved.
- Effectively communicate with individuals from various racial, cultural, ethnic and socioeconomic groups.
- Recognize emergency situations that necessitate law enforcement intervention by social services agencies.
- Analyze information, evidence or clues received from various sources and develop theories for the prevention or solving of crimes.
- Maximize effectiveness for the criminal justice agency through the use of technological advances (i.e. computers/forensic science).

Prerequisites are required for some courses. Evening courses may be required to complete this program.
Graduates with the Early Childhood Development ASSOCIATE degree find rewarding career opportunities as teachers, assistants, and administrators in preschools (private and public), Head Start, childcare centers, and infant/toddler programs.

The program provides a solid foundation of course work that emphasizes developmentally appropriate curriculum design and instructional skills based on the guidelines of the National Association for the Education of Young Children. Successful completion of the Early Childhood Development program leads to an Associate of Applied Science degree.

The Early Childhood program includes 300+ hours of hands-on experience in childcare educational settings. Graduates fulfilling eligibility requirements may apply for the Ohio Pre-Kindergarten Associate License.

Graduates of the program will be able to:

- Demonstrate knowledge of how children develop and learn by creating an environment that supports the physical, social, emotional, cognitive and aesthetic development of young children.
- Plan and utilize developmentally appropriate curriculum and instructional practices that meet the individual needs of all children and include play, small group projects, open-ended questioning, discussions, problem solving, and decision making.
- Utilize positive guidance and problem solving techniques to develop supportive relationships with children, to encourage positive social interaction among children, and to promote positive strategies of conflict resolution.
- Recognize the skills necessary to establish and maintain positive collaborative relationships with families.
- Critically examine the characteristics in family structures, including social and cultural backgrounds.
- Utilize observation and assessment strategies to plan and individualize curriculum and teaching practices.
- Demonstrate the basic principles of administration, organization, and operation of early childhood programs.
- Identify themselves as members of the early childhood profession and use the code of ethical conduct and professional standards related to early childhood practice.
When people find themselves in need of personal assistance, they can turn to one of many social services agencies for help. These agencies need qualified individuals to work with people in need, offering advice. The social services worker can assist in many areas, including: children’s services, helping children get a good start with the right nutrition and education, services for the elderly, nutrition centers, and senior citizen activities and services. In addition, welfare and other social service agencies need individuals to work with the underprivileged, disadvantaged, handicapped or abused and criminal justice population.

Washington State’s Social Services Technology program combines classroom theory with actual field experience. Part of the second year will be spent with various local agencies, applying what has been learned to actual cases. Successful completion of the program leads to the Associate of Applied Science degree.

Graduates of the program will be able to:

- Consistently perform work habits such as: punctuality, productivity, verbal and written communication skills, cooperation with staff and clients and working within the policies, structures, and functions of social service agencies.
- Apply the National Association of Social Workers Code of Ethics and values consistent with the profession, to ethical situations.
- Demonstrate effective interpersonal communication skills needed as a helping professional such as active listening, appropriate verbal and non-verbal responses, and written communication.
- Collect, organize, and prioritize client assessment information needed to develop progress reports, social histories, and case treatment plans.
- Write accurate progress reports, social histories, case treatment plans, and closing summaries.
- Identify client needs and link them to available community resources.
- Monitor and evaluate clients’ success toward individualized goal attainment.
- Identify historical and current social welfare policy issues facing helping professional agencies.

Prerequisites are required for some courses. Evening courses may be required to complete this program.
## Certificate Programs

### Accounting Certificate

**First Semester**
- ENGL 1510 English Composition I 3
- MATH 1106 Business Mathematics or 3
- MATH 2110 Principles of Statistics 3
- BUSM 1550 Business Management 3
- ACCT 1510 Principles of Accounting I 4
- BUSM 1600 PC Applications 3

**Credit Hours** 16

**Second Semester**
- BUSM 1660 Business Law 3
- ACCT 1520 Principles of Accounting II 4
- ACCT 1610 Payroll Accounting 3
- ACCT 2810 Microcomputer Accounting 2
- ACCT 2820 Spreadsheet Accounting 3
- BUSM 2300 Introduction to Finance 3

**Credit Hours** 18

**Total Credit Hours** 34

### Automotive Technician

**First Semester**
- AUTO 1100 Vehicle Service & Maintenance 3
- AUTO 1110 Electrical Circuity 3
- AUTO 1120 Automotive Brakes 3
- AUTO 1130 Electrical Components 3
- AUTO 2100 Automatic Drive Trains 3
- AUTO 2130 Cylinder Block & Lower Engine 3

**Credit Hours** 18

**Second Semester**
- AUTO 1140 Automotive Chassis 3
- AUTO 1150 Manual Drive Trains 3
- AUTO 1160 Fuel & Emissions Controls 3
- AUTO 1170 Upper Engine Design & Service 3
- MATH 1104 Technical Mathematics 3
- ENGL 1510 English Composition I 3

**Credit Hours** 18

**Total Credit Hours** 36

### Computer Systems

**First Semester**
- BUSM 1600 PC Applications 3
- DTCS 2650 Internet & Web Page Design 3
- DTCS 1230 OS Concepts & Customizing 3
- DTGR 1600 Computer Graphics 3
- DTCS 1010 Intro. to Digital Technologies 1
- DTWP 1200 Prog. Logic & Problem Solving 3
- ENGL 1510 English Composition I 3

**Credit Hours** 19

**Second Semester**
- ELEC 2410 Micro. Diagnostics & Upgrading I 3
- DTCS 2100 Database Management 3
- MATH 1110 Intermediate Algebra or 3
- MATH 1106 Business Math 3
- ENGL 1515 Technical Writing 3
- ELEC 1950 Cisco Semester I 3

**Credit Hours** 15

**Total Credit Hours** 34

### Design Drafting

**First Semester**
- DRFT 1510 Design Drafting I 3
- INDT 1150 Machining Processes I 3
- MATH 1104 Technical Mathematics 3
- INDT 1210 Industrial Safety & Hazmat 2
- ENGR 1010 Fundamentals of Engineering 3

**Credit Hours** 14

**Second Semester**
- DRFT 1430 Advanced CAD 4
- DRFT 1560 Structural Drafting or 3
- DRFT 2610 Civil Drafting 3
- INDT 1170 Computer Numerical Control 4
- PHYS 1010 Applied Physics 2
- PHYS 101L Applied Physics Lab 1
- INDT 2180 Manufacturing Processes 3

**Credit Hours** 17

**Total Credit Hours** 31

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Updated December 13, 2013
## Certificate Programs

### Executive Office Support

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td><strong>First Semester</strong></td>
<td>OAST 1510</td>
<td>Keyboarding I</td>
<td>3</td>
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<tr>
<td></td>
<td>OAST 2550</td>
<td>Windows Concepts</td>
<td>3</td>
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<td></td>
<td>OAST 2910</td>
<td>Microsoft PowerPoint</td>
<td>3</td>
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<td></td>
<td>OAST 2220</td>
<td>Microsoft Excel</td>
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<td>OAST 2760</td>
<td>Office Procedures</td>
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<td>ENGL 1510</td>
<td>English Composition I</td>
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<td>OAST 1300</td>
<td>Records Management</td>
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<td>OAST 2230</td>
<td>Microsoft Access</td>
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<td>OAST 2210</td>
<td>Microsoft Word</td>
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<td>OAST 1520</td>
<td>Keyboarding II</td>
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<td>OAST 2520</td>
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### Massage Therapy

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<td><strong>First Semester</strong></td>
<td>HLTH 1510</td>
<td>Massage Techniques I</td>
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<td>BIOL 1360</td>
<td>Anatomy &amp; Physiology I for Massage Therapists</td>
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<td>HLTH 2850</td>
<td>Building an Ethical MT Practice</td>
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<td>BUSM 1660</td>
<td>Business Law</td>
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<td>Massage Techniques II</td>
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<td>Anatomy &amp; Physiology II for Massage Therapists</td>
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<td>Anatomy &amp; Physiology II for Massage Therapists Lab</td>
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<td>HLTH 2480</td>
<td>Orthopedic Assessment &amp; Documentation</td>
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<td>Massage Therapy Directed Practice</td>
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<td>BIOL 1380</td>
<td>Advanced Anatomy &amp; Kinesiology</td>
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### Industrial Technology - Chemical Operator

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<td><strong>First Semester</strong></td>
<td>INDT 1010</td>
<td>Introduction to Chemical Operator</td>
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<td>INDT 1210</td>
<td>Industrial Safety/Hazmat</td>
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<td>INDT 2210</td>
<td>Process Control</td>
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<td>INDT 1340</td>
<td>Team Concepts and Practices</td>
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<td>CHEM 1200</td>
<td>Chemistry Concepts</td>
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<td>MATH 1104</td>
<td>Technical Mathematics</td>
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<td>PHYS 1010</td>
<td>Applied Physics</td>
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<td>PHYS 101L</td>
<td>Applied Physics Lab</td>
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<td></td>
<td>INDT 1330</td>
<td>Industrial Electricity</td>
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<td>MECH 2060</td>
<td>Statistical Quality Control</td>
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<td>MECH 1100</td>
<td>Engineering Materials</td>
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<td>ELET 2410</td>
<td>Programmable Logic Controllers</td>
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Certificate Programs

Medical Coding

**FIRST SEMESTER**
- OAST 1510 Keyboarding I 3
- OAST 2330 Medical Office Procedures 3
- HLT 1350 ICD-10-CM-Coding 3
- BIOL 1330 Survey of Anatomy & Physiology I 2
- HLT 2310 Principles of Reimbursement 3
- HLT 2320 Medical Billing 1
- Credit Hours 15

**SECOND SEMESTER**
- OAST 2220 Microsoft Excel 3
- HLT 1340 CPT Coding 3
- OAST 2210 Microsoft Word 3
- BIOL 1340* Survey of Anatomy & Physiology II 2
- HLT 1120 First Aid & Personal Safety 2
- HLT 1830 Pharmacological Terminology 3
- Credit Hours 16

**Total Credit Hours** 31

Practical Nursing

**GENERAL EDUCATION COURSES**
- ENGL 1510 English Composition I 3
- BIOL 1310 Anatomy & Physiology I * 2
- BIOL 131L Anatomy & Physiology I Lab * or 1
- BIOL 2310 Human Anatomy & Physiology I * 3
- BIOL 231L Human Anatomy & Physiology I Lab * 1
- BIOL 1320 Anatomy & Physiology II * 2
- BIOL 132L Anatomy & Physiology II Lab * or 1
- BIOL 2320 Human Anatomy & Physiology II 3
- BIOL 232L Human Anatomy & Physiology II Lab 1
- PSYC 1010 General Psychology 3
- PSYC 1030 Mental Health Concepts 2

*Must take BIOL 1310/131L and BIOL 1320/132L or BIOL 2310/231L and BIOL 2320/232L

**PRACTICAL NURSING MAJOR**
- NPNT 1410 Nursing Fundamentals I 6
- NPNT 1420 Nursing Fundamentals II 5
- NPNT 1510 PN Trends & Ethics 2
- NPNT 1560 Nutrition & Diet Therapy or 2
- BIOL 2550 Nutrition I 3
- NPNT 1610 Intro to Practical Nursing 2
- NPNT 1620 Practical Nursing I 3
- NPNT 1630 Practical Nursing II 3
- NPNT 1710 Pharmacology 4
- NPNT 1910 Maternal-Child Health 5

Updated December 13, 2013

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The Certificate of Completion is awarded for the successful completion of a series of courses that relate directly to an identifiable area of skills or knowledge. The series can provide individuals who are not available for full-time study an opportunity to gain marketable skills and knowledge. Should an individual decide to enroll in an associate degree program, these courses will apply toward it, if it is in the same area of study.

All courses for a Certificate of Completion must be taken at Washington State. Successful completion means at least a 2.0 GPA for courses counting toward a certificate of completion. Application for a certificate is made to the appropriate academic dean.

**Accounting**
- ACCT 1510 Principles of Accounting I
- ACCT 1520 Principles of Accounting II
- ACCT 2810 Microcomputer Accounting
- ACCT 2820 Spreadsheet Accounting

**Automotive Electricity**
- AUTO 1100 Vehicle Service & Maintenance
- AUTO 1110 Electrical Circuity
- AUTO 1130 Electrical Components
- AUTO 2110 Computerized Engine Controls

**Automotive Service & Maintenance**
- AUTO 1120 Automotive Brakes
- AUTO 1140 Automotive Chassis
- AUTO 1150 Manual Drive Trains
- AUTO 1160 Fuel & Emission Control
- AUTO 2100 Automatic Drive Trains

**CALC Software Applications**
- CALC 1630 Introduction to Windows
- CALC 1640 Intermediate Windows
- CALC 1900 Introduction to MS Office
- CALC 1910 Intermediate MS Office

**Chemical Operator: The Basics**
- INDT 1010 Introduction to Chemical Operator
- MATH 1104 Technical Mathematics
- INDT 1210 Industrial Safety/Hazmat
- INDT 2210 Process Control
- INDT 1340 Team Concepts & Practices

**Chemical Operator: The Core**
- INDT 1330 Industrial Electricity
- CHEM 1200 Chemistry for Chemical Operators
- PHYS 1010 Applied Physics
- PHYS 101L Applied Physics Lab

**Chemical Operator: Advanced Topics**
- ELET 2410 Programmable Logic Controllers
- MECH 2060 Statistical Quality Control
- MECH 1100 Engineering Materials

**Communication**
- 2 Communication Courses (ENGL 1510 or above)
- 1 Speech

**CALC Data Management**
- CALC 1630 Introduction to Windows
- CALC 1640 Intermediate Windows
- CALC 1570 Introduction to QuickBooks
- CALC 1420 Introduction to Excel
- CALC 1430 Intermediate Excel
- CALC 1450 Advanced Excel
- CALC 1320 Introduction to Access
- CALC 1330 Intermediate Access
- CALC 1340 Advanced Access

Two additional CALC courses .5 credit hour or more

**Diesel Engines**
- TRCK 1140 Diesel Engine Design & Service
- TRCK 2100 Diesel Engine Tune Up & Maintenance
- TRCK 2130 Electronic Diesel Engines
- TRCK 2110 Diesel Fuel Systems & Hydraulics

**Drafting: Basic**
- DRFT 1510 Design Drafting I
- DRFT 2530 Engineering Drafting
- ENGR 1010 Fundamentals of Engineering

**Drafting: Advanced**
- DRFT 1430 Advanced CAD
- DRFT 1560 Structural Drafting
- DRFT 2610 Civil Drafting
- DRFT 2800 Capstone Seminar

**Drafting: Computer-Aided Drafting**
- DRFT 1430 Advanced CAD
- DRFT 2530 Engineering Drafting
- DRFT 1560 Structural Drafting
- ENGR 1170 Computer Numerical Control
- ENGR 1010 Fundamentals of Engineering

**EKG Technician**
- HLTH 1810 Medical Terminology I
- HLTH 1820 Medical Terminology II
- HLTH 2320 Medical Billing
- HLTH 2400 EKG Technician
## Certificates of Completion

### Fitness and Exercise
- BIOL 1310 Anatomy & Physiology I
- BIOL 131L Anatomy & Physiology I Lab
- BIOL 1320 Anatomy & Physiology II
- BIOL 132L Anatomy & Physiology II Lab or
- BIOL 2310 Human Anatomy & Physiology I
- BIOL 231L Human Anatomy & Physiology I Lab
- BIOL 2320 Human Anatomy & Physiology II
- BIOL 232L Human Anatomy & Physiology II Lab
- BIOL 1510 Introduction to Nutrition
- HLTH 1120 First Aid & Personal Safety
- PTAT 1550 Basic Exercise Physiology
- HLTH 1000 Principles of Applications of Therapeutic Exercise

### Gasoline Engines
- AUTO 1100 Vehicle Service & Maintenance
- AUTO 1170 Upper Engine Design & Service
- AUTO 2130 Cylinder Block & Lower Engine

### Human Resources Management
- BUSM 2560 Human Resources Management
- BUSM 1550 Business Management
- BUSM 2610 Office Management

### Instrumentation
- ELEC 2010 Instrument & Control Wiring
- ELET 2410 Programmable Logic Controllers
- MECH 2150 Instrumentation I
- MECH 2170 Instrumentation II
- MECH 2190 Instrumentation III

### Machining: Precision Machining
- INDT 1150 Machining Processes
- INDT 1170 Computer Numerical Control
- DRFT 2530 Engineering Drafting
- INDT 2170 Advanced Computer Numerical Control

### Marketing
- MKTG 2130 Sales
- MKTG 2510 Marketing
- MKTG 2160 Advertising

### Mathematics, Science and Computer Science
- Math Course MATH 1110 or higher
- Science Course with Lab component
- Computer Course PC Apps or other

### Medical Billing
- HLTH 1340 CPT Coding
- HLTH 1350 ICD-10-CM Coding
- HLTH 2320 Medical Billing
- BIOL 1330 Survey of Anatomy & Physiology I
- BIOL 1340 Survey of Anatomy & Physiology II

### Medical Coding
- HLTH 1340 CPT Coding
- HLTH 1350 ICD-10-CM Coding
- HLTH 2320 Medical Billing
- HLTH 2310 Principles of Reimbursement
- BIOL 1330 Survey of Anatomy & Physiology I
- BIOL 1340 Survey of Anatomy & Physiology II

### Medical Transcription
- BIOL 1330 Survey of Anatomy & Physiology I
- BIOL 1340 Survey of Anatomy & Physiology II
- HLTH 1830 Pharmacology Terminology
- OAST 2610 Medical Transcription

### Multi-craft
- PERS 1200 21st Century Workplace Skills
- ENGR 1010 Fundamentals of Engineering
- DRFT 2530 Engineering Drafting
- INDT 1150 Machining Processes
- INDT 1210 Industrial Safety and Hazmat
- INDT 1310 Basic Electricity

### Network Support
- ELEC 1950 Cisco Semester I
- ELEC 2050 Cisco Semester II
- ELEC 2610 Intro to Linux
- DTCS 2550 Network Administration

### Office Management
- BUSM 1550 Business Management
- BUSM 2560 Human Resource Management
- BUSM 2610 Office Management

### Office Software
- OAST 2210 Microsoft Word
- OAST 2220 Microsoft Excel
- OAST 2230 Microsoft Access
- OAST 2910 Microsoft PowerPoint
- OAST 2550 Windows Concepts

### Accounting Payroll Specialist
- ACCT 1510 Principles of Accounting I
- ACCT 1610 Payroll Accounting
- BUSM 2560 Human Resource Management
## Certificates of Completion

### PC Support
- **DTCS 1230** | OS Concepts & Customizing
- **ELEC 2410** | Microcomputer Diagnostics & Upgrading I
- **ELEC 2510** | Microcomputer Diagnostics & Upgrading II
- **ELEC 1950** | Cisco Semester I
- **INDT 1310** | Basic Electricity or Digital I
- **ELET 1310** | Digital I

### Pharmacy Technician
- **HLTH 1810** | Medical Terminology I
- **HLTH 1820** | Medical Terminology II
- **HLTH 1830** | Pharmacology Terminology
- **HLTH 1840** | Pharmacy Technician I
- **HLTH 184L** | Pharmacy Technician I Lab
- **HLTH 1850** | Pharmacy Technician II
- **MATH 1100** | Pharmacology Math

### Programmable Logic Controllers
- **ELET 1110** | DC Circuits or
- **INDT 1310** | Basic Electricity
- **ELET 2410** | Programmable Logic Controllers
- **INDT 2210** | Process Control or
- **MECH 2150** | Instrumentation I

### Real Estate
- **REAL 1900** | Real Estate Principles & Practices
- **REAL 2420** | Real Estate Finance
- **REAL 2400** | Real Estate Law
- **REAL 2410** | Real Estate Appraising

### Small Business Entrepreneurship
- **BUSM 1570** | Small Business Entrepreneurship
- **BUSM 1660** | Business Law
- **MKTG 2510** | Marketing
- **ACCT 1510** | Principles of Accounting I

### Social & Cultural
- Arts & Humanities Course (3 credits)
- Social & Behavioral Course (3 credits)
- Elective from A&H or Social/Behavioral (3 credits)

### Surveying
- **DRFT 1430** | Advanced CAD
- **DRFT 2610** | Civil Drafting
- **ENGR 1010** | Fundamentals of Engineering

### Transfer Module
- Three Communication Courses (ENGL 1510 or above & SPCH 1510)
- Mathematics Course (MATH 2120 or higher)
- Natural Science Course
- Two Social/Behavioral Science Courses
- Two Arts & Humanities Courses
- Additional course from Transfer Module

### Truck Maintenance
- **AUTO 1110** | Electrical Circuitry
- **TRCK 1100** | Introduction to Truck Systems
- **PERS 1000** | Success
- **TRCK 2120** | Diesel Truck Drive Trains
- **AUTO 1130** | Electrical Components
- **ENGL 1510** | English Composition I
- **AUTO 2150** | Principles of Air Conditioning
- **TRCK 1130** | Medium & Heavy Truck Chassis
- **TRCK 1120** | Medium & Heavy Brakes
- **TRCK 2140** | Practicum TRCK/AUTO

### Word Processing
- **OAST 1510** | Keyboarding I
- **OAST 1520** | Keyboarding II
- **OAST 2210** | Microsoft Word
- **OAST 2490** | Desktop Publishing
### Course Numbering System

The four-letter course identifier indicates the department and the three numbers indicate the specific course within each department.

The various departments are listed in alphabetical order.

<table>
<thead>
<tr>
<th>Department</th>
<th>Course Code</th>
<th>Department</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>Accounting</td>
<td>ACCT</td>
<td>History</td>
<td>HIST</td>
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<tr>
<td>Agribusiness Management</td>
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<td>Humanities</td>
<td>HUMN</td>
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| Anthropology                        | ANTH        | Industrial Tech | IND 
| Art                                 | ARTS        | Language   | LANG        |
| Automotive Service Tech             | AUTO        | Literature | LITR        |
| Biology                             | BIOL        | Marketing  | MKTG        |
| Business Management                 | BUSM        | Mathematics | MATH        |
| Chemistry                           | CHEM        | Mechanical Engineering Tech | MECH |
| Computer Applications Learning Center | CALC      | Medical Lab Tech | MMLT |
| Criminal Justice                    | CRJU        | Music      | MUSC        |
| Design Drafting                     | DRFT        | Nursing Education - Associate Degree | NADN |
| Diesel Truck Systems                | TRCK        | Office Admin Services Tech | OAST |
| Digital Tech - Computer Graphics    | DTGR        | Personal Development | PERS |
| Digital Tech - Computer Support     | DTCS        | Philosophy | PHIL |
| Digital Tech - Digital Media        | DTME        | Physical Therapist Assistant Tech | PTAT |
| Digital Tech - Interactive Game Design | DTIN      | Physics | PHYS |
| Digital Tech - Web Programming      | DTWP        | Political Science | POLS |
| Early Childhood Tech                | ECDV        | Psychology | PSYC |
| Economics                           | ECON        | Radiologic Tech | RADI |
| Electrical Engineering Tech         | ELET        | Real Estate | REAL |
| Electronics                         | ELEC        | Recreation & Physical Education | RECR |
| Engineering - General               | ENGR        | Respiratory Therapy Tech | RESP |
| English Composition                 | ENGL        | Social Services Tech | SOSV |
| Geography                           | GEOG        | Sociology | SOCI |
| Geology                             | GEOL        | Spanish | SPAN |
| Geoscience                          | GEOS        | Speech    | SPCH |
| Health Science                      | HLTH        | Theatre   | THEA |

### Explanation of Course Description Codes

- **Day, Eve, Online:** indicates which semester or semesters the course is offered during the year and if it is offered day, evening or online. F=Fall; Sp=Spring; Su=Summer; All Terms=All Terms.
- **Prerequisite:** any coursework that must be completed before the student is eligible to enroll for the course.
- **Co-requisite:** any coursework that must be completed during the same semester as the course in which you are enrolling.
- **cr.:** the number of credits to be awarded to students who successfully complete the course.
- **Lecture:** the number of hours per week a particular course meets in a lecture classroom.
- **Lab:** the number of hours per week a particular class meets in a laboratory situation. This is usually in addition to lecture hours.
- **Fee-♦:** indicates course has additional fees.
- **TM-*:** indicates a course covered by the Transfer Module. The final letter indicates the section of the Transfer Module in which the course is included.
- **TAG:** indicates a course covered by the Transfer Assurance Guide.
- **OTM:** Ohio Transfer Module
ACCOUNTING (ACCT)

ACCT 1510 Principles of Accounting I 4 cr.

ACCT 1520 Principles of Accounting II 4 cr.

ACCT 1610 Payroll Accounting 3 cr.
Study of payroll accounting, the computing of wages, the calculation of deductions, the reporting of data to the respective Federal and State agencies. Prerequisite: ACCT 1510. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

ACCT 2190 Principles of Federal Income Tax 3 cr.

ACCT 2210 Cost Accounting 4 cr.

ACCT 2320 Managerial Accounting 3 cr.
Advanced application of financial and cost accounting information to problems facing business managers. Emphasis on the nature and role of management control systems, showing the inter-relationships among the processes of strategic planning, management control, operational control, and information handling. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. TAG: OBU002. ♦

ACCT 2340 Governmental Accounting 3 cr.
The composite activity of analyzing, recording, summarizing, reporting and interpreting the financial transactions of governmental units and agencies.

ACCT 2710 Intermediate Accounting 4 cr.

ACCT 2730 Auditing I 3 cr.
Introduction to auditing, professional ethics, legal liability, internal control, working papers, evidential matters, and beginning audit procedures. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

ACCT 2810 Microcomputer Accounting 2 cr.

ACCT 2820 Spreadsheet Accounting 3 cr.

ACCT 2900 Fraud Examination 3 cr.

ACCT 2910 Capstone Computer Accounting 3 cr.
Students will integrate knowledge of computer and accounting technologies in this Capstone course. Students will create self-guided tutorials and other training materials for computer-based accounting tools. Prerequisite: ACCT 1520. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3. ♦

AGRIBUSINESS MANAGEMENT (AGRI)

AGRI 1100 Introduction to Agribusiness Management 4 cr.
This course will serve to acquaint the student with basic economic and managerial concepts, procedures, and techniques in agricultural business management and sales. Emphasis will be placed on planning, organization, controlling and directing functions of agricultural management. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 4. ♦

AGRI 1300 Principles of Agricultural Sales 3 cr.
A basic course in sales functions and agriculture sales. This
course will cover the role of selling, what it means, and its relationship to agriculture marketing. Students will also be exposed to professionals from the agricultural sales field to get a better understanding of where theory meets practical application. Prerequisite: None. Co-Requisite: None. Day: Sp. Lecture: 3.  ♦

AGRI 1500  Field Experience  1 cr.
The 180 work hours total required for the field experience provides an opportunity to put the student’s classroom knowledge to practical use. Position is selected and/or approved by the student advisor; student is evaluated periodically by the instructor/coordinator and is supervised by an onsite supervisor. Prerequisite: AGRI 1100 and AGRI 1300. Co-Requisite: None. Day: Sp, Su. Lab: 12.  ♦

AGRI 2200  Introduction to Animal Science  4 cr.
An introductory course in animal sciences as it relates to agriculture. After completing this course the student will have a basic understanding of the biological principles applicable to the animal sciences. Basic subjects such as animal reproduction, genetics, nutrition, lactation and consumer products will be covered. This course also covers the breeding, feeding, and management of beef cattle, dairy cattle, horses, swine, and goats. Prerequisite: BIOL 1100, BIOL 1101, BIOL 1110 and BIOL 1111L. Co-Requisite: None. Day: Fa. Lecture: 3, Lab: 3.  ♦

AGRI 2300  Crop and Soil Sciences Management  4 cr.
This is an introductory course in the basics of crop production, agronomy and soil sciences, and pest and disease management. This course starts with an introduction to plant growth, development, anatomy, and morphology and carries the student all the way through traditional plant breeding and genetic engineering of plants for improved food production and pest resistance. Plant diseases, insect pests, weeds, and nutrient disorders will be covered and management strategies will be discussed. Throughout this course you will see a need for improving management of our natural resources and will analyze why there is an increased production of food commodities produced on what is a limited amount of land. A significant portion of the course will deal with biological and cultural controls of disease and insects (Integrated Pest and Disease Management). Prerequisite: BIOL 1100, BIOL 1101, BIOL 1110 and BIOL 1111L. Co-Requisite: None. Day: Sp. Lecture: 3, Lab: 3.  ♦

ANTHROPOLGY (ANTH)

ANTH 1510  Cultural Anthropology  3 cr. TM-S
Comparative survey of selected world cultures, nature of cultural diversity, evolution of socio-cultural systems. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3. TAG: OSS001.

ART (ARTS)

ARTS 1000  Art Appreciation  3 cr. TM-H
Introduction to traditional and contemporary visual arts in the context of their social and cultural backgrounds. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 3.

ARTS 1110  Two-Dimensional Design  3 cr.
Introduction to the organization of the formal elements on a two-dimensional surface and color theory. The fundamental design principles of unity, diversity, balance, movement, and focal point will be emphasized through the application of the formal elements in a variety of projects. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 1, Lab: 4. TAG: OAH003.  ♦

ARTS 1120  Three-Dimensional Design  3 cr.
Introduction to the organization of the formal elements in three-dimensions. Application of the fundamental design principles of unity, diversity, balance, movement, and focal point will be emphasized through the use of the formal elements to create space and form. Focus on the translation of an idea into tangible form using a variety of materials. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 1, Lab: 4.  ♦

ARTS 1210  Drawing I  4 cr.
An introduction to descriptive drawing with an emphasis on perceptual, conceptual, and critical skills. An emphasis on the application of gesture, shape, value, line, perspective, design, and expression to descriptive drawing. A variety of broad and fine media are explored. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: On demand. Lecture: 1, Lab: 6. TAG: OAH001.  ♦

ARTS 1220  Color Theory  3 cr.
This course shall explore the nature of additive and subtractive color systems. Color is emphasized in relationship and clarification of design principles, expressive issues, and iconography. Prerequisite: ARTS 1110 and ARTS 1210. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 1, Lab: 4.

ARTS 1800  Photography I  3 cr.
A non-darkroom introduction to the art and techniques of photography. A focus is placed on the generation of images through the use of the creative controls of the camera. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp. Lecture: 3, Lab: 0. TAG: OAH011.  ♦

ARTS 2010  Art History I  3 cr. TM-H
Survey of art history and the analysis of painting, sculpture, and architecture from prehistory through the Renaissance and the relationship of the visual arts to their social and cultural context. Prerequisite: ENGL 0900 or Compass Score greater than 69. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 3. TAG: OAH005.
ARTS 2020  Art History II  3 cr. TM-H
Survey of art history and the analysis of painting, sculpture, and architecture from Baroque through the 20th Century and the relationship of the visual arts to their social and cultural context. Prerequisite: ENGL 0900 or Compass Score greater than 69. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3. TAG: OAH005.

ARTS 2050  American Art  3 cr. TM-H
Survey of American visual art, architecture, and crafts from early settlements to the present indicating how these arts have expressed American ways of living and how they have been related to American ideals. Prerequisite: ENGL 1510. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3.

ARTS 2090  History of Photography  3 cr. TM-H
History of photography from its invention in 1839 to the present, including photographic theory and methodology. The study of photographs as art objects, historical artifacts, and their social and cultural context. Prerequisite: ENGL 1510. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3.

ARTS 2200  Special Problems in Art  1-6 cr.

ARTS 2210  Drawing II  4 cr.

ARTS 2230  Figure Drawing  4 cr.
Introduction to descriptive drawing of the nude figure with emphasis on perceptual, conceptual, and critical skills. Focus on artistic anatomy and structure and its application to figure drawing. Prerequisite: ARTS 1210. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 1, Lab: 4.

ARTS 2340  Pre-Columbian Art  3 cr. TM-H
Survey of the paintings, sculptures, architecture, and crafts of early Mexico, Central America, and South America from pre-historic to 16th century. Prerequisite: ENGL 1510. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3.

ARTS 2370  Contemporary Art: 1945 to Present  3 cr.
A survey of American art from 1945 to the present, focused primarily on painting and sculpture. The relationship of artwork to the social and cultural context is emphasized. Prerequisite: One prior ARTS course and ENGL 1510. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3.

ARTS 2400  Special Problems in Art (Advanced)  1-6 cr.

ARTS 2410  Painting I  3 cr.
Introduction to descriptive painting with an emphasis on perceptual, conceptual, and critical skills. Emphasis on the application of gesture, shape, value, line, perspective, design, and expression to descriptive painting. Study of the painter's language and modes of expression; color and paint manipulation, illusion and organization of form and space, and surface order. Focused on projects that increase in complexity. Prerequisite: ARTS 1110 and ARTS 1210. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 4. TAG: OAH048.

ARTS 2420  Painting II  3 cr.
Continuation of perceptual, conceptual, and critical painting skills introduced in ARTS 2410. Emphasis on the development of a personal image through the application of the formal elements gesture, shape, light, line, perspective, design, expression, and iconography. Focused on projects that increase in complexity. Prerequisite: ARTS 2410. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 1, Lab: 4.

ARTS 2430  Watercolor Painting  3 cr.
Introduction to the basic techniques and concepts of aquarelle (transparent) and gouache (opaque) watercolor. Focused on projects that increase in complexity with an emphasis on perceptual, conceptual, and critical skills. Prerequisite: ARTS 1110 and ARTS 1210. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 1, Lab: 4.

ARTS 2610  Graphic Design I  4 cr.
This course provides an introduction to visual communication graphics and design. A focus is placed on the generation and manipulation of image, typography, and sign/symbol/icon through digital and non-digital methods. Prerequisite: ARTS 1110 and ARTS 1210. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 1, Lab: 6.

ARTS 2620  Graphic Design II  4 cr.
AUTO 1100  Vehicle Service & Maintenance  3 cr.
Perform minor maintenance and service such as lubrication, minor adjustments, replacing simple components and correcting malfunctions on working vehicles. Includes battery construction, starter servicing, some ASE tasks. Emphasis on shop and trade safety procedures. The course may be offered in a blended format in the evening or summer semester. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 1110  Electrical Circuity  3 cr.
Basic electrical theory with emphasis on operating characteristics of DC series and parallel circuits. Emphasis on the relationship of resistance, voltage, and amperage in an electrical circuit. Circuits will be analyzed using Ohm’s Law and verified using electrical meters. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 1120  Automotive Brakes  3 cr.
A study of hydraulic braking operations, and chassis parts and functions. Laboratory work will consist of brake lathe operation, tire balancing and brake repair. Anti-lock brake concepts are introduced. The course may be offered in a blended format in the evening or summer semester. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 1130  Electrical Components  3 cr.
Study of the theory of electricity and electronics as applied in modern automotive & diesel systems. Principles of operation, testing, and repairing all major parts in these systems including the battery, starting, charging, and ignition systems. The use of tools and procedures necessary to test and repair wiring. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 1140  Automotive Chassis  3 cr.
Study of steering alignment angles and suspension fundamentals. Laboratory work consists of late model alignments, suspension service, and wheel balancing. Active suspension systems will be introduced. The course may be offered in a blended format in the evening or summer semester. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

AUTO 1150  Manual Drive Trains  3 cr.
The design, construction, and operating principles of the major types of transmissions used today are covered. Actual disassembling, maintenance, and servicing techniques of driveline units such as clutch and differentials are covered. Laboratory work will include disassembly and reassembly of working units. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

AUTO 1160  Fuel & Emissions Controls  3 cr.
Study of carburetor and other fuel system components. Covers exhaust emission control devices. Lab work consists of tune-up procedures, carburetor overhaul, and a continuation of troubleshooting procedures using the various diagnostic analyzers and gauges. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

AUTO 1170  Upper Engine Design & Service  3 cr.
Development of work skills and proficiency in engine rebuilding are emphasized. Stresses disassembly, cleaning, inspection and assembly of gasoline and diesel cylinder heads; identify all of the parts of the engine’s upper end and explain the principles of the internal combustion engine operation. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

AUTO 2100  Automatic Drive Trains  3 cr.
Covers design, construction, and operating principles of the major types of transmissions used today. Includes actual disassembling, maintenance and servicing techniques of automatic transmissions, final drives and electronics. Lab work includes disassembly and reassembly of working units. Prerequisite: AUTO 1150. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 2110  Computerized Engine Controls  3 cr.
Covers the operation and control functions of the automotive computer; use of tools and procedures necessary in testing and repair of the various components of these systems. Emphasis on fundamentals of electricity (circuitry, amperage, voltage and resistance) and basics of solid state electronics and their use in the automobile. Review ignition, fuel and emission systems of modern automobiles and their relationship with computerized engine controls. Prerequisite: AUTO 1160. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 2130  Cylinder Block & Lower Engine  3 cr.
Gasoline engines will be disassembled, inspected, and reassembled. Emphasis will be on troubleshooting failed engine components, clearance measurements, and preventive maintenance. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

AUTO 2150  Principles of Air Conditioning  3 cr.
Covers the principles of automotive HVAC systems, plus the operation and diagnosis of the C.C.O.T. (Cycling clutch orifice tube) and V-5 air conditioning systems. Includes purging, charging, reclaiming, leak detection and performance testing. Student will study environmental impact of fluorocarbons. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

BIOLOGY (BIOL)

BIOL 1010  Principles of Biology  3 cr. TM-N
A biology course for non major’s which introduces cell biology, physiology, genetics, evolution and ecology.
Inquiry-based learning and case studies are used to foster good science process skills in lecture and discussion. Prerequisite: None. Co-Requisite: BIOL 101L. Day: All; Eve: Fa, Sp. Lecture: 3.

**BIOL 101L** Principles of Biology Lab 1 cr. TM-N

A biology course for non-major's which introduces cell biology, physiology, genetics, evolution and ecology. Inquiry-based learning and case studies are used to foster good science process skills in lecture, discussion and laboratory. Prerequisite: None. Co-Requisite: BIOL 1010. Day: All; Eve: Fa, Sp. Lab: 3.

**BIOL 1100** General Biology I 3 cr. TM-N

An introductory course for biology majors covering reproduction of cells, their structure and function, classical and molecular genetics and evolution. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 110L. Day: Fa; Eve: On demand. Lecture: 3. TAG: OSC003.

**BIOL 110L** General Biology I Lab 1 cr. TM-N

A series of experiments designed to enhance the material discussed in BIOL 1100. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 110L. Day: Fa; Eve: On demand. Lab: 3. TAG: OSC003.

**BIOL 1110** General Biology II 3 cr. TM-N

A continuation of BIOL 1100 with emphasis on the evolution of animal and plant life, including systematics, phylogeny, organ systems, anatomy, physiology and behavior. The course emphasizes comparative strategies within the animal and plant kingdom. Prerequisite: BIOL 1100 & BIOL 110L with "C" or better. Co-Requisite: BIOL 111L. Day: Sp. Lecture: 3. TAG: OSC004.

**BIOL 111L** General Biology II Lab 1 cr. TM-N

A series of experiments designed to enhance the material discussed in BIOL 1110. Prerequisite: BIOL 1100 & BIOL 110L with "C" or better. Co-Requisite: BIOL 111L. Day: Sp. Lab: 3. TAG: OSC004.

**BIOL 1310** Anatomy & Physiology I 2 cr. TM-N

This course is the first of a two-term sequence designed to facilitate an understanding of the structural and functional units of the human body. Formal classroom activities are integrated in a comprehensive study of the cells, tissues and organs of the body, with emphasis on the integumentary, skeletal, muscular, nervous, endocrine, and reproductive systems. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 1310. Eve: Fa. Lab: 2.

**BIOL 131L** Anatomy & Physiology I Lab 1 cr. TM-N

This course is the first of a two-term sequence designed to facilitate an understanding of the structural and functional units of the human body. Formal laboratory activities are integrated in a comprehensive study of the cells, tissues and organs of the body, with emphasis on the integumentary, skeletal, muscular, nervous, endocrine, and reproductive systems. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 1310. Eve: Fa. Lab: 2.

**BIOL 1320** Anatomy & Physiology II 2 cr. TM-N

The second course in a two-term sequence designed to facilitate understanding of the structure and function of the human body. Formal classroom activities are integrated in a comprehensive study of the nervous system, special senses, blood, circulatory, lymphatic, respiratory, digestive, and renal systems. This course is intended for non-science majors and students in the Practical Nursing program. Prerequisite: BIOL 1310 and BIOL 131L. Co-Requisite: BIOL 1320. Day: Fa; Sp; Eve: On demand; Online: Sp. Lecture: 2.

**BIOL 132L** Anatomy & Physiology II Lab 1 cr. TM-N

The second course in a two-term sequence designed to facilitate understanding of the structure and function of the human body. Formal laboratory activities are integrated into a comprehensive study of the nervous system, special senses, blood, circulatory, lymphatic, respiratory, digestive, and renal systems. This lab is intended for non-science majors and students in the Practical Nursing program. Prerequisite: BIOL 1310 and BIOL 131L. Co-Requisite: BIOL 1320. Eve: Sp. Lab: 2.

**BIOL 1330** Survey Anatomy & Physiology I 2 cr.

This course is the first of a two-term sequence designed to facilitate understanding of the structure and function of the human body. It is a comprehensive study of the cells, tissues and organs of the body, with emphasis on the integumentary, skeletal, muscular, nervous, endocrine, and reproductive systems. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp. Eve: On demand. Lecture: 2.

**BIOL 1340** Survey Anatomy & Physiology II 2 cr.

The second course in a two-term sequence designed to facilitate understanding of the structure and function of the human body. Formal classroom activities are integrated in a comprehensive study of the nervous system, special senses, blood, circulatory, lymphatic, respiratory, digestive, and renal systems. This course is intended for non-science majors. Prerequisite: BIOL 1330. Co-Requisite: None. Day: Fa, Sp. Eve: On demand. Lecture: 2.

**BIOL 1360** Anatomy & Physiology I for Massage Therapists 4 cr.

This course is the first of a three-term sequence designed to facilitate understanding of the structure and function of the human body. Formal classroom instruction leading to a comprehensive study of the cells, tissues and organs of the body, with emphasis on bodies systems and their relation to the practice of Massage Therapy. This course is intended for Massage Therapy Students as preparation for the Certification Exam. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa even yrs. Lecture: 4.
BIOL 1370  Anatomy & Physiology II 3 cr.
This course is the second of a three-term sequence designed to facilitate understanding of the structure and function of the human body. Formal classroom activities are integrated in a comprehensive study of the skeletal, muscular, and nervous systems. This course is intended for Massage Therapy Students as preparation for the Certification Exam. Prerequisite: BIOL 1360. Co-Requisite: BIOL 137L. Day: Sp; Eve: Sp odd yrs. Lecture: 3.

BIOL 137L  Anatomy & Physiology II for Massage Therapists Lab 1 cr.
This course is the second of a three-term sequence designed to facilitate understanding of the structure and function of the human body. Formal laboratory activities are integrated in a comprehensive study of the skeletal, muscular, and nervous systems. This course is intended for Massage Therapy Students as preparation for the Certification Exam. Prerequisite: BIOL 1360. Co-Requisite: BIOL 1370. Day: Sp; Eve: Sp odd yrs. Lab: 3.

BIOL 1380  Advanced Anatomy & Kinesiology 4 cr.
This course builds on knowledge gained by successful completion of BIOL 1360 and BIOL 1370. Emphasis focuses on skeletal, joint, and muscle structure, function and motion in the human body. Detailed consideration is given to muscle origin, insertion, nerve interaction and action, joint motion, prime movers and antagonist muscle groups using proper medical terminology. Prerequisite: BIOL 1370 and BIOL 137L. Co-Requisite: BIOL 138L. Day: Su; Eve: Fa odd yrs. Lecture: 4.

BIOL 138L  Advanced Anatomy & Kinesiology for Massage Therapists Lab 1 cr.
This course builds on knowledge gained by successful completion of BIOL 1360 and BIOL 1370. Emphasis focuses on skeletal, joint, and muscle structure, function and motion in the human body. Detailed consideration is given to muscle origin, insertion, nerve interaction and action, joint motion, prime movers and antagonist muscle groups using proper medical terminology. Prerequisite: BIOL 1370 and BIOL 137L. Co-Requisite: BIOL 1380. Day: Su; Eve: Fa odd yrs. Lab: 4.

BIOL 1510  Introduction to Nutrition 3 cr.
A course for non-science majors which introduces the basic nutritional needs of humans through the life cycle; nutrient functions, sources, and requirements. Significant factors which influence food attitudes and habits are included. Students will develop sample meal plans for different life situations. Prerequisite: None. Co-Requisite: None. Day: Fa. Lecture: 3.

BIOL 2010  Basic Microbiology 2 cr. TM-N
An introduction to microorganisms and their impact on human health, disease, and the environment. Epidemiology, techniques of infection control and sterile technique are discussed. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 201L. Day: All. Lecture: 2.

BIOL 201L  Basic Microbiology Lab 1 cr. TM-N
A series of experiments designed to enhance the material discussed in BIOL 2010. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 2010. Day: All. Lab: 3.

BIOL 2100  Environmental Biology 3 cr. TM-N
A course for majors and non majors which introduces current environmental problems including air and water pollution, toxic wastes, pesticides and energy resources. Human population and environmental impact are also included. Local environmental problems are addressed. Prerequisite: HS Science course with "C" or better or equivalent. Co-Requisite: BIOL 211L. Day: Sp odd yrs. Lecture: 3.

BIOL 211L  Environmental Biology Lab 1 cr. TM-N
Topics of the lab align to the lecture course. Prerequisite: high school science course or equivalent with a "C" grade or better. Prerequisite: HS Science course with "C" or better or equivalent. Co-Requisite: BIOL 2110. Day: Sp odd yrs. Lecture: 3.

BIOL 2310  Human Anatomy & Physiology I 3 cr. TM-N
First of two courses on structure and function of the human body. Comprehensive study of cells, tissues, and organs with emphasis on the integumentary, skeletal, muscular, and nervous systems. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 231L. Day: All; Eve: All; Online: Fa, Sp. Lecture: 3.

BIOL 231L  Human Anatomy & Physiology I Lab 1 cr. TM-N
First of two laboratories on structure and function of the human body. Comprehensive study of cells, tissues, and organs with emphasis on the integumentary, skeletal, muscular, and nervous systems. Prerequisite: HS Biology & Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 231L. Day: All; Eve: All; Lab: 2.

BIOL 2320  Human Anatomy & Physiology II 3 cr. TM-N
Continuation of BIOL 2310. Comprehensive study of the special senses and the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Prerequisite: BIOL 2310 and BIOL 231L. Co-Requisite: BIOL 232L. Day: All; Eve: All; Online: Sp. Lecture: 3.

BIOL 232L  Human Anatomy & Physiology II Lab 1 cr. TM-N
Continuation of BIOL 231L. This is the second of two laboratories involving comprehensive study of the special senses and the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Prerequisite: BIOL 2310 and BIOL 231L. Co-Requisite: BIOL 2320. Day: All; Eve: All; Lab: 2.
BIOL 2450  Pathophysiology  3 cr.
This course focuses on basic pathophysiological processes and major disorders to introduce students to the diversity of disease process. By covering some disorders in detail and others by a generic presentation covering a group of disorders, the student is encouraged to compare textbook presentation with the actual clinical picture of a disorder that they may encounter in the clinical setting. Prerequisite: BIOL 1320 and BIOL 132L or BIOL 2320 and BIOL 232L or BIOL 1360. Co-Requisite: None. Day: Sp, Su; Eve: Su odd yrs. Lecture: 3. TAG: OHL019.

BIOL 2550  Nutrition I  3 cr.
This course is an introduction to the science of nutrition and explores nutritional needs of the individual and the problems that arise if these needs are not met. It includes information on the fundamental principles of nutrition with emphasis on the understanding of the nutrients, their chemical and physical properties, their functions in the body, their food resources and recommended intake for optimum health. Diet therapy is also included. Prerequisite: BIOL 2320 and BIOL 232L. Co-Requisite: None. Day: Sp; Eve: Fa; Online: Su. Lecture: 3. TAG: OHL016.

BIOL 2600  Introduction to Ecology  3 cr. TM-N
A study of the interactions between organisms and their environments. Ecosystems, population structure and dynamics, as well as environmental perturbations are addressed. Prerequisite: BIOL 1010 and BIOL 101L or BIOL 2110 and BIOL 211L with "C" or better. Co-Requisite: BIOL 260L. Day: Sp even yrs. Lecture: 3.

BIOL 260L  Introduction to Ecology Lab  1 cr. TM-N
A study of the interactions between organisms and their environments. Ecosystems, population structure and dynamics, as well as environmental perturbations are addressed. Lab analysis and fieldwork in local areas is conducted. Prerequisite: BIOL 1010 and BIOL 101L or BIOL 2110 and BIOL 211L with "C" or better. Co-Requisite: BIOL 2600. Day: Sp even yrs. Lab: 3. ♦

BIOL 2650  Nutrition for Sports and Fitness  3 cr.
This course is an overview on the nutritional effects of physiological processes experienced through exercise. Specifically, it focuses on the macro- and micronutrients relationship in combination with an appropriate exercise routine on strength-hypertrophy, endurance, fatigue, and composition-weight changes. This course will also entail a review of the current sport nutrition literature and sport supplements. Prerequisite: BIOL 1510 or BIOL 2550. Co-Requisite: None. Day: Fa. Lecture: 3.

BUSM 1550  Business Management  3 cr.

BUSM 1570  Small Business Entrepreneurship  3 cr.
A study of the basic fundamentals and problems of operating a small business. Topics of major interest including organization, opportunities in democracy, location, physical facilities, financing, administration of a credit program, problems of distributing goods and services, keeping records of your business, simplified bookkeeping systems. This course contains a student simulation to start a business. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa; Online: Sp, Su. Lecture: 3. ♦

BUSM 1600  PC Applications  3 cr.
The primary focus is on the application of personal computers using software popular in the business community. Students will use current operating systems, web browsers, word processing, spreadsheet databases, and presentation software. Concepts will be reinforced by a variety of hands-on assignments. Prerequisite: None. Co-Requisite: None. Day: All; Eve: All; Online: All. Lecture: 2, Lab: 2. ♦

BUSM 1660  Business Law  3 cr.
Introduction to the legal environment of business, based principally on the Uniform Commercial Code. Topics covered in the course include: business ethics, nature and sources of law, the U.S. judicial system, torts, contracts, product liability, agency, partnerships, corporations, anti-trust law, the employment relationship, equal employment legislation, and securities regulation. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa; Online: All. Lecture: 3. TAG: OBU004. ♦

BUSM 1710  Auto/Diesel Bus Computer App  3 cr.
Students will study the fundamentals of operating computer business applications in the automotive industry. Topics include basic start-up, inventory control, billing and records maintenance. The computer's disk operating system, spreadsheets, word processing programs, browsers and presentation graphics will be introduced. Students will complete assignments in each type of software. Basic operations in web advisor and Sakai will be covered. This course was developed for Automotive and Diesel Truck majors only. This course is not for business majors and may not be substituted for any other BUSM course in the college's inventory. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦
**CHEM 1210  Principles of Chemistry I 3 cr. TM-N**
Provides elementary chemistry knowledge for non-science majors on states of matter, elements, compounds, atomic and molecular structure, chemical bonding, solutions and the periodic table, acids, bases & buffers, the Gas Laws, reaction rates & Equilibrium, radioactivity & nuclear processes. Prerequisite: MATH 0950. Co-Requisite: CHEM 121L. Day: All; Eve: All. Lecture: 3.

**CHEM 121L  Principles of Chemistry I Lab 1 cr. TM-N**
Lab portion of the course that provides elementary chemistry knowledge for non-science majors on states of matter, elements, compounds, atomic and molecular structure, chemical bonding, solutions and the periodic table. Prerequisite: MATH 0950. Co-Requisite: CHEM 1210. Day: All; Eve: All. Lab: 2.

**CHEM 1220  Principles of Chemistry II 3 cr. TM-N**
Survey of organic chemistry and biochemistry and their impact upon daily existence. Prerequisite: CHEM 1210 and CHEM 121L or CHEM 1510 and CHEM 151L with "C" or better. Co-Requisite: CHEM 122L. Day: Fa, Sp; Eve: On demand. Lecture: 3.

**CHEM 122L  Principles of Chemistry II Lab 1 cr. TM-N**

**CHEM 1510  Fundamentals of Chemistry I 3 cr. TM-N**
This chemistry series is for students majoring in science and related fields. Fundamental chemical concepts covered in the first semester include atomic structure, periodic classification, molecular bonding, stoichiometry, acid-base neutralization, thermochemistry, and gas laws. Critical thinking is stressed through problem solving. Prerequisite: MATH 1110 & HS Chemistry or CHEM 1210 & CHEM 121L with "C" or above. Co-Requisite: CHEM 151L. Day: Fa. Lab: 3. TAG: OSC008.

**CHEM 151L  Fundamentals of Chemistry I Lab 1 cr. TM-N**
Lab portion of the course that provides elementary chemistry knowledge for non-science majors on states of matter, elements, compounds, atomic and molecular structure, chemical bonding, solutions and the periodic table. Prerequisite: CHEM 1510 and CHEM 151L with "C" or better. Co-Requisite: CHEM 1510. Day: Fa. Lab: 3. TAG: OSC008.

**CHEM 1520  Fundamentals of Chemistry II 3 cr. TM-N**
This chemistry series is for students majoring in science and related fields. Fundamental chemical concepts covered in the second semester include intermolecular forces, colligative properties, equilibria, kinetics, thermodynamics, and electrochemistry. Prerequisite: CHEM 1510, CHEM 151L with "C" or better. Co-Requisite: CHEM 152L. Day: Sp; Eve: Su. Lecture: 3. TAG: OSC009.

**CHEM 152L  Fundamentals of Chemistry II Lab 1 cr. TM-N**
This chemistry lab series is for students majoring in science and related fields. General laboratory procedures, emphasizing safety, data analysis and reporting, will be developed through the hands-on laboratory experiments.
covering fundamental chemical concepts and principles covering intermolecular forces, colligative properties, equilibria, thermodynamics, and electrochemistry.
Prerequisite: CHEM 1510 and CHEM 151L with "C" or better. Co-Requisite: CHEM 1520. Day: Sp; Eve: Su. Lab: 3. TAG: OSC009.

COMPUTER APPLICATIONS LEARNING CENTER (CALC)

CALC 1020 Introduction to Computers 0.5 cr.
This course is designed for someone with little or no microcomputer knowledge. Topics include: learning to type with confidence when using the keyboard, learn the alphabet on the keyboard and type without looking at your hands. Gain basic understanding in computer hardware technology and terms, making software purchasing decisions and learn basic skills in Microsoft Windows and Word. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1030 Intermediate Computers 0.5 cr.
This course is a continuation of the Introduction to computer course. This course is also an excellent choice for those wanting to learn microcomputer topics at a leisurely pace. Topics include: Learning about Microsoft Excel; PowerPoint, Internet, and Email using Microsoft Windows Mail. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1100 Project Management 2.5 cr.
Course gives the framework for the delivery of project that allows individuals that are participating in or managing project management activities to understand and coordinate their activities in an optimal manner. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 2.5.

CALC 1320 Introduction to Access 0.5 cr.
Topics include: Database environment and terminology; creating databases and structuring tables; primary key; create, modify, and print queries, forms and reports; relationships; multiple table and summary queries; Wizards; and more. Experience with word processor, spreadsheet and Windows recommended. Not for a novice microcomputer user. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1340 Advanced Access 0.5 cr.
Topics Include: A continuation of the Intermediate Access course. Topics include: Develop a database with the guidance of a professional Access programmer; develop menu systems; macros; use Access Tools; customize dialog boxes; create modules in VBA; database management techniques; and more. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1420 Introduction to Excel 0.5 cr.
Topics include: Excel environment; spreadsheet design; labels; formulas; and values; toolbar functions; select cell/ranges to move, copy and print; edit, preview, and spell check files; formatting cells; conditional formatting; charts; AutoSum; basic functions; IF statements and more. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1430 Intermediate Excel 0.5 cr.
Topics include: managing workbooks, data consolidation, automating tasks with macros, toolbars, sorting and filtering data lists, data validation, enhancing charts, worksheet protection and more. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1450 Advanced Excel 0.5 cr.
Topics include: Comparing data with advanced pivot tables; create advanced charts and graphs; data analysis techniques; forms design with Excel; solving business problems with advanced functions; analyzing a database with functions; automating tasks with macros, and more. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1520 Introduction to PowerPoint 0.5 cr.
Topics Include: Learn presentation skills and techniques along with technology skills to create an effective PowerPoint presentation. Add creative slide transitions to make your presentation more interesting. Topics include: Develop an effective slide presentation; electronic slide shows; add, insert and delete slides; slide sorter; modifying and formatting presentations; graphics; presentation tips; and more. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1530 Introduction to Word 0.5 cr.
Topics Include: A continuation of the Intermediate Access course. Topics include: Creating sub forms and sub reports; making user-friendly forms; advanced reports; compact and repair databases; sharing Access data; parameter and action queries; charts; hot tips; and more. Introduction to Access or equivalent experience recommended. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1540 Intermediate Word 0.5 cr.
Topics Include: Using Graphics, mail merge, styles, templates, formatting long documents, and more. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.
CALC 1570  Introduction to QuickBooks  0.5 cr.
Topics Include: QuickBooks environment, setting up a new company, working with centers and lists to manage customers, invoicing and credit memos, receipts and payments, banking and billing activities, reporting and budgeting, and protecting and backing up data. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1630  Introduction to Windows  0.5 cr.
Students will learn how to use the Start menu and taskbar; move and resize windows; create and manage files, folders, and libraries; edit file metadata; and search for content on their computers. Students will also create shortcuts, use gadgets, and change system settings. Finally, students will browse the Web with Internet Explorer 8, add sites to their Favorites lists, and add RSS feeds. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1640  Intermediate Windows  0.5 cr.
Topics include: how to configure user accounts, work with devices and printers, manage and protect important files, maintain and restore their computers, troubleshoot applications, share and access network resources, and configure power-saving plans and security settings. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 0.5.

CALC 1710  A+ Certification Training  4 cr.
This course will cover and prepare you for the A+ Essentials Exam (220-601) and Practical Application Exam (220-602) objectives. Topics included in 601: covering personal computer concepts, operating systems, installing, building, upgrading, repairing, optimizing and configuring a system, hardware troubleshooting, networks, and security. Topics included in 602: install, configure, optimize and upgrade windows, identify tools, diagnostic procedures and troubleshooting techniques and perform preventative maintenance. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 4.

CALC 1720  Network+ Certification Training  2.5 cr.
This course will help prepare students for the CompTIA Network+ 2009 certification exam. It should be noted that a course alone cannot prepare students for any CompTIA exam. It is important that students have the recommended work experience in IT networking prior to taking the exam. For the CompTIA Network+ 2009 certification, CompTIA recommends students have 9 to 12 months of experience in the IT support industry. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 2.5.

CALC 1730  Security+ Certification Training  2 cr.
This ILT Series course will prepare students to pass the current CompTIA Security+ SY0-301 certification exam. After taking this course, students will understand the field of network security and how it relates to other areas of information technology. This course also provides the broad-based knowledge necessary to prepare for further study in specialized security fields, or it can serve as a capstone course that gives a general introduction to the field. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 2.

CALC 1900  Introduction to MS Office  2.5 cr.
Students will learn about the Microsoft Office button, Ribbon tabs, and Ribbons groups, galleries, the Document Information panel and the mini toolbar. Students will also work with Office XML file format, Word features like formatting; Excel features like charts and reports, and table options; PowerPoint features on graphics and presentations, and Outlook features will also be discussed. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 2.5.

CALC 1910  Intermediate MS Office  2.5 cr.
The course is designed to give students proficiency in using those features that are shared across the Office 2007 suite, as well as how to use Office programs in combination with each other. For example, students will embed Excel data in PowerPoint, linking Access data to an Excel file, use a Word outline to create a presentation, and import Access data into Outlook. They will also learn how to use proofing tools, and publish Office documents to the Web. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 2.5.

CRIMINAL JUSTICE TECHNOLOGY (CRJU)

CRJU 1010  Introduction to Criminal Justice  3 cr.
This course examines American criminal justice and the systems and procedures developed by society for dealing with crime, law, and justice. Emphasis is on the three major components of the system: police, courts, and corrections. The course also provides an introduction to the major theories of criminal behavior and victimization. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa on demand. Lecture: 3. TAG: OSS031.

CRJU 1100  Criminal Evidence and Procedure  3 cr.
A thorough study of the constitutional basis for procedural law. Emphasis will be placed on the 4th, 5th, 6th, 7th, 8th, and 14th Amendments of the U.S. Constitution. Cases chosen for review will involve significant precedent or will involve current legal decisions affecting the role and performance of our criminal justice professions. Study of the evidence rules with specific emphasis on their application in preparing and presenting evidence. Course will briefly discuss burden of proof, general admissibility tests, witness testimony, and documentary and real evidence. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3.

CRJU 1120  Criminal Law  3 cr.
Study of the history and development of criminal law, the elements of crime, parties to a crime, types of offenses,
and possible defenses. The theories of the text will directly correlate to the specific sections of the Ohio Revised Code. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 3.

**CRJU 1210  Criminal Investigation 3 cr.**
Fundamental principles and techniques applicable to police investigation from incident to trial. A review of current and evolving technologies and the collection, preservation, and presentation of evidence in a court of law will be presented. Ethical considerations will be addressed. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 3.

**CRJU 1310  Police Operations 3 cr.**
Introduction to basic principles and philosophies of law enforcement organizations. Examination of purposes, methods, techniques, and types of patrol. Overview of support services and analysis of various techniques used in surveillance, narcotics, and vice control. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3. TAG: OSS032.

**CRJU 1510  Corrections in the Criminal Justice System 3 cr.**
Comprehensive overview of corrections practice and theory to include organization and administration of correctional institutions. Examines history and development of corrections, the interrelationship of corrections and the criminal justice system, elements of correctional process, correctional clients, non-institutional corrections systems, and alternatives to incarceration. Emphasis is placed on the role of the correctional officer and on the operation and analysis of current methods of correctional treatment within institutions. Students learn to apply corrections principles and develop interpersonal communication and decision making skills for direct intervention with correctional clients. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Fa on demand. Lecture: 3. TAG: OSS033.

**CRJU 1600  Private Security Academy 6 cr.**

**CRJU 1601  Firearms Academy 1 cr.**

**CRJU 2140  Peace Officer Basic Academy (POBA) I 12 cr.**
The Peace Officer Training Academy (POBA) is sanctioned under the auspices of the Ohio Attorney General's Office. Successful completion of the POBA certificate program is mandatory for individuals to become certified Law Enforcement Officers in the State of Ohio. Cadets will learn the basic fundamental skills, aptitudes and attitudes necessary to be a successful peace officer in the State of Ohio. Prerequisite: Admission standards per AG's office. Co-Requisite: None. Day: Fa. Lecture: 8, Lab: 12.

**CRJU 2150  Peace Officer Basic Academy (POBA) II 11 cr.**
The Peace Officer Training Academy (POBA) is sanctioned under the auspices of the Ohio Attorney General's Office. Successful completion of the POBA certificate program is mandatory for individuals to become certified Law Enforcement Officers in the State of Ohio. Cadets will learn the basic fundamental skills, aptitudes and attitudes necessary to be a successful peace officer in the State of Ohio. Continuation of CRJU2140 POBA I Prerequisite: CRJU 2140. Co-Requisite: None. Day: Sp. Lecture: 7, Lab: 12.

**CRJU 2210  Criminalistics 3 cr.**
Introduces the crime laboratory and techniques of scientific investigation with emphasis on recognition, collection, and preservation of evidence. Develops skills in using scientific equipment to detect and identify blood, hair, and other serology evidence, fingerprints, narcotics, impression and trace evidence, gun shot evidence, hairs, fibers, and soil evidence. Prerequisite: CRJU 1210. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2, Lab: 2.

**CRJU 2510  Juvenile Justice Procedures 3 cr.**
The study of the development, organization, operation, and results of community based corrections practice. The course emphasizes probation, parole, and alternative sentencing options including day-report centers and residential treatment. Prerequisite: None. Co-Requisite: None. Eve: Fa on demand. Lecture: 3.

**CRJU 2520  Community Based Corrections 3 cr.**
A study of the objectives of criminal justice organizations, to include corrections, courts, and law enforcement. Topics include organizational effectiveness, leadership, communication, morale, records, programs, and evaluation methods of organizations. Prerequisite: CRJU 1310 or CRJU 2510. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3.

**CRJU 2550  Correctional Counseling and Treatment 3 cr.**
Survey of treatment modalities for adult and juvenile offenders. Topics covered include legal issues in treatment, treatment theory, assessments, group and individual counseling processes, and differences between male/
foundations, form and concrete work; structural timber,

CRJU 2580  Criminal Justice Practicum  1 cr.
Practicum provides the placement of an individual into a
criminal justice agency (police, probation, courts,
corrections) to observe and participate in its operation.
Students will spend 7 hours per week in field work with
respective agency. Prerequisite: 15 hours General Education
courses and 15 hours of CRJU courses. Co-Requisite: CRJU

CRJU 2590  Criminal Justice Seminar  1 cr.
Under the direction of the college faculty, the student will
participate in a one-hour weekly review and assessment of the
work experience as related to the practicum situation.
Input from the agency supervisor will be used as an
integral part of this weekly review. Prerequisite: 15 hours
General Education courses and 15 hours of CRJU courses.
Lecture: 1.

CRJU 2850  Criminal Justice Careers  2 cr.
Focuses on job search skills, resume writing, current CJ
trends, interview techniques, job retention, and career
planning. Prerequisite: None. Co-Requisite: None. Day: Fa.
Lecture: 2.

DESIGN DRAFTING (DRFT)

DRFT 1410  Computer Aided Drafting I  4 cr.
Students will learn the basics of using a computer
aided drafting system for two-dimensional drawing.
Assignments will include creating, editing, dimensioning,
and plotting drawings using AutoCAD software and
employing functions to make the productivity of the
process. Prerequisite: None. Co-Requisite: None. Day: Fa;

DRFT 1430  Advanced CAD  3 cr.
A class designed to take a basic AutoCAD user to a higher
level of understanding and skill. Topics include
drawing productivity functions, three-dimensional modeling,
presentation and customization. Prerequisite: DRFT 1410
or ENGR 1010. Co-Requisite: None. Day: Sp; Eve: Sp.
Lecture: 2, Lab: 2. ♦

DRFT 1510  Design Drafting I  3 cr.
Introduction to basic concepts of mechanical drafting with
emphasis placed on graphic language, lettering, geometric
constructions, sketching, dimensioning, multi-view
projection, pictorials and shape and true-size descriptions;
solving problems involving points, lines, and planes; use of
professional equipment. Prerequisite: None. Co-Requisite:
None. Day: Fa; Eve: Fa. Lecture: 1, Lab: 5. ♦

DRFT 1560  Structural Drafting  3 cr.
Foundations, form and concrete work; structural timber,

DRFT 2530  Engineering Drafting  3 cr.
In depth studies in engineering applications and drawing
practices of geometric tolerancing, threads and fasteners,
gears, electrical and welding symbology, wiring and PNID
diagrams. Students apply designs through parametric
design software to show the results professionally with
computer models and working drawings. May be offered in
a blended classroom/online format. Prerequisite: DRFT
1410 or ENGR 1010. Co-Requisite: None. Day: Fa; Eve:
Fa. Lecture: 1, Lab: 5. ♦

DRFT 2610  Civil Drafting  3 cr.
Basic principles of surveying including actual field work
with transit, tape, and stadia rod. Calculations connected
with this work will be explained and problems will be
solved simulating everyday boundary survey work.
Prerequisite: DRFT 1410 or ENGR 1010. Co-Requisite:

DRFT 2800  Capstone Seminar  3 cr.
In depth studies of specific topics pertinent to the design
drafting field and preparation to join the job market. Students
will participate in an industry-related project and report
on the activity with a presentation. Resume and portfolio
development and interview techniques are discussed.
Prerequisite: DRFT 1430 and SPCH 1510. Co-Requisite:
None. Day: Sp; Eve: On demand. Lecture: 1, Lab: 5. ♦

DIESEL TRUCK SYSTEMS (TRCK)

TRCK 1100  Introduction to Truck Systems  3 cr.
Perform minor maintenance and service, such as
lubrication, replacing simple components and correcting
defects on heavy and medium duty trucks. Includes the
study of brakes, clutch, and electrical systems. Hands
on training with an emphasis on shop and trade safety
procedures. Prerequisite: None. Co-Requisite: None. Day:
Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

TRCK 1120  Medium and Heavy Brakes  3 cr.
Students will be introduced to basic brake systems,
terminology, components, and theory of operation. Medium
and heavy air and hydraulic brakes systems are covered
including: service and emergency systems, disc, wedge
and cam foundation brakes. Major antilock braking
systems are discussed including service and diagnostics
procedures. Basic industrial hydraulics systems for mobile
applications are covered including: principles of operation,
parts identification, and preventative maintenance.
Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa.
Lecture: 2, Lab: 2. ♦
TRCK 1130  Medium and Heavy Truck Chassis  3 cr.
This course of training consists of the theory, service, and repair of on-road medium and heavy truck and trailer chassis. Steering, suspension, and tire/wheel configurations are covered as are the associated geometry and alignment for both truck and trailers. Theory and operation of fifth wheels and coupling system are discussed including service and repair. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

TRCK 1140  Diesel Engine Design & Service  3 cr.
Introduction to basic diesel engine designs, terminology, subsystems, components, and theory of operation. Labs: will emphasize proper use of tools, application of appropriate safety and environmental procedures, and the development of professional work standards in a group shop environment. Engines will be disassembled, cleaned, inspected for reusability of parts, reassembled, and tested. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

TRCK 2100  Diesel Engine Tune Up & Maintenance  3 cr.
Examines the history of the diesel engine; the role of the trucking industry and the professional technician; the terms, formulae and presentation methods of engine performance data; diesel fuel and its alternatives. Labs will emphasize tune-up procedures and troubleshooting methodologies, engine brake theory and adjustment, engine performance and testing procedures. Prerequisite: TRCK 1140. Co-Requisite: None. None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

TRCK 2110  Diesel Fuel Systems & Hydraulics  3 cr.
A study of the primary hydromechanical fuel management systems and subsystems used by the diesel industry, theory of operation, nomenclature, maintenance procedures. Mobile hydraulic systems, associated components, and theories of operation are covered also. Labs will provide hands-on disassembly, inspection, and calibration of diesel fuel injection systems; and applied hydraulic experiments. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

TRCK 2120  Diesel Truck Drive Trains  3 cr.
Students will remove, disassemble, reassemble, install and test the operation of class 6/8 heavy truck drive train components. Includes five to fifteen speed transmissions; single reduction, double reduction, and internal differential assemblies; automatic transmissions; and related components. Lab work includes disassembly and reassembly procedures, troubleshooting, and component failure analysis. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

TRCK 2130  Electronic Diesel Engines  3 cr.

TRCK 2140  Practicum TRCK/AUTO  2 cr.
Supervised training in the automotive or diesel industry. Students will be mentored 7 hours per week for 15 weeks at an established automotive/diesel service or parts business. Requires weekly journal entries for successful completion of course. Capstone Practicum. Prerequisite: 27 credits TRCK/AUTO courses. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 1, Lab: 7. ♦

TRCK 2150  ASE Technician Preparation  3 cr.
This course is intended for automotive or diesel truck systems majors who are preparing to take one or more ASE (Automotive Service Excellence) examinations. Combined refresher materials with an abundance of sample test questions that relate to each competency required for certification by ASE. Labs with hands on operations and the appropriate ASE task check off sheets will be used to put together a portfolio. Prerequisite: 27 credits TRCK/AUTO courses. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

DIGITAL TECHNOLOGY-COMPUTER GRAPHICS (DTGR)

DTGR 1200  Color Theory  3 cr.
To provide the student an opportunity to thoroughly understand and apply color to any branch of art or design. Learn what is the nature of color and what are its “parts” and traits. And devise, explore, refine, and implement effective color designs. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Su. Lecture: 2, Lab: 2. ♦

DTGR 1300  2D Design  3 cr.
2D Design explores the basic design principles. This is a visual design theory course that introduces the core concepts of visual design. We will analyze design problems and create new design concepts. We will explore designers and artists of the past and present for examples of successful visual design solutions. The course involves a balance of lecture and discussion along with extensive design exercises and design problems. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

DTGR 1550  Interface Design  3 cr.
Designing interfaces for multimedia, Web, and software applications. Explore different types of interfaces used in web, game, and software applications. Organize an interface using tools provided creating meaningful progression for the user. Using the user centered approach to design. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦
DTGR 1600  Computer Graphic Design I  3 cr.
Covers industry standard page layout software and vector editing software. Vector and typography tools are utilized. Emphasis is placed on developing text layout projects. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

DTGR 2620  Computer Graphic Design II  3 cr.
Covers advanced raster page layout software and digital photography/image editing software. Raster tools are utilized. Emphasis is placed on developing graphic projects. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DTGR 2700  Selective Topics of Computer Graphics  3 cr.
This course covers media law, the history of media and the history of computer graphics. It looks into the issues of creating media in today's technological world where media is thrown at us from all angles including: web, TV, print, and social media and how would one protect their intellectual property in such a vast and changing landscape. This course will also look at graphics trends and branding from the past, present, and future. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 2, Lab: 2. ♦

DTGR 2800  Introduction to ZBrush  3 cr.
Learn the use of an industry standard modeling program called ZBrush to create realistic looking 3D Models for Film and Game Design. Includes modeling basics as well as lighting, texturing, and shaders. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 2, Lab: 2. ♦

DTGR 2960  Capstone: Computer Graphics  3 cr.
Designing interfaces for multimedia, Web, and software applications. Finalizing graphics design ideas and further exploring design ideas for final presentation and placement in final portfolio. Prerequisite: DTGR 2620. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DIGITAL TECHNOLOGY-COMPUTER SUPPORT (DTCS)

DTCS 1010  Introduction to Digital Technology  1 cr.
A survey course of Digital Technology, and the Digital Technology majors, which includes Digital Media, Web Application Programming, Graphics, and Computer Support Technician. An introductory topic for each major will be presented by key faculty. Hands-on exercises will be incorporated. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 1, Lab: 0.5. ♦

DTCS 1230  O/S Concepts and Customizing  3 cr.
An introduction to mainstream operating systems, focusing on Windows and Linux versions. Course covers the purpose, function, and concepts of an operating system including customizing, trouble shooting, back-ups, network configuration, printing, user configurations, etc. Prerequisite: DTCS 1010. Co-Requisite: DTCS 1010. Day: Fa; Eve: Sp. Lecture: 3. ♦

DTCS 2100  Database Management  3 cr.
An introduction to database theory and methodology with practical use of a SQL-based database. Projects will include building and interrogating small databases. Prominent database applications will be studied. Prerequisite: BUSM 1600. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 2, Lab: 2. ♦

DTCS 2550  Network Administration  3 cr.
This course covers effective network management, with an emphasis on Windows Server 2008. Topics include network file system design, active directory configuration, DNS, DHCP, security, group policy, login scripts, printing, email, back-up, and a variety of advanced topics. Prerequisite: ELEC 1950. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 2, Lab: 2. ♦

DTCS 2650  Internet and Web Design  3 cr.
Course starts with students working in a plain text editor such as Eclipse learning XHTML and CSS coding and then introduces techniques used in GUI editors such as Dreamweaver. Topics covered include XHTML coding, cascading style sheets, tables, layers, frames, forms, graphics usage, code validation and security issues. Students are introduced to using server-side scripts to create interactive web pages. Student web hosting accounts are provided for each student for the duration of the course. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp odd yrs. Lecture: 2, Lab: 2. ♦

DTCS 2700  Selective Topics of Computer Graphics  3 cr.
The knowledge and principles acquired in the Computer Support Technician curriculum will be used through direct interaction with an IT Professional Mentor. The student is required to work with an assigned IT professional for 21 hours per week. The college faculty and practicum site mentor work closely to ensure the student a wide range of repair/troubleshooting and networking experiences. Prerequisite: ELEC 2510. Co-Requisite: DTCS 2810. Day: Sp; Eve: On demand. Lab: 21. ♦

DTCS 2800  Computer Repair & Diagnostic Practicum  3 cr.
Capstone course allows students to use all the skills acquired in the Computer Support Technician Major. Concentrates on the interpersonal relationships existing in the work environment. Students will have the opportunity to discuss/evaluate their experiences in the DTCS 2800 Computer Support Technician Practicum. Students will share their insights with each other. Prerequisite: ELEC 2510. Co-Requisite: DTCS 2800. Day: Sp; Eve: On demand. Lecture: 1. ♦

DTCS 2850  Flash  3 cr.
Interactive application development for media rich projects that run on the Web, on the desktop and on mobile
DIGITAL TECHNOLOGY—DIGITAL MEDIA (DTME)

DTME 1000 Survey of Digital Media 3 cr.
The course provides an overview of the historical development of America’s mass media. The course will look at how mass media have influenced and shaped American history. The course will study mass media’s contributions to society, as well as its failure to respond appropriately at critical times in history. The goal is to have an understanding of how the mass media came to be the institution it is today and what we might expect in the future. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1300 Video Production I 3 cr.
An introductory course studying the basics concepts, theories and terminology of producing visually based productions for broadcast and web site environments. Topics include the production process, broadcast equipment application, lighting for video, audio for video, introduction to nonlinear editing, working with talent and writing for video. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1310 Video Production II 3 cr.
This course is a continuation of study for DTME 1300. This course will consolidate practices and theories learned in DTME 1300 and introduce advanced nonlinear editing techniques & supervision of a visually based project. Students will employ proper skills needed to produce, direct, script & manage original video/audio projects for a variety of applications including broadcast & web. Students will produce an original creative video. Prerequisite: DTME 1300. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1320 Audio Production 3 cr.
This is an introduction to audio production for radio, video, film and music recording, including principles, equipment, preproduction, production, and post-production. The purpose of this course is to provide an understanding of audio production as a medium of communication, as well as to familiarize the student with the terminology, facilities, and processes of audio production. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1330 Digital Video Effects 3 cr.
Course covers aspects of manipulating digital imagery and video for special effects. Topics include image and video representation, digital workflow, lighting, rendering, compositing mixed environments (live and CG), morphing, particle effects, dynamics, camera properties, image tracking and filters. Students will concentrate on planning, storyboarding, and producing short movies that apply special effects. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1340 Lighting for Video 3 cr.
Lighting emphasizes professional procedures and protocol relevant to the film, TV, and internet broadcast industries. Students work with industry standard lighting and grip equipment and are trained in the safe use of electricity and power distribution. This course also covers the basics of color correction and camera filtration using tungsten, fluorescent, and HMI sources. Special emphasis is placed on using scripts as the main guide for lighting design. Prerequisite: DTME 1300. Co-Requisite: None. Day: Fa; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1400 Media Management 3 cr.
This course focuses on management of mass media organizations. This includes print, broadcasting, & general communication organizations. Discussion will include the production, content, and distribution aspects of media, with a focus on how revenues and profits are achieved. Students will also explore media regulation, media law and possible “effects” of media on individuals and society. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand; Online: On demand. Lecture: 3.

DTME 1410 Digital Movie Making 3 cr.
Digital Movie Making will explore the world of small budget independent filmmaking. Course will discuss Visual Psychology, creative techniques for effective imaging, characteristics of light, lensing & lighting, digital visual effects, continuity, short film & documentary production. Prerequisite: DTME 1300. Co-Requisite: None. Day: Fa; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1420 Broadcast Journalism 3 cr.
This course will explore the concepts and techniques for producing broadcast journalism segments for broadcast and web applications. Students will be introduced to electronic news gathering, news writing, on-air reporting and editing. Students will write, report, & produce projects for television, radio, & internet applications. Students will report for WSCC-TV 22. Prerequisite: DTME 1300. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2.

DTME 1430 Capstone Portfolio 3 cr.
This course is an advanced level course to prepare the student to enter the workforce as a Media Professional. The course will include resume writing, production of visually based demo, networking skills, job interview skills, writing samples, and 96 hrs of approved internship. The course will reflect the Digital Media curriculum. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 3.
DIGITAL TECHNOLOGY-INTERACTIVE GAME DESIGN (DTIN)

DTIN 1500  Introduction to Game Design & Development  3 cr.
Introduces game development through the use of game engines. Elements of designing a game including character development, weaponry, scoring, scenery, modeling and sound effects are covered. Image manipulation, sound, music, objects, sprites, events, actions, active objects, 2-D and 3-D concepts are explored. Students create games using game engines. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DTIN 1600  3D Graphics  3 cr.
Use computer modeling to create 3D graphics. Use texture mapping digital models to create the surface detail to make computer generated images to appear photorealistic. Prerequisite: None. Co-Requisite: None. Day: Fa Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DTIN 2100  3D Animation  3 cr.

DTIN 2150  Simulation I (Maya Fundamentals)  3 cr.
This course is designed to help students understand simulation and event modeling as they relate to software development for games and other types of software. Using software to build 3D models and skeletal structures for use in video games and animation. Creating and modifying polygons, vertices, faces, and splines. Prerequisite: DTIN 1600. Co-Requisite: None. Day: Sp; Eve: Fa on demand. Lecture: 2, Lab: 2. ♦

DTIN 2200  Simulation II (Advanced Maya)  3 cr.
Part two – the focus of this course is on how to understand simulation and event modeling as they relate to software development for games and other types of software. This course will build on knowledge from Intro to Maya to help students add special effects and particle effects to their work. Prerequisite: DTIN 2150. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DTIN 2400  IOS Application Development  3 cr.
Create engaging app for current technology for mobile phones and tablets using the IOS SDK. Learn how to access the advanced tools for interactivity including the accelerometer and multi gesture touch screen. Prerequisite: DTWP 2600. Co-Requisite: None. Day: Sp; Eve: Fa on demand. Lecture: 2, Lab: 2. ♦

DTIN 2960  Capstone: Interactive/Game Design  3 cr.
Designing a game concept from scratch and designing a working prototype. This class will revisit topics used throughout the program including: prototyping, scriptwriting, storyboarding, animation, 3D modeling, lighting, etc. Prerequisite: DTIN 2200. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DIGITAL TECHNOLOGY-WEB APPLICATION PROGRAMMING (DTWP)

DTWP 1200  Programming Logic and Problem Solving  3 cr.
A first course in programming where students are exposed to basic programming concepts and use Python to illustrate fundamental principles of design and programming that apply in any language. Emphasizes problem-solving and includes coverage of computer graphics and object-oriented concepts. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

DTWP 1300  Introduction to PHP  3 cr.

DTWP 2110  MySQL Database Design & Programming  3 cr.
The study of an open source relational database management system (RDBMS). Students use Structured Query Language (SQL) and PHP to interact with and design database solutions for web applications. Students get hands-on experience in the classroom. Prerequisite: DTWP 1300. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 2, Lab: 2. ♦

DTWP 2320  JavaScript  3 cr.

DTWP 2510  Java Programming  3 cr.
Introduces Java, a pure object-oriented language and a language of the World Wide Web. Students apply object-oriented concepts to develop real-world programs. Uses incremental development technique to show how to develop programs from the bottom up. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Su. Lecture: 2, Lab: 2. ♦

DTWP 2600  .NET Programming  3 cr.
A study of fundamental design tenets for .NET programming. Introduction to Microsoft's C# and VB languages. Programs will incorporate object-oriented code using encapsulation, inheritance, and polymorphism. Students will create high-performance applications of all types: Web forms, Windows forms, and Web services to solutions for MS SQL Server, using the .NET framework.
Students will get hands-on experience in the classroom. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Su. Lecture: 2, Lab: 2.


EARLY CHILDHOOD DEVELOPMENT TECHNOLOGY (ECDV)

ECDV 1020 Child Development 3 cr. This course explores the developing child’s essential characteristics and needs from conception through age eight. It includes basic theories, research methods, significant studies and fundamental principles of child growth and development. The course examines age-appropriate expectations for physical, social, emotional, cognitive, language, and aesthetic domains as well as individual differences. Development is discussed within the context of multiple influences. Emphasis will be placed on applying this knowledge to creating healthy, respectful, challenging and supportive learning environments. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa odd yrs. Lecture: 3. TAG: OED005.

ECDV 1100 Creative Learning Environments 3 cr. This course focuses on the social, emotional, cognitive, and physical growth and development of the preschool child through creative play. Theories of play and its role in development as well as incorporating creative materials into the early childhood program will be discussed. Optimal indoor and outdoor environments will be examined. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp odd yrs. Lecture: 3.

ECDV 1120 Principles of Positive Child Guidance 3 cr. This course presents different guidance and discipline techniques that the early childhood professional can use to guide the young child to develop self-control, conflict resolution and problem solving skills. Emphasis is on the role of the professional in providing an environment that encourages the development of pro-social behaviors. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp odd yrs. Lecture: 3.

ECDV 1130 Health, Safety and Nutrition 3 cr. This course provides training for teachers of young children in the procedures of CPR, first aid for injuries, and management of symptoms of childhood communicable diseases. Training is provided in recognizing child abuse and neglect including physical and behavioral indicators of child maltreatment and reporting concerns. This course also emphasizes the nutritional needs of young children and the planning of nutritious meals in child centers. After successful completion of the course, students will obtain the certification needed to meet the requirements of the Ohio Dept. of Job and Family Services Licensing Rules. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3.

ECDV 2110 Integrated Curriculum 3 cr. This course focuses on developing goals and objectives and planning learning experiences for preschoolers with an emphasis on the Math and Science content areas. The course uses an emergent curriculum approach to planning with connection to the Ohio Department of Education Early Learning Content Standards. The Project Approach teaching and the Multicultural Creative Curriculum will be studied. Students will design math and science activities and implement them in an approved child-center. Prerequisite: ECDV 1100. Co-Requisite: None. Day: Fa; Eve: Fa even yrs. Lecture: 3.

ECDV 2120 Infant and Toddler Development 3 cr. This course focuses on the developmental domains of children from birth to three years of age, providing a study of designing safe, supportive, and nurturing environments for infants and toddlers. Students will design, implement, and evaluate developmentally appropriate experiences for infants and toddlers. The teacher’s role in the nurturing environment is an important part of the course. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp odd yrs. Lecture: 3.

ECDV 2200 Literacy and Language Arts 3 cr. This course will focus on young children’s emergent literacy development. Emphasis will be given to planning the curriculum and preparing environments that support children’s literacy learning. Choosing children’s quality literature and developmentally appropriate language and literacy experiences will be presented. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa even yrs. Lecture: 3.

ECDV 2210 Art, Music and Movement 3 cr. This course focused on a developmentally appropriate program in art, music, and movement that fosters the creative and aesthetic development of young children. Students will have hands on experience with an extensive variety of art materials and actual involvement with music and movement activities. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp even yrs. Lecture: 3.

ECDV 2300 Families, Communities and Schools 3 cr. This course focuses on the interrelationships among families, communities, and schools. Explores ways to involve families and the community in early childhood programs with an emphasis on the needs of culturally, linguistically, and socially diverse families. Strategies for developing positive partnerships between teachers and families will be discussed as well as becoming familiar with community resources that will support children and families. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp even yrs. Lecture: 3. TAG: OED006.
ECDV 2400  Observation and Assessment  3 cr.
This course focuses on developing observation and documentation skills for the early childhood professional. It includes using assessment tools, examining standardized tests, documenting children's progress, and basic data collection techniques. Discusses how to interpret observational findings as they relate to planning environments and curriculum for young children. Prerequisite: ECDV 1020. Co-Requisite: None. Day: Fa, Su on demand. Lecture: 3.

ECDV 2500  Administration of Early Childhood Programs  3 cr.
This course focuses on the skills and information needed to develop and operate a high quality child center. Examines policy and program development, communicating with families, and licensing and accreditation standards for child centers. Concentration on the role of the early childhood professional in child centers such as classroom environments, selecting and evaluating material, staff development, ethics, and advocacy. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp odd yrs. Lecture: 3.

ECDV 2600  ECDV Practicum and Seminar  2 cr.
This course provides students in the ECDV program the opportunity to apply the knowledge, skills, and dispositions acquired in ECDV coursework. The student is placed in an early childhood program for hands-on experience with young children ages 3-5. The practicum requires the student to be in the classroom 7 hours a week for the entire semester. A one-hour seminar is required and focuses on the actual practicum experience and topics as they relate to the early childhood profession. An FBI and BCI background check is required. Prerequisite: 9 hours of general education courses and 15 hours ECDV courses. Co-Requisite: None. Day: All. Lecture: 1, Lab: 7. ♦

ECDV 2620  Student Teaching and Seminar  2 cr.
This course provides candidates in the ECDV program the final opportunity to apply the knowledge, skills, and dispositions acquired in the coursework presented in the associate degree program. The candidate is placed in an early childhood program for actual teaching experience with young children ages 3-5. Student teaching requires the candidate to be in the classroom 10 hours a week for the entire semester. A one-hour seminar is required and focuses on the actual student teaching experience and topics as they relate to the early childhood profession. The professional early childhood portfolio will be completed. An FBI and BCI background check is required. Prerequisite: Successful completion of ECDV 2600. Co-Requisite: None. Day: All. Lecture: 1, Lab: 10. ♦

ECON 2120  Principles of Macroeconomics  3 cr. TM-S
Introduction to American capitalism: basic economic concepts including, national income analysis, employment theory, inflation, the business cycle, price level, fiscal policy, federal budget deficit, the role of money, the institutions and function of the American banking system, the Federal Reserve, monetary policy, comparative advantage, and Gross Domestic Product. Prerequisite: None. Co-Requisite: None. Day: Fa, Su; Eve: Sp. Lecture: 3. TAG: OSS005. ♦

ECON 2130  Principles of Microeconomics  3 cr. TM-S
Study of the following microeconomic topics: opportunity cost, production possibilities frontier, supply and demand analysis, supply and demand elasticity, price determination, profit maximization, cost analysis, wage determination, imperfect market structures, antitrust and government deregulation of industry. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa; Online: Su. Lecture: 3. TAG: OSS004. ♦

ECON 2400  Economics for Technologies & Engineers  3 cr.
A comprehensive introduction to engineering and industrial economics. Course includes concepts in economic decision making; cash flow analysis; time value of money; perform risk analysis; replacement and timing decisions; depreciation; the impact of uncertainty on decision making. Prerequisite: MATH 2130. Co-Requisite: None. Day: Sp; Eve: Su. Lecture: 3. TAG: OES005. ♦

EDUCATION TRANSFER ( EDUC)

EDUC 1000  Introduction to Teaching  3 cr.
Introduction to the teaching profession and college education program. Study revolves around six themes: standards-based education, professionalization, diversity, democratic issues, curriculum and instruction, and legal and organizational issues. These themes will be examined through selected readings and field experiences. Professional portfolios will be started and transfer options discussed. Includes 10 hours of integrated field exercises in the local schools. Documentation of clear FBI/BCI background check required. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 3. TAG: OED001.

EDUC 1400  Introduction to Instructional Planning  2 cr.
Familiarizes pre-service teachers with a systematic approach to the development of effective lesson plans. Covers identification of instructional goals and objectives; selection of instructional strategies and activities; consideration of appropriate classroom management systems; creating and using assessment tools; and evaluation and revision of plans. Students develop a variety of lesson plans and learn to incorporate variations to accommodate diverse learners. Prerequisite: EDUC 1000. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2.

EDUC 1510  Early Childhood Education Seminar and Field Work  1 cr.
Classroom observation for students preparing to enter the teaching profession. Students must attend a seminar on
COURSE CATALOG

campus and complete 40 hours of field work. Students must clear an FBI/BCI background check to participate. Students gain knowledge and experience necessary for initial understanding of concepts and practices presented in education courses. Prerequisite: EDUC 1000. Co-Requisite: None. Day: Fa, Sp. Lecture: 1. ♦

EDUC 1530 Middle Childhood Education Seminar and Field Work 1 cr.
Classroom observation for students preparing to enter the teaching profession. Students must attend a seminar on campus and complete 40 hours of field work. Students must clear an FBI/BCI background check to participate. Students gain knowledge and experience necessary for initial understanding of concepts and practices presented in education courses. Prerequisite: EDUC 1000. Co-Requisite: None. Day: Fa, Sp. Lecture: 1. ♦

EDUC 1550 Young Adult Education Seminar and Field Work 1 cr.
Classroom observation for students preparing to enter the teaching profession. Students must attend a seminar on campus and complete 40 hours of field work. Students must clear an FBI/BCI background check to participate. Students gain knowledge and experience necessary for initial understanding of concepts and practices presented in education courses. Prerequisite: EDUC 1000. Co-Requisite: None. Day: Fa, Sp. Lecture: 1. ♦

EDUC 1700 Educational Technology 3 cr.
Introduces varied uses of the computer and technology in classrooms. Material covered includes integration of computers into the curriculum and record-keeping assistance; hardware and software selection criteria; and offers opportunity to use several popular software packages. Assists pre-service teachers in meeting ISTE standards (NETS). Includes laboratory and project work. Prerequisite: BUSM 1600. Co-Requisite: None. Day: Sp, Su; Eve: Fa even yrs. Lecture: 3. TAG: OED002. ♦

EDUC 1800 Online Instructional Strategies 3 cr.
This course focuses on the effective ways of integrating technology and instructional strategies to build and deliver online and blended courses at Washington State Community College. It introduces the various academic technologies used by WSCC, including the Sakai learning management system. The course will address topics such as teaching with technology, academic integrity and FERPA. Quality of online content will be discussed within the context of Quality Matters Rubric standards for online and blended course design. Participants will learn how to manage time for efficient delivery of a course and learn how to distinguish between quality of content and quality of delivery in an online and blended course. Prerequisite: None. Co-Requisite: None. Online: All. Lecture: 3.

EDUC 2100 Exceptional Learners Programming with emphasis on understanding their needs and behaviors. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 3. TAG: OED004.

EDUC 2110 Exceptional Learners Education Seminar and Field Work 1 cr.
Classroom observation for students preparing to enter the teaching profession. Students must attend a seminar on campus and complete 40 hours of field work. Students must clear an FBI/BCI background check to participate. Students gain knowledge and experience necessary for initial understanding of concepts and practices presented in education courses. Prerequisite: EDUC 1000. Co-Requisite: None. Day: Fa, Sp. Lecture: 1. ♦

EDUC 2400 Multicultural Education 3 cr.
Examination of the social, political, and economic context of schooling as it effects diverse learners and their ability to succeed. Emphasis is on the teacher’s role in providing an equitable, just, and supportive learning environment for all students. Includes at least one field experience in a school with cultural, racial, and/or ethnic diversity. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp. Lecture: 3.

EDUC 2950 Education Capstone: Foundations of the Profession 3 cr.
To be taken as the Education Transfer student is completing associate degree requirements; complements EDUC 1000 and continues study of the six themes of teacher education. Course content highlights the history of U. S. education; issues of social justice; school government, finance, organization, and law; educational philosophy; exploration of theories of curriculum and instruction, and educational practices in other cultures. Professional portfolios will be updated and transfer plans finalized. Prerequisite: EDUC 1000. Co-Requisite: None. Day: Fa, Sp; Eve: On demand. Lecture: 3. ♦

ELECTRICAL ENGINEERING TECHNOLOGY (ELET)

ELET 1000 Internship 1-6 cr.
Provides the opportunity to put classroom knowledge to practical use. Student's position is selected and/or approved by the college; student is evaluated periodically by the organization and is supervised by a college instructor/coordinator. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: TBD, Lab: TBD.

ELET 1110 DC Circuits 3 cr.
Comprehensive study of DC electricity with emphasis on basic electrical concepts such as atomic structure, electron theory, current, voltage, resistance, conductance, Ohm's Law, electrical energy and power, Kirchoff's voltage and current laws, series, parallel, series-parallel circuits, network theorems, capacitance, inductance, time constants, and magnetic circuits. Prerequisite: None. Co-Requisite: MATH 1110. Day: Sp. Lecture: 1, Lab: 6. TAG: OET001. ♦

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ELET 1130  AC Circuits  3 cr.

ELET 1310  Digital I  4 cr.

ELET 1330  Digital II  3 cr.

ELET 1350  Digital Electronics I  3 cr.
The first of two courses in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Prerequisite: None. Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 3.

ELET 1370  Digital Electronics II  3 cr.
The second of two courses in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Prerequisite: ELET 1350. Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 3.

ELET 2110  Rotating Machinery  3 cr.
Emphasis on DC and AC equipment and machinery; includes armature and field windings of generators and motors, controls, parallel generator operation, speed regulation, efficiency, losses, transformers, and polyphase systems. Prerequisite: ELET 1130. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 2, Lab: 3.

ELET 2130  P&I Drawings and Motor Control  2 cr.

ELET 2210  Electronics I  4 cr.
Semiconductor theory, including diode and applications, bipolar transistor theory, small and large signal amplifiers, biasing and gain calculations, JFETs, MOSFETs, Solid State Relays, thyristors, op-amps, and regulated power supplies. Prerequisite: ELET 1130. Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 6. TAG: OET005.

ELET 2230  Electronics II  4 cr.

ELET 2410  Programmable Logic Controllers  3 cr.
Basic operations, history, numbering systems, system hardware and software, ladder logic programming, Math functions, sequencers, comparisons, block transfers, program control instructions, fault handling, and PLC networking. Prerequisite: ELET 1110 or permission. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 3.

ELEC 1950  Cisco Semester I - Network Fundamentals  3 cr.
This course uses the OSI and TCP layered models of computer networks to examine the nature and roles of protocols and services at various layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Labs will allow students to analyze protocols and network operations, build small networks, apply basic cabling principles, and perform basic configurations of network devices such as routers, switches, and implementation of IP addressing schemes. Prerequisite: DTCS 1230. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2, Lab: 3.

ELEC 2010  Instrument & Control Wiring  2 cr.
Installation techniques for various types of analog and discrete instrument and control wiring, including coax, Cat-5 Ethernet, and Fiber Optic. Prerequisite: INDT 1350. Co-Requisite: None. Day: Fa. Lecture: 1, Lab: 2.5.

ELEC 2050  Cisco Semester II - Routing Protocols and Concepts  3 cr.
This course covers the components, architecture, operation, and principles of routing and routing protocols. Students analyze, configure, and troubleshoot primary routing protocols such as RIPv1, RIPv2, EIGRP, and OSPF. Students will learn to recognize, troubleshoot, and solve common routing issues and problems. Prerequisite: ELEC 1950. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 2, Lab: 3.
ELEC 2330  Microprocessors  4 cr.
Introduction to basic concepts of microprocessors; emphasis on internal operation and software function; machine language programming with the use of flow charts to ease programming tasks. Write, debug, and run short programs on a microprocessor-system to gain familiarity with software techniques. Application of microprocessors to real tasks; methods of interfacing input and output devices such as keyboards, relays, and readouts. Trouble-shooting methods, logic probes and emulation packages. Prerequisite: ELET 1330 or ELET 1360. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3, Lab: 2. TAG: OET004. ♦

ELEC 2410  Microcomputer Diagnostics & Upgrading I  3 cr.
This course covers diagnosing common microcomputer problems, preventive maintenance and using diagnostic programs. In addition, topics related to adding additional hardware and enhancing older computers will be covered. Hands-on experience and activities will be included. Prerequisite: DTCS 1230. Co-Requisite: None. Day: Sp; Eve: Fa odd yrs. Lecture: 2.5, Lab: 1. ♦

ELEC 2450  Introduction to Linux  3 cr.
This course covers the main aspects of the Linux operating system. Students will install and configure Linux on appropriate hardware. Includes managing users, software, hardware, the Linux file systems, the Bash Shell and configuring TCP/IP servers. Students will configure a server-side LAMP environment for Web development. Prerequisite: DTCS 1230. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2.5, Lab: 1. ♦

ELEC 2510  Microcomputer Diagnostics & Upgrading II  3 cr.
Emphasis will be on system troubleshooting methods using appropriate tools and test equipment, as well as operating system issues using advanced software diagnostics. Prerequisite: ELEC 2410. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 2, Lab: 3. ♦

ELEC 2900  Introduction to Computer Forensics  3 cr.
Course focuses on the study and application of criminal investigation skills and evidence-based case development for civil, criminal, and administrative cases. Applies the techniques, skills, and knowledge of computer and network support. Students will complete specialized lab experiences and training designed to build the skills necessary for computer based investigations. Prerequisite: CRJU 1210, ELEC 2050 and ELEC 2510. Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

ENGLISH COMPOSITION (ENGL)

ENGL 0800  Integrated Language Skills I  4 cr.
Study of sentence-writing, vocabulary, and reading skills in a computer-assisted format. Emphasizes a review of grammar, mechanics, and punctuation; vocabulary skills; various reading comprehension skills; and flexible reading rates. Prerequisite: Compass Placement. Co-Requisite: PERS 1000. Day: All; Eve: All; Blended: Fa. Lecture: 3, Lab: 2. ♦

ENGL 0900  Integrated Language Skills II  4 cr.
Integrate reading and writing skills in a computer assisted format in order to develop the ability to write clear, concise paragraphs and to think critically about paragraphs and essays. Students will be required to critically read, critique and write paragraphs with organizational patterns essential to college-level reading and writing. The final module will include reading and interpreting essays and writing an essay which includes an introduction, body, and conclusion. Prerequisite: ENGL 0800 or compass placement. Co-Requisite: PERS 1000. Day: All; Eve: All; Blended: Fa. Lecture: 4. ♦

ENGL 1510  English Composition I  3 cr. TM-E
Develop, compose, and revise expository essays, which center on a definite thesis statement. The course covers rhetorical modes such as example, process analysis, definition, and comparison/contrast. The course also covers planning, drafting, revision skills. Prerequisite: ENGL 0900 with "C" or better or Compass Score 69 or greater. Co-Requisite: None. Day: All; Eve: All; Online: Fa, Sp. Lecture: 2, Lab: 2. ♦

ENGL 1513  Business Writing  3 cr. TM-E
Students deal with the principles and techniques of effective writing for non-technical areas of business. Case situations form the basis for the course which covers various types of reports, internal and external, job search, and personnel situations. The student will prepare a resume and study job hunting skills. Prerequisite: ENGL 1510 with "C" or better or Compass Score ≥ 75. Co-Requisite: None. Day: All; Eve: All. Lecture: 3. ♦

ENGL 1515  Technical Writing  3 cr. TM-E
Students adapt their writing skills to prepare technical documents—memos, resume, application letter, abstract, instructions, description, and proposal—including page design and graphics. Prerequisite: ENGL 1510 with "C" or better. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp. Lecture: 3. ♦

ENGL 1520  English Composition II  3 cr. TM-E
Continues improvement of writing skills. Argumentative and
expository papers created by evaluating information from multiple perspectives and drawing reasonable conclusions for a final research writing. Prerequisite: ENGL 1510 or ENGL 1515 or ENGL 1513. Co-Requisite: None. Day: All; Eve: All; Online: All. Lecture: 2, Lab: 2.

ENGR 2240 Statics for Engineers 4 cr.
Analysis of forces and effects of forces on rigid body structures at rest such as frames and trusses. Prerequisite: PHYS 2510, PHYS 251L and MATH 2263. Co-Requisite: None. Day: On demand; Eve: Fa. Lecture: 4. TAG: OES002.

ENGR 2250 Strength of Materials for Engineers 3 cr.
A comprehensive coverage of the important topics in strength of materials with an emphasis on application, problem solving, and design of structural members, mechanical devices, and systems. Includes evaluation of externally applied forces and internally induced stresses in materials. Consideration is given in terms of compression, tension, and shear to solve problems of an engineering nature. Prerequisite: ENGR 2240 and MATH 2263. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 2, Lab: 3.

ENGR 2310 Engineering Design & Development I 3 cr.
Project Lead the Way® A research course that requires students to formulate the solution to an open-ended engineering question. With a community mentor and skills gained in their previous courses, students create written reports on their applications, defend the reports, and submit them to a panel of outside reviewers at the end of the school year. Prerequisite: PLTW or ENGR 1010, ELET 1310 and ELET 1330. Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 3.

ENGR 2320 Engineering Design & Development II 3 cr.
Project Lead the Way® A continuation of ENGR 2310; a research course that requires students to formulate the solution to an open-ended engineering question. With a community mentor and skills gained in their previous courses, students create written reports on their applications, defend the reports, and submit them to a panel of outside reviewers at the end of the school year. Prerequisite: ENGR 2310. Co-Requisite: None. Day: Sp. Lecture: 2, Lab: 3.

GEOGRAPHY (GEOG)

GEOG 1210 Cultural Geography 3 cr. TM-S
Basic course in human geography stressing the spatial dimensions of culture, particularly the interrelationships between man’s activities and the natural forces of the environment – climate, terrains, arability, and the physical distribution of the earth’s products. Selected cultural elements include language, religion, population, and settlement patterns. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 3. TAG: OSS007.
GEOL 2310  Environmental Geology  3 cr. TM-N
This course is a survey of geological processes and products and their relation to environments and life forms. It includes the formation of the earth, internal and surface processes with a focus on major environmental processes, immediate and extended influence of humans, natural resources and their sustainability and prospects for future of physical environment. Prerequisite: None. Co-Requisite: GEOL 231L. Day: Fa; Eve: On demand. Lecture: 3.

GEOL 231L  Environmental Geology Lab  1 cr. TM-N
This course is the laboratory associated with the GEOL 2310 course and includes an introduction to laboratory techniques, laboratory safety with an emphasis on geological processes in practical situations. Prerequisite: None. Co-Requisite: GEOL 2310. Day: Fa; Eve: On demand. Lab: 2. ♦

GEOS 1010  Physical Geography  4 cr.
The fundamental study of earth’s landforms, climate, soils, natural vegetation, and their related processes. Students will also become familiar with reading maps and basic mapping techniques. Prerequisite: None. Co-Requisite: None. Eve: Fa. Lecture: 3, Lab: 2. ♦

GEOS 2410  Introduction to Meteorology  4 cr.
Introduction to the physical principles behind weather systems and weather change. Topics covered include weather vs. climate, atmospheric energy transfer, solar radiation, temperature controls, cloud formation, global systems, high and low pressure systems, mid-latitude cyclones, hurricanes, forecasting, and climate change. Prerequisite: GEOS 1010. Co-Requisite: None. Eve: Sp. Lecture: 3, Lab: 2. ♦

GEOS 2510  Introduction to Mapping and GIS  4 cr.
Introduction to mapping sciences and Geographic Information Systems (GIS). Topics include brief history of cartography, map types, essential elements of maps, scales, distortion, basic surveying, aerial photography, and GPS. Students will also become familiar with ESRI’s ArcGIS software, as well as learn the basic principles and theories behind GIS. Prerequisite: GEOS 1010 and MATH 2120. Co-Requisite: None. Eve: Sp. Lecture: 3, Lab: 2. ♦

GEOS 2520  GIS Applications  4 cr.
A continuation of GEOS 2510 and capstone course for the Geoscience degree and GIS Certificate. Focus on more advanced GIS applications commonly used in the workplace. Topics covered include georeferencing, digitization, using spatial analyst and other extensions, interpolation, collecting and incorporating GPS data, and platting surveys. Students will create professional, presentation-quality poster-sized maps. Prerequisite: GEOS 2510. Co-Requisite: None. Eve: Fa. Lecture: 3, Lab: 2. ♦

HLTH 1000  Personal Fitness Concepts  2 cr.
This course of study focuses on fitness issues which affect Americans today and in the future. Emphasis is placed on establishing positive fitness based on factors which influence fitness. This course will also focus attention on individual personal fitness. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand; Online: On demand. Lecture: 2.

HLTH 1001  Basic Life Support for Healthcare Providers  0.5 cr.
This course provides training for basic life support and Cardiopulmonary Resuscitation for Healthcare Providers. Students will learn single-rescuer and team basic life support for adults, children and infants through interactive exercises, scenarios and a written test. This is a one day class that leads to a certificate. Prerequisite: None. Co-Requisite: None. Day: Fa, Su; Eve: On demand. Lecture: 0.4, Lab: 0.4. ♦

HLTH 1002  Basic Life Support for Healthcare Providers Renewal  0.5 cr.
This course provides recertification training for basic life support and Cardiopulmonary Resuscitation for Healthcare Providers. Students will learn single-rescuer and team basic life support for adults, children and infants through interactive exercises, scenarios and a written test. This is a one day class that leads to recertification. Prerequisite: None. Co-Requisite: None. Day: Fa, Su; Eve: On demand. Lecture: 0.4, Lab: 0.4. ♦

HLTH 1100  Health and Wellness  3 cr.
Identifies and studies timely health and wellness issues from personal and societal viewpoints. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand; Online: On demand. Lecture: 3.

HLTH 1120  First Aid and Personal Safety  2 cr.
Lectures, discussion, and practice are used to study safety and give first aid in emergency situations. A certificate (adult, infant, and child) for CPR may be obtained by students who pass appropriate examinations. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Sp on demand. Lecture: 2. ♦

HLTH 1140  EMT Basic  5 cr.
Learn to be an Emergency Medical Technician-Basic and be prepared to help in medical emergencies. Learn skills that will allow you to obtain a State EMT-B Certification and work with other EMTs in paid and volunteer fire departments and/or EMS Agencies after completing this
course of study and passing the National Registry Exam. There will be one weekend block of hands on experience required in this class. Prerequisite: HS Diploma, CPR-HCP card and valid driver's license. Co-Requisite: None. Eve: Su. Lecture: 4, Lab: 4. ♦

HLTH 1200  Mind-Body-Spirit Balance  2 cr.
This course is designed to teach students in the wellness field how to maintain mind-body-spirit balance. The course is highly experiential so that students will be able to not only maintain homeostasis but also be able to pass that knowledge on to others. The topics covered in this course include hands-on exercises for stress-reduction and relaxation, meditation and in-depth knowledge of the energy system. Prerequisite: None. Co-Requisite: None. Eve: Fa, Sp. Lecture: 2.

HLTH 1340  CPT Coding  3 cr.
A course using Current Procedural Terminology (CPT) to convert widely accepted, uniform descriptions of medical, surgical, and diagnostic services rendered by health care providers into five-digit numeric codes. Understand the use of CPT for research, analysis, and reimbursement. Understand the use of Level II National codes. CPT codes are used to evaluate case studies and inpatients scenarios utilizing code assignment in the inpatient setting and the appropriate assignment of inpatient coding conventions. Prerequisite: None. Co-Requisite: BIOL 1310 or BIOL 2310. Eve: Fa on demand. Lecture: 3.

HLTH 1350  ICD-10-CM-Coding  3 cr.
International Classification of Diseases, Clinical Modification (ICD-9-CM) to classify patient morbidity and mortality information for statistical purposes and indexing hospital records by disease and operations for storage and retrieval. Application of the guidelines and principles of ICD-9-CM Volumes 1, 2, 3 are used to evaluate case studies of outpatient scenarios utilizing appropriate coding assignment and coding conventions. Students may not receive credit for both this course and OAST 1350. Prerequisite: None. Co-Requisite: BIOL 1330 or BIOL 2310. Eve: Fa. Lecture: 3.

HLTH 1510  Massage Techniques I  4 cr.
History of medical massage, the therapeutic environment and relationship, professional ethics; applied anatomy of integumentary system and superficial fascia; introduction to Swedish Massage and Deep Tissue massage. Prerequisite: Acceptance into Massage Program. Co-Requisite: None. Day: Fa; Eve: Fa even yrs. Lecture: 3, Lab: 3. ♦

HLTH 1520  Massage Techniques II  4 cr.
Introduction to soft tissue barriers and their clinical significance; Muscle Energy Techniques, Craniosacral therapy; Pregnancy Massage, Trigger Point Therapy, Pain physiology and assessment; Myofacial Release; Chair Massage, Reflexology, Shiatsu, and other modalities. Swedish massage continued; applied anatomy of neuromuscular and musculoskeletal systems; palpatory and assessment skills, pathology of joints, professional ethics, and communication in therapeutic relationship. Prerequisite: HLTH 1510. Co-Requisite: None. Day: Sp; Eve: Sp odd yrs. Lecture: 3, Lab: 3. ♦

HLTH 1810  Medical Terminology I  2 cr.
Introduction to the basic medical word elements - roots, suffixes, prefixes and combining forms - used by the medical profession. Spelling, definitions, pronunciations and usage of medical terms pertaining to all body systems are stressed. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa; Online: All. Lecture: 2. TAG: OHL020.

HLTH 1820  Medical Terminology II  2 cr.
Continuation of Medical Terminology I - provides an overview of basic terminology necessitated in health care delivery. Students learn how to use appropriate reference material. The course entails instruction in correct pronunciation, accurate spelling, detailed definitions, and administration of acceptable applications of the terminology presented. Prerequisite: HLTH 1810. Co-Requisite: None. Day: Sp; Eve: Sp; Online: All. Lecture: 2.

HLTH 1830  Pharmacological Terminology  3 cr.
Contains detailed definitions for terminology associated with pharmacology and the administration of drugs. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 3.

HLTH 1840  Pharmacy Technician I  2 cr.
This comprehensive course will prepare students to enter the pharmacy field. Technicians work in hospitals, home infusion pharmacies, community pharmacies and other health care settings - working under the supervision of a registered pharmacist. Course content includes medical terminology specific to the pharmacy, reading and interpreting prescriptions and defining drugs by generic and brand names and different drug classifications. Students will learn about the differences between the two types of pharmacy settings (retail and health system), dispensing of prescriptions, inventory control and billing and reimbursement. Prerequisite: None. Co-Requisite: HLTH 184L. Day: On demand; Eve: Fa. Lecture: 2.

HLTH 184L  Pharmacy Technician I Lab  1 cr.
This course provides simulated clinical practice in the lab in order to function as a Pharmacy Technician. It is organized to correspond with the class lectures and the textbook. Prerequisite: None. Co-Requisite: HLTH 1840. Day: On demand; Eve: Fa. Lab: 2. ♦

HLTH 1850  Pharmacy Technician II  3 cr.
As a continuation of HLTH 1840, this comprehensive course will prepare students to enter the pharmacy field. Technicians work in hospitals, home infusion pharmacies, community pharmacies and other health care settings - working under the supervision of a registered pharmacist. Course content includes medical terminology specific to the pharmacy, reading and interpreting prescriptions and defining drugs by generic and brand names. Students
HLTH 2010  Advanced EMT I  5 cr.
Advance beyond the basic EMT skills with the first of a two semester program, which follows the Ohio Advanced EMT Curriculum. This class centers on pharmacology and cardiology. Skills in patient assessment and clinical decision making along with airway management and other topics will be presented. The lab class is a combination of "ride along" EMS time and hospital time, which is scheduled in advance. There are 45 hours required to be completed before the end of the semester. The time will be spent under supervision of faculty and hospital staff, as well as qualified EMS providers. The student will be able to use their new skills and observe others as they apply the skills in the clinical setting. Prerequisite: HLTH 184L and MATH 1100. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 3.

HLTH 2020  Advanced EMT II  5 cr.
Advance beyond the basic EMT skills with the second of a two semester program, which follows the Ohio Advanced EMT Curriculum. This class centers on pharmacology and cardiology. Skills in patient assessment and clinical decision making along with airway management and other topics will be presented. The lab class is a combination of "ride along" EMS time and hospital time, which is scheduled in advance. There are 45 hours required to be completed before the end of the semester. The time will be spent under supervision of faculty and hospital staff, as well as qualified EMS providers. The student will be able to use their new skills and observe others as they apply the skills in the clinical setting. Prerequisite: HLTH 2010. Co-Requisite: None. Day: Su; Eve: Sp even yrs. Lecture: 2, Lab: 2.

HLTH 2050  History of Sports  2 cr.
An analysis of the history of sports, athletics and recreation. Lecture and related activities will explore the role of sports in our lives. This course will also assess the historical framework of sports and how it has impacted sports today and in the future. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa odd yrs. Lecture: 2.

HLTH 2310  Principles of Reimbursement  3 cr.
Introductory course describing the use of health information and statistical coded data in government reimbursement and payment systems and commercial health plans. The student will be able to describe the use of the Medicare program, DRG payment systems, PRO review systems, RBRVS system, APC system, and will be able to identify the major components of Managed Health Care. Prerequisite: None. Co-Requisite: BIOL 1330/1340 or BIOL 2310/2320. Eve: Fa. Lecture: 3.

HLTH 2320  Medical Billing  1 cr.
Comprehensive course designed to teach medical billing using patient accounting software. Activities include record charges and payments, schedule appointments, record information on patients, ICD and CPT coding, produce claim forms, patient statements, and print variety of reports. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 1.

HLTH 2400  EKG/Cardiovascular Technician  3 cr.
This comprehensive Certified EKG Technician Program prepares students to function as EKG/Cardiovascular Technicians and prepares them to take the Electrocardiograph (EKG) Technician exam if they have a Health Science degree and/or one year experience. This course will include important practice and background information on anatomy of the heart and physiology, medical disease processes, medical terminology, medical ethics, legal aspects of patient contact, and electrocardiography. Additionally, students will practice with equipment and perform hands-on labs including introduction to the function and proper use of the EKG machine, the normal anatomy of the chest wall for proper lead placement, 12-lead placement, and other clinical practices. Prerequisite: None. Co-Requisite: None. Eve: Su. Lecture: 2, Lab: 2.

HLTH 2480  Orthopedic Assessment & Documentation for Massage Therapists  3 cr.
This course is designed to provide a well rounded opportunity for students to assess anatomical and physiological deficiencies in the body, to document such deficiencies with palpation, observation, and various orthopedic tests, and to develop strategies to resolve these deficiencies. Prerequisite: HLTH 1510 and BIOL 1360. Co-Requisite: None. Day: Sp; Eve: Fa odd yrs. Lecture: 2, Lab: 2.

HLTH 2550  Massage Therapy Directed Practice  2 cr.
Introductory experience in the clinical setting, application of theories and techniques for client intervention, assessment and medical record keeping, and referral to other health care providers. Prerequisite: HLTH 1520. Co-Requisite: None. Day: Su; Eve: Sp even yrs. Lecture: 1, Lab: 5.

HLTH 2800  Massage Therapy Seminar  2 cr.

HLTH 2850  Building an Ethical Massage Therapy Practice  2 cr.
This course prepares students to safely and ethically practice massage therapy. It provides steps and discusses techniques to build a successful and reputable massage therapy practice. Students will develop professionalism and a basic understanding of the therapist – client relationship. A code of ethics and a standard of
practice will be explored and implemented. Prerequisite: acceptance into Massage Program. Co-Requisite: None. Day: Fa; Eve: Su odd yrs. Lecture: 2.

**HISTORY (HIST)**

**HIST 1010  Civilization I: Early World Culture  3 cr. TM-S**
The examination of civilization in the Mediterranean, India, and China; Greek and Roman eras; the beginning of Christianity, the Byzantine Empire; the rise of Islam, Buddhism, and Hinduism; Feudalism; the rise of the Christian Church; Scholasticism and the universities; the Renaissance and the Reformation; the rise of the cities in Europe and Asia; the age of exploration. Prerequisite: None. Co-Requisite: None. Eve: Fa. Lecture: 3. TAG: OHS041.

**HIST 1020  Civilization II: Early/Modern Period3 cr. TM-S**
The Commercial Revolution; the Age of Science; Reason & Enlightenment; The Rise of Nationalism; The Industrial Revolution and its problems; social reform; scientific advancement; development of the arts; the world wars; Russian and Chinese revolutions; the Cold War; rise and fall of imperial systems in Africa; East Asia, the Middle East, and Latin America. Prerequisite: None. Co-Requisite: None. Eve: Sp. Lecture: 3. TAG: OHS042.

**HIST 2110  American History to 1865  3 cr. TM-S**
Political, diplomatic, social, and economic developments of America from 1607 to 1865: Topics include Colonial America, founding of a new nation, the early national period, Jacksonian Democracy, territorial expansion, sectionalism & controversy and the Civil War. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3. TAG: OHS043.

**HIST 2120  American History 1865 to Present 3 cr. TM-S**
Political, diplomatic, social, and economic development of America 1865 to Present. Topics include Reconstruction, the Industrial Revolution, the progressive movement, World Wars I and II, prosperity and depression, and problems of the Cold War era. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3. TAG: OHS044.

**HIST 2300  Ohio: Its Land and Its People  3 cr.**
Students will examine the history, geography, economics, government, and people of Ohio. Emphasis is on the state's natural resources and human capital and how both have been important to the state, nation, and world. Students will engage in research related to Marietta's rich history and topics of importance to Ohio's founding, growth, and development. Designed for those interested in the study of history as well as for those preparing to teach Ohio history. Prerequisite: ENGL 1510 or permission. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

**HIST 2750  Women in American History  3 cr.**
Examination of women's roles, experiences, and contributions throughout the settlement, founding, and growth of the United States. Major themes related to views of women in the home, workplace, and society are traced as they change over time. Emphasis is on women's common experiences while acknowledging the diversity and uniqueness of individual women or groups of women. Students will engage in extensive reading of primary and secondary source materials and conduct original research. Prerequisite: None (ENGL 1520, HIST 2110 and HIST 2120 recommended). Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3.

**HUMANITIES (HUMN)**

**HUMN 1100  Leadership Development  3 cr.**
Development of leadership skills through understanding of leadership and group dynamics theory; personal leadership philosophy; moral and ethical responsibilities of leadership, and awareness of leadership style. Integrates readings from the humanities, classic literature, contemporary multi-cultural writings, and experiential learning exercises with readings and discussions of traditional leadership theories. Prerequisite: ENGL 0900 or Compass Score greater than 69. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 3.

**HUMN 1200  Introduction to Film  3 cr. TM-H**
Study of film as an art form. Includes a brief history on development of the cinema, viewing, and discussion of representative films and excerpts. Prerequisite: ENGL 1520 or ENGL 1530. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3.

**HUMN 1300  Survey of Mythology  3 cr. TM-H**
Overview of mythology from the earliest oral tales to present. Structured around eight major threads into which all myths fall; three major myth divisions. Prerequisite: None. Co-Requisite: None. Day: Fa. Lecture: 3.

**HUMN 1400  Introduction to Islam  3 cr.**
The course provides an introduction to the central religious and cultural concepts of Islam as a major world religion. It begins by a historical look at the origin of Islam, the basic concepts of faith, and how Islam relates to the other two monotheistic traditions - Judaism and Christianity. The course will then explore the customs and culture of Muslims around the world, society, politics, and economy. Finally, the course will take a look at Muslims in the West and the problem of Islamophobia. The course functions as a first introduction to the basics of Islam. No prior study or knowledge of Islam is assumed or required. Prerequisite: None. Co-Requisite: None. Online: All. Lecture: 3.

**HUMN 2480  Science of Science Fiction  3 cr. TM-H**
The Science of Science Fiction provides an overview of science fiction and some of the science behind it. This will include a short history of science fiction and the science behind it as well as some of the major sub-genres of
science fiction in order to see the impact of various fields of science. Prerequisite: ENGL 0900 or Compass Score greater than 69 & HS Science. Co-Requisite: None. Day: Sp odd yrs; Eve: Sp on demand. Lecture: 3.

**INDUSTRIAL TECHNOLOGY (INDT)**

**INDT 1000 Internship**  1-6 cr.
Provides the opportunity to put classroom knowledge to practical use. Student's position is selected and/or approved by the college; student is evaluated periodically by the organization and is supervised by a college instructor/coordinator. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: TBD, Lab: TBD.

**INDT 1010 Introduction to Chemical Operator**  3 cr.
A course delivered in an online modular format designed for newly hired or potential chemical operators. Designed to provide participants with a basic foundation in chemistry and mathematics as well as equipment operation and function. Concepts relating to safe operating practices and environmentally responsible behavior are also included. This course serves as the introductory course for students interested in pursuing an online Chemical Operator Associate degree or certificate and instructs the student in online learning protocols and methods. Course delivery includes use of computer simulations and labs and interactive video. Prerequisite: None. Co-Requisite: None. Online: All. Lecture: 3.

**INDT 1020 Introduction to the Petroleum Industry**  3 cr.
This course introduces students to an overall exposure to the oil and natural gas industry from the beginnings of the formation of hydrocarbons to the marketing of finished products. Subjects such as origins of petroleum, exploration, regulations, drilling, well completion, production of oil, artificial lift, natural gas production, refining and marketing are covered. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Fa, On demand. Lecture: 3.

**INDT 1030 Well Planning and Drilling Operations**  3 cr.
This course introduces students to well design, casing design, directional design, and well programming. Topics include drilling fluids, cementing, well site operations, drilling problems, and drillbits. Students will complete the course by analyzing the final well report. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Sp, On demand. Lecture: 3.

**INDT 1080 Introduction to Abstractor**  1 cr.
This course introduces the responsibilities of an abstractor. These include obtaining all property information needed by an attorney, determining what is important in the summary, and performing all processes needed to assure the abstract is complete. Prerequisite: None. Co-Requisite: None. Eve: Fa on demand. Lecture: 1.

**INDT 1100 Industrial Maintenance**  3 cr.
Student will learn the basics of industrial maintenance including safety, use of hand tools, types and uses of fasteners, print reading, and bearings. A detailed exploration of modern machinery and equipment to understand, diagnose, troubleshoot, and maintain a variety of industrial machines. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Fa. Lecture: 2, Lab: 2.

**INDT 1110 Electrical Maintenance**  3 cr.
Student will learn electrical maintenance for an industrial setting including the basics of electricity, circuits, testing, and wiring. A detailed exploration of electrical machinery and controls to develop an understanding for diagnosing, troubleshooting, and maintaining a wide variety of industrial machines. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 2, Lab: 2.

**INDT 1150 Machining Processes**  3 cr.
Introduction to traditional mechanical machining operations. The course is designed to provide basic training in conventional machine tool operations and processes. Projects will be completed on the lathe, vertical milling machine and drill press. Instruction will include proper hand tool use and the use of measuring devices. Students will work within specified decimal tolerances from engineering drawings. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 1, Lab: 5.

**INDT 1170 Computer Numerical Control**  3 cr.
Emphasis on advanced machining processes and an introduction to computerized numerical equipment (CNC). Basic alpha-numeric control codes taught along with programming skills using industry standard RS-274D machine programming language. Students will work within specified decimal tolerances from engineering drawings. Prerequisite: INDT 1150. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 1, Lab: 5.

**INDT 1210 Industrial Safety and Hazmat**  2 cr.

**INDT 1250 SMAW Welding**  3 cr.
Oxy Acetylene cutting and Plasma Arc cutting techniques will be employed and performed. Basic Shielded Metal Arc welding techniques on plate are introduced and performed. Basic weld symbols and math and layout skills for welders are explained. Safety emphasized throughout all aspects. Prerequisite: None. Co-Requisite: None. Eve: Fa. Lecture: 1, Lab: 5.

**INDT 1260 GMAW Welding**  3 cr.
Gas Metal Arc welding, Short Arc, Spray and Pulse Arc techniques on plate are introduced, demonstrated and
performed. Intermediate weld symbols and math and layout skills for welders are explained, demonstrated and performed. Safety emphasized throughout all aspects. Prerequisite: INDT 1250. Co-Requisite: None. Eve: Sp. Lecture: 1, Lab: 5. ♦

INDT 1310 Basic Electricity 3 cr.
Basics of electricity, residential wiring, electrical safety, GFI, NEC, electrical service entry, wire rating; laboratory experiences covering voltage, current, power, conductors, semi-conductors, insulators, circuit analysis, A/C and D/C circuits, diodes, transformers, meters. Prerequisite: MATH 0950 or MATH 1104. Co-Requisite: None. Day: Fa, Sp; Eve: Sp. Lecture: 1, Lab: 5. ♦

INDT 1330 Industrial Electricity 2 cr.
This course introduces the basic concepts of electricity, electrical components and equipment, and their applications in an industrial environment. Electrical basics, including Ohm’s Law, series and parallel circuits, resistance, capacitance and inductance are covered; as well as direct and alternating electrical current. Electrical drawings and symbols, power and energy, motors, motor control, transformers, electrical distribution, and basic industrial electronics will also be covered. The application of trouble shooting is incorporated and electrical safety awareness in the workplace is reinforced. Prerequisite: MATH 0106. Co-Requisite: None. Day: Fa; Eve: Fa; Online: On demand. Lecture: 1, Lab: 3. ♦

INDT 1340 Team Concepts and Practices 3 cr.
This course focuses on the urgency of making American businesses competitive in a global economic environment. It presents an overview of total quality management (TQM) for technicians and managers in organizations of all types and sizes. Principles and processes, as well as the tools and techniques for continuous improvement, are emphasized. This course describes patterns of change in the social, economic, and political structures of the United States, and illustrates how individuals and organizations applying TQM principles can increase productivity and effectiveness. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 2, Lab: 2. ♦

INDT 1350 Commercial Wiring and Prints 2 cr.
Sizing and installation of home and commercial electrical wiring circuits in compliance with the National Electric Code, including installation of conduit, junction boxes, outlet boxes, receptacles and switches. Reading commercial electrical blueprints, conductor ampacity calculations, and sizing of overcurrent protection devices. Prerequisite: None. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 2.5. ♦

INDT 1410 Computer Integrated Manufacturing I 3 cr.
The first of two courses that apply principles of robotics and automation to Computer Aided Design (CAD). In addition to the hands-on application of CAM software to create part programs, designing parts, drawing geometry, defining tools and tool paths, setting cutting speeds and feed rates are all part of this introductory programming class. Use CAM files to design and produce CNC programs with NC code and real time graphics. Importing AutoCAD and DXF Files into the FeatureCAM software to create part programs. Designing parts, drawing geometry, defining tools and tool paths, setting cutting speeds and feed rates are all part of this introductory programming class. Use CAM files to design and produce CNC programs with NC code and real time graphics. Importing AutoCAD and DXF Files into the FeatureCAM software to create part programs. Designing parts, drawing geometry, defining tools and tool paths, setting cutting speeds and feed rates are all part of this introductory programming class. Use CAM files to design and produce

**INDT 2180  Manufacturing Processes 3 cr.**
This class provides up-to-date coverage of the processes used in modern manufacturing settings. It also provides comprehensive coverage of the concepts that are shaping the future of manufacturing. Visits to local industries, textbook assignments and classroom discussions are the methods by which this will be accomplished. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 1, Lab: 4. ♦

**INDT 2210  Process Control 4 cr.**
This introductory course covers the equipment and technology associated with the control systems found in modern chemical process and manufacturing plants. The introduction is followed by units covering valves, piping and vessels, pumps, compressors, turbines and motors, heat exchangers, cooling towers, boilers, furnaces, basic instrumentation and process diagrams. This course introduces the concept of process control and instrumentation and covers the fundamental components of a control loop. PID control and PLC’s are introduced along with the concept of distributive control systems. The function of pneumatic and electronic transmitters and transducers is explained and the function, operation, and maintenance of chemical analyzers are included. The application of trouble shooting is incorporated and safety awareness, environmental responsibility, and professionalism in the workplace are reinforced. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 4. ♦

**INDT 2250  GTAW Welding 3 cr.**
Gas Tungsten Arc welding, Carbon/Stainless Steel and Aluminum techniques on plate are introduced, demonstrated, and performed. Weld symbols and math and layout for welders are explained, demonstrated and performed. Safety emphasized throughout all aspects. Prerequisite: INDT 1260. Co-Requisite: None. Eve: Fa. Lecture: 1, Lab: 5. ♦

**INDT 2260  Pipe and Open-V Plate Welding 3 cr.**
SMAW, GMAW and GTAW techniques on Open Groove Weld in all positions on Plate and Pipe are demonstrated and performed. Weld symbols and math and layout skills for welders are explained, demonstrated and performed. Safety emphasized throughout all aspects. Prerequisite: INDT 2250. Co-Requisite: None. Eve: Sp. Lecture: 1, Lab: 5. ♦

**INDT 2280  Management & Supervision 3 cr.**
Basics in the need and means of getting things done using organizational and communication skills to direct the work of others. A study of goals, group dynamics, planning, follow-up, giving instructions, training means and methods, and industrial psychology. Prerequisite: None. Co-Requisite: None. Day: Sp Eve: Sp. Lecture: 3. ♦

**INDT 2300  Process Troubleshooting 3 cr.**
The effective troubleshooter needs to understand basic troubleshooting methods & tools, as well as how equipment and systems work. We use a systematic approach to the troubleshooting process including using problem solving tools like, Ask Why 5 Times & Cause and Effect Diagrams. This course develops industrial workers’ skills to identify, analyze and resolve process problems and abnormal situations. Prerequisite: None. Co-Requisite: None. Day: Sp. Lecture: 3. ♦

**INDT 2800  Capstone Seminar 3 cr.**
A research seminar focusing on a selected topic related to Industrial Technology. Presentations will be given using Microsoft PowerPoint. A term paper is required for a final project. Prerequisite: SPCH 1510 and ENGL 1520. Co-Requisite: None. Day: Sp; Eve: On demand; Online: On demand. Lecture: 1, Lab: 5. ♦

**LANGUAGE (LANG)**

**LANG 1010  Beginning American Sign Language I 3 cr.**
A beginning course of American Sign Language (ASL), the natural language used by Deaf people and the Deaf community. This course focuses on ASL vocabulary, including receptive and expressive skills. The students will learn the alphabet, how to introduce themselves, give personal information, count, use specified classifiers, provide directions and describe everyday situations. Characteristics of Deaf culture will also be covered. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 3.

**LANG 1020  Beginning American Sign Language II 3 cr.**
Continuation of LANG 1010. Focuses on the grammatical structure of ASL, including receptive and expressive skills. Students learn how to use additional classifiers, give and read directions, cardinal and ordinal numbers; describe other people, signs for money and time, and personal and possessive pronouns. Deaf culture and Deaf history will also be discussed. Prerequisite: LANG 1010 with "C" or better, or placement from skill test administered by ASL I.P. Coordinator. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

**LANG 1900  Fingerspelling and Numbers 3 cr.**
A course to enhance the receptive and productive fingerspelling skills. The students will learn glossing, numbers and fingerspelling skills in every day situations, as well as mathematic signs utilized in educational settings. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp; Blended: Fa, Sp. Lecture: 3.

**LANG 2010  Intermediate American Sign Language 3 cr.**
A continuation of Beginning American Sign Language (ASL) I and II; the natural language used by Deaf people and the Deaf community. This course will continue to focus
on the grammatical structure of ASL, including receptive
and expressive skills. The student will learn how to narrate
personal events and share information, discuss financial
situations, decision making, and discuss health conditions
in fluent ASL. The student will learn the linguistics of
ASL, focusing on phonology, morphology, syntax, and
semantics. Prerequisite: LANG 1020 and LANG 1900
with "C" or better. Co-Requisite: None. Day: Fa; Eve: Fa;

LANG 2100 Introduction to Interpreting 3 cr.
This course is an introduction to the principles and
techniques of interpreting between English and American
Sign Language as both the target and source languages;
sign-to-voice interpreting. Role playing, English idioms
and cognitive processing skills will be utilized. Legislation
impacting the education and legal rights of Deaf
individuals, history of interpreting, the terminology of
the field and the ethics of interpreting will be learned.
The interpreting process and the national certification of
interpreters will be discussed. Students will start memorizing
the Interpreters Code of Professional Conduct. Prerequisite:
LANG 1010 and LANG 1900 with "C" or better. Co-
Requisite: None. Day: Sp; Eve: Sp; Blended: Sp. Lecture:
2, Lab: 2.

LANG 2160 Intermediate Interpreting 3 cr.
Continuation of development and competency of the
interpreting process between English and American Sign
Language. Including interpretation of idiomatic cultural
expressions and linguistic variation. Team interpreting
will be introduced. Prerequisite: None. Co-Requisite: None.
Day: Fa; Eve: Fa. Lecture: 3.

LANG 2170 Advanced Interpreting 3 cr.
Development and demonstration of further mastery of
advanced interpreting principles and techniques. Platform
interpreting, team interpreting, and applications of the
code of ethics to interpreting situations. Prerequisite: LANG

LANG 2210 Advanced American Sign Language 3 cr.
This is the final course in the study of ASL; an intensive
study of the linguistic structure of English and ASL.
Students explore the syntactic similarities and differences
between the two languages and learn how to find
functional equivalence between the two languages. The
course focuses on student’s receptive and productive
mastery of using multiple grammatical features, narrative
and explanatory discourse, specialized and targeted
vocabulary. Principles of self-assessment of both
productive and receptive abilities demonstrated. The
course is designed to achieve fluency of the most basic
and complex grammatical features of ASL. Activities
include incorporating into sign production the necessary
adjustments for registers, emotive components, and cultural
background. Prerequisite: LANG 2010. Co-Requisite:

LANG 2400 Non-educational Interpreting 3 cr.
A study of interpreting in medical, mental health,
religious, technical employment and legal settings and
the terminology/signs unique to each. Practice and
performance of the vocabulary used in these settings.
Prerequisite: LANG 2210 and LANG 2800. Co-Requisite:

LANG 2500 Interpreting Practicum I 1 cr.
The first of two interpreting practica. Students are required
to complete a minimum of one hundred five (105) clock
hours at an assigned mentored site to develop interpreting
skills, knowledge of the interpreting profession, and the role
of the interpreter in various settings. Prerequisite: LANG
2010 and LANG 2100. Co-Requisite: LANG 2510 and

LANG 2510 Interpreting Seminar I 1 cr.
Students will attend weekly seminar meetings to review and
discuss practicum experiences at their assigned placements.
Prerequisite: LANG 2010 and LANG 2100. Co-Requisite:
LANG 2500. Day: Fa; Sp; Eve: Fa; Sp. Lecture: 1.

LANG 2520 Interpreting Practicum II 1 cr.
The second of two, progressive, interpreting practica.
Students are required to complete a minimum of one
hundred five (105) clock hours at an assigned mentored
site to develop interpreting skills, knowledge of the
interpreting profession, and the role of the interpreter in
various educational settings to include optimum hands on
training including team interpreting. Prerequisite: LANG
2500. Co-Requisite: LANG 2530 and LANG 2210. Day:

LANG 2530 Interpreting Seminar II 1 cr.
Students will attend weekly seminar meetings to review and
discuss practicum experiences at their assigned placements.
This seminar must be taken in the last semester of the
program. Prerequisite: LANG 2510. Co-Requisite: LANG

LANG 2600 Transliterating 3 cr.
A preparatory course for the Registry of Interpreters for the
Deaf Certificate of Transliteration exam. The Signing Exact
English System of manually coded English is introduced,
and conceptual accuracy is stressed for educational
interpreting. Prerequisite: None. Co-Requisite: None. Day:
Fa; Eve: Fa. Lecture: 3.

LANG 2800 Educational Interpreting 3 cr.
In-depth investigations into American Sign Language
vocabulary related to specialized educational interpreting
including but not limited to Sciences, sexual behavior
and drug use/abuse. This course is designed to increase
student’s comfort and skill level for interpreting in
educational, substance abuse treatment, and counseling
settings. Prerequisite: LANG 2100. Co-Requisite: None.
Day: Fa; Eve: Fa. Lecture: 3.
LITERATURE (LITR)

LITR 2010  Introduction to Fiction  3 cr. TM-H  
Students study the forms and techniques of fiction. Selections may include short stories or short novels. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: Fa on demand; Eve: Fa on demand; Online: Fa on demand. Lecture: 3.

LITR 2020  Introduction to Poetry  3 cr. TM-H  
Study of poetry from various periods of literature. Covers forms and techniques that poets use. Prerequisite: ENGL 1510 or ENGL 1520. Co-Requisite: None. Day: Su. Lecture: 3.

LITR 2030  Introduction to Drama  3 cr. TM-H  
Students study plays from various periods and cultures. Students will examine different dramatic forms including tragedy, comedy, historical, or others. Writing Intensive Course. Prerequisite: ENGL 1510 or ENGL 1520 or ENGL 1530. Co-Requisite: None. Day: Sp on demand; Eve: Sp on demand. Lecture: 3.

LITR 2040  World Literature I  3 cr. TM-H  
Critical study of a variety of international works of poetry, prose, and drama to the 16th-17th Century. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: Sp even yrs; Eve: Sp even yrs; Online: even yrs. Lecture: 3.

LITR 2050  World Literature II  3 cr. TM-H  
Critical study of a variety of international works of poetry, prose, and drama from the 17th century to the present. Writing intensive course. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: Sp even yrs; Eve: Sp even yrs; Online: even yrs. Lecture: 3.

LITR 2100  Survey of American Literature I  3 cr. TM-H  
Historical and critical study of American authors from colonial period to the Civil War. (Multi-skilled Communication Intensive Course) Prerequisite: ENGL 1510 or ENGL 1520 and SPCH 1510 or SPCH 2060 or permission. Co-Requisite: None. Fa: On demand; Eve: On demand; Online: On demand. Lecture: 3. TAG: OAH053.

LITR 2110  Survey of American Literature II  3 cr. TM-H  
A historical and critical study of American authors from the Civil War to the present. Communication intensive course. Prerequisite: ENGL 1510 or ENGL 1520 and SPCH 1510 or SPCH 2060 or permission. Co-Requisite: None. Day: Sp odd yrs; Eve: Sp odd yrs; Online: Sp odd yrs. Lecture: 3. TAG: OAH054.

LITR 2200  Survey of British Literature I  3 cr. TM-H  
Historical and critical study of British authors from the Old English period through the 18th century. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: All; Eve: All; Online: Fa, Sp. Lecture: 3. TAG: OAH055.

LITR 2210  Survey of British Literature II  3 cr. TM-H  
Historical and critical study of British authors from the 19th century to the present. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: On demand; Eve: On demand; Online: On demand. Lecture: 3. TAG: OAH056.

LITR 2600  Children's Literature  3 cr.  
Survey course focusing on literature for children from birth to age 12. Students study the history of children's books, child development as it relates to literature, evaluation and selection of appropriate print media, and children's responses to literature. Ten hours of field application is included for education majors. Prerequisite: ENGL 1510 or permission. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 3.

LITR 2620  Adolescent Literature  3 cr.  
Survey course focusing on literature for the adolescent in which students study the evaluation and selection of books for adolescents, the relationship between literacy and adolescent development, the history and various genres of adolescent literature, and the Internet as a research tool. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: Sp. Lecture: 3.

LITR 2700  Introduction to Shakespeare  3 cr. TM-H  
Critical study of selected Shakespeare plays from the comedies, histories, and tragedies. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: Sp on demand; Eve: Sp on demand; Online: Sp on demand. Lecture: 3.

LITR 2720  Survey of Women's Literature  3 cr.  
Study of literature by women from the 1600's to the present. The course includes readings by female authors, various documentaries, the writing of response papers that examine ideas and themes discussed in class, an oral presentation, and the writing of a critical research paper. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Fa: Sp, Fa. Lecture: 3.

MARKETING (MKTG)

MKTG 2130  Sales  3 cr.  
Basic course on planning and delivering a sales presentation. Covers preparation of a sales presentation including prospecting, approach, body, demonstration and close. Course includes a student project to plan and deliver an individual sales presentation. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 3.

MKTG 2160  Advertising  3 cr.  
The course introduces advertising theory and preparation. Topics include: media strategy, creating the advertising message, the use and selection of advertising media including newspaper, magazines, radio and television.
MATH 0950  Elementary Algebra 4 cr.
A review of the essentials of math and an introduction to algebra. Topics include the four basic operations with fractions, decimals, natural numbers, whole numbers, and integers; ratio, proportion, percent, some basic geometry topics, Metric and English conversions, scientific notation, and an introduction to solving equations and problem solving. Prerequisite: Mandatory Compass Score <65. Co-Requisite: None. Day: All; Eve: Fa, Sp. Lecture: 3, Lab: 2.

MATH 1106  Math Essentials 4 cr.
A review of the essentials of math and an introduction to algebra. Topics include the four basic operations with fractions, decimals, natural numbers, whole numbers, and integers; ratio, proportion, percent, some basic geometry topics, Metric and English conversions, scientific notation, and an introduction to solving equations and problem solving. Prerequisite: Mandatory Compass Score <65. Co-Requisite: None. Day: All; Eve: Fa, Sp. Lecture: 3, Lab: 2.

MATH 1100  Pharmacology Math 2 cr.
Review of basic mathematical principles in addition, subtraction, multiplication and division are applied to whole numbers, fractions and decimals. Principles of percentage and ratio and proportion are also reviewed. Conversions within and between the metric, apothecary and household systems of measurement are taught. Calculate IV flow rates, computing medication doses, pediatric, insulin & heparin doses. Prerequisite: MATH 0950 with "C" or better or placement. Co-Requisite: None. Day: All; Eve: All; Online: Fa, Sp. Lecture: 4.

MATH 1104  Technical Mathematics 3 cr.
For automotive and diesel technology majors. Includes a brief review of fractions, decimals, percents, and introduction to basic algebra with emphasis on evaluation of formulas and principles of ratio and proportion. Includes English and Metric systems. Selected topics from plane and solid geometry with emphasis on practical applications to measurement of length, area, and volume. A scientific hand-held calculator will be used to solve these problems. Prerequisite: MATH 0950 with "C" or better or placement. Co-Requisite: None. Day: Fa, Sp; Eve: Sp on demand. Lecture: 3.

MATH 2100  Laboratory Mathematics 2 cr.
The course includes the study and usage of scientific notation, exponents, logarithms, metric system, pH and statistical analysis. The concepts of normality, molarity, molality and percentage solutions are studied in relation to preparation of solutions. Calculations pertinent to particular areas of the clinical laboratory are addressed. Prerequisite: MATH 1110 and completion of 3 previous MLT semesters. Co-Requisite: None. Day: Fa, Su. Lecture: 2.

MATH 2110  Principles of Statistics 3 cr. TM-M
Introduction to the vocabulary, concepts, formulas, and presentation of statistics as applied to business and the sciences. This course focuses on measures of central tendencies and dispersion; probability; sampling practices and theory, and probability distributions with emphasis on binomial and normal distributions. Calculator usage will be incorporated into this course. Prerequisite: MATH 1110 with "C" or better. Co-Requisite: None. Day: Fa, Sp. Lecture: 3.

MATH 2120  Trigonometry 3 cr. TM-M
Topics from trigonometry and analytical geometry including identities will be discussed. Application of mathematical skills
to develop mathematical models and problem solving will be emphasized. Prerequisite: MATH 1110 with "C" or better or placement. Co-Requisite: None. Day: All; Eve: Fa. Lecture: 3.

MATH 2130  College Algebra            4 cr. TM-M

Application-based course on functions and graphs, systems of linear equations, 3x3 determinants, factoring, quadratic equations and inequalities, exponents and radicals, and logarithms. Prerequisite: MATH 1110 with "C" or better or placement. Co-Requisite: None. Day: All; Eve: All. Lecture: 4.

MATH 2150  Precalculus                5 cr. TM-M

This course is intended for the student needing a solid mathematical background in order to take the Analytical Geometry and Calculus sequence. Topics to be covered include: functions, graphs of functions including polynomial, rational, all powers, as well as logarithmic and exponential functions, complex numbers, and systems of equations and inequalities, operations on matrices, trigonometric definitions, right and nonright angle trigonometry, trigonometric identities, law of sines and cosines, graphing trigonometric and inverse trigonometric functions, vectors, conics, and polar coordinates. Prerequisite: MATH 1110 with "C" or better or placement. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 5.

MATH 2173  Survey of Math I           4 cr. TM-M

This course is the first of a series of two courses designed for elementary education majors. Topics to be covered are: Mathematical reasoning and problem solving, sets and whole number operations and properties, estimation and computation, number theory, integer operations and properties, rational number operations and properties, and ratio and proportion. Prerequisite: MATH 1110 with "C" or better. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 4.

MATH 2175  Survey of Math II          3 cr. TM-M

Continuation of MATH 2173. Includes topics in algebra, geometry, statistics, and probability as they apply to an elementary education. Prerequisite: MATH 2173 with "C" or better. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3.

MATH 2250  Elementary Linear Algebra  3 cr. TM-M

Solutions to linear systems, matrices and matrix algebra, determinants, n-dimensional vector spaces and subspaces, bases and dimension, linear mappings, matrices of linear mappings, eigenvalues and eigenvectors, diagonalization. Emphasis is on techniques and computational skills. Prerequisite: MATH 2264 with "C" or better. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3. TAG: OMT019.

MATH 2260  Introduction to Calculus   3 cr. TM-M

Math series is for general business, education, and technology majors. Survey of basic concepts of calculus. For student who want an introduction to calculus but do not need depth. (Not open for credit to students who have taken the MATH 2263 series) Prerequisite: MATH 2130 or MATH 2150 with "C" or better. Co-Requisite: None. Day: Sp, Su. Lecture: 3.

MATH 2263  Analytical Geometry and Calculus I   4 cr. TM-M

For engineering and science majors. Introduction to the Calculus sequence with emphasis on techniques and their applications. Topics covered: functions and limits, differentiations and integration, analytic geometry, vectors, transcendental functions, multiple integrals, and infinite series. Prerequisite: MATH 2120 and MATH 2130 or MATH 2150 with "C" or better. Co-Requisite: None. Day: Fa, Sp; Eve: On demand. Lecture: 4.

MATH 2264  Analytical Geometry and Calculus II  4 cr. TM-M

This series is for engineering and science majors. Basic introduction to calculus with emphasis on techniques and their applications. Topics covered: functions and limits, differentiation and integration, analytic geometry, vectors, transcendental functions, multiple integrals, conics and infinite series. Prerequisite: MATH 2263 with "C" or better. Co-Requisite: None. Day: Sp on demand. Lecture: 4.

MATH 2265  Analytical Geometry and Calculus III 4 cr. TM-M

This series is for engineering and science majors. Basic introduction to calculus with emphasis on techniques and their applications. Topics covered: functions and limits, differentiation and integration, analytic geometry, vectors, transcendental functions, multiple integrals and infinite series. Prerequisite: MATH 2264 with "C" or better. Co-Requisite: None. Day: Sp on demand. Lecture: 4. TAG: OMT018.

MATH 2270  Differential Equations        3 cr. TM-M

This course is for engineering and science majors. Basic introduction to differential equations with emphasis on techniques and their applications. Prerequisite: MATH 2265 with "C" or better. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3. TAG: OMT020.

MECHANICAL ENGINEERING TECHNOLOGY (MECH)

MECH 1000  Internship                    1-6 cr.

Provides the opportunity to put classroom knowledge to practical use. Student's position is selected and/or approved by the college; student is evaluated periodically by the organization and is supervised by a college instructor/coordinator. Prerequisite: Permission. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: TBD, Lab: TBD.

MECH 1100  Engineering Materials        4 cr.

Introduces engineering materials, including ferrous and
nonferrous materials, plastics, and ceramics; various material property tests such as tension, compression, shear, elongation, and impact; basic metallurgy; various plastic processing techniques. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3, Lab: 3. TAG: OET013.

MECH 2060  Statistical Quality Control  2 cr.
Introduces techniques to improve quality and reduce production costs: variable (X bar and R) and attributes (p, np, c, u); charting techniques using data from a variety of production cases; use of a variety of statistical analysis techniques: including frequency, distribution, measures of central tendency, and measure of dispersion. Prerequisite: MATH 0950. Co-Requisite: None. Day: Fa; Online: Sp. Lecture: 1, Lab: 3. ♦

MECH 2150  Instrumentation I  4 cr.
Physical properties of matter and energy, the common types of measurement used in industry, instrument communication signals, common types of instruments used in industry, elements of control systems, thermocouples and RTD’s. Types of Level, Flow, Pressure, and Weight sensors used in industry; use of transmitters and recorders in control systems. Prerequisite: None. Co-Requisite: None. Day: Fa. Lecture: 3, Lab: 2. ♦

MECH 2170  Instrumentation II  4 cr.
Control loops, controllers, the types of control modes, controller tuning, and final control elements. All aspects of selecting, sizing, maintenance and repair of control valves and actuators and their proper use in different types of control systems, use a laptop to calibrate instruments and construct and tune control loops. Prerequisite: MECH 2150. Co-Requisite: None. Day: Sp. Lecture: 3, Lab: 2. ♦

MECH 2230  Hydraulics & Pneumatics  3 cr.
A comprehensive introduction to fluid power including both hydraulic and pneumatic. Course includes underlying theoretical concepts and mathematical equations; construction, selection, and function of components; operation and design of basic circuits; reading basic schematics. Prerequisite: MATH 0950. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 3. ♦

MECH 2300  Thermodynamics  3 cr.
Introduction to the fundamental concepts of energy transformation and transport. Covers the first and second laws of thermodynamics; properties of liquids and gases. Prerequisite: MATH 2120, PHYS 2010 and PHYS 201L. Eve: On demand. Lecture: 3.

MECH 2800  Mechanical Engineering Capstone Seminar  3 cr.
In depth study/project of a student chosen topic pertinent to the field of mechanical engineering technology. Participants will study the topic in a structured format with a specific outcome. The project must be supported with documented research, a written project proposal, estimate, a prototype product, PowerPoint presentation, and a physical display. Prerequisite: ENGL 1510, SPCH 2060, MECH 1100 and ENGR 2210. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3. ♦

MEDICAL LABORATORY TECHNOLOGY (MMLT)

MMLT 1010  MLT Orientation  2 cr.
This course presents an overview of the role of the MLT which includes ethics, employment areas, job opportunities, and some basic laboratory skills. The collection of blood specimens is taught. This course also includes a self-study course in medical terminology. Prerequisite: MLT Program Admission. Co-Requisite: None. Day: Fa. Lecture: 1, Lab: 3. TAG: OHL008. ♦

MMLT 1210  Urinalysis and Body Fluid Analysis  2 cr.
Quantitative and qualitative procedures for routine chemical, physical and microscopic examination of urine. Includes theory and application of renal function. Also included are the analyses of cerebral spinal fluid, seminal fluid, gastric secretions and feces. Prerequisite: MLT Program Admission. Co-Requisite: None. Day: Fa. Lecture: 1, Lab: 3. TAG: OHL010. ♦

MMLT 1310  Hematology I  3 cr.
Course which studies the origin, formation and differentiation of blood cells. Erythrocyte, leukocyte, and platelet pathology as well as the mechanism of hemostasis, vascular integrity and platelet function in relation to disease states is discussed. Techniques in counting red cells, white cells, and platelets are included, as well as red blood cell indices. Clinical application of coagulation includes the study of various procedures such as prothrombin time, activated partial thromboplastin time, thrombin time, fibrinogen level, bleeding time and fibrinogen degradation products. Prerequisite: MLT Program Admission. Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 3. TAG: OHL009. ♦

MMLT 1320  Hematology II  2 cr.
Course which studies the various types of anemias, leukemias, lymphomas, proliferative disorders and storage syndromes. Techniques include reticulocyte counts, ESRs, normal differentials and abnormal differentials. Prerequisite: MMLT 1310. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 3. ♦

MMLT 1410  Immunology and Serology  3 cr.
A study of the formation, characteristics and reactions of antigens and antibodies. The serological applications of these principles are investigated in theory and application in agglutination, flocculation, and precipitation reactions. Also includes principles of immunodiffusion and the study of complement. Prerequisite: MMLT 1010. Co-Requisite: None. Day: Su. Lecture: 2, Lab: 2. ♦

MMLT 1420  Immunohematology  3 cr.
Course which includes the study of blood group
systems, phenotyping, atypical antibodies and cases of crossmatching incompatibilities. Time is spent studying investigations of transfusion reactions, the use of blood components in therapy, fetal-maternal incompatibilities and other immunological procedures. ABO and Rh typing, antibody screening and crossmatching of patient and donor blood are some of the procedures practiced. Topics of safety in immunohematology laboratory are addressed. Prerequisite: MMLT 1010. Co-Requisite: None. Day: Su. Lecture: 2, Lab: 3.

MMLT 1510 Diagnostic Microbiology 5 cr.
Course which provides the study of bacteriology, parasitology, mycology and virology. Procedures include the cultivation and identification of organisms via the use of primary and secondary culture techniques, aerobic and anaerobic techniques, biochemical techniques, serological techniques and microscopic examination. Antibiotic sensitivity testing, blood cultures, concentration of mycobacteria and the preparation of culture media and stains are also studied. Parasitology, host parasite relationships, as well as the various types of fungi, are included in the course. Prerequisite: MMLT 1010. Co-Requisite: None. Day: Sp. Lecture: 3, Lab: 4.

MMLT 1610 Clinical Chemistry 4 cr.
Course which provides the student with an introduction to manual and analytical techniques used in a clinical laboratory. Includes information about the procedures used in clinical chemistry in relation to principle, reagents, specimens, controls, procedures, instruments, normal and abnormal test results and correlation with clinical conditions. Topics of safety in the clinical chemistry laboratory are addressed. Prerequisite: MMLT 1010, CHEM 1220 and CHEM 122L Co-Requisite: MMLT 2210. Day: Fa. Lecture: 3, Lab: 2.

MMLT 2210 Instrumentation and Laboratory Skills 3 cr.
Provides an integration of the theory, application, and laboratory skills learned during the first three semesters of the program in an on-campus clinical laboratory. Areas of emphasis include: instrumentation, quality control, time management, and laboratory information systems. Designed to increase proficiency in laboratory techniques. Student competency will be assessed by comparison with known results in coagulation, hematology, immunohematology, microbiology, serology, and urinalysis. Prerequisite: Completion of the first 3 semesters of MLT Program. Co-Requisite: MMLT 1610. Day: Fa. Lecture: 1, Lab: 6.

MMLT 2310 MLT Seminar 1 cr.
Student participation in discussions about their progress and challenges in the Directed Practice. Projects include preparation of a patient case study report and a research project describing medical laboratory practice in a non-US country. Guest lecturers, technical workshops, field trips and discussion of timely topics in the field are utilized. Students learn the importance of continuing education in the medical laboratory field. Prerequisite: Completion of the first 4 semesters of MLT Program. Co-Requisite: None. Day: Sp. Lecture: 1.

MMLT 2410 MLT Directed Practice 6 cr.
One semester of an off-campus directed practice where the student applies the principles and practice skills learned in the first four semesters of the program in an actual clinical laboratory. Students progress through 3 levels: observation of laboratory procedures, practice of laboratory procedures with maximum supervision, and practice of laboratory procedures with minimal supervision. Competency in laboratory procedures is assessed by comparison with known results. Prerequisite: Completion of the first 4 semesters of MLT Program. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 32.

MUSIC (MUSC)

MUSC 1010 Fundamentals of Music 3 cr.
Fundamentals of Music is a basic introduction to the mechanics and structure of the components of the Western harmonic system. The course is designed to give the non-music major a background in the perception and reading of musical symbols. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp on demand. Lecture: 3.

MUSC 1200 Music Appreciation 3 cr. TM-H
Development of listening skills for understanding elements of musical style in a historical perspective and the significance of music as Fine Art. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp; Online: Fa, Sp. Lecture: 3.

MUSC 1250 Survey of American Music 3 cr. TM-H
Survey of Americans musical heritage, including recognition of the different evolutions in music, such as operetta, jazz, blues, and country. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3.

MUSC 1400 Beginning Piano 2 cr.
Group instruction on piano at the beginner’s level during two-75 minute classes per week plus practice time. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa on demand. Lecture: 1.5, Lab: 1.

MUSC 1500 Chorus 1 cr.
This course is designed to be a performance ensemble to develop choral singing skills, and to perform literature from the Renaissance to the 20th Century. Open to college and community at large. Ability to read music helpful but not required. At least three rehearsal hours per week will be required. Course may be repeated for additional credit. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand. Lab: 3.

MUSC 1600 Instrumental Ensemble 1 cr.
The student must audition and be proficient on an
 COURSE CATALOG

NURSING EDUCATION, ASSOCIATE DEGREE (NADN)

NADN 2030   Discovering ADN for LPN 4 cr.
This course is designed to strengthen the student’s ability to apply the nursing process to common and altered functional health patterns, in order to prevent illness and maintain or regain health. This course cultivates the transitioning LPN nursing student in developing assessment, nursing and communication skills while processing medical surgical nursing information. Prerequisite: LPN Program graduate. Co-Requisite: NADN 2050. Day: Sp. Lecture: 4, Lab: 0.5. ♦

NADN 2050   Role Transition to ADN 2 cr.
Designed to enhance the transition of Practical Nursing Education program graduates to the Associate Degree Nursing Program. Focuses on the transition from Licensed Practical Nursing to Associate Degree Nursing: introduces program philosophy, functional health patterns, nursing process, and clinical skills. Prerequisite: LPN Program graduate. Co-Requisite: NADN 2030, PSYC 2700 and ENGL 1510. Day: Sp, Su; Online: Sp, Su. Lecture: 2. ♦

NADN 2100   Introduction to Nursing 1 cr.
This theory course is a one hour course to introduce students to concepts concerning the practice of nursing. The learning activities are designed around the interaction of the person, the environment, and society in the changing health care system. This course will explore nursing education and diverse nursing roles, roles and responsibilities of health team members, the political process and its effects on nursing practice, financing of healthcare, and ethical and legal practice parameters. Prerequisite: Admission ADN Program. Co-Requisite: NADN 2110, BIOL 2310, BIOL 231L, ENGL 1510 and PSYC 2700. Day: Fa. Lecture: 1.

NADN 2110   Discovering Nursing Process 6 cr.
This course emphasizes assessment of functional health patterns in the use of the nursing process. This course includes: safety, health promotion, nursing skills, medication administration and beginning medical surgical nursing content. It is designed to cultivate a safe Level 1 nursing student in developing assessment, nursing and communication skills while processing medical surgical nursing information in the college lab and later in the clinical setting. Prerequisite: Admission ADN Program. Co-Requisite: BIOL 2310, BIOL 231L, NADN 2100, ENGL 1510 and PSYC 2700. Day: Fa. Lecture: 4, Lab: 6. ♦

NADN 2120   Applying NP Across the Lifespan 7 cr.
This course is a continuation of Discovering Nursing Process and is designed to strengthen the student’s ability to apply the nursing process to common and altered functional health patterns, in order to prevent illness and maintain or regain health. This course is designed to cultivate a safe Level 1 nursing student in developing assessment, nursing and communication skills while processing medical surgical nursing information in acute care and community settings. The student role as a beginning provider of care, manager of care and member of the nursing profession will be expanded as knowledge and value clarification increases. Prerequisite: NADN 2100, NADN 2110, BIOL 2310, BIOL 231L, PSYC 2700 and ENGL 1510. Co-Requisite: NADN 2150, BIOL 2320, BIOL 232L and ENGL 1520. Day: Sp. Lecture: 3, Lab: 1. Clinical: 11. ♦

NADN 2150   Nursing Process in Pharmacology 3 cr.
This theory course is an introduction to the use of pharmacological interventions in relationship to functional health patterns. Identified classes of drugs will be discussed. The nurses’ role in drug therapy will be explored. The nursing process will be reviewed as a means for assessing, diagnosing, intervening, and evaluating clients’ responses to drug administration. Individual responses to drug therapy and variables which affect responses will also be explored. Prerequisite: NADN 2100, NADN 2110, BIOL 2310, PSYC 2700 and ENGL 1510. Co-Requisite: NADN 2120, BIOL 2320, BIOL 232L and ENGL 1520. Day: Sp. Lecture: 3.

NADN 2240   Applying NP Patterns Emotional Distress 3 cr.
Mental health concepts and selected theoretical frameworks are used to understand adaptive and maladaptive coping behaviors in response to alterations in psychological functioning. This course explores psychiatric illnesses and mental health concepts consistent with the roles of the professional nurse. Emphasis is on the nursing process, DSM-IV criteria, therapeutic communication, therapeutic relationships, self awareness, treatment modalities, community resources, and inter-related client needs in a variety of health care settings. Current relevant research and the sociocultural, legal and ethical implications of providing nursing care to clients experiencing patterns of emotional distress is discussed. Prerequisite: NADN 2120, NADN 2150, BIOL 2320 and ENGL 1520. Co-Requisite: NADN 2320, BIOL 2550, ENGL 1520 and PSYC 2700. Day: Su. Lecture: 3.
NADN 2320  Applying NP Maternal/Newborn Clients  4 cr.
This nursing course will provide the student with the knowledge and skills needed in the care of women from the perinatal period through postpartum, including newborn care. Utilizing functional health patterns, the student will apply the nursing process in family centered care addressing physiological and psychosocial adaptation of the family during normal as well as complex pregnancies and newborn life. Women's health throughout the lifespan will be discussed as well as legal and ethical dimensions specific to maternal-newborn family. Prerequisite: NADN 2120, NADN 2150, BIOL 2320, BIOL 232L and ENGL 1520. Co-Requisite: NADN 2240 and BIOL 2550. Day: Su. Lecture: 2.5, Lab: 1. Clinical: 3.5.

NADN 2330  Applying NP Pediatric Clients  4 cr.
This course is designed to assist the Associate Degree Nursing student in the comprehension of pathophysiological and psychosocial concepts as they relate to pediatric clients experiencing complex alterations in functional health patterns. Emphasis will be placed upon assisting clients and their support persons to attain, maintain and regain health in advanced technological settings. The student will utilize the nursing process and evidence-based practice to enhance and refine their clinical decision-making skills. Prerequisite: NADN 2350, BIOL 2010, BIOL 201L and SPCH 2060. Co-Requisite: NADN 2400 and MATH 2110. Day: Sp. Lecture: 2.5, Lab: 1. Clinical: 3.5.

NADN 2350  Applying NP Complex Clients  8 cr.
This course is designed to assist the Associate Degree Nursing student in the comprehension of pathophysiological and psychosocial concepts as they relate to clients experiencing complex alterations in functional health patterns. Emphasis will be placed upon assisting clients and their support persons to attain, maintain and regain health in advanced technological settings. The student will utilize the nursing process and evidence-based practice to enhance and refine their clinical decision-making skills. Prerequisite: NADN 2320, NADN 2240 and BIOL 2250. Co-Requisite: BIOL 2010, BIOL 201L and SPCH 2060. Day: Fa. Lecture: 3, Lab: 1. Clinical: 14.

NADN 2400  Nursing Care of Groups of Clients  5 cr.
This course is designed to assist the Associate Degree Nursing student in developing a theoretical foundation for the professional practice of nursing and implementing the role of “member of the profession” in clinical practice. The course focuses on discovering, discussing and writing about issues and trends which affect nursing practice. The scope of nursing practice, laws which govern nursing, ethical considerations, and managerial concepts will be explored. Prerequisite: NADN 2350, NADN 2330, BIOL 2010 and SPCH 2060. Co-Requisite: MATH 2110. Day: Sp. Lecture: 2, Lab: 9.

NURSING EDUCATION, PRACTICAL (NPNT)

NPNT 1410  Nursing Fundamentals I  6 cr.
This course explores the use of basic nursing skills combined with the nursing process to develop safe entry level nursing students. This course encompasses, asepsis, hygiene, medication administration, while introducing basic medical—surgical nursing skills in the lab and later in the clinical setting. Prerequisite: NPNT 1610. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3, Lab: 3. Clinical: 6.

NPNT 1420  Nursing Fundamentals II  5 cr.
This course emphasizes more complex nursing skills with continued use of the nursing process to develop competent and safe nursing students. Complex Skills to be performed included skills related to the respiratory, perioperative, circulatory, endocrine, integumentary, reproductive and neurological systems, as well as the skills and principles of IV therapy in the state of Ohio. Prerequisite: NPNT 1410. Co-Requisite: NPNT 1910. Day: Sp; Eve: Sp. Lecture: 2, Lab: 1.5. Clinical: 7.5.

NPNT 1510  Practical Nursing Trends & Ethics  2 cr.
Offered to provide an understanding of past, current, and future issues which impact nursing, end of life issues and various capstone topics. Included are: historical perspectives, legal & ethical issues, roles and responsibilities of the practical nurse. The role of the Ohio Board of Nursing will be explored. The student will be assisted in formulating a letter of application and a resume, applying for licensure, and preparing for the NCLEX-PN examination using the computer lab. Prerequisite: NPNT 1410. Co-Requisite: None. Day: Sp; Eve: Su. Lecture: 2.

NPNT 1560  Nutrition and Diet Therapy  2 cr.
This course presents an introduction to nutrition and the study of diet therapy. Information on the understanding of nutrients and their functions in the body will be presented. Diet is presented as treatment and prevention in conjunction with other therapies. Prerequisite: Practical Nursing program admission. Co-Requisite: None. Day: Su; Eve: Fa. Lecture: 2.

NPNT 1610  Introduction to Practical Nursing  2 cr.
This course will introduce the student to Practical Nursing beginning with growth and developmental tasks of adulthood and aging. Also covered will be diabetes mellitus, perioperative nursing, pain, fluid & electrolytes, IV therapy, shock, and acid-base balance. Prerequisite: Practical Nursing program admission. Co-Requisite: None. Day: Su; Eve: Fa. Lecture: 2.

NPNT 1620  Practical Nursing I  3 cr.
This course continues with nursing care of adults with various needs. Includes nursing care, assessment and teaching for lymphatic and hemopoietic, gastrointestinal, musculoskeletal, endocrine, renal, and reproductive systems. Prerequisite: NPNT 1610. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 3.
NPNT 1630  Practical Nursing II  3 cr.
This course is the third in a series which develops the art and science of nursing care of adults. It includes nursing care of adults with problems of Cardiovascular, Respiratory, Neurological, Immunity, Special Senses, & Integumentary systems. Prerequisite: NPNT 1620. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 3.

NPNT 1710  Pharmacology  4 cr.
This course is a comprehensive study of drugs; including pharmacology math, drug classifications, pharmaceutical preparations, site of drug actions and physiological responses of the body to drugs. Responsibilities of the practical nurse in relation to the care of the client receiving the medication will be stressed. Prerequisite: NPNT 1410 and MATH 1100. Co-Requisite: None. Day: Fa; Eve: Su. Lecture: 4. ♦

NPNT 1910  Maternal Child Health  5 cr.
Study of the maternity cycle including the common deviations from the normal obstetrical course and the sick child, including common deviations from normal for each age group. Prerequisite: NPNT 1410 and NPNT 1560. Co-Requisite: NPNT 1420. Day: Sp; Eve: Sp. Lecture: 3, Clinical: 7. ♦

OFFICE ADMINISTRATIVE SERVICES TECHNOLOGY (OAST)

OAST 1110  Word Essentials  1 cr.
Word Essentials is a graduated instruction approach that moves students from early modeling instruction through project-based problems similar to situations they will encounter in the workplace, and requires students to use their thinking and problem-solving skills. Prerequisite: None. Co-Requisite: None. Online: Fa, Sp. Lab: 2.

OAST 1200  Voice Recognition  2 cr.
Focuses on mastery of voice recognition skills including: user profile files, building vocabulary files, dictating documents, editing and formatting, correcting recognition errors, and cursor control. Voice recognition skills will be used with a popular software package. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: On demand. Lecture: 1, Lab: 2. ♦

OAST 1300  Records Management  3 cr.

OAST 1510  Keyboarding I  3 cr.
Designed for beginning typing students at the college level. Students must have previous keyboarding skills. Emphasis on developing speed and accuracy in timed writings.

Students will format various documents including emails, letters, memos, tables, and reports. Prerequisite: Pre-Keyboarding Placement. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp. Lecture: 2, Lab: 2. ♦

OAST 1520  Keyboarding II  3 cr.
Continuation of OAST 1510 Keyboarding I. Continued emphasis on developing speed and accuracy in timed writings. In basket projects, previewing correspondence, itineraries, agendas, manuals, multipage documents, memo reports, and advanced tables. Prerequisite: OAST 1510. Co-Requisite: None. Day: Sp; Eve: Fa, Sp. Lecture: 2, Lab: 2. ♦

OAST 1810  Business Editing and Proofreading  2 cr.
Business-related exercises to improve proofreading and editing skills for business or personal use. Topics covered include grammar, punctuation, format, sentence construction, and editing for content, conciseness and clarity. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 1, Lab: 2. ♦

OAST 1880  Practicum Orientation  1 cr.
Practicum orientation is designed to provide an overview of office procedures, principles and policies utilized in physicians' offices. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp. Lecture: 1.

OAST 2210  Microsoft Word  3 cr.
Use Microsoft Word to create documents, select and edit text, format characters, use AutoCorrect, move and copy text, find and replace, printing and page formatting, page numbers, headers and footers, footnotes and endnotes. Prerequisite: None. Co-Requisite: OAST 1510. Day: Fa; Eve: Sp. Lecture: 2, Lab: 2. ♦

OAST 2220  Microsoft Excel  3 cr.
Use Microsoft Excel to create and enhance simple worksheets, copy data, create named ranges, change fonts, patterns, colors, and formats. Create and use formulas and functions, both basic and advanced. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 2, Lab: 2. ♦

OAST 2230  Microsoft Access  3 cr.
Introduces Access databases, adding and editing data, using AutoCorrect, copy and paste, filters and queries, creating forms and reports, and creating relationships. Students will design and build a relational database. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2, Lab: 2. ♦

OAST 2330  Medical Office Procedures  2 cr.
Comprehensive basic knowledge in medical office procedures. Topics include the medical environment, staff, ethics, and law, interacting with patients, telecommunications, scheduling appointments, computers and information processing, and computers and financial management. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa odd yrs. Lecture: 2. ♦
OAST 2490  Desktop Publishing  3 cr.

OAST 2520  Workplace Technology  2 cr.
Designed for students to develop skills necessary to use various workplace technologies. Upon completion, students should be able to demonstrate proficiency using a scanner, fax, digital camera, laptop, video conferencing, software, telephone/voice mail, smartphone, iPod, etc. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 1, Lab: 2. ♦

OAST 2550  Windows Concepts  3 cr.
The course provides an in-depth study of a graphical user interface (GUI) operating system, Windows. Topics covered will include Introduction to Windows; Managing Files and Folders; Customizing File and Folder Management; Securing the Computer; Control Panel; Backing Up and Restoring Your Files, Creating DVD Videos, Working with Windows Media. Outlook topics include: composing, sending, responding to email messages, schedule meetings and appointments, maintain calendars, and customize tools. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 2, Lab: 2. ♦

OAST 2610  Medical Transcription  3 cr.
Transcription of authentic physician-dictated reports organized by systems. Emphasis on development of accuracy, speed, and medical knowledge for transcription of chart notes, consultations, history and physical exams, emergency room reports, and discharge summary. Review of grammar, punctuation, and techniques of editing and proofreading. The efficient use of reference materials and resources is included in this course. Prerequisite: BIOL 1330. Co-Requisite: BIOL 1340. Day: Sp; Eve: Fa. Lecture: 2, Lab: 2. ♦

OAST 2670  Office Procedures  3 cr.
Developed to give a basic knowledge in general office procedures in the electronic office. Topics include: virtual office, business ethics, telephone etiquette, travel arrangements, planning meetings, and mail responsibilities. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 2. ♦

OAST 2890  Practicum/Seminar I  1.5 cr.
Practicum provides placement of an individual into an office to observe and participate in its operation. Students will spend 105 hours per semester with respective office. Students will participate in reviews and assessments of work experience as related to the practicum during Seminar forums/chats. Prerequisite: OAST 1880. Co-Requisite: None. Day: Fa, Sp. Lecture: 0.5, Lab: 7. ♦

OAST 2891  Practicum/Seminar II  1.5 cr.
A second practicum provides placement of an individual into an office to observe and participate in its operation. Students will spend 105 hours per semester with respective office. Students will participate in reviews and assessments of work experience as related to the practicum during Seminar forums/chats. Prerequisite: OAST 2890. Co-Requisite: None. Day: Fa, Sp. Lecture: 0.5, Lab: 7. ♦

OAST 2892  Practicum/Seminar III  1.5 cr.
A third practicum provides placement of an individual into an office to observe and participate in its operation. Students will spend 105 hours per semester with respective office. Students will participate in reviews and assessments of work experience as related to the practicum during Seminar forums/chats. Prerequisite: OAST 2891. Co-Requisite: None. Day: Fa, Sp. Lecture: 0.5, Lab: 7. ♦

OAST 2910  Microsoft PowerPoint  3 cr.
Students learn design concepts and computer skills needed to develop effective presentations for meetings, seminars, lectures, or business meetings. Text charts, number charts, and picture charts will be incorporated in order to create slide show presentations that communicate a multitude of business concepts. Design elements will include SmartArt, WordArt, ClipArt as well as sound and animation. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp even yrs. Lecture: 2, Lab: 2. ♦

OAST 2960  Capstone Seminar  2 cr.

PERSONAL DEVELOPMENT (PERS)

PERS 0250  Essential Keyboarding Skills  2 cr.
A course designed for the person who has limited knowledge of the computer and keyboard. The course will include beginning computer skills and function of basic computer parts. The course will develop basic keyboarding skills for alphabetic keys, symbols, and numeric keypad. Basic formatting features will include margins, spacing, and text alignment. Students will learn to format letters, memos, and reports. This course is not a substitute for OAST 1510. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp. Lecture: 2. ♦

PERS 1001  Freshman Experience I  1 cr.
Designed to help new Washington State Community College students in the adjustment to the campus in particular and collegiate life in general. This course is also designed to assist any students facing obstacles in
their college career. Students will examine the college experience and ways to become a more informed and prepared student. Beneficial to both transfer and technical students, this course will focus on motivation and attitude, campus resources, effective personal management skills, and various study skills. Prerequisite: None (highly recommended for all new students). Co-Requisite: ENGL 0800, ENGL 0900 and/or MATH 0106. Day: All; Eve: All; Online: All. Lecture: 1.

**PERS 1002 Freshman Experience II** 1 cr.
Designed for second semester students to follow up on the skills learned in PERS 1001, Freshman Experience I. Students will apply the skills learned in the first half of the course. Most class work and some assignments will be completed in study groups consisting of students with similar interests to develop a bond and interdependence that will see the students through future coursework. The major emphasis on this course will be on interdependence; personal responsibility; and self and time management; and lifelong learning. Prerequisite: PERS 1001. Co-Requisite: ENGL 0800, ENGL 0900 and/or MATH 0106. Day: All; Eve: All; Online: All. Lecture: 1.

**PERS 1060 Personal Career Development** 3 cr.
Prepares students for the world of work and future career plans. Students develop a career plan, practice job search skills and resume writing, complete job applications, learn interview strategies, and job market research. Covers global work issues, workplace diversity, personal budgeting, and continuing education opportunities. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 1.

**PERS 1080 Financial Literacy** 1 cr.
Introduces concepts of financial responsibility, managing personal income, savings, debt, and charitable giving. Explores a broad spectrum of money management and financial planning options for use in protecting and growing one's assets. Prerequisite: None. Co-Requisite: None. On demand. Lecture: 1.

**PERS 1200 21st Century Workplace Skills** 3 cr.
An introduction to basic skills and knowledge required for the 21st Century workplace. Topics include communication basics, interpersonal skills, teamwork, problem solving, ethics and personal responsibility, leadership skills, dealing with change, and planning for professional development. The course includes a capstone presentation that requires teamwork and application of the lessons learned in each module. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand; Online: On demand. Lecture: 3.

**PERS 1300 Learning to Learn** 2 cr.
Designed to help students develop appropriate learning and study skills and personal management skills.

Students will complete workbook and interactive Internet assignments to create a portfolio of course work on: time management, goal setting, note taking, test taking, memory techniques, learning styles, and orientation to the library. Prerequisite: None. Co-Requisite: None. Day: On demand. Lecture: 2.

**PERS 1500 Online Success** 1 cr.
A course designed to orient students to the online learning environment. It also covers the personal management skills and study skills needed to be successful in e-learning courses. Students will use the Sakai course management system for online attendance, class participation, and virtual communication. In addition, students will learn about campus resources, time management, memory techniques, test-taking strategies, and research methods and documentation. Prerequisite: Basic Computer Skills. Co-Requisite: None. Online: All. Lecture: 1.

**PERS 1750 Efficient Reading** 1 cr.
Designed to help the good reader become a fast, efficient reader. Covers the reading process, reading habits, reading for a purpose, retention and recall, and flexible reading techniques. Students will do daily reading drills with comprehension checks. Prerequisite: ENGL 0800 with "C" or better or Compass Score. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 1.

**PHILOSOPHY (PHIL)**

**PHIL 1010 Introduction to Philosophy** 3 cr. TM-H
This course represents humanity's attempts to understand the nature of the universe and the meaning and purpose of life. The class is divided into five topics; reasoning; epistemology; metaphysics; ethics; and aesthetics. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 3. TAG: OAH045.

**PHIL 1200 Principles of Reasoning** 3 cr. TM-H
Basic concepts of logic and techniques for judging the validity of arguments. Topics include systems for symbolizing arguments and deriving conclusions from premises, formal and informal fallacies of reasoning, classical and contemporary theories of deduction - the syllogism and the enthymeme - as well as induction - generalization and hypothesis testing. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp; Online: On demand. Lecture: 3.

**PHIL 1300 Introduction to Ethics** 3 cr. TM-H
Discussion of classic and modern philosophical views of human values, ideals, and morality. Provides some introductory problems, concepts, and results of ethics; includes selected philosophers of past and present. Lecture, reading and discussion. Prerequisite: ENGL 0900 or
PHYSICAL THERAPIST ASSISTANT TECHNOLOGY (PTAT)

PTAT 1010  Introduction to Physical Therapy  2 cr.
This course offers an introduction to the definition, history, and development of the physical therapy profession. Students learn the role of the physical therapist assistant, the laws, regulations, and policies of the American Physical Therapy Association, current issues, and special topics in the profession including pediatric, neurologic, orthopedic, cardiopulmonary, and geriatric physical therapy practice. Prerequisite: Acceptance into PTA Program. Co-Requisite: None. Day: Fa. Lecture: 2.

PTAT 1550  Basic Exercise Physiology  3 cr.
This course covers all areas of basic exercise physiology. There is an emphasis on both cardiovascular and pulmonary exercise physiology as the basis of safe and effective exercise prescription in normal individuals, Pulmonary, cardiac and special needs patients. This course is part of the progression for the ACSM’s Group Exercise Leader or NSCA-Certified Personal Trainer. Prerequisite: BIOL 1310 and BIOL 131L or BIOL 2310 and BIOL 231L. Co-Requisite: None. Day: Sp. Lecture: 3. TAG: OAH046.

PTAT 2210  Physical Therapy Procedures  4 cr.
Students will be exposed to basic theory and physiology of heat, cold, ultrasound, electrical stimulation, hydrotherapy, traction, and compression, light, and massage. The opportunity for development of skills in application of these modalities will be offered to students in the laboratory setting. Prerequisite: PTAT 1010. Co-Requisite: PTAT 2400. Day: Sp. Lecture: 3, Lab: 3.

PTAT 2250  Introduction to Clinical Setting  2 cr.
This course covers the interaction of Physical Therapy personnel within the physical therapy department, with emphasis on the physical therapist assistant. The Physical Therapist Assistant student will be introduced to basic patient care skills. These include: use of wheelchairs, crutches, and other assistive devices; body mechanics; patient transfer and positioning; gait training; evaluating vital signs; and other useful advice on patient’s/therapist’s problems. The course offers SOAP note documentation principles. Prerequisite: PTAT 2400 and PTAT 2210. Co-Requisite: PTAT 2560 and PTAT 2410. Day: Fa. Lecture: 1, Lab: 2.

PTAT 2400  Functional Anatomy & Kinesiology  4 cr.
This course builds on the student’s knowledge gained by successfully completing BIOL 2310. The emphasis and focus, however, will be on the neuromuscular/skeletal anatomy of the extremities, spine and facial areas of the human body and on the normal kinematics of these structures. Detailed considerations are given to origin, insertion, nervous innervation, nervous and arterial supply to the muscles of the human extremities, trunk, and face. This course will also emphasize the basic kinesiological principles describing the science of joint motion and muscle action in the human body. The focus of the course will be describing the action of the commonly agreed upon prime movers, using terminology most widely accepted with the discipline of physical therapy. Students will also be introduced to goniometry and manual muscle testing. Prerequisite: BIOL 2310, BIOL 231L, PTAT 1010, PHYS 1320 and PHYS 132L. Co-Requisite: PTAT 2210. Day: Sp. Lecture: 3, Lab: 2.

PTAT 2410  Musculoskeletal Dysfunction  3 cr.
This course covers the basic concepts and principles associated with musculoskeletal dysfunction and the types of physical therapy interventions utilized to treat common musculoskeletal disorders. Emphasis will be on recognition and understanding the dysfunction and disease process. Prerequisite: PTAT 2400 and PTAT 2210. Co-Requisite: PTAT 2250 and PTAT 2560. Day: Su. Lecture: 3.

PTAT 2450  Directed Practice I  2 cr.
An introductory experience in clinical settings in which the student will be able to perform previously learned theories and techniques for patient care under the close supervision of a licensed physical therapist. Prerequisite: PTAT 2210, PTAT 2400, PTAT 2560, PTAT 2410, PTAT 2250 and BIOL 2450. Co-Requisite: PTAT 2500. Day: Fa. Lab: 10.

PTAT 2500  Seminar I  1 cr.
Student participation in discussions related to clinical experiences in Directed Practice I. This course begins the review process for the National Physical Therapy Examination. Prerequisite: PTAT 2210, PTAT 2400, PTAT 2560, PTAT 2410, PTAT 2250 and BIOL 2450. Co-Requisite: PTAT 2450. Day: Fa. Lecture: 1.

PTAT 2540  Neurological Conditions in PT  2 cr.
This is an entry level survey on principles of neurological rehabilitation course, for the conditions and their clinical presentations. Clinical management and physical therapy interventions will be discussed for the most common neurological problems that may be seen in physical therapy practice. Normal and abnormal neurodevelopment will also be covered. Prerequisite: PTAT 2560, PTAT 2410, PTAT 2250 and BIOL 2450. Co-Requisite: PTAT 2620 and PTAT 2640. Day: Fa. Lecture: 2.

PTAT 2550  Directed Practice II  3 cr.
Intermediate experience in clinical setting to perform learned theories and techniques for patient care under close supervision of a licensed Physical Therapist and/ or Physical Therapist Assistant. Prerequisite: PTAT 2450,

PTAT 2560  Principles and Applications of Therapeutic Exercise  2 cr.
This course covers the basics behind exercise principles and the application of exercise programs. The student will be exposed to the principles of therapeutic exercise for a number of special exercise programs and activities of daily living with concurrent home programs. Prerequisite: PTAT 2400 and PTAT 2210. Co-Requisite: PTAT 2410 and PTAT 2250. Day: Su. Lecture: 1, Lab: 2. ♦

PTAT 2600  Seminar II  1 cr.
Student participation in discussions related to clinical experiences in Directed Practice II. This course continues the review process for the National Physical Therapy Examination. Prerequisite: PTAT 2450, PTAT 2540, PTAT 2620, PTAT 2640 and PTAT 2500. Co-Requisite: PTAT 2550. Day: Sp. Lecture: 1.

PTAT 2620  Physical Therapy & Special Populations  3 cr.
This course is designed for the entry level student in Physical Therapist Assistant education. A survey of current practices in a pediatric and geriatric physical therapy is offered. A wide range of disabilities including neurological, musculoskeletal, developmental, neuromuscular, and cardio pulmonary problems will be discussed. An overview of major problems in the older adult population with suggested procedures for treatment will be presented as well as information on evaluating and treating a child with the disability. Prerequisite: PTAT 2560, PTAT 2410, PTAT 2250 and BIOL 2450. Co-Requisite: PTAT 2540 and PTAT 2640. Day: Fa. Lecture: 3.

PTAT 2640  Advanced Rehabilitation Concepts  3 cr.
Using selective topics from comprehensive sources, this course introduces the basic concepts of rehabilitation management of adult patients with differing special needs, including, but not limited to: obstetrics/gynecological, burns, amputees, and cardiovascular. Prerequisite: PTAT 2560, PTAT 2410, PTAT 2250 and BIOL 2450. Co-Requisite: PTAT 2540 and PTAT 2620. Day: Fa. Lecture: 3.

PTAT 2650  Directed Practice III  4 cr.
Advanced final educational experience in a clinical setting in which the student will be able to perform learned theories and techniques for patient care under the guidance and supervision of a licensed Physical Therapist and/or Physical Therapist Assistant. Prerequisite: PTAT 2550 and PTAT 2600. Co-Requisite: PTAT 2990. Day: Sp. Lab: 20. ♦

PTAT 2990  PTA Capstone  4 cr.
The first 8 weeks of this course is a summative course. It will provide a cumulative review of all courses in the PTA program. Students will take a cumulative computerized exam at the initiation and conclusion of the course to assess overall learning outcomes. Students will be provided with individualized feedback regarding strengths and weaknesses to better prepare them for the national physical therapist assistant examination for licensure. During the last 2 weeks of this course, students present the Evidence Based Research Project that was presented at the clinical sites during the third Directed Practice. Special topics in the last 2 weeks of the course include, but are not limited to: job placement and career development, evidence-based journal reviews, round table discussions, professionalism in physical therapy, and final preparation for licensing and the national physical therapy licensing examination. Prerequisite: PTAT 2550 and PTAT 2600. Co-Requisite: PTAT 2650. Day: Sp. Lecture: 4. ♦

PHYSICS (PHYS)

PHYS 1010  Applied Physics  2 cr.
Introduction to the principles combined with its applications in industry today. Covers the broad fields of mechanics, heat, light, sound. Specific topics include atomic structure, flow of fluids, work, energy, simple machines, thermal expansion & gas laws. High school physics is not required. Prerequisite: MATH 1104 or MATH 1102. Co-Requisite: PHYS 101L. Day: Fa, Sp; Eve: Fa, Sp; Online: Fa, Sp. Lecture: 2.

PHYS 101L  Applied Physics Lab  1 cr.
The Laboratory portion of the course PHYS 1010. This includes an introduction to laboratory techniques, laboratory safety, significant figures as well as communicating scientific ideas. For non-science majors. Prerequisite: MATH 1104 or MATH 1102. Co-Requisite: PHYS 1010. Day: Fa, Sp; Eve: On demand; Online: Fa. Lab: 2. ♦

PHYS 1100  Principles of Physical Science I  3 cr. TM-N
Covers basic principles and concepts of astronomy and physics. For non-science majors. Prerequisite: high school science. Prerequisite: High school physics or equivalent. Co-Requisite: PHYS 110L Day: Fa; Eve: On demand. Lecture: 3.

PHYS 110L  Principles of Physical Science Lab 1 cr. TM-N
This course is the laboratory component of the PHYS 1100 course and deals with the basic principles and concepts of chemistry, geology and meteorology. This course is designed for non-science majors. Prerequisite: High school science or equivalent. Co-Requisite: PHYS 1100. Day: Fa; Eve: On demand. Lab: 2. ♦

PHYS 11200  Principles of Physical Science II  3 cr. TM-N
This course covers the basic principles and concepts of chemistry, geology, and meteorology. For non-science majors. Prerequisite: High school science or equivalent. Co-Requisite: PHYS 120L. Day: Sp; Eve: On demand. Lecture: 3.
**PHYS 120L**  Principles of Physical Science II Lab  1 cr. TM-N

This course is the laboratory component of the PHYS 1200 course and includes principles and concepts of chemistry, geology, and meteorology. This course is designed for non-science majors. Prerequisite: High school science or equivalent. Co-Requisite: PHYS 1200. Day: Sp; Eve: On demand. Lab: 2. ♦

**PHYS 1210**  Survey of Astronomy  3 cr. TM-N

The history of astronomy, the nature of the solar system, common constellations and stars, galaxies and recent discoveries in the field. A few sessions held at night for telescope viewing. Prerequisite: None. Co-Requisite: MATH 0950 and PHYS 121L. Day: Sp; Eve: Fa, On demand. Lecture: 3.

**PHYS 121L**  Survey of Astronomy Lab  1 cr. TM-N

The course is the laboratory associated with the Survey of Astronomy course and includes proper laboratory and safety procedures, communicating scientific ideas as well as identifying common constellations and stars. For the day class, a few sessions may be held at night for telescope viewing. Prerequisite: None. Co-Requisite: MATH 0950 and PHYS 121L. Day: Sp; Eve: Fa, On demand. Lab: 2. ♦

**PHYS 1310**  Physics for Respiratory Therapy  1 cr.

This course is an introduction to the principles of physics combined with applications to medical fields with an emphasis on Respiratory Therapy topics. The course includes the study of Newton's laws, energy, waves, heat, and fluids. Detailed explanations are given of biological and medical applications of fluids. Prerequisite: MATH 0950 or PHYS 1200. Co-Requisite: PHYS 131L. Day: Sp; Eve: Fa, On demand. Lecture: 1.

**PHYS 131L**  Physics for Respiratory Therapy Lab  1 cr.

This course is the laboratory associated with the PHYS 1310 course and includes an introduction to laboratory techniques, laboratory safety, significant figures as well as the study of Newton's laws and medical applications of fluids. Prerequisite: MATH 0950 or MATH 2100. Co-Requisite: PHYS 1310. Day: Fa; Eve: On demand. Lab: 2. ♦

**PHYS 1320**  Physics for Physical Therapy  1 cr.

This course is an introduction to the Principles of Physics combined with applications to medical fields. The course includes the study of Newton's laws and classes of levers. Detailed explanations are given of biological and medical applications of waves, heat and electricity. Prerequisite: MATH 0950 or MATH 2100. Co-Requisite: PHYS 132L. Day: Sp; Eve: On demand. Lecture: 1.

**PHYS 132L**  Physics for Physical Therapy Lab  1 cr.

This course is the laboratory associated with the PHYS 1320 course and includes an introduction to laboratory techniques, laboratory safety, significant figures as well as the study of Newton's laws and classes of levers. Prerequisite: MATH 0950 or MATH 2100. Co-Requisite: PHYS 1320. Day: Fa; Eve: On demand. Lab: 2. ♦

**PHYS 2010**  Introduction to Physics I  3 cr. TM-N

The course is an introduction to engineering mechanics and covers kinematics, Newton's laws of motion, work, energy, power, conservation of energy, conservation of momentum, mechanics of solids and liquids, statics, uniform circular motion oscillations, and waves. Prerequisite: MATH 2120. Co-Requisite: PHYS 201L. Day: Sp; Eve: On demand. Lecture: 3. TAG: OSC014.

**PHYS 201L**  Introduction to Physics I Lab  1 cr. TM-N

This course is the laboratory associated with the PHYS 2010 course and includes an introduction to laboratory techniques, laboratory safety, significant figures for engineers. Prerequisite: MATH 2120. Co-Requisite: PHYS 2010. Day: Sp; Eve: On demand. Lab: 2. TAG: OSC014. ♦

**PHYS 2030**  Introduction to Physics II  3 cr. TM-N

Continuation of PHYS 2010 including an introduction to optics, heat and thermodynamics, electricity and magnetism. The course covers the properties of electrostatics, the electric field, electric potential, direct current circuits, magnetism, electro-magnetic induction, electro mechanical devices and instruments, and alternating currents by combining lectures with demonstrations and labs. Prerequisite: PHYS 2010 and PHYS 201L. Co-Requisite: PHYS 203L. Day: Fa; Eve: On demand. Lecture: 3. TAG: OSC015.

**PHYS 203L**  Introduction to Physics II Lab  1 cr. TM-N

This course is a continuation of the PHYS 201L course and is associated with PHYS 2030. Prerequisite: PHYS 2010 and PHYS 201L. Co-Requisite: PHYS 2030. Day: Fa; Eve: On demand. Lab: 2. TAG: OSC015. ♦

**PHYS 2510**  General Physics I  4 cr. TM-N

This physics series is for science and engineering majors. Classical physics with calculus and vectors. Topics include Newtonian mechanics, rotational dynamics, gravitation, fluids and wave phenomena. Prerequisite: None. Co-Requisite: MATH 2263 and PHYS 251L. Day: Fa; Eve: On demand. Lecture: 4. TAG: OSC015.

**PHYS 251L**  General Physics I Lab  1 cr. TM-N

The laboratory section associated with the General Physics I class. The course includes proper laboratory and safety procedures, significant digits and communicating scientific ideas. This physics series is intended for science and engineering majors. Prerequisite: None. Co-Requisite: MATH 2263 and PHYS 251L. Day: Fa; Eve: On demand. Lab: 2. TAG: OSC016. ♦

**PHYS 2530**  General Physics II  4 cr. TM-N

Continuation of PHYS 2510. Classical physics with calculus and vectors; thermal properties of matter, heat, and thermodynamics, electricity, magnetism and optics.
**PHYS 253L  General Physics II Lab  1 cr. TM-N**

**POLITICAL SCIENCE (POLS)**

**POLS 1010  Current Affairs  3 cr.**
This course includes discussion and analysis of current issues of public concern at the state and national level. Major emphasis is placed on the importance of the mass media in shaping opinions and influencing decisions. Prerequisite: None. Co-Requisite: None. Day: On demand. Lecture: 3.

**POLS 1020  American National Government  3 cr. TM-S**
Survey of all aspects of our democratic system; emphasis on the Constitution, the three branches of government, civil rights and liberties, and foreign policy. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp. Lecture: 3. TAG: OSS011.

**POLS 1030  State and Local Government  3 cr. TM-S**

**POLS 1500  American Foreign Policy  3 cr.**
An examination of American foreign policy from World War II to the present; consideration of external and domestic influences on American Foreign Policy behavior. Prerequisite: None. Co-Requisite: None. Day: On demand. Lecture: 3.

**POLS 2050  Global Issues  3 cr.**
Consideration of major problems such as environment, health, economics, war, population, human rights; discussion of possible political solutions. Writing Intensive Course. Prerequisite: ENGL 1515 or ENGL 1510. Co-Requisite: None. Day: Sp on demand. Lecture: 3. TAG: OSS012.

**PSYCHOLOGY (PSYC)**

**PSYC 1000  Psychology of Human Relations  3 cr.**
Study of human interaction and its effects on both the personal and professional levels. Course focuses on diversity, introspection, communication, groups, conflict management, with emphasis on practical application of acquired knowledge. Prerequisite: None. Co-Requisite: None. Day: All; Eve: On demand. Lecture: 3.

**PSYC 1010  General Psychology  3 cr. TM-S**
Introduction to Psychology: Survey of topics in psychology including physiological bases of behavior, methods of psychology, cognition, social/organizational, developmental, and personality/psychology. Prerequisite: ENGL 0900 or Compass placement. Co-Requisite: None. Day: All; Eve: All; Online: Fa, Sp. Lecture: 3. TAG: OSS015.

**PSYC 1030  Mental Health Concepts  2 cr.**
This course presents an overview of mental health and mental illness as opposite poles of a continuum. Included for study are mental function and dysfunction, categories of mental illness and treatment modalities. Addictive disorders are also covered. Prerequisite: PSYC 1010. Co-Requisite: None. Day: Sp; Eve: Su. Lecture: 2.

**PSYC 2100  Social Psychology  3 cr. TM-S**
Study of social interactions emphasizing a balance of research and application. Topics will include social cognition, attitude formation and change, conformity/obedience, group processes, pro-social behavior, aggression, and stereotyping/prejudice. Prerequisite: PSYC 1010. Co-Requisite: None. Day: On demand. Lecture: 3. TAG: OSS016.

**PSYC 2320  Abnormal Psychology  3 cr. TM-S**
Survey of the major categories of psychological disturbance emphasizing a balance of research and application. Topics will include etiology, prognosis, and treatment modalities using the current DSM as a reference basis. Prerequisite: PSYC 1010. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 3. TAG: OSS017.

**PSYC 2700  Developmental Psychology  3 cr. TM-S**

**PSYC 2750  Educational Psychology  3 cr. TM-S**
Applications of psychological theories and models to the classroom. Major topics include goals of education; cognitive, social and affective development in children;
RADT 1010  Introduction to Radiologic Technology and Procedures I 2 cr.
This course introduces the student to specific medical, legal, ethical, and professional topics important for success in the profession, including professional issues in Radiologic Technology, patient care and safety, and instrumentation. This course also presents the student with the didactic material, laboratory demonstrations and practice necessary to develop the cognitive and psychomotor domains in order to be successful in the clinical setting. The course will teach the student how to perform specific radiographic procedures and allow the student to practice the procedures in the laboratory setting during clinical rotations, followed by performing them in the clinical setting under proper supervision. The student is required to attend two lecture sessions per week. Prerequisite: Acceptance into RADT Program. Co-Requisite: None. Day: Fa, Lecture: 2.

RADT 1110  Principles of Radiographic Exposure I 4 cr.
This is the first of two radiographic exposure courses. This course introduces the student to the fundamentals of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality. This course provides the student with the prerequisite knowledge (cognitive domain) base required prior to operating the radiographic equipment in the clinical setting. This course presents the student with the study of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality. This course presents the student with the study of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality. This course presents the student with the study of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality. This course presents the student with the study of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality. This course presents the student with the study of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality. This course presents the student with the study of X-ray exposure, anatomy and physiology of the X-ray tube, principles of X-ray production, interactions between x-rays and matter, and basic radiographic quality.

RADT 1120  Principles of Radiographic Exposure II 3 cr.
This is the second of two radiographic exposure courses. This course presents the student with the study of "radiographic quality" and the factors that control it. The course also covers recorded detail, density, contrast, distortion, and the factors controlling each. This course reviews and relates exposure principles to practical problem solving. It covers Quality Improvement, and exposure combination problems. Prerequisite: RADT 1110. Co-Requisite: None. Day: Sp, Lecture: 3.

RADT 1220  Radiographic Procedures II 3 cr.
This is the second of four Radiographic Procedures courses. This course is a continuation of Radiographic Procedures I and presents the student with the didactic material and laboratory demonstration and practice necessary to develop the cognitive and psychomotor domains in order to be successful in clinic. The course will teach the student how to perform specific radiographic procedures and allow the student to practice the procedures in the laboratory setting prior to performing them in the clinical setting. Prerequisite: RADT 1210. Co-Requisite: None. Day: Sp, Lecture: 3.

RADT 1230  Radiographic Procedures III 2 cr.
This is the Third and final positioning course in the program. This course offers a comprehensive review of "routine" positions already taught, and "non-routine" positions not yet covered, but common to the profession and part of the A.R.R.T. certification exam test bank. Prerequisite: RADT 1220. Co-Requisite: None. Day: Su, Lecture: 2.

RADT 1310  Applied Radiography I 2 cr.
This is the first of six Applied Radiography courses that provides the student with the exposure to the practice of Radiology necessary to develop competence in patient care, instrumentation, radiographic procedures, processing techniques, promote professional and ethical conduct, and develop the student's ability to function both independently and as a member of the health care team, develop critical thinking/problem solving skills, and develop and promote Life-Long Learning skills. The outcomes are measured by performance objectives, written objectives, competency evaluations, and adherence to policy and the professional code of conduct. This is a knowledge based course designed to develop and evaluate the cognitive and psychomotor Domains. Prerequisite: RADT 1010. Co-Requisite: None. Day: Fa, Clinical: 14.

RADT 1320  Applied Radiography II 2 cr.
This is the second of six Applied Radiography courses that provides the student with the exposure to the practice of Radiology necessary to develop competence in patient care, instrumentation, radiographic procedures, processing techniques, promote professional and ethical conduct, and develop the student's ability to function both independently and as a member of the health care team, develop critical thinking/problem solving skills, and develop and promote Life-Long Learning skills. The outcomes are measured by performance objectives, written objectives, competency evaluations, and adherence to policy and the professional code of conduct. This is a knowledge based course designed to develop and evaluate the cognitive and psychomotor Domains. Prerequisite: RADT 1310. Co-Requisite: None. Day: Sp, Clinical: 14.

RADT 1330  Applied Radiography III 2 cr.
This is the third of six Applied Radiography courses that provides the student with the exposure to the practice of
Radiology necessary to develop competence in patient care, instrumentation, radiographic procedures, processing techniques, promote professional and ethical conduct, and develop the student's ability to function both independently and as a member of the health care team develop critical thinking/problem solving skills, and develop and promote Life-Long Learning skills. The outcomes are measured by performance objectives, written objectives, competency evaluations, and adherence to policy and the professional code of conduct. This is a knowledge based course designed to develop and evaluate the cognitive and psychomotor Domains. Prerequisite: RADT 1320. Co-Requisite: None. Day: Su. Clinical: 14.

**RADT 2170 Radiographic Physics** 4 cr.
This course includes the study of matter, electrostatics, electrodynamics, magnetism, electromagnetism, electromagnetic induction, the generation of electricity, the production and control of high voltage, regulation of current, rectification, review of x-ray production, half value layer, pair production, review of the x-ray tube, and x-ray circuits. Prerequisite: RADT 1120. Co-Requisite: None. Day: Fa. Lecture: 4.

**RADT 2190 Special Procedures/ Radiographic Imaging** 2 cr.
This course covers all aspects of the radiographic dark room and film processing. The student is taught the physical aspects of the radiographic dark room, manual and automatic processing equipment, and lighting. The student is taught the principles of radiographic photography, radiographic chemistry, digital/electronic image processing, and dark room/processing problems and trouble shooting. This course also covers the equipment, positioning, and anatomy involved with "Special Procedures" radiography. Prerequisite: RADT 1230. Co-Requisite: None. Day: Fa. Lecture: 2.

**RADT 2310 Applied Radiography IV** 3 cr.
This is the fourth of six Applied Radiography courses that provides the student with the exposure to the practice of Radiology necessary to develop competence in patient care, instrumentation, radiographic procedures, processing techniques, promote professional and ethical conduct, and develop the student's ability to function both independently and as a member of the health care team, develop critical thinking/problem solving skills, and develop and promote Life-Long Learning skills. The outcomes are measured by performance objectives, written objectives, competency evaluations, and adherence to policy and the professional code of conduct. This is a knowledge/skills based course designed to develop and evaluate the cognitive, psychomotor, and affective Domains. Prerequisite: RADT 2320. Co-Requisite: None. Day: Sp. Clinical: 21.

**RADT 2320 Applied Radiography V** 3 cr.
This is the fifth of six Applied Radiography courses that provides the student with the exposure to the practice of Radiology necessary to develop competence in patient care, instrumentation, radiographic procedures, processing techniques, promote professional and ethical conduct, and develop the student's ability to function both independently and as a member of the health care team develop critical thinking/problem solving skills, and develop and promote Life-Long Learning skills. The outcomes are measured by performance objectives, written objectives, competency evaluations, and adherence to policy and the professional code of conduct. This is a knowledge/skills based course designed to develop and evaluate the cognitive, psychomotor, and affective Domains. Prerequisite: RADT 2310. Co-Requisite: None. Day: Sp. Clinical: 21.

**RADT 2330 Applied Radiography VI** 3 cr.
This is the last of six Applied Radiography courses that provides the student with the exposure to the practice of Radiology necessary to develop competence in patient care, instrumentation, radiographic procedures, processing techniques, promote professional and ethical conduct, and develop the student's ability to function both independently and as a member of the health care team, develop critical thinking/problem solving skills, and develop and promote Life-Long Learning skills. The outcomes are measured by performance objectives, written objectives, competency evaluations, and adherence to policy and the professional code of conduct. This is a knowledge/skills based course designed to develop and evaluate the cognitive, psychomotor, and affective Domains. Prerequisite: RADT 2320. Co-Requisite: None. Day: Su. Clinical: 21.

**RADT 2340 Selected Topics** 3 cr.
This course covers the A.R.R.T. credentialing exam (Registry) content specifications for the current Radiography examination. It is intended to be a review of material from all previous semesters to prepare the student for the ARRT Registry exam. This course includes a separate 1 credit hour, 2-day Kettering A.R.R.T. Registry Review Seminar. Prerequisite: RADT 2510. Co-Requisite: None. Day: Su. Lecture: 3.

**RADT 2350 Kettering National ARRT Review** 1 cr.
This is a 2 day course taught during the 6th semester of the program. It is a comprehensive review of the American Registry of Radiologic Technologists Certification Exam Content Specifications. It provides each student with a step by step method of preparing for the Certification Exam. Prerequisite: Enrollment in RADT 2420. Co-Requisite: None. Day: Su. Lecture: 1. ♦

**RADT 2510 Pathology/Advanced Radiobiology & Radiation Protection** 3 cr.
This course provides some review of anatomy and pathology, and a detailed study of radiographically diagnosed diseases and abnormalities. This course provides an introduction to cross sectional anatomy. This course also details the deleterious biological effects of ionizing radiation on cellular function and body systems, and the Dose Equivalent Limits of ionizing radiations.
The course also reviews and details radiation protection procedures with Federal and state requirements. Prerequisite: RADT 2190. Co-Prerequisite: None. Day: Sp. Lecture: 3.

REAL ESTATE (REAL)

REAL 1900 Real Estate Principles & Practices 3 cr. Introduction to the U.S. real estate industry. Covers ethics, regulation; nature, importance, and character of land; real estate business and market; ownership and interest; contracts; surveying and property descriptions; transfer of title; mortgage instruments; title closing; financing; investment; deeds, leases and other instruments. Prerequisite: None. Co-Prerequisite: None. Eve: Fa on demand. Lecture: 3.

REAL 2400 Real Estate Law 3 cr. Includes law of agency as applied to real estate brokers and sales agents; law of fixtures; estates (including leases); conveyance of real estate titles; license law of Ohio; zoning; cooperatives and condominiums. Prerequisite: None. Co-Prerequisite: None. Eve: Sp on demand. Lecture: 3.

REAL 2410 Real Estate Appraising 2 cr. Study of the professional approach to value estimation; economic, sociological, and political forces on real property; appraisal of single family residence; problem definition; how data is acquired, classified, analyzed, and interpreted into an estimate of value. Prerequisite: None. Co-Prerequisite: None. Eve: Sp on demand. Lecture: 3.

REAL 2420 Real Estate Finance 2 cr. Role of real estate financing in community development; financial instruments; nature of financial institutions in the mortgage market; and how the market is influenced by government policy. Includes risk analysis, procedures and methods in financing income properties. Prerequisite: None. Co-Prerequisite: None. Eve: Sp on demand. Lecture: 3.

RECREATION & PHYSICAL EDUCATION (RECR)

RECR 1200 Strength Training 1 cr. Principles and practices of strength training, including the design of a basic workout, proper mechanics of using free weights, and appropriate exercises for the major muscle groups. May be repeated. Prerequisite: None. Co-Prerequisite: None. Day: Su; Eve: Fa, Sp. Lab: 2.

RECR 1210 Women's Strength Training 1 cr. Instruction and participation in basic strength training exercises. Emphasis on proper forms and techniques when using dumbbells, barbells, cable-crossover, leg press and Nautilus equipment. May be repeated. Prerequisite: None. Co-Prerequisite: None. Day: Fa, Sp. Lab: 2.

RECR 1230 Group Cycling 1 cr. Group stationary cycling is a low-impact, highly motivating, vigorous fitness program. Group cycling bikes are specifically designed to allow the rider to adjust the degree of intensity to the appropriate health and fitness level of the individual. Prerequisite: None. Co-Prerequisite: None. Day: All. Lab: 2.

RECR 1310 Step Aerobics 1 cr. Instruction and participation in step aerobic exercise and weight training. Two hours per week. Course may be repeated. Prerequisite: None. Co-Prerequisite: None. Day: All; Eve: All. Lab: 2.

RECR 1320 Cardiokickboxing 1 cr. Cardiokickboxing is a high energy course that combines the skills of martial arts with aerobic movements. Prerequisite: None. Co-Prerequisite: None. Day: On demand. Lab: 2.

RECR 1330 Muscle Conditioning & Flexibility 2 cr. This course will teach students about resistance training to strengthen and build muscles using equipment and/or one's own body weight. Stretching techniques to gain flexibility will also be practiced. Prerequisite: None. Co-Prerequisite: None. Day: Fa, Sp. Lecture: 1, Lab: 2.

RECR 1340 Dance Aerobics 1 cr. Instruction and participation in aerobic exercise integrated with various dance techniques. Two hours per week. Course may be repeated. Prerequisite: None. Co-Prerequisite: None. Day: On demand. Lab: 2.

RECR 1350 Zumba 1 cr. This course is a fun upbeat aerobic class. This course is designed to increase coordination and cardiovascular fitness. Zumba is a nationally recognized exercise program. The objective is to teach a fun way to exercise by bringing students to a party setting for aerobic exercise. Prerequisite: None. Co-Prerequisite: None. Day: On demand. Lab: 2.

RECR 1360 Walking 1 cr. This course will involve walking outside. This course is designed to improve cardiovascular fitness and assist with weight loss. The course will take place on the trails at Washington State Community College. There will also be walking on area sidewalks and steps, stairs & concrete surfaces. Prerequisite: None. Co-Prerequisite: None. Day: On demand. Lab: 2.

RECR 1750 Yoga 1 cr. Yoga class offers instruction and practice in basic asana with emphasis on breath and the synchronization of breath and movement. Yoga class addresses and emphasizes the integration of body, mind, and spirit via a series of practices involving seven to ten postures and breathing techniques. Prerequisite: None. Co-Prerequisite: None. Day: Fa, Sp. Lab: 2.
## RESPIRATORY THERAPY TECHNOLOGY (RESP)

### RESP 1100 Introduction to Respiratory Care 2 cr.

### RESP 1210 Cardiopulmonary Pharmacology 2 cr.
The course is an orientation to general pharmacology including drug groups, dosage, effects, and dispensing regulations. It is an emphasis on drugs used in the treatment and management of cardiopulmonary disease including bronchodilators, mucokinetics, steroids, and other drugs. Prerequisite: BIOL 2320, BIOL 232L, PHYS 1310, PHYS 131L and program admission. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 3. ♦

### RESP 1250 Medical Gas Administration Therapeutics 4 cr.
This course is a study of therapeutic modalities and physiologic monitoring practices used in the treatment and diagnosis of pulmonary diseases inclusive of: Arterial Blood Gas Analysis and puncture, Co-oximetry, Pulse-oximetry, End tidal CO2 monitoring and Oxygen analysis. This course includes material on the calibration, maintenance, function equipment used and an introduction to basic skills relating to patient care, including scientific principles of equipment operation, and basic oxygen administration, aerosol, bronchial hygiene therapy, humidification therapy and Airway management techniques inclusive of endotracheal intubation. Prerequisite: BIOL 2320, BIOL 232L, PHYS 1310, PHYS 131L and program admission. Co-Requisite: None. Day: Sp. Lecture: 3, Lab: 3. ♦

### RESP 1330 Cardiopulmonary Anatomy & Physiology 2 cr.

### RESP 1350 Clinical Practice I 1 cr.
Experiences will include basic skills such as; medical asepsis, monitoring vital signs, charting in medical record and other record keeping, isolation techniques, and CPR. The student will become familiarized with Hospital and Respiratory Therapy Dept. policies and procedures for operations and emergency procedures. Also includes performance of medical gas administration and introduction to basic therapeutic procedures. The student will also be assigned to a physician's office for involvement with patient history and physicals. Prerequisite: BIOL 2320, BIOL 232L, PHYS 1310, PHYS 131L and program admission. Co-Requisite: None. Day: Sp. Lab: 5. ♦

### RESP 1360 Advanced Cardiopulmonary Resuscitation 1 cr.
In-depth study of specific respiratory care issues in a group with a structured format. Prerequisite: BIOL 2320, BIOL 232L, PHYS 1310, PHYS 131L and program admission. Co-Requisite: None. Day: Sp. Lab: 3. ♦

### RESP 2450 Clinical Practice II 1 cr.
Continuation of the hospital clinical experience including basic patient care skills such as medical asepsis, vital sign monitoring, documentation of the patient's response to procedures, CPR and other basic skills. Also performance of therapeutic and diagnostic modalities such as: Aerosol Therapies, I.P.P.B., Postural Drainage & Percussion, Medical Gas Administration, Pulse Oximetry, End Tidal CO2 Monitoring, Airway Care, and Arterial Puncture and analysis of Blood Gas Samples. Students will explore the Cultural Diversity and Age Specific requirements of the patient population and be introduced to the care of pediatric patients. In this semester the student will also be assigned to a hospital operating room under the supervision of the Anesthesia Dept to experience airway maintenance procedures. Prerequisite: RESP 1100, RESP 1210, RESP 1250, RESP 1350, RESP 1330 and RESP 1360. Co-Requisite: None. Day: Su. Lab: 8. ♦

### RESP 2460 Arterial Blood Gases 1 cr.
The course will review the fundamentals of acid-base respiratory physiology, interpretation and assessment of blood gases and the clinical applications. Prerequisite: RESP 2500, RESP 2610 and RESP 2450. Co-Requisite: None. Day: Fa. Lecture: 1. ♦

### RESP 2500 Respiratory Critical Care I 2 cr.
Initial studies of the care of the critically ill patient with an emphasis on Mechanical Ventilation. In this session the student will study the principles, effects, and modes of mechanical ventilation as well as the techniques of initiation, monitoring, and weaning patients. The course
RESP 2510  Cardiopulmonary Pathology I  3 cr.

RESP 2520  Cardiopulmonary Pathology II  1 cr.
Practical application of the principles obtained in Cardiopulmonary Pathology I, as they apply to the National Board for Respiratory Care (NBRC) examination process, with emphasis on the Clinical Simulation Exam. Prerequisite: RESP 2510. Co-Requisite: None. Day: Sp. Lecture: 3. ♦

RESP 2550  Clinical Practice III  2 cr.
Additional Hospital experience and continuation of patient care skills, providing therapeutic modalities: Small Volume Nebulizer, Postural Drainage & Percussion, IPPB, Incentive Spirometry, etc. In addition the student should be able to perform Arterial puncture and analysis of blood samples as well as non-invasive diagnostic procedures; pulse oximetry, capnography, etc. The student will begin to explore aspects of Mechanical Ventilation and Critical Care environments in this semester as well as provide care to the Pediatric Patient. The student will also apply various modes of mechanical ventilation to adult patients in the hospital setting toward the end of the semester. Prerequisite: RESP 2500, RESP 2610 and RESP 2450. Co-Requisite: None. Day: Fa. Lab: 15. ♦

RESP 2600  Respiratory Critical Care II  3 cr.
Continuation of the care of the critically ill patient, beginning with a review of adult and neo-natal ventilation procedures. This semester will deal with aspects of managing a patient on mechanical ventilation, inclusive of hemodynamic monitoring, ventilator waveform interpretation, and pharmacological interventions for the ventilator patient as well as ventilation of the patient in the home. The course will conclude with a discussion on classification of mechanical ventilators and patient case studies. Prerequisite: RESP 2500, RESP 2610 and RESP 2450. Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 3. ♦

RESP 2610  Respiratory Pediatrics and Neonatology I  2 cr.

RESP 2620  Respiratory Pediatrics and Neonatology II  2 cr.
This course is a continuation of RESP 2610 and involves more advanced Respiratory Care of neonatal and pediatric patient care preparation. Prerequisite: RESP 2610 and RESP 2450. Co-Requisite: None. Day: Fa. Lecture: 1, Lab: 3. ♦

RESP 2700  Assessment of Pulmonary Function  2 cr.
Advanced pulmonary physiology and pathology related to pulmonary function, test interpretation emphasizing performance of testing protocols, interpretation of results, equipment maintenance and quality assurance, computer applications, special procedures, and pulmonary function calculations and math. Prerequisite: RESP 2510 and RESP 2600. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 3. ♦

RESP 2730  Pulmonary Rehabilitation & Subspecialties & Math  2 cr.
This course encompasses areas of Respiratory Care that are considered subspecialties such as Hyperbaric Oxygen, Thoracic Imaging, Bronchoscopy, Cardiac/Pulmonary Rehabilitation, Alternative Respiratory Care sites/Home Care, Respiratory care administration, responsibilities and basic math with common equations used in respiratory care. Prerequisite: RESP 2510 and RESP 2600. Co-Requisite: None. Day: Sp. Lecture: 2. ♦

RESP 2750  Clinical Practice IV  2 cr.
Final experiences in the practical application of Respiratory Care. The student will be assigned specific areas of clinical experience in: Pulmonary Function, Pulmonary Rehabilitation, Sleep Lab, Home care, and Neonatal and Pediatric Intensive Care. During this semester the student will also be assigned to sites outside of the acute care hospital for clinical experience. The student will also apply various modes of mechanical ventilation to adult patients in the hospital setting. Prerequisite: RESP 2600, RESP 2510, RESP 2550, RESP 2620, RESP 2460 and MATH 1101. Co-Requisite: None. Day: Sp. Lab: 15. ♦

RESP 2800  Cardiology and Hemodynamic Monitoring  2 cr.
This course encompasses areas of Respiratory Care Hemodynamic Monitoring in critical care and cardiology. Prerequisite: RESP 2510 and RESP 2600. Co-Requisite: None. Day: Sp. Lecture: 2. ♦

RESP 2850  Polysomnography  2 cr.
This course encompasses areas of sleep disorders and the polysomnography testing procedure used to diagnosis these disorders. Therapeutic procedures and test interpretation is also included and the appropriate therapy for specific sleep disorders. Prerequisite: RESP 2510 and CRT or RRT. Co-Requisite: None. Day: Sp. Lecture: 2. ♦

RESP 2990  Respiratory Capstone  3 cr.
This course is a summative course in which several summative evaluations (knowledge & affective domains) are performed.
prior to graduation. It is also a continuation of writing and verbal communication skills and summative evaluation. This is a writing intensive course. Prerequisite: ENGL 1510 and ENGL 1515. Co-Requisite: None. Day: Sp. Lecture: 3.

SOCIAL SERVICES TECHNOLOGY (SOSV)

SOSV 1110 Introduction to Social Work & Social Welfare 3 cr.
Introduces social services through examination of social problems, community resources, and practice methods from both historical and contemporary perspectives. Discusses professional roles of generalist social work practice. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3. TAG: OSS029.

SOSV 1120 Interview Techniques 3 cr.
Introduces basic interviewing techniques used in social work; mechanics of conducting interviews, gathering information, recording interviews; techniques used in one-to-one interviews, multiple interviews, and groups. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3.

SOSV 1130 Casework Practice 3 cr.
Emphasizes the importance of the interpersonal relationship between worker and client. Basic concepts of generalist practice provide foundation. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

SOSV 1140 American Social Welfare Institution 3 cr.
A general overview of the nature of social welfare as a social institution. The course will focus on social welfare acts, historical development of programs and services, value and diversity orientation, issues in social policy and the emergence of social work as a profession. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3. TAG: OSS030.

SOSV 1680 Social Service and the Law 3 cr.
Study of basic legal concepts and procedures as they affect social service policies, practices and service delivery. Develops legal understanding necessary to guide social service workers through the complications encountered in a profession increasingly regulated by law. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

SOSV 2100 Crisis Intervention 3 cr.
Designed to acquaint the student with practical strategies of crisis intervention and the knowledge and skills needed to deal with these situations. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3.

SOSV 2110 Family Intervention 3 cr.
Introduces various skills, theories, techniques and factors in family intervention; role of the worker and client as related to individuals, families, and specific problems; relationships, client-worker contacts, and confidentiality. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

SOSV 2120 Gerontology 3 cr.
Study of gerontology with emphasis on the ways in which social structures and institutions help to shape our concepts of the aging process. The behavior patterns of aging, the effects of the aging process on health, problems related to aged persons and a consideration of appropriate worker roles will be studied. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

SOSV 2150 Domestic Violence 3 cr.
Introduces key issues of domestic violence and evaluates policy responses of public and private criminal justice and social services. Assessment of intervention methods and measures that can be taken to prevent abusive behavior. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

SOSV 2200 Social Services Practicum I 1 cr.
Basic principles acquired in social services put into practice through direct delivery of social services in an approved community agency under the direction of a qualified supervisor. Student works in an agency twelve hours per week and attends a one-hour seminar weekly on campus. College faculty and agency supervisor work closely to ensure broad experiences in direct service to people. Prerequisite: 15 hours of General Education courses, 15 hours SOSV courses and SOSV 1120 and SOSV 1130. Co-Requisite: SOSV 2210. Day: Fa; Sp; Eve: On demand. Lab: 7.

SOSV 2210 Social Services Seminar I 1 cr.
First of two seminars. Under the direction of the college faculty, the student participates in a one-hour weekly review and assessment of the work experience as related to the practicum situation. Input from the agency supervisor will be used as an integral part of this weekly review. Prerequisite: 15 hours of General Education courses, 15 hours SOSV courses and SOSV 1120 and SOSV 1130. Co-Requisite: SOSV 2200. Day: Fa; Eve: On demand. Lecture: 1.

SOSV 2220 Social Services Practicum II 1 cr.

SOSV 2230 Social Services Seminar II 1 cr.

SOSV 2310 Addictive Behavior 3 cr.
Explores the process through which individuals develop addictions. Covers similarities between particular addictive behaviors and examines the common effects of addiction on family life and society. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3.
SOCIOLOGY (SOCI)

SOCI 1010  Introduction to Sociology  3 cr. TM-S
Introduction to the nature of human society and its
development. Covers fundamental concepts and ideas:
culture, personality, socialization, social organization,
groups, and institutions. Prerequisite: None. Co-Requisite:
None. Day: All; Eve: All; Online: All. Lecture: 3. TAG:
OSS021.

SOCI 2010  Social Problems  3 cr. TM-S
Sociological perspectives on social problems, including:
crime, sexual inequality, racism, drug and alcohol, mental
illness, unemployment and poverty. Prerequisite: SOCI
1010. Co-Requisite: None. Day: Sp on demand; Eve: On
demand. Lecture: 3. TAG: OSS025.

SOCI 2200  Sociology of the Family  3 cr. TM-S
Emphasis on the American family and how it is changing.
Covers interaction within the family, mate selection,
mariage and its alternatives, family disorganization,
and the future of the American family. Prerequisite: SOCI
1010. Co-Requisite: None. Day: On demand; Eve: On
demand. Lecture: 3. TAG: OSS023.

SOCI 2250  The Sociology of Race and Ethnic
Relations in America  3 cr. TM-S
Social, economic and political survey of America’s diverse
racial, ethnic and religious groups; immigration and
residential patterns; subcultural characteristics and histories
of the groups in the United States. Special attention to
African-Americans, Asian-Americans, Native Americans
and Latino peoples. Prerequisite: SOCI 1010 or one
Lecture: 3. TAG: OSS024.

SOCI 2300  Introduction to Criminology  3 cr.
Introduction to major concepts, theories and empirical data
that make up criminology and corrections. Emphasis on
types and rates of crime, definitions of criminal deviance,
explanations of criminal behavior, jails/prisons and
community programs. Prerequisite: CRJU 1010 or SOCI

SOCI 2500  Cross Cultural Communication  3 cr.
Examines the communication issues associated with
transactions between people from different cultures.
Discussions focus on differences in perception and cognitive
patterns; value systems and hierarchies; and, symbolic
meaning as expressed through various verbal codes and
nonverbal cues. The issues of ethnocentrism and conflict
management are also considered. Students cannot receive
credit for both SPCH 2500 and SOCI 2500. Prerequisite:
SOCI 1010 or SPCH 2060 or SPCH 1510. Co-Requisite:
None. Day: All; Eve: All; Online: All. Lecture: 3.
topics include: perception; self-concept; nonverbal cues; verbal codes; listening skills; and, conflict management techniques. The course also examines the basic stages in significant interpersonal relationships involving family, friends, and intimates. Prerequisite: ENGL 0900. Co-Requisite: None. Day: All; Eve: All; Online: All. Lecture: 3. TAG: OCM002.

SPCH 2500  Cross Cultural Communication  3 cr.
Examines the communication issues associated with transactions between people from different cultures. Discussions focus on differences in perception and cognitive patterns; value systems and hierarchies; and, symbolic meaning as expressed through various verbal codes and nonverbal cues. The issues of ethnocentrism and conflict management are also considered. Students cannot receive credit for both SPCH 2500 and SOCI 2500. Prerequisite: SOCI 1010 or SPCH 2060 or SPCH 1510. Co-Requisite: None. Day: All; Eve: All; Online: All. Lecture: 3.

THEATRE (THEA)

THEA 1200  Introduction to Theatre  3 cr. TM-H
Overview of theatre as an art form. Includes historical and production points of view. Students will effectively view and critique plays and musicals. Writing intensive course. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: On demand; Online: All. Lecture: 3.

THEA 1400  Fundamentals of Acting  3 cr.
## WSCC Faculty

### Full-Time Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Credentials</th>
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<tbody>
<tr>
<td>Anderson, Amanda</td>
<td>MA, University of Louisville</td>
</tr>
<tr>
<td>Ball, Renea</td>
<td>BSN, Ohio University; ADN, Ohio University/AAS, Hocking College</td>
</tr>
<tr>
<td>Baker, Kathy</td>
<td>BA, Glenville State; AAS, Cuyahoga Community College</td>
</tr>
<tr>
<td>Barker, Sheri</td>
<td>MSN, University of Phoenix; BSN, University of Phoenix; ADN, Hocking College</td>
</tr>
<tr>
<td>Barrett, Richard</td>
<td>MEd, Ohio University; BSEE, Ohio University</td>
</tr>
<tr>
<td>Blake, Dan</td>
<td>AAS, Washington State Community College</td>
</tr>
<tr>
<td>Bogard, Tracey</td>
<td>BSN, Ohio University; AAS, Hocking College</td>
</tr>
<tr>
<td>Boone, Darla</td>
<td>MSN, West Virginia University; BSN, University of Cincinnati</td>
</tr>
<tr>
<td>Brunny, Michelle</td>
<td>BSN, Salem College; ADN, Parkersburg Community College</td>
</tr>
<tr>
<td>Corbett, Casey</td>
<td>BA, Marietta College; AA, Washington State Community College</td>
</tr>
<tr>
<td>DeVol, Troy</td>
<td>BS, Ohio Valley University</td>
</tr>
<tr>
<td>Edwards, David</td>
<td>MA, Eastern Illinois University; BA, Eastern Illinois University</td>
</tr>
<tr>
<td>Freed, Laura</td>
<td>MPT, West Virginia University; BA, West Virginia University</td>
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<tr>
<td>Freshour, Tara</td>
<td>MA, West Virginia University; BS, Ohio University</td>
</tr>
<tr>
<td>Gabbert, Terrie</td>
<td>MSN, Regis University; BSN, Marshall University; AAS, Parkersburg Community College</td>
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<tr>
<td>Garcia, Laura</td>
<td>MA, West Virginia University; BA, Wheeling Jesuit College</td>
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<tr>
<td>Hager, Tommy</td>
<td>BSEE, West Virginia University; AAS, Parkersburg Community College</td>
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<tr>
<td>Hall, Kent</td>
<td>MEd, University of Rio Grande</td>
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<tr>
<td>Hendershot, Debbie</td>
<td>MUS, University of South Carolina; BEd, Glenville State College; AAB, Washington Technical College</td>
</tr>
<tr>
<td>Hill, Sherri</td>
<td>BA, Marietta College; AAB, Accounting, Washington State Community College</td>
</tr>
<tr>
<td>Hirschi, Dean</td>
<td>PhD, University of Kansas; MS, University of Kansas; BS, University of Utah</td>
</tr>
<tr>
<td>Jarrell, Mollie</td>
<td>JD, WVU College of Law; MS, Marshall University; BA, Marshall University</td>
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<tr>
<td>Johnson, Paula</td>
<td>MEd, Marietta College; BS, Marietta College</td>
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<tr>
<td>Kessler, Mickey</td>
<td>MFA, Carnegie Melon; BA, Youngstown State University</td>
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<tr>
<td>Kincaid, Heather</td>
<td>PhD, Ohio University; MEd, Marietta College; BS, Ohio University; AAS, WSCC</td>
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<tr>
<td>Kinker, J. Robert</td>
<td>PhD, Ohio State University; MA, Ohio State University; BA, Capital University</td>
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<tr>
<td>Lamraoui, Ashley</td>
<td>AAS, Washington State Community College</td>
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<td>Long, Jan</td>
<td>BA, Marietta College; ADN, Hocking College</td>
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<tr>
<td>Lowe, Natalie</td>
<td>MEd, Ohio Valley University; BA, Glenville State College; AAB, Washington Technical College</td>
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<tr>
<td>McAuley, Carol</td>
<td>MA, Otterbein College; LPN, Washington State Community College</td>
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<tr>
<td>Mentink, Sue</td>
<td>BS, Michigan Technological University</td>
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<tr>
<td>Merritt, Brad</td>
<td>MBA, Ohio University; BA, Marietta College</td>
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<tr>
<td>Palmer, Mike</td>
<td>BS, Ohio Valley University; AAS, Washington State Community College</td>
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<tr>
<td>Poorman, Karen</td>
<td>MEd, Ohio University; BS, Concord College</td>
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<tr>
<td>Richards, Paul</td>
<td>MA, Trinity College &amp; University; BA, West Virginia University; AA, WVU-P</td>
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<tr>
<td>Rosenthal, Deborah</td>
<td>PhD, Middle Tennessee State University; MEd, The University of North Carolina; BS, The University of Michigan; AS, Oakland Community College</td>
</tr>
<tr>
<td>Ruth, Elizabeth</td>
<td>MBA, Keller Graduate School of Management; BA, Marshall University</td>
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<tr>
<td>Rutherford, Ben</td>
<td>MA, St. John’s College; BA, West Virginia University</td>
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<tr>
<td>Salem, Esther</td>
<td>MEd, University of Rio Grande; BA, York College (SUNY); AAS, WSCC</td>
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<tr>
<td>Schaad, Tricia</td>
<td>MSN, Otterbein College; BSN, Mt. Carmel</td>
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<tr>
<td>Schilling, Janet</td>
<td>MEd, Ohio University; BS, University of Rio Grande</td>
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<tr>
<td>Shore, Allen</td>
<td>MS, Murray State University; BS, Appalachian State University; AA, Caldwell Community College</td>
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<tr>
<td>Singree, Shirley</td>
<td>MS, Ohio University; BS, Rio Grande College; AAS, MMLT, Washington Technical College</td>
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<tr>
<td>Sites, Andrea</td>
<td>MS, Ohio University; BS, Ohio University</td>
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<tr>
<td>Starkey, Jeffrey</td>
<td>MBA, Bowling Green University; BA, Ohio University</td>
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<tr>
<td>Taylor, Emily</td>
<td>BA, Ohio Valley University; AAS, Washington State Community College</td>
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<tr>
<td>Thomas, Deborah</td>
<td>PhD, West Virginia University; MA, West Virginia University; BA, West Virginia University</td>
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<tr>
<td>Tuten, Tamara</td>
<td>MS, Ohio University; BA, Ohio University</td>
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<tr>
<td>Unsold, Deborah</td>
<td>MEd, Bowling Green State University; VA, Wittenberg College</td>
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<tr>
<td>Veladota, Christina</td>
<td>PhD, Ohio University; MFA, University of North Carolina; BFA, Emerson College</td>
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<tr>
<td>Warren, Alicia</td>
<td>MEd, Ohio University; BSN, Ohio University; ADN, Parkersburg Community College; LPN, Muskingum/Perry Career Center</td>
</tr>
<tr>
<td>Wilder, Tanya</td>
<td>MA, University of Kentucky; BSB, Appalachian State University</td>
</tr>
<tr>
<td>Will, Julia</td>
<td>MEd, Marietta College; BS, Ohio University</td>
</tr>
</tbody>
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Updated December 13, 2013
### Adjunct Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Credentials</th>
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<tbody>
<tr>
<td>Adams, Amber</td>
<td>MS, Walden University; BS, Glenville State College</td>
</tr>
<tr>
<td>Adams, Susan</td>
<td>MA, West Virginia University; BS, West Virginia University</td>
</tr>
<tr>
<td>Akir, Ziad</td>
<td>Ph.D., Ohio University; MS, Ohio University; BS, Ohio University</td>
</tr>
<tr>
<td>Ankrom, David</td>
<td>BA, Kaplan University; AAB, Washington State Community College</td>
</tr>
<tr>
<td>Arnold, Nick</td>
<td>BA, Ohio State University</td>
</tr>
<tr>
<td>Bargeloh, Frank</td>
<td>MA, West Virginia University; BA, Glenville State College</td>
</tr>
<tr>
<td>Biehl, Delmar</td>
<td>AAS, Washington State Community College</td>
</tr>
<tr>
<td>Bohl, Tina</td>
<td>MEd, Marietta College; BS, Ohio University</td>
</tr>
<tr>
<td>Brodie, Samantha</td>
<td>BSBA, OSU; IT Diploma, DeVry</td>
</tr>
<tr>
<td>Burdette, John</td>
<td>AAS, Northern Virginia Community College</td>
</tr>
<tr>
<td>Byrd, Robin Nicole</td>
<td>MBA, West Virginia University; BS, Ohio University</td>
</tr>
<tr>
<td>Caplinger, William</td>
<td>MSN, Marshall University; BSN, Ohio University; AAS, Rio Grande</td>
</tr>
<tr>
<td>Conrath, Dave</td>
<td>BGS, Ohio University</td>
</tr>
<tr>
<td>Danison, Amy</td>
<td>BS, Purdue University</td>
</tr>
<tr>
<td>Davidson, Patricia</td>
<td>BSN, Ohio University; AAS, Hocking College</td>
</tr>
<tr>
<td>Deem, Kay</td>
<td>BSN, Alderson Broadus; AAS, Parkersburg Community College</td>
</tr>
<tr>
<td>DeWees, Brent</td>
<td>MM, Kentucky Christian University; BS, Kentucky Christian University</td>
</tr>
<tr>
<td>Doak, Debra</td>
<td>BSN, West Virginia University; RN, Good Samaritan</td>
</tr>
<tr>
<td>Doerfler, Mark</td>
<td>MSEd, Franciscan University; BA, Wheeling Jesuit; AAS, Columbus Tech</td>
</tr>
<tr>
<td>Duff, Angela</td>
<td>BSN, Wheeling Jesuit University; ADN, WVU-P</td>
</tr>
<tr>
<td>Duffy, Brenda</td>
<td>BA, Ohio Valley University; AAS, Hocking College</td>
</tr>
<tr>
<td>Feathers, Robert</td>
<td>BS, Ohio Valley College; AIS, Washington State Community College</td>
</tr>
<tr>
<td>Finley-Boggs, Kathleen</td>
<td>MA, West Virginia University; BA, Glenville State College</td>
</tr>
<tr>
<td>Gould, Jane</td>
<td>RN, Mansfield General Hospital School of Nursing</td>
</tr>
<tr>
<td>Harner, Debra</td>
<td>MA, West Virginia University; BA, West Virginia University</td>
</tr>
<tr>
<td>Hiles, Janine</td>
<td>BSN, University of Phoenix; AAS, Washington State Community College</td>
</tr>
<tr>
<td>Horne, David</td>
<td>PhD, University of Toledo; MS, University of Toledo; BSc, University of Herfordshire (England)</td>
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<tr>
<td>Hutchins, Bonnie</td>
<td>MEd, Marietta College; BS, Marietta College</td>
</tr>
<tr>
<td>Jarvis, Rebecca</td>
<td>MEd, Ohio University; BEd, Youngstown State</td>
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<tr>
<td>King, Naomi</td>
<td>BSN, Ohio University; AAS, Ohio University Zanesville</td>
</tr>
<tr>
<td>Kinker, Sam</td>
<td>BA, Ohio University; AA, Washington State Community College</td>
</tr>
<tr>
<td>Kinker-Elliott, Melanie</td>
<td>LPN Certificate, Washington State Community College</td>
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<tr>
<td>Kornmiller, Brenda</td>
<td>MEd, Ohio State University; BSBA, Ohio State University</td>
</tr>
<tr>
<td>Krawczyk, Carl-Michal</td>
<td>MA, University of Houston; BA, University of Maryland, European Division; AA, University of Maryland European Division</td>
</tr>
<tr>
<td>LaBarre, Mary</td>
<td>MSN, Otterbein; BSN, Mt. Carmel</td>
</tr>
<tr>
<td>Lang, Judith</td>
<td>BSN, Kent State University</td>
</tr>
<tr>
<td>Marasco, Frank</td>
<td>DC, Chiropractic National University of Health; BS, National University of Health; Pre-Health (Undergraduate Community College of Allegheny County 90 credits)</td>
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<tr>
<td>McAfee, Tracy</td>
<td>MA, Ohio State University; BA, Baldwin-Wallace</td>
</tr>
<tr>
<td>McVey, Lindsay</td>
<td>MJS, Kent State College; BA, Kent State University</td>
</tr>
<tr>
<td>Moegling, Larry</td>
<td>MEd, Ohio University; BS, Bowling Green State University</td>
</tr>
<tr>
<td>Nelson, Stefanie</td>
<td>MA, Ohio University; BA, Muskingum College</td>
</tr>
<tr>
<td>Nutter, Mark</td>
<td>PhD, Ohio University; MA, Ohio University; BS, Ohio University</td>
</tr>
<tr>
<td>Owen, Frieda</td>
<td>PhD, New York University; MAT, Augustana College; BA</td>
</tr>
<tr>
<td>Phillips, Aimée</td>
<td>MS, West Virginia University; BS, West Virginia University; Camden Clark School of Radiologic Technology</td>
</tr>
<tr>
<td>Richards, Patrick</td>
<td>DMA, The University of Southern Mississippi; M.Mus, West Virginia University; B.Mus, West Virginia University</td>
</tr>
<tr>
<td>Richmond, Alicia</td>
<td>MA, West Virginia University; RBA, WVU Parkersburg; AA, WVU Parkersburg</td>
</tr>
<tr>
<td>Rode, Donald</td>
<td>BS, University of Illinois</td>
</tr>
<tr>
<td>Roe, Elizabeth</td>
<td>BSN, Mt. St. Joseph; RN, Good Samaritan</td>
</tr>
<tr>
<td>Russell, R. Steve</td>
<td>EdD, West Virginia University; BS, West Virginia University</td>
</tr>
<tr>
<td>Salyers, Kim</td>
<td>MAEd, University of Phoenix; BS, Ohio Valley University; AAS, Central Ohio Technical College</td>
</tr>
</tbody>
</table>
## Adjunct Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Credentials</th>
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<tbody>
<tr>
<td>Scott, Saundra</td>
<td>MEd, Ohio University; BS, Trine University (formerly Tri-State University)</td>
</tr>
<tr>
<td>Stanley, Amy</td>
<td>BSN, Ohio University; ADN, Washington State Community College</td>
</tr>
<tr>
<td>Stauffer, Kara</td>
<td>BS, West Virginia University</td>
</tr>
<tr>
<td>Thompson, Michal</td>
<td>BA, Hiram College; AAS, Lakeland Community College</td>
</tr>
<tr>
<td>VanNoy, Gerri</td>
<td>MA, West Virginia University; BA, WVU-P; AA, WVU-P; AAS, WSCC</td>
</tr>
<tr>
<td>Vaughan, Dixie</td>
<td>PhD, Ohio University; MEd, Ohio University; BS, Marshall University</td>
</tr>
<tr>
<td>Weber, Sheila</td>
<td>BA, Ohio Valley University; AB, Washington State Community College</td>
</tr>
<tr>
<td>Welch, Clint</td>
<td>JD, Capital University; MHA, Ohio State University; BA, Ohio University; ADN, Hocking College</td>
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<tr>
<td>Williamson, Rebecca</td>
<td>MA, Marietta College; AAS, WVU-P</td>
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<tr>
<td>Wilson, Robert</td>
<td>MEd, Rio Grande University; BS, Ohio University; AAS, Washington State Community College</td>
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<tr>
<td>Wright, John</td>
<td>AAS, Jefferson Technical College</td>
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<tr>
<td>York, James</td>
<td>MS, Ohio University; BS, Purdue University</td>
</tr>
<tr>
<td>Yost, Dody</td>
<td>MA, Marietta College; BA, Marietta College</td>
</tr>
<tr>
<td>Zoller, Lynne</td>
<td>MSN, Otterbein; MHSA, Ohio University; BSN, West Virginia University; ADN, WVU-P</td>
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</tbody>
</table>