Washington State
COMMUNITY COLLEGE

2013-2014

COURSE CATALOG

DESK REFERENCE

Main Desk: 740.374.8716
Admissions: 740.568.1900
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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
www.ncahlc.org/

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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.

2013 - 2014 WSCC Catalog

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

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2013 - 2014 WSCC Academic Calendar

Fall Semester 2013

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

Winter Intersession 2013-2014

Winter Intersession classes begin	December 16	Monday
Deadline to withdraw from Winter Intersession	January 6	Monday
Winter Intersession ends	January 10	Friday

Spring Semester 2014

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

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.
3. Independent Life-Long Learning: Continue as an independent learner engaged in a lifelong process of discovery.
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.

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.

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.

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.

Transfer and Articulation

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.

Transfer and Articulation

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.

Arts & Sciences

Baccalaureate Preparation/Transfer Programs

Washington State
COMMUNITY COLLEGE

Biological Sciences Transfer 19
Business Administration Transfer 20
Education Transfer - Early Childhood 21
Education Transfer - Middle Childhood 22
Education Transfer - Adolescent/Young Adult 23
Engineering Transfer 24
Fine Arts Transfer - Studio Art 25
Fine Arts Transfer - Graphic Design 26
General Sciences Transfer 27
Associate of Individualized Studies 28
Liberal Arts Transfer 29
Mathematics Transfer 30
Physical Sciences Transfer 31
Social Services Transfer 32
Associate of Technical Studies 33
Cyber Security & Investigation 34

Biological Sciences Transfer

ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 2130	College Algebra	4
BIOL 1100	General Biology I	3
BIOL 110L	General Biology I Lab	1
PSYC 1010	General Psychology	3
—	Arts & Humanities Elective	3
Credit Hours		17

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
BIOL 1110	General Biology II	3
BIOL 111L	General Biology II Lab	1
BUSM 1600	PC Applications	3
—	Social/Behavioral Science Elective	3
—	Social/Behavioral Science Elective	3
MATH 2263	Analytical Geometry & Calculus I	4
Credit Hours		20

THIRD SEMESTER

CHEM 1510	Fundamentals of Chemistry I	3
CHEM 151L	Fundamentals of Chemistry I Lab	1
PHYS 2510	General Physics I	4
PHYS 251L	General Physics I Lab	1
—	Arts & Humanities Elective	3
—	Social/Behavioral Science Elective	3
SPCH 1510	Speech	3
Credit Hours		18

FOURTH SEMESTER

CHEM 1520	Fundamentals of Chemistry II	3
CHEM 152L	Fundamentals of Chemistry II Lab	1
PHYS 2530	General Physics II	4
PHYS 253L	General Physics II Lab	1
BIOL 2600	Introduction to Ecology	3
BIOL 260L	Introduction to Ecology Lab	1
—	Arts & Humanities Elective	3
Credit Hours		16

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

ENGL 1510	English Composition I	3
BUSM 1600	PC Applications	3
BUSM 1550	Business Management I	3
—	Arts & Humanities Elective	3
ECON 2120	Principles of Macroeconomics	3
Credit Hours		15

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
PSYC 1010	General Psychology *or*	3
—	Social/Behavioral Science Elective	
MATH 2130	College Algebra *or*	3-4
MATH 2260	Introduction to Calculus	
—	Arts & Humanities Elective	3
—	Business Elective	3
Credit Hours		15-16

THIRD SEMESTER

ACCT 1510	Principles of Accounting I	4
SPCH 1510	Speech	3
—	Arts & Humanities Elective	3
—	Business Elective	3
—	Natural Science Elective	3
Credit Hours		16

FOURTH SEMESTER

ACCT 1520	Principles of Accounting II	4
ECON 2130	Principles of Microeconomics	3
—	Natural Sciences Elective	4
—	Business Elective	3
Credit Hours		14

Total Credit Hours **60-61**

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

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.

Education Transfer - Early Childhood

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
EDUC 1000	Introduction to Teaching	3
PSYC 1010	General Psychology	3
SPCH 1510	Speech	3
PHIL 1200	Principles of Reasoning	3
BUSM 1600	PC Applications	3
Credit Hours		18

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
EDUC 1510	Early Childhood Education Seminar & Field Work	1
EDUC 1400	Introduction to Instructional Planning	2
MUSC 1010	Fundamentals of Music *or*	3
—	Arts & Humanities Elective	
MATH 2173	Survey of Math I	4
PSYC 2700	Developmental Psychology	3
Credit Hours		16

THIRD SEMESTER

LITR 2600	Children's Literature	3
MATH 2175	Survey of Mathematics II	3
ARTS 1000	Art Appreciation	3
BIOL 1010	Principles of Biology *or*	3-4
PHYS 1100	Principles of Physical Science I	
EDUC 2100	Exceptional Learners	3
EDUC 2110	Exceptional Learners Education Seminar & Field Work	1
EDUC 2400	Multicultural Education *or*	2-3
ECDV 2210	Art, Music and Movement	
Credit Hours		18-20

FOURTH SEMESTER

EDUC 1700	Educational Technology	3
PSYC 2750	Educational Psychology	3
EDUC 2950	Education Capstone - Foundations of the Profession	3
ECDV 1130	ECD Health & Safety	2
PHYS 1200	Principles of Physical Science II *or*	4
PHYS 1210	Astronomy	
—	Social/Behavioral Science Elective	3
Credit Hours		18

Total Credit Hours **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.

Education Transfer - Middle Childhood

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
EDUC 1000	Introduction to Teaching	3
PHIL 1200	Principles of Reasoning	3
PSYC 1010	General Psychology	3
SPCH 1510	Speech	3
BUSM 1600	PC Applications	3
Credit Hours		18

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
MATH 2130	College Algebra *or*	4
—	Math Elective	
EDUC 1530	Middle Childhood Education Seminar & Field Work	1
EDUC 1400	Introduction to Instructional Planning	2
PSYC 2700	Developmental Psychology	3
—	Arts & Humanities Elective	3
Credit Hours		16

THIRD SEMESTER

EDUC 2100	Exceptional Learners	3
EDUC 2110	Exceptional Learners Education Seminar & Field Work	1
—	Course in Area of Concentration I	3-4
—	Social/Behavioral Science Elective	3
—	Arts & Humanities Elective	3
—	Natural Science Elective	4
Credit Hours		17-18

FOURTH SEMESTER

—	Natural Science Elective	4
—	Arts & Humanities Elective	3
PSYC 2750	Educational Psychology	3
EDUC 2950	Educ. Capstone - Foundations of the Profession	3
EDUC 1700	Educational Technology	3
—	Course in Area of Concentration II	3-4
Credit Hours		19-10

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.

Education Transfer - Adolescent/Young Adult

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
EDUC 1000	Introduction to Teaching	3
PHIL 1200	Principles of Reasoning	3
PSYC 1010	General Psychology	3
SPCH 1510	Speech	3
BUSM 1600	PC Applications	3
Credit Hours		18

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
MATH 2130	College Algebra *or*	4
—	Math Elective	
EDUC 1550	Young Adult Education Seminar & Field Work	1
EDUC 1400	Introduction to Instructional Planning	2
PSYC 2700	Developmental Psychology	3
—	Arts & Humanities Elective	3
Credit Hours		16

THIRD SEMESTER

EDUC 2100	Exceptional Learners	3
EDUC 2110	Exceptional Learners Education Seminar & Field Work	1
—	Course in Area of Concentration I	3-4
—	Social/Behavioral Science Elective	3
—	Arts & Humanities Elective	3
—	Science Elective	4
Credit Hours		17-18

FOURTH SEMESTER

—	Science Elective	4
—	Arts & Humanities Elective	3
PSYC 2750	Educational Psychology	3
EDUC 2950	Educ. Capstone - Foundations of the Profession	3
EDUC 1700	Educational Technology	3
—	Course in Area of Concentration II	3-4
Credit Hours		19-20

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 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.

Engineering Transfer

ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 2263	Analytical Geometry & Calculus I	4
—	Social/Behavioral Science Elective	3
PHIL 1200	Principles of Reasoning	3
CHEM 1510	Fundamentals of Chemistry I	3
CHEM 151L	Fundamentals of Chemistry I Lab	1
Credit Hours		17

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
MATH 2264	Analytical Geometry & Calculus II	4
CHEM 1520	Fundamentals of Chemistry II	3
CHEM 152L	Fundamentals of Chemistry II Lab	1
—	Arts & Humanities Elective	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		17

THIRD SEMESTER

MATH 2265	Analytical Geometry & Calculus III	4
—	Social/Behavioral Science Elective	3
PHYS 2510	General Physics I	4
PHYS 251L	General Physics I Lab	1
—	Arts & Humanities Elective	3
Credit Hours		15

FOURTH SEMESTER

MATH 2270	Differential Equations	3
—	Computer Science Elective	3
—	Social/Behavioral Science Elective	3
PHYS 2530	General Physics II	4
PHYS 253L	General Physics II Lab	1
MATH 2250	Elementary Linear Algebra	4
Credit Hours		18

Total Credit Hours **67**

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

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

ARTS 1210	Drawing I	4
ARTS 1110	Two-Dimensional Design	3
ARTS 2010	Art History I	3
—	Math Elective (2110 or higher)	3
ENGL 1510	English Composition I	3
PHIL 1200	Principles of Reasoning	3
Credit Hours		19

SECOND SEMESTER

ARTS 2230	Figure Drawing	4
ARTS 2410	Painting I	3
ARTS 2610	Graphic Design I	4
ARTS 2020	Art History II	3
—	Social/Behavioral Science Elective	3
SPCH 1510	Speech	3
Credit Hours		20

THIRD SEMESTER

ARTS 2210	Drawing II	4
ARTS 1800	Photography I	3
ARTS 1120	Three Dimensional Design	3
ENGL 1520	English Composition II	3
—	Natural Science Elective	4
Credit Hours		17

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.

Fine Arts Transfer - Graphic Design

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

ARTS 1210	Drawing I	4
ARTS 1110	Two-Dimensional Design	3
ARTS 2010	Art History I	3
—	Math Elective (2110 or higher)	3
ENGL 1510	English Composition I	3
PHIL 1200	Principles of Reasoning	3
Credit Hours		19

SECOND SEMESTER

ARTS 1800	Photography	3
—	Natural Science Elective	4
ARTS 2610	Graphic Design I	4
ARTS 2050	American Art	3
ECON 2120	Macroeconomics	3
Credit Hours		17

THIRD SEMESTER

ARTS 2230	Figure Drawing	4
ARTS 2020	Art History II	3
ARTS 1220	Color Theory	3
ENGL 1520	English Composition II	3
SPCH 1510	Public Speaking	3
—	Social/Behavioral Science Elective	3
Credit Hours		19

FOURTH SEMESTER

ARTS 2620	Graphic Design II	4
POLS 2050	Global Issues	3
ARTS 1120	3-D Design	3
ARTS 2370	Contemporary Art	3
—	Natural Science Elective	4
Credit Hours		17

Total Credit Hours **72**

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.

General Sciences Transfer

ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
BUSM 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**

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

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.

Associate of Individualized Studies

GENERAL & BASIC COURSES		
—	English Elective	3
—	English Elective	3
—	Speech Elective	3
—	Social/Behavioral Science Elective	3
—	Arts & Humanities Elective	3
—	Computer Applications Elective	3
—	Math Elective *or*	3
—	Natural Science Elective	
—	General Education Elective	4
—	General Education Elective	3
Credit Hours		28+

MAJOR CONCENTRATION COURSES		
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	4
—	Major Concentration Elective	4
Credit Hours		32+
Total Credit Hours		**60+**

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.

Liberal Arts Transfer

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

MATH 2130	College Algebra *or*	4
—	Math Elective	
ENGL 1510	English Composition I	3
BUSM 1600	PC Applications	3
—	Social/Behavioral Sciences Elective	3
PHIL 1200	Principles of Reasoning	3
Credit Hours		16

SECOND SEMESTER

SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
ENGL 1520	English Composition II	3
—	Arts & Humanities Elective	3
—	Social/Behavioral Sciences Elective	3
—	Natural Sciences Elective	3-4
Credit Hours		15-16

THIRD SEMESTER

ENGL 1530	English Composition III *or*	3
—	English Elective	
—	Arts & Humanities Elective	3
—	Social/Behavioral Sciences Elective	3
—	Liberal Arts Major	3
—	Liberal Arts Major	3
Credit Hours		15

FOURTH SEMESTER

—	Arts & Humanities Elective	3
—	Social/Behavioral Sciences Elective	3
—	Natural Science Elective	3-4
—	Liberal Arts Major	3
—	Liberal Arts Major	3
Credit Hours		15-16

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 bachelors 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

ENGL 1510	English Composition I	3
MATH 2263	Analytical Geometry & Calculus I	4
—	Social/Behavioral Science Elective	3
—	Arts & Humanities Elective	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		16

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
MATH 2264	Analytical Geometry & Calculus II	4
—	Transfer Module Elective	3
—	Arts & Humanities Elective	3
—	Natural Sciences Elective	3
Credit Hours		16

THIRD SEMESTER

MATH 2265	Analytical Geometry & Calculus III	4
—	Social/Behavioral Science Elective	3
—	Natural Science Elective	3
MATH 2250	Elementary Linear Algebra	4
Credit Hours		14

FOURTH SEMESTER

MATH 2270	Differential Equations	3
—	Computer Science Elective	3
—	Social/Behavioral Science Elective	3
—	Transfer Module Elective	3
—	Arts & Humanities Elective	3
Credit Hours		15

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.

Physical Sciences Transfer

ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
BUSM 1600	PC Applications	3
MATH 2263	Analytic Geometry & Calculus I	4
CHEM 1510	Fundamentals of Chemistry I	3
CHEM 151L	Fundamentals of Chemistry I Lab	1
—	Arts & Humanities Elective	3
Credit Hours		17

SECOND SEMESTER

ENGL 1520	English Composition II	3
MATH 2264	Analytic Geometry & Calculus II	4
—	Social/Behavioral Science Elective	3
CHEM 1520	Fundamentals of Chemistry II	3
CHEM 152L	Fundamentals of Chemistry II Lab	1
—	Arts & Humanities Elective	3
Credit Hours		17

THIRD SEMESTER

SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
GEOG 1210	Cultural Geography	3
PHYS 2510	General Physics I	4
PHYS 251L	General Physics I Lab	1
MATH 2265	Analytic Geometry & Calculus III	4
—	Natural Science Elective	3
Credit Hours		18

FOURTH SEMESTER

MATH 2270	Differential Equations	3
—	Social/Behavioral Science Elective	3
PHYS 2530	General Physics II	4
PHYS 253L	General Physics II Lab	1
—	Arts & Humanities Elective	3
—	Additional Elective	3-4
Credit Hours		17-18

Total Credit Hours **69-70**

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

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.

Social Services Transfer

ASSOCIATE OF ARTS DEGREE FOR TRANSFER

FIRST SEMESTER

SOCI 1010	Introduction to Sociology	3
SOSV 1110	Introduction to Social Work & Social Welfare	3
BUSM 1600	PC Applications	3
SOSV 1140	American Social Welfare Institution	3
ENGL 1510	English Composition I	3
—	Arts & Humanities Elective	3
Credit Hours		18

SECOND SEMESTER

—	Arts *or* Music Elective	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
PSYC 1010	Psychology	3
SOCI 2010	Social Problems	3
MATH 2110	Principles of Statistics	3
Credit Hours		18

THIRD SEMESTER

POLS 1020	American National Government	3
SOSV 2100	Crisis Intervention	3
BIOL 1010	General Biology I	3
BIOL 101L	General Biology I Lab	1
—	History Elective	3
SOCI 2200	Sociology of Family	3
Credit Hours		16

FOURTH SEMESTER

—	Literature Elective	3
PSYC 2320	Abnormal Psychology	3
SOSV 1120	Interview Techniques	3
GEOG 1210	Cultural Geography	3
—	Natural Science Elective *or*	3-4
—	Math Elective	
SOCI 2250	Sociology of Race & Ethnicity in America	3
Credit Hours		18-19

Total Credit Hours **70-71**

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

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.

Associate of Technical Studies

GENERAL & BASIC COURSES

ENGL 1510	English Composition I	3
ENGL 1520	English Composition II *or*	3
ENGL 1515	Technical Writing	
SPCH 1510	Speech	3
BUSM 1600	PC Applications	3
MATH 1110	Intermediate Algebra (or equivalent)	3
—	Natural Science Elective	3
PHIL 1200	Principles of Reasoning	3
—	Arts & Humanities Elective	3
—	Social/Behavioral Science Elective	3
—	Social/Behavioral Science Elective	3
Credit Hours		30+

MAJOR CONCENTRATION COURSES

—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
—	Major Concentration Elective	3
Credit Hours		30+

Total Credit Hours **60+**

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.

Cyber Security & Investigation

ASSOCIATE OF TECHNICAL STUDIES

FIRST SEMESTER		
ENGL 1510	English Composition I	3
MATH —	MATH 1110 or higher	3
BUSM 1600	PC Applications	3
PHIL 1200	Principles of Reasoning	3
CRJU 1120	Criminal Law	3
DTCS 1230	OS Concepts and Customizing	3
Credit Hours		18
SECOND SEMESTER		
ENGL 1520	English Composition II or	3
ENGL 1515	Technical Writing	
—	Social & Behavioral Science	3
SPCH 1510	Speech	3
CRJU 1110	Criminal Evidence and Procedures	3
ELEC 2410	Microcomputer Diagnostic and Upgrading I	3
ELEC 1950	CISCO Semester I	3
Credit Hours		18
THIRD SEMESTER		
—	Natural Science	3
CRJU 1210	Criminal Investigation	3
DTCS 2100	Database Management	3
ELEC 2050	CISCO Semester II	3
ELEC 2510	Microcomputer Diagnostic and Upgrading II	3
Credit Hours		15
FOURTH SEMESTER		
—	Arts and Humanities	3
—	Social & Behavioral Science	3
CRJU 2580	Criminal Justice Practicum	1
CRJU 2590	Criminal Justice Seminar	1
ELEC 2900	Introduction to Computer Forensics	3
ELEC 2610	Introduction to Linux	3
ELEC 2450	Security +	3
Credit Hours		17
Total Credit Hours		**68**

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.

***Employment of information security analysts, web developers, and computer network architects is projected to grow 22 percent from 2010 to 2020, faster than the average for all occupations. Job prospects for all three occupations should be favorable.** Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2012-13 Edition*, Information Security Analysts, Web Developers, and Computer Network Architects, on the Internet at http://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts-web-developers-and-computer-network-architects.htm (visited *February 13, 2013*).

Business Technology

Washington State
COMMUNITY COLLEGE

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Accounting Technology

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	
BUSM 1550	Business Management	3
BUSM 1600	PC Applications	3
Credit Hours		16

SECOND SEMESTER

ACCT 1520	Principles of Accounting II	4
BUSM 1660	Business Law	3
BUSM 2300	Introduction to Finance	3
ACCT 2820	Spreadsheet Accounting	3
ACCT 2810	Microcomputer Accounting	2
ACCT 1610	Payroll Accounting	3
Credit Hours		18

THIRD SEMESTER

ACCT 2710	Intermediate Accounting	4
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		19

FOURTH SEMESTER

ACCT 2900	Fraud Examination *or*	3
ACCT 2340	Governmental Accounting *or*	
ACCT 2730	Auditing	
ACCT 2210	Cost Accounting	4
ECON 2130	Principles of Microeconomics	3
SPCH 1510	Speech	3
BUSM 1570	Small Business Entrepreneurship	3
—	Social/Behavioral Science Elective	3
Credit Hours		19

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	
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**

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

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:
    - Word processing
    - Spreadsheets
    - Databases
    - Programming
    - Web Pages/Internet
    - Networks
    - Operating Systems
    - Desktop Publishing

Business Management Technology

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 1106	Business Math	3
BUSM 1550	Business Management	3
MKTG 2130	Sales	3
BUSM 1600	PC Applications	3
Credit Hours		15

SECOND SEMESTER

ENGL 1520	English Composition II	3
PSYC 1010	General Psychology	3
BUSM 1660	Business Law	3
BUSM 2560	Human Resource Management	3
MKTG 2510	Marketing	3
—	Arts & Humanities Elective	3
Credit Hours		18

THIRD SEMESTER

BUSM 1570	Small Business Entrepreneurship	3
DTCS 2100	Database Management	3
ECON 2120	Principles of Macroeconomics	3
ACCT 1510	Principles of Accounting I	4
MKTG 2160	Advertising	3
Credit Hours		16

FOURTH SEMESTER

ACCT 1520	Principles of Accounting II	4
BUSM 2610	Office Management	3
BUSM 2300	Introduction to Finance	3
BUSM 2750	International Business	3
SPCH 1510	Speech	3
ECON 2130	Principles of Microeconomics	3
Credit Hours		19

Total Credit Hours **68**

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

In business today, the effective manager understands all phases of the company's operation and elicits the performance needed to maintain the organization. In short, managers are key to the survival and growth of business. There are a large number of career opportunities in business management, for the qualified individual. College graduates are prime candidates for management training programs and jobs that lead to middle management.

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.

Digital Technology - Web Application Programming

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

DTCS 1010	Intro to Digital Technology	1
DTCS 2650	Internet & Web Page Design	3
DTWP 1200	Programming Logic and Problem Solving	3
DTCS 2100	Database Management	3
BUSM 1660	Business Law	3
ENGL 1510	English Composition I	3
Credit Hours		16

SECOND SEMESTER

DTWP 2510	Java Programming	3
DTGR 2620	Computer Graphics Design II	3
POLS 2050	Global Issues	3
MATH 1106	Business Mathematics	3
DTWP 1300	Introduction to PHP	3
Credit Hours		15

THIRD SEMESTER

DTWP 2110	MySQL Database Design & Programming	3
DTWP 2600	.NET Programming	3
DTCS 2850	Flash	3
DTCS 1230	O/S Concepts & Customizing	3
ENGL 1520	English Composition II	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		18

FOURTH SEMESTER

ELEC 2610	Introduction to Linux	3
DTWP 2320	Javascript	3
DTWP 2910	Capstone: Web Programming	3
ECON 2120	Principles of Macroeconomics *or*	3
ECON 2130	Principles of Microeconomics	
—	Arts & Humanities Elective	3
Credit Hours		15

Total Credit Hours **64**

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

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

Digital Technology - Computer Support Technician

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

DTCS 1010	Intro to Digital Technology	1
BUSM 1600	PC Applications	3
DTCS 1230	O/S Concepts & Customizing	3
DTCS 2650	Internet & Web Design	3
ENGL 1510	English Composition I	3
DTWP 1200	Programming Logic and Problem Solving	3
Credit Hours		17

SECOND SEMESTER

ELEC 2410	Microcomputer Diagnosis & Upgrading I	3
ELEC 1950	CISCO I - Network Fundamentals	3
MATH 1110	Intermediate Algebra *or*	3
MATH 1106	Business Math	
—	Arts & Humanities Elective	3
INDT 1310	Basic Electricity *or*	3
—	Technical Elective	
—	Technical Elective	2
Credit Hours		17

THIRD SEMESTER

ELEC 2050	CISCO II - Routing Protocols & Concepts	3
ELEC 2510	Microcomputer Diagnosis & Upgrading II	3
DTCS 2100	Database Management	3
ENGL 1520	English Composition II	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		15

FOURTH SEMESTER

DTCS 2550	Network Administration	3
ELEC 2610	Introduction to Linux	3
POLS 2050	Global Issues	3
BUSM 1660	Business Law	3
DTCS 2810	Capstone: Computer Support Technician	1
DTCS 2800	Computer Repair & Diagnosis Practicum	3
Credit Hours		16

Total Credit Hours **65**

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

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 socioeconomic 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

Digital Technology - Digital Media

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

DTME 1000	Survey of Digital Media	3
DTME 1300	Video Production I	3
DTCS 2850	Flash	3
DTCS 2650	Internet & Web Page Design	3
ENGL 1510	English Composition I	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		18

SECOND SEMESTER

DTME 1310	Video Production II	3
DTME 1320	Audio Production	3
DTME 1330	Digital Video Effects	3
DTGR 1600	Computer Graphics Design I	3
MATH 1106	Business Math	3
ENGL 1520	English Composition II	3
Credit Hours		18

THIRD SEMESTER

DTME 1340	Lighting for Video	3
DTME 1420	Broadcast Journalism	3
DTME 1410	Digital Movie Making	3
DTIN 1600	3D Graphics	3
—	Natural Science Elective	4
Credit Hours		16

FOURTH SEMESTER

DTME 1400	Media Management	3
DTME 1430	Capstone Portfolio	3
SOCI 2500	Cross Cultural Communications	3
—	Arts & Humanities Elective	3
—	Arts & Humanities Elective	3
—	Political Science Elective	3
Credit Hours		18

Total Credit Hours **73**

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.

Digital Technology - Computer Graphics

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

DTGR 1600	Computer Graphics Design I	3
DTGR 1200	Color Theory	3
DTCS 1010	Intro to Digital Technology	1
DTIN 1600	3D Graphics	3
DTCS 2650	Internet & Web Design	3
DTGR 1550	Interface Design	3
Credit Hours		17

SECOND SEMESTER

DTGR 1300	2D Design	3
ARTS 1210	Basic Drawing	3
ENGL 1510	English Composition I	3
MATH 1106	Business Math	3
DTME 1330	Digital Video Effects	3
DTIN 2150	Simulation I (Maya Fundamentals)	3
Credit Hours		18

THIRD SEMESTER

DTCS 2850	Flash	3
DTIN 2100	3D Animation	3
DTGR 2620	Computer Graphic Design II	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
ENGL 1520	English Composition II	3
BUSM 1660	Business Law	3
Credit Hours		18

FOURTH SEMESTER

DTGR 2960	Capstone - Computer Graphics	3
DTIN 2200	Simulation II (Adv. Maya)	3
DTGR 2700	Selected Topics - Computer Graphics Design	3
DTGR 2800	Introduction to ZBrush	3
ECON 2120	Principles of Macroeconomics *or*	3
ECON 2130	Principles of Microeconomics	
POLS 2050	Global Issues *or*	3
POLS 1010	Current Affairs	
Credit Hours		18

Total Credit Hours **71**

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

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.

OAST - Medical Administrative Assistant

ASSOCIATE OF APPLIED BUSINESS DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

OAST 1510	Keyboarding I	3
OAST 2550	Windows Concepts	3
OAST 1880	Practicum Orientation	1
ENGL 1510	English Composition I	3
HLTH 1120	First Aid/Personal Safety	2
HLTH 1830	Pharmacological Terminology	3
BIOL 1330	Survey of Anatomy & Physiology I	2
Credit Hours		17

SECOND SEMESTER

OAST 1200	Voice Recognition	2
OAST 1520	Keyboarding II	3
OAST 2210	Microsoft Word	3
OAST 2610	Medical Transcription	3
OAST 2890	OAST Practicum/Seminar I	1.5
HLTH 1350	ICD 10-CM Coding	3
BIOL 1340	Survey of Anatomy & Physiology II	2
Credit Hours		17.5

THIRD SEMESTER

OAST 1810	Business Editing and Proofreading	2
OAST 2220	Microsoft Excel	3
OAST 2330	Medical Office Procedures	2
OAST 2891	OAST Practicum/Seminar II	1.5
ENGL 1520	English Composition	3
HLTH 1340	CPT Coding	3
HLTH 2310	Principles of Reimbursement	3
Credit Hours		17.5

FOURTH SEMESTER

—	Arts & Humanities Elective	3
OAST 2520	Workplace Technology	2
OAST 2892	OAST Practicum/Seminar III	1.5
OAST 2960	Capstone Seminar	2
SPCH 2060	Interpersonal Communication	3
	Social & Behavioral Science Elective	3
	Math or Natural Science Elective	4
Credit Hours		18.5

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.

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

Washington State
COMMUNITY COLLEGE

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Automotive Technology - Automotive Service

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

AUTO 1100	Vehicle Service & Maintenance	3
AUTO 1110	Electrical Circuitry	3
AUTO 1120	Automotive Brakes	3
AUTO 1130	Electrical Components	3
ENGL 1510	English Composition I	3
BUSM 1710	Auto/Diesel Bus. Computer App.	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
ENGL 1515	Technical Writing	3
MATH 1104	Technical Mathematics	3
Credit Hours		18

THIRD SEMESTER

AUTO 2100	Automatic Drive Trains	3
AUTO 2110	Computerized Engine Controls	3
AUTO 2130	Cylinder Block & Lower Engine	3
—	Arts & Humanities Elective	3
SPCH 2060	Interpersonal Communication	3
BUSM 1800	Personal Finance	3
Credit Hours		18

FOURTH SEMESTER

TRCK 2140	Practicum Truck/Auto	2
AUTO 2150	Principles of Air Conditioning	3
TRCK 2150	ASE Technician Preparation	3
PHYS 1010	Applied Physics	2
PHYS 101L	Applied Physics Lab	1
POLS 2050	Global Issues	3
BUSM 1660	Business Law	3
Credit Hours		17

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	3
AUTO 1110	Electrical Circuitry	3
TRCK 1120	Medium & Heavy Brakes	3
AUTO 1130	Electrical Components	3
ENGL 1510	English Composition I	3
BUSM 1710	Auto/Diesel Bus. Computer App.	3
Credit Hours		18

SECOND SEMESTER

TRCK 1130	Medium & Heavy Truck Chassis	3
TRCK 1140	Diesel Engine Design & Service	3
AUTO 1170	Upper Engine Design & Service	3
ENGL 1515	Technical Writing	3
MATH 1104	Technical Mathematics	3
BUSM 1660	Business Law	3
Credit Hours		18

THIRD SEMESTER

TRCK 2100	Diesel Engine Tune Up & Main.	3
TRCK 2110	Diesel Fuel Systems & Hydr.	3
TRCK 2120	Diesel Truck Drive Trains	3
BUSM 1800	Personal Finance	3
----	Arts & Humanities Elective	3
SPCH 2060	Interpersonal Communication	3
Credit Hours		18

FOURTH SEMESTER

TRCK 2130	Electronic Diesel Engines	3
TRCK 2140	Practicum Truck/Auto	2
TRCK 2150	ASE Technician Preparation	3
AUTO 2150	Principles of Air Conditioning	3
PHYS 1010	Applied Physics	2
PHYS 101L	Applied Physics Lab	1
POLS 2050	Global Issues	3
Credit Hours		17

Total Credit Hours **71**

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

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.

Electrical Engineering Technology (ICE)

INSTRUMENTATION, CONTROL, and ELECTRICAL

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

ELET 1310	Digital I	4
ENGR 1010	Fundamentals of Engineering	3
MATH 1110	Intermediate Algebra	3
MECH 2150	Instrumentation I	4
ENGL 1510	English Composition I	3
Credit Hours		17

SECOND SEMESTER

ELET 1330	Digital II	3
ELET 1110	DC Circuits	3
ENGL 1515	Technical Writing	3
MATH 2120	Trigonometry	3
MECH 2170	Instrumentation II	4
INDT 1350	Commercial Wiring and Prints	2
Credit Hours		18

THIRD SEMESTER

ELET 2210	Electronics I	4
ELET 1130	AC Circuits	3
PHYS 2010	Introduction to Physics I	3
PHYS 201L	Introduction to Physics I Lab	1
ELET 2410	Program Logic Controllers I	3
ELET 2110	Rotating Machinery	3
ELEC 2010	Instrumentation & Control Wiring	2
Credit Hours		19

FOURTH SEMESTER

—	Arts & Humanities Elective	3
POLS 2050	Global Issues	3
SPCH 2060	Interpersonal Communication	3
ELET 2230	Electronics II	4
ELET 2130	P&I Drawings & Motor Control	2
MECH 2230	Hydraulics & Pneumatics	3
Credit Hours		18

Total Credit Hours **72**

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.

Geosciences Transfer

ASSOCIATE OF SCIENCE DEGREE FOR TRANSFER

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 2120	Trigonometry	3
GEOG 1210	Cultural Geography	3
CHEM 1510	Fundamentals of Chemistry I	3
CHEM 151L	Fundamentals of Chemistry I Lab	1
GEOS 1010	Physical Geography	4
Credit Hours		17

SECOND SEMESTER

ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
MATH 2130	College Algebra	4
PHYS 2010	Introduction to Physics I	3
PHYS 201L	Introduction to Physics I Lab	1
GEOS 2510	Intro to Mapping and GIS	4
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		18

THIRD SEMESTER

GEOS 2520	GIS Applications	4
—	Social/Behavioral Science Elective	3
GEOL 2310	Environmental Geology	3
GEOL 231L	Environmental Geology Lab	1
—	Arts & Humanities Elective	3
—	Arts & Humanities Elective	3
Credit Hours		17

FOURTH SEMESTER

GEOS 2410	Introduction to Meteorology	4
BUSM 1600	PC Applications	3
—	Social/Behavioral Science Elective	3
BIOL 2110	Environmental Biology	3
BIOL 211L	Environmental Biology Lab	1
—	Arts & Humanities Elective	3
Credit Hours		17

Total Credit Hours **69**

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

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.

Industrial Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

ENGL 1510	English Composition I	3
ENGR 1010	Fundamentals of Engineering	3
INDT 1150	Machining Processes	3
INDT 1210	Industrial Safety/Hazmat	2
—	Technical Elective	3
Credit Hours		14

SECOND SEMESTER

DRFT 2530	Engineering Drafting	3
ENGL 1515	Technical Writing	3
INDT 1170	Computer Numerical Control	3
MATH 1104	Technical Mathematics	3
INDT 1340	Team Concepts and Practices	3
—	Technical Elective	3
Credit Hours		18

THIRD SEMESTER

INDT 2100	Fabrication Processes	2
INDT 2170	Advanced CNC	3
PHYS —	Physics Elective	3-4
SPCH 1510	Speech	3
—	Technical Elective	3
—	Arts and Humanities Elective	3
Credit Hours		17-18

FOURTH SEMESTER

INDT 2180	Manufacturing Processes	3
INDT 2280	Management & Supervision	3
INDT 2800	Industrial Capstone Seminar	3
—	Technical Elective	3
—	Technical Elective	3
—	Social & Behavioral Science Elective	3
Credit Hours		18

Total Credit Hours **67-68**

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

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

FIRST SEMESTER

DRFT 1510	Design Drafting	3
ENGL 1510	English Composition I	3
ENGR 1010	Funamentals of Engineering	3
INDT 1150	Machining Processes	3
INDT 1210	Industrial Safety/ Hazmat	2
Credit Hours		14

SECOND SEMESTER

DRFT 2530	Engineering Drafting	3
ENGL 1515	Technical Writing	3
INDT 1170	Computer Numerical Control	3
MATH 1104	Technical Mathematics	3
DRFT 1430	Advanced CAD	3
—	Technical Elective	3
Credit Hours		18

THIRD SEMESTER

DRFT 2610	Civil Drafting	3
PHYS —	Physics Elective	3-4
SPCH 1510	Speech	3
—	Technical Elective	3
—	Technical Elective	3
—	Arts and Humanities Elective	3
Credit Hours		18-19

FOURTH SEMESTER

DRFT 1560	Structural Drafting	3
INDT 2180	Manufacturing Processes	3
INDT 2800	Industrial Capstone Seminar	3
—	Technical Elective	3
—	Technical Elective	3
—	Social & Behavioral Science Elective	3
Credit Hours		18

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.

Industrial Technology - Geotechnical Drafting

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*	3
DRFT 1560	Structural Drafting	
—	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 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.

Industrial Technology - Petroleum Technology (Pending OBR approval)

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

GEOS 1010	Physical Geography	4
ENGR 1010	Fundamentals of Engineering	3
INDT 1020	Intro to the Petroleum Industry	3
INDT 1150	Machining Processes	3
INDT 1210	Industrial Safety/Hazmat	2
Credit Hours		15

SECOND SEMESTER

DRFT 2530	Engineering Drafting	3
ENGL 1510	English Composition I	3
INDT 2040	Production of Oil & Gas	4
MATH 1104	Technical Mathematics	3
GEOS 2510	Intro to Mapping & GIS	4
Credit Hours		17

THIRD SEMESTER

MECH 2150	Instrumentation I	4
PHYS —	Physics Elective	3-4
SPCH 1510	Speech	3
ENGL 1515	Technical Writing	3
INDT 1030	Well Planning & Drilling Operations	3
—	Arts & Humanities Elective	3
Credit Hours		19-20

FOURTH SEMESTER

MECH 2170	Instrumentation II	4
INDT 2180	Manufacturing Processes	3
INDT 2800	Industrial Capstone Seminar	3
INDT 2050	Introduction to Petroleum Geology	3
—	Social & Behavioral Sciences Elective	3
Credit Hours		16

Total Credit Hours **67-68**

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 Collage'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.

Industrial Technology - Process Technician

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

INDT 1010	Intro to Chemical Operator	3
INDT 1210	Industrial Safety/Hazmat	2
INDT 2280	Management and Supervision	3
ENGL 1510	English Composition I	3
BUSM 1600	PC Applications	3
Credit Hours		14

SECOND SEMESTER

INDT 1340	Team Concepts & Practices	3
INDT 1330	Industrial Electricity	2
MECH 1100	Engineering Materials	4
ENGL 1515	Technical Writing	3
PHYS 1010	Applied Physics	2
PHYS 101L	Applied Physics Lab	1
Credit Hours		15

THIRD SEMESTER

INDT 2210	Process Control	4
INDT 2300	Process Troubleshooting	3
MATH 1104	Technical Mathematics	3
SPCH 1510	Speech	3
ELET 2410	Programmable Logic Controls	3
Credit Hours		16

FOURTH SEMESTER

INDT 2180	Manufacturing Processes	2
INDT 2800	Capstone Seminar	3
CHEM 1200	Chemistry Concepts	3
MECH 2060	Statistical Quality Control	2
POLS 2050	Global Issues	3
—	Arts & Humanities Elective	3
Credit Hours		16

Total Credit Hours **61**

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.

Mechanical Engineering Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

ENGR 1010	Fundamentals of Engineering	3
MATH 2120	Trigonometry or	3
MATH 2150	Pre-Calculus	
ENGL 1510	English Composition I	3
INDT 1150	Machining Processes	4
CHEM 1210	Principles of Chemistry I	3
CHEM 121L	Principles of Chemistry I Lab	1
OAST 2220	Microsoft Excel	3
Credit Hours		20

SECOND SEMESTER

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

THIRD SEMESTER

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

FOURTH SEMESTER

SPCH 2060	Interpersonal Communication	3
ENGR 2220	Strength of Materials	3
PHIL 1300	Introduction to Ethics	3
MECH 2230	Hydraulics & Pneumatics	3
MECH 2800	Capstone Seminar	3
INDT 1330	Industrial Electricity	2
Credit Hours		17

Total Credit Hours **72**

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

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.

Mechanical Engineering Technology - Pre-Engineering

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

ELET 1310	Digital I	3
ENGR 1010	Fundamentals of Engineering	3
MATH 2263	Analytical Geometry & Calculus I	4
PHYS 2510	General Physics I	4
PHYS 251L	General Physics I Lab	1
ENGL 1510	English Composition I	3
Credit Hours		18

SECOND SEMESTER

ELET 1330	Digital II	3
ENGR 2240	Statistics for Engineers	4
MATH 2264	Analytic Geometry & Calculus II	4
PHYS 2530	General Physics II	4
PHYS 253L	General Physics II Lab	1
—	Speech Elective	3
Credit Hours		19

THIRD SEMESTER

CHEM 1510	Fundamentals of Chemistry I	3
CHEM 151L	Fundamentals of Chemistry I Lab *or*	1
CHEM 1210	Principles of Chemistry I	
CHEM 121L	Principles of Chemistry I Lab	
DRFT 2530	Engineering Drafting	3
—	Humanities Elective	3
MATH 2265	Analytic Geometry & Calculus III	4
ENGR 2230	Dynamics	3
Credit Hours		17

FOURTH SEMESTER

—	Technical Elective	3
MATH 2270	Differential Equations	3
ENGL 1515	Technical Writing	3
ENGR 2220	Strength of Materials	3
POLS 2050	Global Issues	3
MECH 2800	MET Capstone	3
Credit Hours		18

Total Credit Hours **72**

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.

Health Sciences

Washington State
COMMUNITY COLLEGE

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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

FIRST SEMESTER

ENGL 1510	English Composition I	3
__	Natural Science and/or Math Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
BUSM 1600	PC Applications	3
Credit Hours		18

SECOND SEMESTER

__	ENGL Composition Elective	3
__	Natural Science and/or Math Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
Credit Hours		18

THIRD SEMESTER

SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Natural Science and/or Math Elective	3
Credit Hours		15

FOURTH SEMESTER

__	Arts & Humanities Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Major Concentration Elective	3
__	Social/Behavioral Science Elective	3
Credit Hours		15

Total Credit Hours **66**

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

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.
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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.

Massage Therapy

ONE-YEAR FULL-TIME CERTIFICATE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

HLTH 1510	Massage Techniques I	4
BIOL 1360	Anatomy & Physiology I for Massage Therapists	4
HLTH 2850	Building an Ethical Massage Therapy Practice	2
BUSM 1660	Business Law	3
Credit Hours		13

SECOND SEMESTER

HLTH 1520	Massage Techniques II	4
BIOL 1370	Anatomy & Physiology II for Massage Therapists	3
BIOL 137L	Anatomy & Physiology II for Massage Therapists Lab	1
HLTH 2480	Orthopedic Assessment & Documentation	3
BIOL 2450	Pathophysiology	3
Credit Hours		14

THIRD SEMESTER

HLTH 2550	Massage Therapy Directed Practice	2
HLTH 2800	Massage Therapy Seminar	2
BIOL 1380	Advanced Anatomy & Kinesiology	4
BIOL 138L	Advanced Anatomy & Kinesiology Lab	1
Credit Hours		9

Total Credit Hours **36**

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

FIRST SEMESTER

MMLT 1010	MLT Orientation	2
MMLT 1210	Urinalysis & Body Fluid Analysis	2
MMLT 1310	Hematology I	3
BIOL 1100	General Biology I	3
BIOL 110L	General Biology I Lab *or*	1
BIOL 2310	Human Anatomy & Physiology I	
BIOL 231L	Human Anatomy & Physiology I Lab	
CHEM 1210	Principles of Chemistry I	3
CHEM 121L	Principles of Chemistry I Lab	1
Credit Hours		15

SECOND SEMESTER

MMLT 1320	Hematology II	2
MMLT 1510	Diagnostic Microbiology	5
BIOL 1110	General Biology II	3
BIOL 111L	General Biology II Lab *or*	1
BIOL 2320	Human Anatomy & Physiology II	
BIOL 232L	Human Anatomy & Physiology II Lab	
CHEM 1220	Principles of Chemistry II	3
CHEM 122L	Principles of Chemistry II Lab	1
Credit Hours		15

THIRD SEMESTER

MMLT 1410	Immunology & Serology	3
MMLT 1420	Immunohematology	3
ENGL 1510	English Composition I	3
MATH 1110	Intermediate Algebra	3
__	Social/Behavioral Science Elective	3
Credit Hours		15

FOURTH SEMESTER

MMLT 2210	Instrumentation & Lab Skills	3
MMLT 1610	Clinical Chemistry	4
MATH 2100	Lab Math	2
ENGL 1520	English Composition II	3
BUSM 1600	PC Applications	3
Credit Hours		15

FIFTH SEMESTER

MMLT 2410	MLT Directed Practice	6
MMLT 2310	MLT Seminar	1
__	Arts & Humanities Elective	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
Credit Hours		13
Total Credit Hours		**73**

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

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.

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 life long 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

FIRST SEMESTER		
NADN 2100	Introduction to Nursing	1
NADN 2110	Discover Nursing Proc.	6
BIOL 2310	Human Anatomy & Physiology I	3
BIOL 231L	Human Anatomy & Physiology I Lab	1
ENGL 1510	English Composition I	3
PSYC 2700	Developmental Psychology	3
Credit Hours		17
SECOND SEMESTER		
NADN 2120	Applied NP Across the Lifespan	7
NADN 2150	NP in Pharmacology	3
BIOL 2320	Human Anatomy & Physiology II	3
BIOL 232L	Human Anatomy & Physiology II Lab	1
ENGL 1520	English Composition II	3
Credit Hours		17
THIRD SEMESTER		
NADN 2240	APP NP Patterns of Emotional Distress	3
NADN 2320	APP NP Mat-Newborn Clients	4
BIOL 2550	Nutrition	3
Credit Hours		10
FOURTH SEMESTER		
NADN 2350	APP NP Complex Clients	8
BIOL 2010	Basic Microbiology	2
BIOL 201L	Basic Microbiology Lab	1
SPCH 2060	Interpersonal Communication	3
__	Arts & Humanities Elective	3
Credit Hours		17
FIFTH SEMESTER		
NADN 2330	APP NP Pediatric Clients	4
NADN 2400	APP NP Groups of Clients	5
MATH 2110	Principles of Statistics or	3
MATH 1106	Business Math	
Credit Hours		12
Total Credit Hours		**73**

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

Updated December 13, 2013

Nursing - Practical Nursing Day

ONE-YEAR FULL TIME DAY CERTIFICATE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

NPNT 1560	Nutrition & Diet Therapy *or*	2-3
BIOL 2550	Nutrition I	
NPNT 1610	Intro to Practical Nursing	2
ENGL 1510	English Composition I	3
PSYC 1010	General Psychology	3
MATH 1100	Pharmacology Math	2
Credit Hours		12-13

SECOND SEMESTER

NPNT 1410	Nursing Fundamentals I	6
NPNT 1620	Practical Nursing 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
NPNT 1710	Pharmacology	4
Credit Hours		16-17

THIRD SEMESTER

NPNT 1420	Nursing Fundamentals II	5
NPNT 1630	Practical Nursing II	3
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
NPNT 1510	PN Trends & Ethics	2
NPNT 1910	Maternal-Child Health	5
PSYC 1030	Mental Health Concepts	2
Credit Hours		20-21

Total Credit Hours **48-51**

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

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

- Develop an appreciation for the dignity and integrity of human beings which leads to respect for the individuality of the client and other health team members.
- Demonstrate a code of behavior based on ethical principles and an understanding of the legal scope for the practical nurse.
- Demonstrate motivation to learn through involvement in assignments, participation in conferences, and self evaluation.

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.

Nursing - Practical Nursing Evening

TWO-YEAR PART-TIME EVENING CERTIFICATE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

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
NPNT 1610	Intro to Practical Nursing	2
NPNT 1560	Nutrition & Diet Therapy or	2-3
BIOL 2550	Nutrition I	
Credit Hours		7-9

SECOND SEMESTER

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
NPNT 1620	Practical Nursing I	3
MATH 1100	Pharmacology Math	2
Credit Hours		8-9

THIRD SEMESTER

PSYC 1010	General Psychology	3
NPNT 1710	Pharmacology	4
Credit Hours		7

FOURTH SEMESTER

ENGL 1510	English Composition I	3
NPNT 1410	Nursing Fundamentals I	6
NPNT 1630	Practical Nursing II	3
Credit Hours		12

FIFTH SEMESTER

NPNT 1420	Nursing Fundamentals II	5
NPNT 1910	Maternal-Child Health	5
Credit Hours		10

SIXTH SEMESTER

PSYC 1030	Mental Health Concepts	2
NPNT 1510	PN Trends & Ethics	2
Credit Hours		4

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.

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.

Physical Therapist Assistant Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

PTAT 1010	Introduction to Physical Therapy	2
BIOL 2310	Human Anatomy & Physiology I	3
BIOL 231L	Human Anatomy & Physiology I Lab	1
PHYS 1320	Physics for Physical Therapy	1
PHYS 132L	Physics for Physical Therapy Lab	1
HLTH 1810	Medical Terminology	2
SPCH 2060	Interpersonal Communication	3
MATH 2110	Principles of Statistics	3
ENGL 1510	English Composition I	3
Credit Hours		19

SECOND SEMESTER

BIOL 2320	Human Anatomy & Physiology II	3
BIOL 232L	Human Anatomy & Physiology II Lab	1
PTAT 2400	Functional Anatomy & Kinesiology	4
ENGL 1520	English Composition II	3
PSYC 1010	General Psychology	3
PTAT 2210	Physical Therapy Procedures	4
Credit Hours		18

THIRD SEMESTER

PTAT 2560	Principles & Applications of Therapeutic Exercise	2
PTAT 2410	Musculoskeletal Dysfunction	3
BIOL 2450	Pathophysiology	3
Credit Hours		8

FOURTH SEMESTER

PHIL 1300	Introduction to Ethics	3
PTAT 2250	Intro to Clinical Setting	2
PTAT 2540	Neurological Conditions in Physical Therapy	2
PTAT 2620	Physical Therapy and Special Populations	3
PTAT 2640	Advanced Rehab Concepts in Physical Therapy	3
PTAT 2450	Directed Practice I	2
PTAT 2500	PTA Seminar I	1
Credit Hours		16

FIFTH SEMESTER

PTAT 2550	Directed Practice II	3
PTAT 2600	PTA Seminar II	1
PTAT 2650	Directed Practice III	4
PTAT 2990	PTA Capstone	4
Credit Hours		12

Total Credit Hours **73**

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

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, WV 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

Radiologic Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER		
BIOL 2310	Human Anatomy & Physiology I	3
BIOL 231L	Human Anatomy & Physiology I Lab	1
HLTH 1810	Medical Terminology I	2
RADT 1010	Intro to Rad. Tech. and Proced. I	2
RADT 1110	Radiographic Exposure I	4
RADT 1310	Applied Radiography I	2
Credit Hours		14
SECOND SEMESTER		
BIOL 2320	Human Anatomy & Physiology II	3
BIOL 232L	Human Anatomy & Physiology II Lab	1
__	MATH 1110 *or* equivalent	3
RADT 1120	Radiographic Exposure II	3
RADT 1220	Radiographic Procedures II	3
RADT 1320	Applied Radiography II	2
Credit Hours		15
THIRD SEMESTER		
BUSM 1600	PC Applications	3
RADT 1330	Applied Radiography III	2
RADT 1230	Radiographic Procedures III	2
Credit Hours		7
FOURTH SEMESTER		
RADT 2170	Radiographic Physics	4
RADT 2190	Special Procedures/Imaging	2
RADT 2310	Applied Radiography IV	3
ENGL 1510	English Composition I	3
__	Arts and Humanities Elective	3
Credit Hours		15
FIFTH SEMESTER		
RADT 2510	Radiobiology/Rad. Prot/Pathology	3
SPCH 2060	Interpersonal Communication	3
RADT 2320	Applied Radiography V	3
ENGL 1515	Technical Writing	3
__	Social and Behavioral Science Elective	3
Credit Hours		15
SIXTH SEMESTER		
RADT 2330	Applied Radiography VI	3
RADT 2420	Selected Topics	3
RADT 2430	Kettering ARRT Review	1
Credit Hours		7
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.

Respiratory Therapy Technology

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		
ENGL 1510	English Composition I	3
__	Social/Behavioral Science Elective	3
BIOL 2310	Human Anatomy & Physiology I	3
BIOL 231L	Human Anatomy & Physiology I Lab	1
PHYS 1310	Physics for Resp. Therapy I	1
PHYS 131L	Physics for Resp. Therapy I Lab	1
SPCH 2060	Interpersonal Communication *or*	3
SPCH 1510	Speech	
Credit Hours		15
SECOND SEMESTER		
RESP 1210	Cardiopulmonary Pharmacology	2
RESP 1330	Cardiopulmonary Ana. & Phys.	2
RESP 1350	Clinical Practice I	1
__	Arts & Humanities Elective	3
RESP 1250	Medical Gas Administration & Therap.	4
RESP 1100	Intro to Respiratory Care	2
BIOL 2320	Human Anatomy & Physiology II	3
BIOL 232L	Human Anatomy & Physiology II Lab	1
Credit Hours		18
THIRD SEMESTER		
RESP 2450	Clinical Practice II	1
RESP 2610	Respiratory Pediatrics & Neonatology I	2
RESP 2500	Respiratory Critical Care I	2
ENGL __	Technical Writing or Higher	3
HLTH 2400	EKG/Cardiovascular Technician	3
Credit Hours		11
FOURTH SEMESTER		
RESP 2600	Respiratory Critical Care II	3
RESP 2510	Cardiopulmonary Pathology I	3
RESP 2550	Clinical Practice III	2
RESP 1360	Adv. Cardiopulmonary Resuscitation	1
RESP 2620	Resp. Pediatrics & Neonatology II	2
RESP 2460	Arterial Blood Gases	1
BIOL 2010	Basic Microbiology	2
BIOL 201L	Basic Microbiology Lab	1
Credit Hours		15
FIFTH SEMESTER		
RESP 2520	Cardiopulmonary Pathology II	1
RESP 2700	Assessment of Pul. Functions	2
RESP 2750	Clinical Practice IV	2
RESP 2730	Pulmonary Rehab & Subspec.	2
RESP 2800	Cardiology & Hemodynamic Monitoring	2
RESP 2990	Respiratory Capstone	3
RESP 2850	Polysomnography	2
Credit Hours		14
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.

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:
    - o Medical Gas therapy
    - o Humidification therapy
    - o Deep breathing and other hyperinflation therapy
    - o Aerosol therapy
    - o Medications
    - o Coughing techniques and other Bronchopulmonary hygiene
    - o Cardiopulmonary resuscitation
    - o Advance Life Support therapy
    - o Airway management
    - o Heart and lung testing
    - o Blood gas analysis
    - o Mechanical ventilation management
    - o Other vital physiological monitoring

Public Services

Washington State
COMMUNITY COLLEGE

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American Sign Language Interpretation

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER		
SOCI 1010	Introduction to Sociology *or*	3
PSYC 1010	General Psychology	
LANG 1010	Beginning ASL I	3
BUSM 1600	PC Applications	3
LANG 1900	Fingerspelling & Numbers	3
ENGL 1510	English Composition I	3
Credit Hours		15
SECOND SEMESTER		
SOCI 1700	Psycho-social Aspects of Deaf Culture	3
SPCH 2060	Interpersonal Communications	3
PHIL 1200	Principles of Reasoning	3
LANG 1020	Beginning ASL II	3
ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
LANG 2100	Introduction to Interpreting	3
Credit Hours		18
THIRD SEMESTER		
LANG 2800	Educational Interpreting	3
LANG 2160	Intermediate Interpreting	3
LANG 2600	Transliterating	3
LANG 2500	Interpreting Practicum I	2
LANG 2510	Interpreting Seminar I	1
LANG 2010	Intermediate ASL	3
----	Natural Sciences Elective *or*	3-4
----	Math Elective	
Credit Hours		18-19
FOURTH SEMESTER		
LANG 2400	Non-educational Interpreting	3
LANG 2210	Advanced ASL	3
LANG 2170	Advanced Interpreting	3
LANG 2520	Interpreting Practicum II	2
LANG 2530	Interpreting Seminar II	1
Credit Hours		12
Total Credit Hours		**63-64**

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

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.

Criminal Justice - Corrections

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 1106	Business Mathematics (or higher)	3
BUSM 1600	PC Applications	3
PSYC 1010	General Psychology *or*	3
SOCI 1010	Intro to Sociology	
CRJU 1010	Introduction to Criminal Justice	3
CRJU 1120	Criminal Law	3
Credit Hours		18

SECOND SEMESTER

ENGL 1520	English Composition II	3
POLS 1020	American National Government *or*	3
POLS 1030	State & Local Government	
SPCH 2060	Interpersonal Communication *or*	3
SPCH 2500	Cross-Cultural Communication *or*	
SPCH 1510	Speech	
CRJU 1510	Corrections in the Criminal Justice System	3
CRJU 1110	Crim. Evid. & Procedures	3
HLTH 1120	First Aid & Personal Safety	2
Credit Hours		17

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
Credit Hours		15

FOURTH SEMESTER

SOSV 2100	Crisis Intervention *or*	3
SOSV 2150	Domestic Violence *or*	
SOSV 2310	Addictive Behavior	
—	Criminal Justice Tech. Elective	1
CRJU 2560	Corrections Counseling & Treatment	3
CRJU 2530	Criminal Justice Administration	3
SOCI 2300	Introduction to Criminology	3
CRJU 2580	Criminal Justice Practicum	1
CRJU 2590	Criminal Justice Seminar	1
Credit Hours		15

Total Credit Hours **65**

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

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.

Criminal Justice - Law Enforcement

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER		
ENGL 1510	English Composition I	3
MATH 1106	Business Mathematics	3
BUSM 1600	PC Applications	3
PSYC 1010	General Psychology *or*	3
SOCI 1010	Intro to Sociology	
CRJU 1010	Introduction to Criminal Justice	3
CRJU 1120	Criminal Law	3
Credit Hours		18
SECOND SEMESTER		
ENGL 1520	English Composition II	3
POLS 1020	American National Government *or*	3
POLS 1030	State & Local Government	
SPCH 2060	Interpersonal Communication *or*	3
SPCH 2500	Cross-Cultural Communication *or*	
SPCH 1510	Speech	
CRJU 1110	Criminal Evidence & Proc.	3
CRJU 1310	Police Operations	3
HLTH 1120	First Aid & Personal Safety	2
Credit Hours		17
THIRD SEMESTER		
—	Arts & Humanities Elective	3
—	Social/Behavioral Science Elective	3
CRJU 1210	Criminal Investigation	3
CRJU 2550	Juvenile Justice Procedures	3
CRJU 2850	Criminal Justice Careers	2
—	Recreation & Phys. Ed. Elective	1
Credit Hours		15
FOURTH SEMESTER		
SOSV 2100	Crisis Intervention *or*	3
SOSV 2150	Domestic Violence *or*	
SOSV 2310	Addictive Behavior	
—	Criminal Justice Tech. Elective	1
CRJU 2210	Criminalistics	3
CRJU 2530	Criminal Justice Administration	3
SOCI 2300	Introduction to Criminology	3
CRJU 2580	Criminal Justice Practicum	1
CRJU 2590	Criminal Justice Seminar	1
Credit Hours		15
Total Credit Hours		**65**

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

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).

Criminal Justice - Peace Officer Basic Academy

OHIO PEACE OFFICER BASIC ACADEMY

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 1106	Business Mathematics	3
BUSM 1600	PC Applications	3
PSYC 1010	General Psychology *or*	3
SOCI 1010	Introduction to Sociology	
CRJU 1010	Intro to Criminal Justice	3
—	Arts & Humanities Elective	3
Credit Hours		18

SECOND SEMESTER

ENGL 1520	English Composition II	3
POLS 1020	American National Government *or*	3
POLS 1030	State and Local Government	
SPCH 2060	Interpersonal Communication *or*	3
SPCH 2500	Cross-Cultural Communication *or*	
SPCH 1510	Speech	
CRJU 1110	Criminal Evidence and Procedures	3
CRJU 2750	Forensic Psychology and Criminal Behavior	3
SOSV 2100	Crisis Recognition *or*	3
SOSV 2150	Domestic Violence *or*	3
SOSV 2310	Addictive Behavior	3
Credit Hours		18

THIRD SEMESTER

CRJU 2140	Peace Officer Basic Academy I (POBA)	12
—	Social/Behavioral Science Elective	3
Credit Hours		15

FOURTH SEMESTER

CRJU 2150	Peace Officer Basic Academy II (POBA)	11
CRJU 2530	Criminal Justice Administration	3
Credit Hours		14

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).

Early Childhood Development

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

EDUC 1000	Introduction to Teaching	3
ECDV 1020	Child Development	3
ECDV 1100	Creative Learning Environments	3
PSYC 1010	General Psychology	3
SPCH 1510	Speech	3
ENGL 1510	English Composition I	3
Credit Hours		18

SECOND SEMESTER

ENGL 1520	English Composition II	3
MATH 2173	Survey of Math I	4
ECDV 1120	Principles of Positive Child Guidance	3
ECDV 1130	Health, Safety and Nutrition	3
ECDV 2210	Art, Music and Movement	3
ECDV 2400	Observation & Assessment	3
Credit Hours		19

THIRD SEMESTER

EDUC 2100	Exceptional Learners	3
ECDV 2110	Integrated Curriculum	3
ECDV 2200	Literacy and Language Arts	3
ECDV 2120	Infant and Toddler Development	3
—	Arts & Humanities Elective	3
ECDV 2600	Early Childhood Development Practicum & Seminar	2
Credit Hours		17

FOURTH SEMESTER

EDUC 1700	Educational Technology	3
PSYC 2750	Educational Psychology	3
ECDV 2300	Families, Communities and Schools	3
ECDV 2500	Administration of Early Childhood Programs	3
ECDV 2620	Early Childhood Development Student Teaching and Seminar	2
Credit Hours		14

Total Credit Hours **68**

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.

Social Services Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE FOR DIRECT EMPLOYMENT

FIRST SEMESTER

SOCI 1010	Introduction to Sociology	3
SOSV 1110	Introduction to Social Work & Social Welfare	3
BUSM 1600	PC Applications	3
SOSV 1140	American Social Welfare Institution	3
ENGL 1510	English Composition I	3
Credit Hours		15

SECOND SEMESTER

SOSV 1130	Casework Practice	3
SOSV 1120	Interview Techniques	3
SPCH 1510	Speech *or*	3
SPCH 2060	Interpersonal Communication	
ENGL 1520	English Composition II *or*	3
ENGL 1530	English Composition III	
PSYC 1010	Psychology	3
SOSV 2150	Domestic Violence	3
Credit Hours		18

THIRD SEMESTER

PSYC 2700	Developmental Psychology	3
SOSV 2100	Crisis Intervention	3
SOSV 2310	Addictive Behavior	3
—	Social/Behavioral Science Elective	3
SOSV 1680	Social Services and the Law	3
SOSV 2200	Social Services Practicum I	1
SOSV 2210	Social Services Seminar I	1
Credit Hours		17

FOURTH SEMESTER

SOSV 2110	Family Intervention	3
SOSV 2120	Gerontology	3
—	Arts & Humanities Elective	3
—	Social/Behavioral Science Elective	3
—	Natural Science Elective *or*	3-4
—	Mathematics Elective	
SOSV 2220	Social Services Practicum II	1
SOSV 2230	Social Services Seminar II	1
Credit Hours		17-18

Total Credit Hours **67-68**

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

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.

Certificate Programs
Certificates of Completion
Course Catalog

Washington State
COMMUNITY COLLEGE

Certificate Programs

ACCOUNTING CERTIFICATE

FIRST SEMESTER

ENGL 1510	English Composition I	3
MATH 1106	Business Mathematics or	3
MATH 2110	Principles of Statistics	
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 Circuitry	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	
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	
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**

Certificate Programs

EXECUTIVE OFFICE SUPPORT

FIRST SEMESTER		
OAST 1510	Keyboarding I	3
OAST 2550	Windows Concepts	3
OAST 2910	Microsoft PowerPoint	3
OAST 2220	Microsoft Excel	3
OAST 2760	Office Procedures	3
Credit Hours		15
SECOND SEMESTER		
ENGL 1510	English Composition I	3
OAST 1300	Records Management	3
OAST 2230	Microsoft Access	3
OAST 2210	Microsoft Word	3
OAST 1520	Keyboarding II	3
OAST 2520	Workplace Technology	2
Credit Hours		17
Total Credit Hours		**32**

INDUSTRIAL TECHNOLOGY - CHEMICAL OPERATOR

FIRST SEMESTER		
INDT 1010	Introduction to Chemical Operator	3
INDT 1210	Industrial Safety/Hazmat	2
INDT 2210	Process Control	4
INDT 1340	Team Concepts and Practices	3
CHEM 1200	Chemistry Concepts	3
MATH 1104	Technical Mathematics	3
Credit Hours		18
SECOND SEMESTER		
PHYS 1010	Applied Physics	2
PHYS 101L	Applied Physics Lab	1
INDT 1330	Industrial Electricity	2
MECH 2060	Statistical Quality Control	2
MECH 1100	Engineering Materials	4
ELET 2410	Programmable Logic Controllers	3
Credit Hours		14
Total Credit Hours		**32**

MASSAGE THERAPY

FIRST SEMESTER		
HLTH 1510	Massage Techniques I	4
BIOL 1360	Anatomy & Physiology I for Massage Therapists	4
HLTH 2850	Building an Ethical MT Practice	2
BUSM 1660	Business Law	3
Credit Hours		13
SECOND SEMESTER		
HLTH 1520	Massage Techniques II	4
BIOL 1370	Anatomy & Physiology II for Massage Therapists	3
BIOL 137L	Anatomy & Physiology II for Massage Therapists Lab	1
HLTH 2480	Orthopedic Assessment & Documentation	3
BIOL 2450	Pathophysiology	3
Credit Hours		14
THIRD SEMESTER		
HLTH 2550	Massage Therapy Directed Practice	2
HLTH 2800	Massage Therapy Seminar	2
BIOL 1380	Advanced Anatomy & Kinesiology	4
BIOL 138L	Advanced Anatomy & Kinesiology Lab	1
Credit Hours		9
Total Credit Hours		**36**

Certificate Programs

MEDICAL CODING

FIRST SEMESTER

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

SECOND SEMESTER

OAST 2220	Microsoft Excel	3
HLTH 1340	CPT Coding	3
OAST 2210	Microsoft Word	3
BIOL 1340*	Survey of Anatomy & Physiology II	2
HLTH 1120	First Aid & Personal Safety	2
HLTH 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

Certificates of Completion

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 Circuitry
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 *or*
DRFT 1560	Structural Drafting
INDT 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
BIOL 2650	Nutrition for Sports & Fitness
HLTH 1120	First Aid & Personal Safety
PTAT 1550	Basic Exercise Physiology
RECR	RECR Elective
HLTH 1000	Personal Fitness Concepts *or*
PTAT 2560	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 Numberical 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

Mechanical Design

ENGR 2210	Statics
ENGR 2220	Strength of Materials
INDT 1170	Computer Numerical Control
MECH 1100	Engineering Materials
ENGR 1010	Fundamentals of Engineering

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
HTLH 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*
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 Catalog

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.

Accounting	ACCT	History	HIST
Agribusiness Management	AGRI	Humanities	HUMN
Anthropology	ANTH	Industrial Tech	INDT
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	Nursing Education - Practical	NPNT
Digital Tech - Computer Graphics	DTGR	Office Admin Services Tech	OAST
Digital Tech - Computer Support	DTCS	Personal Development	PERS
Digital Tech - Digital Media	DTME	Philosophy	PHIL
Digital Tech - Interactive Game Design	DTIN	Physical Therapist Assistant Tech	PTAT
Digital Tech - Web Programming	DTWP	Physics	PHYS
Early Childhood Tech	ECDV	Political Science	POLS
Economics	ECON	Psychology	PSYC
Education Transfer	EDUC	Radiologic Tech	RADT
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.
Introduces fundamental financial accounting concepts and procedures. Covers application of principles of journalizing, posting, classifying and summarizing basic financial data for personal service, merchandising operations, inventory valuation, and partnerships. Prerequisite: None. Co-Requisite: None. Day: Fa, Su; Eve: Fa, Sp. Lecture: 2, Lab: 4. ♦

ACCT 1520 Principles of Accounting II 4 cr.
Covers fundamental accounting concepts and procedures for the corporate organization and financial statement analysis. Includes long-term asset cost and depreciation methods; organizational structure of corporations, accounting procedures for capital stock, corporate earnings, dividends, corporate bonds and cash flows. Prerequisite: ACCT 1510. Co-Requisite: None. Day: Sp; Eve: Sp, Su; Online: Sp. Lecture: 2, Lab: 4. ♦

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.
Introduces federal taxes on income for individuals and businesses. Emphasizes tax return preparation; limited coverage of partnership and corporate returns. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 2. ♦

ACCT 2210 Cost Accounting 4 cr.
Introduction to cost accounting systems and methods. Covers cost concepts, classification, and measurement techniques in relation to their importance in income determination, planning and control. Emphasis on job order cost, process cost standard cost, and activity based accounting methods. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 4. ♦

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. Prerequisite: ACCT 1520. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 2, Lab: 2. ♦

ACCT 2710 Intermediate Accounting 4 cr.
Study of theoretical and practical application of basic accounting principles. Covers Accounting Principles Board and Financial Accounting Standards Board pronouncements and opinions. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3, Lab: 2. ♦

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.
The use of microcomputers applied to accounting principles and practices. A hands-on approach to learning how automated accounting systems function. Prerequisite: ACCT 1510. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 1, Lab: 2. ♦

ACCT 2820 Spreadsheet Accounting 3 cr.
Use of spreadsheet software applied to accounting principles and practices. A hands-on approach to learning accounting applications using microcomputer-based spreadsheets. Prerequisite: ACCT 1510 and BUSM 1600. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 2, Lab: 2. ♦

ACCT 2900 Fraud Examination 3 cr.
Study of financial fraud covering prevention, detection, investigation, management, and resolution of the various types of fraud. Prerequisite: ACCT 1520. Co-Requisite: None. Day: Sp; Eve: Sp odd yrs. Lecture: 2, Lab: 2. ♦

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 110L, BIOL 1110 and BIOL 111L. 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 soil. 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 110L, BIOL 1110 and BIOL 111L. Co-Requisite: None. Day: Sp. Lecture: 3, Lab: 3. ♦

ANTHROPOLOGY (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: Sp; 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.
By Permission Only. Directed individual study of a special studio problem. May be repeated. Prerequisite: Permission. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: TBD, Lab: TBD.

ARTS 2210 Drawing II 4 cr.
Continuation of descriptive drawing with an emphasis on perceptual, conceptual, and critical skills. Emphasis on expression and iconography through the application of gesture, shape, line, perspective, and design. Emphasis on the development of a personal image. Prerequisite: ARTS 1210. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 1, Lab: 6. ♦

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: 6. ♦

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.
By Permission Only. Directed individual study of a special studio problem. May be repeated. Prerequisite: Permission. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: TBD, Lab: TBD.

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.
The course investigates the historical background, technical issues, aesthetic issues, and translation of meaning through 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: Sp; Eve: On demand. Lecture: 1, Lab: 6.

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO)

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 Circuitry 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 1100. Day: Fa; Eve: On demand. Lab: 3. TAG: OSC003. ♦

BIOL 1110 General Biology II 3 cr. TM-N
A continuation of BIOL1100 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 1110. 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. Two class hours per week. Prerequisite: HS Biology & HS Chemistry or BIOL 1010, BIOL 101L & CHEM 1210, CHEM 121L. Co-Requisite: BIOL 131L. Day: Fa, Sp; Eve: On demand. Lecture: 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 132L. 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 for Massage Therapists 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 for Massage Therapists 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 2110 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. Lab: 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 2310. 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.

BUSINESS MANAGEMENT (BUSM)

BUSM 1550 Business Management 3 cr.
The nature of business management, organization and opportunities. Development of managerial viewpoints and methods. Explores business personnel, marketing and operational control functions. Prerequisite: None. Co-Requisite: None. Day: Fa, Su; Eve: Sp; Online: Sp. Lecture: 3. ♦

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. ♦

BUSM 1800 Personal Finance 3 cr.
An introduction to personal finances including such topics as: computing present and future value of money, lease and buy purchase options, types of insurance, protection methods for personal assets and personal identity. Covers investment fundamentals of stocks, bonds, and mutual funds, plus retirement, estate planning and tax planning. This course will NOT substitute for BUSM 2300 – Introduction to Finance. Prerequisite: None. Co-Requisite: None. Day: Fa. Lecture: 3. ♦

BUSM 2300 Introduction to Finance 3 cr.
Introduction to short, intermediate and long-term debt, risk management, financial intermediaries, and valuation of stock. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa; Online: Fa. Lecture: 3. ♦

BUSM 2560 Human Resource Management 3 cr.
Theories of human resource management topics including: equal employment opportunity legislation, the employee selection process: recruiting, testing, and interviewing, a management team approach to performance appraisal, the process of discipline and discharge and safety. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 3. ♦

BUSM 2610 Office Management 3 cr.
Study of the following office management topics: office layout, office environment, selection of office equipment, performance appraisal, job evaluation, salary administration, work measurement, systems analysis, records management, forms design, reprographics. The course contains two projects – a capstone project, and an office layout project. Prerequisite: BUSM 2560. Co-Requisite: BUSM 2560. Day: Sp; Eve: Fa. Lecture: 3. ♦

BUSM 2750 International Business 3 cr.
This course focuses on the economic, social, and cultural aspects of doing business overseas. The following topics are emphasized – entering foreign markets, regional trading blocks, study of foreign cultures, managing people from other cultures, and foreign exchange. A variety of topics concerning multinational corporations will be studied including their evolution, integration models, sources of risk, and options for solving current global problems. Prerequisite: BUSM 1550 and ECON 2120. Co-Requisite: None. Day: Sp. Lecture: 3. ♦

CHEMISTRY (CHEM)

CHEM 1200 Chemistry Concepts 3 cr.
Designed to be a college level chemistry for non-science majors; delivered in an online format which provides elementary knowledge on: states of matter, elements, compounds, atomic and molecular structure, chemical bonding, solutions, the periodic table, acids/bases and buffers, gas laws, reaction rates and equilibrium, radioactivity and nuclear processes. Prerequisite: MATH 0950. Co-Requisite: None. Online: All. Lecture: 3.

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 bonds, 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
Lab for Survey course 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 1220. Day: Fa, Sp; Eve: On demand. Lab: 2. ♦

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. Lecture: 3. TAG: OSC008.

CHEM 151L Fundamentals of Chemistry I Lab 1 cr. TM-N
This chemistry 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 in atomic structure, periodic trends, bonding, stoichiometry, acid-base neutralization, thermochemistry, and gas laws. Prerequisite: MATH 1110 & HS Chemistry or CHEM 1210 & CHEM 121L with "C" or above. 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 1330 Intermediate Access 0.5 cr.
This course is a continuation of the Introduction to 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 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: Word environment, document design, selecting, moving, and copying text. Fonts, formatting paragraphs, tabs, bulleted lists, borders, shading, margins, page and section breaks, page numbering, columns, tables and more. 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 1110 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 System3 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.
Successful completion of the Ohio Peace Officer Training Commission's certified Private Security Academy programs provides graduates with a State of Ohio certification. The state mandates 135 hours of training covers the areas of: administration, legal, human relations, communications, loss prevention, safety and protective services, unarmed self-defense and first aid. Prerequisite: Admission standards per AG's office. Co-Requisite: None. Day: Fa. Lecture: 5, Lab: 15. ♦

CRJU 1601 Firearms Academy 1 cr.
Successful completion of the Ohio Peace Officer Training Commission's certified Private Security programs provides graduates with a State of Ohio certification. The state mandates 45 hours of training covers firearms training revolver, semi-auto and shotgun. Prerequisite: CRJU 1600. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 5. ♦

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 2520 Community Based Corrections 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 2530 Criminal Justice Administration 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 Juvenile Justice Procedures 3 cr.
A survey of the nature and causes of delinquent activity by juveniles. Social and psychological factors underlying delinquency are studied. The roles of police, courts, and corrections in the juvenile justice system. Prerequisite: CRJU 1010. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 3.

CRJU 2560 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/

female and adult/juvenile populations. Prerequisite: CRJU 1510. Co-Requisite: None. Eve: Sp on demand. Lecture: 3.

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 2590. Day: Sp, Su; Eve: On demand. Lab: 7. ♦

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. Co-Requisite: CRJU 2580. Day: Sp, Su; Eve: On demand. 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; Eve: Fa, Sp. Lecture: 2, Lab: 4. ♦

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, reinforced concrete, and structural steel frames; floor systems; industrial floors; roof systems; industrial roofing; masonry construction; curtain wall construction; building insulation. Prerequisite: DRFT 1410 or ENGR 1010. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 1, Lab: 5. ♦

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: None. Day: Sp. Lecture: 1, Lab: 5. ♦

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 test ran. 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. Day: Fa; Eve: Fa. 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.
Study of current electronic engine management systems. Identification and use of service tools/software used for diagnostics, repair, and data retrieval/management. Identification and repair of wiring systems. Labs provide hands-on use of tooling to diagnose and repair engine performance problems on live equipment. Prerequisite: TRCK 2110. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 2, Lab: 2. ♦

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 2800 Computer Repair & Diagnostic Practicum 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 2810 Capstone Seminar: Computer Support Technician 1 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

devices. Includes creating animations, using special effects, drawing objects, incorporating sound and video and an intro to programming in ActionScript. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa odd yrs. Lecture: 2, Lab: 2. ♦

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: 3. ♦

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 non-linear 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, story-boarding, 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: Fa; 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.
Learn 3D Modeling and animation tools including sculpting, spine modeling, patch modeling and digital lighting. Prerequisite: DTIN 2150. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 2, Lab: 2. ♦

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 fames 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. Lecture: 2, Lab: 2. ♦

DTWP 1300 Introduction to PHP 3 cr.
Students create dynamic web pages and web applications while learning the syntax and object-oriented features of PHP open source server-side scripting language. Students get hands-on experience in the classroom. Prerequisite: DTWP 1200 and DTCS 2650. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2, Lab: 2. ♦

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.
A study of client-side scripting using JavaScript. Includes: Form Validation, Manipulating the Browser Object Model, Object-Oriented Programming, Dynamic HTML, and AJAX. Students get hands-on experience in the classroom. Prerequisite: DTWP 1300 and DTCS 2650. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 2, Lab: 2. ♦

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, Window 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. ♦

DTWP 2910 Capstone: Web Programming 3 cr.
Configuration, and administration of Web servers in both developmental and production environments. Students design, program, and debug a 3-tier Web application. Prerequisite: DTWP 2110. Co-Requisite: None. Day: Sp; Eve: On demand. 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 BCII 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 BCII background check is required. Prerequisite: Successful completion of ECDV 2600. Co-Requisite: None. Day: All. Lecture: 1, Lab: 10. ♦

ECONOMICS (ECON)

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: 0ES005. ♦

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

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 3 cr.
This study of people with special needs and exceptionalities includes information on inclusion and differentiated school 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. ♦

ELET 1130 AC Circuits 3 cr.
Extensive study of AC Fundamentals emphasizing frequency, reactance, series, parallel, and series-parallel impedances, voltage, current, Ohm's Law, Kirchoff's voltage and current Laws, AC power, network theorems, resonance, complex power, circuit analysis in time and frequency domains, phase angle, phasor diagrams, transformers, coupled circuits, and polyphase systems. Prerequisite: ELET 1110. Co-Requisite: None. Day: Fa. Lecture: 1, Lab: 6. TAG: OET003. ♦

ELET 1310 Digital I 4 cr.
The first of two courses in digital circuit fundamentals, including: Introductory Concepts, Number Systems, Operations, and Codes, Logic Gates, Boolean Algebra, and Logic Simplification, Combinational Logic Analysis, Functions of Combinational Logic, Latches, Flip-Flops, and Timers, Counters, Shift Registers, Memory and Storage, and Integrated Circuit Technologies. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Sp. Lecture: 3, Lab: 3. TAG: OET002. ♦

ELET 1330 Digital II 3 cr.
The second of two courses in digital circuit fundamentals, including: Programmable Logic and Software, Signal Interfacing and Processing, Computer Concepts, and a Design Project. Prerequisite: ELET 1310. Co-Requisite: None. Day: Sp; Eve: Fa. Lecture: 2, Lab: 3. ♦

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: Sp. 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.
Reading and interpreting Process and Instrument Drawings, Motor Control diagrams and Ladder Logic Diagrams. Installing, testing, and troubleshooting motor control circuits. Prerequisite: ELET 1110 and ELET 1130. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 2.5. ♦

ELET 2210 Electronics I 4 cr.
Semiconductor theory, including diode theory 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.
An introduction to alternative energy technologies, including: solar, wind, and fuel cells. Research and construction project of a selected topic using various facets of electrical engineering technology. Final project term paper and presentation required. Prerequisite: ELET 2210. Co-Requisite: None. Day: Sp. Lecture: 2, Lab: 6. ♦

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. ♦

ELECTRONICS (ELEC)

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: 4. ♦

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: 4. ♦

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: Fa; 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 Network Security Concepts 3 cr.
This course covers intermediate networking concepts with a focus on security fundamentals. Topics include secure network administration practices, common network protocols, vulnerabilities and attacks, wireless network security, access control, switching principles, firewalls, network compliance and auditing. This course maps to the objectives for the CompTIA Security + Certification exam. Prerequisite: ELEC 2050. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 2, Lab: 3. ♦

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: On demand. Lecture: 2.5, Lab: 1. ♦

ELEC 2610 Introduction to Linux 3 cr.
Introduces 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, Lab: 2. ♦

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; Blended: All. Lecture: 2, Lab: 2. ♦

ENGL 1530 English Composition III 3 cr. TM-E
Analysis and interpretation of world literature (fiction, poetry, and drama); incorporating oral and written responses. Writing formal Literary Criticism from several critical perspectives. Prerequisite: ENGL 1510 or ENGL 1520 or permission. Co-Requisite: None. Day: All; Eve: All; Online: All. Lecture: 3. ♦

ENGL 2500 Creative Writing 3 cr.
Beginning work in writing fiction and poetry, emphasizing structural analysis of student works and established models. Prerequisite: ENGL 1510 or ENGL 1520. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3. ♦

ENGINEERING, GENERAL (ENGR)

ENGR 1010 Fundamentals of Engineering 3 cr.
A study of various engineering careers and computer applications in those areas as well as ethics as related to engineering practices. Students will work as teams to apply the problem-solving process as it relates to engineering disciplines and develop related skills. Presents the basics of drafting practices and projection types; basic concepts of operating a CAD system. Emphasis on sketching a form and then converting these images to a CAD produced engineering drawing. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 2, Lab: 4. TAG: OES001. ♦

ENGR 2210 Statics 4 cr.
Analysis of forces and effects of forces on rigid body structures at rest such as frames and trusses. Prerequisite: MATH 2120, PHYS 2010 and PHYS 201L. Co-Requisite: None. Day: On demand; Eve: Fa. Lecture: 4. TAG: OET007.

ENGR 2220 Strength of Materials 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 2210. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 2, Lab: 3. TAG: OET008. ♦

ENGR 2230 Dynamics 3 cr.
Mass in motion. Forces affecting these bodies and forces generated as a result of these bodies being in motion. Prerequisite: ENGR 2240 and MATH 2263. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 2, Lab: 3. TAG: OES003. ♦

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. ♦

GEOLOGY (GEOL)

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. ♦

GEOSCIENCE (GEOS)

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. ♦

HEALTH SCIENCES (HLTH)

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 analysis, research, 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

will review dosage calculations, I.V. flow rates, drug compounding, dose conversions, and dispensing of prescriptions. Students will learn common diseases, causes, symptoms related to each body system and associated drug classes, and allegations. Prerequisite: HLTH 1840, HLTH 184L and MATH 1100. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 3.

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: Current Ohio Basic EMT Card; Acceptance Advanced EMT Program. Co-Requisite: None. Eve: Fa. Lecture: 4, Lab: 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. Eve: Sp. Lecture: 4, Lab: 3. ♦

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. Eve: Fa. 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.
Comprehensive review of massage therapy theory and practice for the massage therapist. Prerequisite: HLTH 1520. Co-Requisite: None. Day: Su; Eve: Sp even yrs. Lecture: 2.

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 it's 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 Islamophopia. 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, wellsite 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.
An introduction to occupational health and safety through recognition and control of health and safety hazards in the workplace. Tools and techniques for injury/illness prevention, incident investigation, and the implementation of a typical safety program. Prerequisite: None. Co-Requisite: None. Day: Fa; Online: Sp. Lecture: 2. ♦

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). The course builds on computer solid modeling skills developed in Introduction to Engineering Design, and Design and Drawing for Production. Students use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included. Prerequisite: IED & POE (PLTW only). Co-Requisite: None. Day: Fa. Lecture: 2, Lab: 3. ♦

INDT 1430 Computer Integrated Manufacturing II 3 cr.
The second of two courses that applies principles of robotics and automation to Computer Aided Design (CAD). The course builds on computer solid modeling skills developed in Introduction to Engineering Design, and Design and Drawing for Production. Students use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included. Prerequisite: INDT 1410 (PLTW only). Co-Requisite: None. Eve: Sp. Lecture: 2, Lab: 3. ♦

INDT 2040 Production of Oil and Gas 4 cr.
This course introduces students to the properties of drilling and completion fluids; well control; oil and gas well testing; production operations; evaluation of artificial lift systems; gas measurement. Properties of natural gases and condensate systems; gas flow in porous media; gas reservoir engineering; gas field development; gas condensate reservoirs; natural gas transportation and storage. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Fa, On demand. Lecture: 4.

INDT 2050 Introduction to Petroleum Geology 3 cr.
This course includes a discussion of the concepts of petroleum geology, oil and gas reservoirs, and the subsurface characteristics used in petroleum exploration. Classroom emphasis will be placed upon the practical application of basic geology to the production of crude oil and natural gas. Prerequisite: None. Co-Requisite: None. Day: On demand; Eve: Sp. Lecture: 3.

INDT 2100 Fabrication Processes 2 cr.
Theory and practice of sheet metal fabrication processes. Hand and machine processes will be introduced with lab activities involving layout, pattern development, cutting, bending, forming, turning, punching and joining. Assembly methods will include seaming, welding, and riveting. Assigned projects will be completed and one original design project will be required. Prerequisite: INDT 1150. Co-Requisite: None. Day: Fa; Eve: On demand. Lecture: 1, Lab: 5. ♦

INDT 2170 Advanced Computer Numerical Control 3 cr.
CNC programming for milling machine and lathe. Application of CAM software to design, edit and verify 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

machine parts on CNC VMC center and Sharp CNC lathe. Prerequisite: INDT 1170. Co-Requisite: None. Day: On demand; Eve: Fa. Lecture: 1, Lab: 5. ♦

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; Blended: Fa. Lecture: 2, Lab: 2.

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 2160. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3.

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: None. Day: Sp; Eve: Sp; Blended: Sp. Lecture: 2, Lab: 2.

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: None. Day: Sp; Eve: Sp. Lecture: 3.

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 2160. Day: Fa, Sp; Eve: Fa, Sp. Lab: 7. ♦

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: Fa, Sp; Eve: Fa, Sp. Lab: 7. ♦

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 2520 and LANG 2210. Day: Fa, Sp; Eve: Fa, Sp. Lecture: 1.

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 sort 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: Sp; Eve: 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: . Day: Fa, Sp. 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.

Student prepares a rough draft through final copy of print, radio, and television ads. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3. ♦

MKTG 2510 Marketing 3 cr.
Introduction to the marketing process. Study the framework of marketing in the organization, the marketing concept, the marketing mix, target marketing, consumer decision making, marketing research, physical distribution, channels of distribution, product concepts, promotion, pricing concepts, global marketing. Prerequisite: None. Co-Requisite: None. Day: Sp; Eve: Sp. Lecture: 3. ♦

MATHEMATICS (MATH)

MATH 0106 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 0950 Elementary Algebra 4 cr.
Covers simplifying and evaluating expressions, solving, graphing, and writing of linear equations and inequalities, solving systems of linear equations and inequalities. Also includes operations with exponents and on polynomials. Prerequisite: MATH 0106 with "C" or better or placement. Co-Requisite: None. Day: All; Eve: All; Online: Fa, Sp. Lecture: 4.

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. Co-Requisite: None. Day: Fa, Su. Lecture: 2.

MATH 1101 Respiratory Math 1 cr.
This course uses basic math and common equations used in respiratory care to solve problems. Prerequisite: RESP 1330, RESP 2400, RESP 2450, RESP 2610, and MATH 0950. Co-Requisite: RESP 2500. Day: Fa. Lecture: 1.

MATH 1102 Applied Geometry 3 cr.
The study of plane and solid geometric figures with applications to measurement of length, area, and volume. Problems will include metrics, and equivalent areas and volumes. Prerequisite: MATH 0950 or placement. Co-Requisite: None. Day: Fa; Eve: Sp on demand. Lecture: 3.

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 1106 Business Mathematics 3 cr.
Introduction to business calculations applied to selected topics from retailing, finance, banking, and accounting. This course includes a brief review of basic arithmetic and percents, followed by trade and cash discounts, mark-up, payroll, depreciation, inventory, and simple and compound interest. Prerequisite: MATH 0950 with "C" or better or placement. Co-Requisite: None. Day: All; Eve: Fa. Lecture: 3.

MATH 1110 Intermediate Algebra 3 cr.
Exponents, radicals, linear equations, functions, graphs, analytical geometry of a straight line, solving systems of linear equations including solving by determinants, and introduction to the quadratic equation. Prerequisite: MATH 0950 with "C" or better or placement. Co-Requisite: None. Day: All; Eve: All; Online: Fa, Sp. Lecture: 3.

MATH 2100 Laboratory Mathematics 2 cr.
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. 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 proto-type 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

orchestral instrument. A chamber orchestra uses many string performers but only uses one to a part in the wind section. Instruments that may be used in the WSCC Orchestra include: violin, viola, cello, bass, flute, oboe, bassoon, clarinet, trumpet, horn, trombone, tuba, and percussion. The director may choose to keep more than two players per part and rotate players on various compositions. Other instruments are used when required of the music score. Prerequisite: Audition only. Co-Requisite: None. Day: On demand; Eve: On demand. Lab: 3. ♦

MUSC 1610 Applied Musical Instrument or Voice 1 cr.
Private Instruction on an applied instrument or voice. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp on demand. Lecture: 0.5, Lab: 1. ♦

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 1610 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.
A study of methods and systems for efficient management of office records. Practice with alphabetic, numeric, subject, and geographic filing of material. Records projects enhance manual filing skills. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp; Eve: Fa. Lecture: 3. ♦

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.
An introduction to creating, editing, formatting, and layout of sophisticated documents including: internal, letterheads, envelopes, business cards, personal, brochures, specialty promotional, newsletters, and design elements. Use proper desktop publishing software. Prerequisite: OAST 2210. Co-Requisite: OAST 2210. Day: Fa; Eve: On demand. Lecture: 2, Lab: 2.

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: 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 2760 Office Procedures 2 cr.
Designed 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. Student 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. Student 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. Student 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.
Capstone Seminar focuses on job search skills, portfolio development, graduates banquet, and professional development, and certification for administrative assistants. Prerequisite: 27 OAST/HLTH course hours. Co-Requisite: None. Day: Sp; Eve: On demand. Lecture: 1, Lab: 2. ♦

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: 3.

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: Blended: 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: Fa, Sp; Eve: 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

Compass score greater than 69. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp; Online: Fa, Sp. Lecture: 3. TAG: OAH046.

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: 2, Lab: 2.

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 2540, PTAT 2620, PTAT 2640 and PTAT 2500. Co-Requisite: PTAT 2600. Day: Sp. Lab: 15. ♦

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 science or equivalent. Co-Requisite: PHYS 110L. Day: Fa; Eve: On demand. Lecture: 3.

PHYS 110L Principles of Physical Science I 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 1200 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 a 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 MATH 2100. Co-Requisite: PHYS 131L. Day: Sp; Eve: 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: OSC016.

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 2510. 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.

Prerequisite: PHYS 2510, PHYS 251L and MATH 2263. Co-Requisite: MATH 2264 and PHYS 253L. Day: Sp; Eve: On demand. Lecture: 4. TAG: OSC017.

PHYS 253L General Physics II Lab 1 cr. TM-N
Continuation of PHYS 251L. Classical physics with calculus and vectors; thermal properties of matter, heat, thermodynamic, electricity and magnetism. Prerequisite: PHYS 2510, PHYS 251L and MATH 2263. Co-Requisite: MATH 2264 and PHYS 2530. Day: Sp; Eve: On demand. Lab: 2. TAG: OSC017. ♦

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
Survey of the structure and operation of state and local governments. Emphasis on the relationship and interaction of state and local government subdivisions in Ohio. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp. Lecture: 3. TAG: OSS014.

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
Examines the life cycle of humans from conception to death. Applies developmental theories and research in the explanation of human behavior. Allows experiential learning opportunities that demonstrate research in the field. Prerequisite: PSYC 1010. Co-Requisite: None. Day: All; Eve: Fa, Sp. Lecture: 3. TAG: OSS048.

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;

cognitive and behavioral models of learning; motivation; individual and cultural differences; effects of social class, ethnicity, and gender on learning and development; tests and evaluation. Prerequisite: PSYC 1010. Co-Requisite: None. Day: Fa; Eve: On demand; Online: Fa. Lecture: 3. TAG: OED003.

RADIOLOGIC TECHNOLOGY (RADT)

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 film, film holders, intensifying screens, automatic exposure control, scattered radiation, and devices used to improve radiographic quality including stationary and moving grids, anode heel effect, and compensating filters. Prerequisite: Acceptance into RADT Program. Co-Requisite: None. Day: Fa. Lecture: 4.

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 1230. Co-Requisite: None. Day: Fa. 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 2420 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 2430 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: None. Eve: Sp on demand. Lecture: 2.

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-Requisite: None. Eve: Fa on demand. Lecture: 2.

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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: 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-Requisite: None. Day: Fa, Sp. Lab: 2. ♦

RECR 1760 Mat Pilates 1 cr.
Mat Pilates is an introductory class to core development. Pilates is a well researched exercise technique to strengthen core muscles, restore balance, improve flexibility and reduce stress and fatigue. Prerequisite: None. Co-Requisite: None. Day: Fa, Sp. Lab: 2. ♦

RECR 1800 Karate 1 cr.
Learn Okinawan style Karate, Shorinryu, at all levels. Beginners are introduced to basic blocks, strikes, kicks and kata. Returning and advanced students set goals to be accomplished by the end of each term, as agreed to with their instructor (Sensei). Students also have options for extra instruction, seminars, tournaments, uniforms and testing for advancement in rank. Self defense and the spirit of martial arts are emphasized. Prerequisite: None. Co-Requisite: None. Day: All. Lab: 2. ♦

RESPIRATORY THERAPY TECHNOLOGY (RESP)

RESP 1100 Introduction to Respiratory Care 2 cr.
History, organization, credential systems and job functions of the respiratory care profession; respiratory care theory and procedures including terminology, applied principles of physics, vital signs, ambulation and body mechanics, universal precautions, oxygen appliances and quality assurance procedures. Prerequisite: BIOL 2320, BIOL 232L, PHYS 1310, PHYS 131L and program admission. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 3. ♦

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.
Overview of the fundamental concepts of the cardiopulmonary system and function. Emphasis on normal physiology. Prerequisite: BIOL 2320, BIOL 232L, PHYS 1310, PHYS 131L and program admission. Co-Requisite: None. Day: Sp. Lecture: 1, Lab: 3. ♦

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.(RT) 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 analyzation 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

will conclude with a study of the principles of Neonatal ventilation. Prerequisite: RESP 1100, RESP 1210, RESP 1250, RESP 1350, RESP 1330 and RESP 1360. Co-Requisite: None. Day: Su. Lecture: 1, Lab: 3. ♦

RESP 2510 Cardiopulmonary Pathology I 3 cr.
Diseases and disorders affecting the cardiopulmonary systems emphasizing diagnosis, selection and implementation of therapeutic modalities, and the role of the respiratory care practitioner treatment. Prerequisite: RESP 2500, RESP 2610 and RESP 2450. Co-Requisite: None. Day: Fa. Lecture: 3. ♦

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. Lab: 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.
Development of fetus, anticipation of high-risk pregnancies and evaluation and care of the newborn infant emphasizing neonatal and pediatric pulmonary physiology and disease. Prerequisite: RESP 1100, RESP 1210, RESP 1250, RESP 1350, RESP 1330 and RESP 1360. Co-Requisite: None. Day: Su. Lecture: 1, Lab: 3. ♦

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 & Subspecialities & 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: Sp; 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.
A continuation of SOSV 2200, at a new agency, if possible. Prerequisite: SOSV 2200. Co-Requisite: SOSV 2230. Day: Fa, Sp; Eve: On demand. Lab: 7.

SOSV 2230 Social Services Seminar II 1 cr.
A continuation of SOSV 2210. Prerequisite: SOSV 2210. Co-Requisite: SOSV 2220. Day: Fa, Sp; Eve: On demand. Lecture: 1.

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, marriage 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 American History course. Co-Requisite: None. Day: Sp. 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 1010. Co-Requisite: . Eve: Sp; Online: Sp. Lecture: 3.

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.

SPANISH (SPAN)

SPAN 1110 Beginning Spanish 3 cr.
Development of comprehension, speaking, reading, and basic writing skills through grammar exercises, oral and written communication activities, and on-line work. Beginning course of a 2 semester, first year sequence. Prerequisite: None. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3, Lab: 1.

SPAN 1130 Intermediate Spanish 3 cr.
Continuation of basic skills in Spanish. Prerequisite: SPAN 1110 or 1 year high school Spanish. Co-Requisite: None. Day: Fa; Eve: Fa. Lecture: 3, Lab: 1.

SPAN 2110 Advanced Spanish 3 cr.
First course of a 2-semester intermediate level sequence. Continued study of advanced concepts of Spanish grammar; includes readings, discussions and compositions in Spanish, as well as cultural material. Prerequisite: SPAN 1130 or 2-3 years high school Spanish. Co-Requisite: None. Day: Fa, Sp; Eve: Fa, Sp. Lecture: 3, Lab: 1.

SPAN 2130 Conversational Spanish 3 cr.
Continued review. Emphasis on advanced grammar concepts, advanced oral and written communication in Spanish. Cultural material and selected readings of Spanish & Latino dramatists, poets, & novelists with discussion and analysis in Spanish. Prerequisite: SPAN 2110 or 3-4 years high school Spanish. Co-Requisite: None. Day: Sp. Lecture: 3, Lab: 1.

SPEECH (SPCH)

SPCH 1510 Speech 3 cr. TM-C
Introduces students to both the general principles of communication and the specific process involved in the preparation and presentation of informative and persuasive one-to-many messages. Prerequisite: None. Co-Requisite: None. Day: All; Eve: All; Online: All. Lecture: 3. TAG: OCM004.

SPCH 2050 Professional Communication 3 cr.
This course emphasizes the development of oral and written communication skills most often used in business and professional settings: interviewing; decision making in small group and organizational contexts; team building; and formal individual and group presentation. Prerequisite: SPCH 1510. Co-Requisite: None. Day: On demand; Eve: On demand. Lecture: 3.

SPCH 2060 Interpersonal Communication 3 cr.
Focuses on such factors as gender, age, and social position as they influence the most common form of human communication: the dyadic encounter. Discussion

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.
Performance-based study and practice of basic techniques in building a character: body control, interpretation, scene work, warm-up exercises, games, improvisations, and monologue exercises. Prerequisite: None. Co-Requisite: None. Eve: Fa, Sp. Lecture: 3.

WSCC Faculty

Full-Time Faculty

Name	Credentials
Anderson, Amanda	MA, University of Louisville
Ball, Renea	BSN, Ohio University; ADN, Ohio University/AAS, Hocking College
Baker, Kathy	BA, Glenville State; AAS, Cuyahoga Community College
Barker, Sheri	MSN, University of Phoenix; BSN, University of Phoenix; ADN, Hocking College
Barrett, Richard	MEd, Ohio University; BSEE, Ohio University
Blake, Dan	AAS, Washington State Community College
Bogard, Tracey	BSN, Ohio University; AAS, Hocking College
Boone, Darla	MSN, West Virginia University; BSN, University of Cincinnati
Brunny, Michelle	BSN, Salem College; ADN, Parkersburg Community College
Corbett, Casey	BA, Marietta College; AA, Washington State Community College
DeVol, Troy	BS, Ohio Valley University
Edwards, David	MA, Eastern Illinois University; BA, Eastern Illinois University
Freed, Laura	MPT, West Virginia University; BA, West Virginia University
Freshour, Tara	MA, West Virginia University; BS, Ohio University
Gabbert, Terrie	MSN, Regis University; BSN, Marshall University; AAS, Parkersburg Community College
Garcia, Laura	MA, West Virginia University; BA, Wheeling Jesuit College
Hager, Tommy	BSEE, West Virginia University; AAS, Parkersburg Community College
Hall, Kent	MEd, University of Rio Grande
Hendershot, Debbie	MLIS, University of South Carolina; BEd, Glenville State College; AAB, Washington Technical College
Hill, Sherri	BA, Marietta College; AAB, Accounting, Washington State Community College
Hirschi, Dean	PhD, University of Kansas; MS, University of Kansas; BS, University of Utah
Jarrell, Mollie	JD, WVU College of Law; MS, Marshall University; BA, Marshall University
Johnson, Paula	MEd, Marietta College; BS, Marietta College
Kessler, Mickey	MFA, Carnegie Melon; BA, Youngstown State University
Kincaid, Heather	PhD, Ohio University; MEd, Marietta College; BS, Ohio University; AAS, WSCC
Kinker, J. Robert	PhD, Ohio State University; MA, Ohio State University; BA, Capital University
Lamraoui, Ashley	AAS, Washington State Community College
Long, Jan	BA, Marietta College; ADN, Hocking College
Lowe, Natalie	MEd, Ohio Valley University; BA, Glenville State College; AAB, Washington Technical College
McAuley, Carol	MA, Otterbein College; LPN, Washington State Community College
Mentink, Sue	BS, Michigan Technological University
Merritt, Brad	MBA, Ohio University; BA, Marietta College
Palmer, Mike	BS, Ohio Valley University; AAS, Washington State Community College
Poorman, Karen	MEd, Ohio University; BS, Concord College
Richards, Paul	MA, Trinity College & University; BA, West Virginia University; AA, WVU-P
Rosenthal, Deborah	PhD, Middle Tennessee State University; MEd, The University of North Carolina; BS, The University of Michigan; AS, Oakland Community College
Ruth, Elizabeth	MBA, Keller Graduate School of Management; BA, Marshall University
Rutherford, Ben	MA, St. John's College; BA, West Virginia University
Salem, Esther	MEd, University of Rio Grande; BA, York College (SUNY); AAS, WSCC
Schaad, Tricia	MSN, Otterbein College; BSN, Mt. Carmel
Schilling, Janet	MEd, Ohio University; BS, University of Rio Grande
Shore, Allen	MS, Murray State University; BS, Appalachian State University; AA, Caldwell Community College
Singree, Shirley	MS, Ohio University; BS, Rio Grande College; AAS, MMLT, Washington Technical College
Sites, Andrea	MS, Ohio University; BS, Ohio University
Starkey, Jeffrey	MBA, Bowling Green University; BA, Ohio University
Taylor, Emily	BA, Ohio Valley University; AAS, Washington State Community College
Thomas, Deborah	PhD, West Virginia University; MA, West Virginia University; BA, West Virginia University
Tuten, Tamara	MS, Ohio University; BA, Ohio University
Unsold, Deborah	MEd, Bowling Green State University; BA, Wittenberg University
Veladota, Christina	PhD, Ohio University; MFA, University of North Carolina; BFA, Emerson College
Warren, Alicia	MSN, Ohio University; BSN, Ohio University; ADN, Parkersburg Community College; LPN, Muskingum/Perry Career Center
Wilder, Tanya	MA, University of Kentucky; BSB, Appalachian State University
Will, Julia	MEd, Marietta College; BS, Ohio University

WSCC Faculty

Adjunct Faculty

Name	Credentials
Adams, Amber	MS, Walden University; BS, Glenville State College
Adams, Susan	MA, West Virginia University; BS, West Virginia University
Akir, Ziad	Ph.D., Ohio University; MS, Ohio University; BS, Ohio University
Ankrom, David	BA, Kaplan University; AAB, Washington State Community College
Arnold, Nick	BA, Ohio State University
Bargeloh, Frank	MA, West Virginia University; BA, Glenville State College
Biehl, Delmar	AAS, Washington State Community College
Bohl, Tina	MEd, Marietta College; BS, Ohio University
Brodie, Samantha	BSBA, OSU; IT Diploma, DeVry
Burdette, John	AAS, Northern Virginia Community College
Byrd, Robin Nicole	MBA, West Virginia University; BS, Ohio University
Caplinger, William	MSN, Marshall University; BSN, Ohio University; AAS, Rio Grande
Conrath, Dave	BGS, Ohio University
Danison, Amy	BS, Purdue University
Davidson, Patricia	BSN, Ohio University; AAS, Hocking College
Deem, Kay	BSN, Alderson Broadus; AAS, Parkersburg Community College
DeWees, Brent	MM, Kentucky Christian University; BS, Kentucky Christian University
Doak, Debra	BSN, West Virginia University; RN, Good Samaritan
Doerfler, Mark	MSEd, Franciscan University; BA, Wheeling Jesuit; AAS, Columbus Tech
Duff, Angela	BSN, Wheeling Jesuit University; ADN, WVU-P
Duffy, Brenda	BA, Ohio Valley University; AAS, Hocking College
Feathers, Robert	BS, Ohio Valley College; AIS, Washington State Community College
Finley-Boggs, Kathleen	MA, West Virginia University; BA, Glenville State College
Gould, Jane	RN, Mansfield General Hospital School of Nursing
Harner, Debra	MA, West Virginia University; BA, West Virginia University
Hiles, Janine	BSN, University of Phoenix; AAS, Washington State Community College
Horne, David	PhD, University of Toledo; MS, University of Toledo; BSc, University of Hertfordshire (England)
Hutchins, Bonnie	MEd, Marietta College; BS, Marietta College
Jarvis, Rebecca	MEd, Ohio University; BEd, Youngstown State
King, Naomi	BSN, Ohio University; AAS, Ohio University Zanesville
Kinker, Sam	BA, Ohio University; AA, Washington State Community College
Kinker-Elliott, Melanie	LPN Certificate, Washington State Community College
Kornmiller, Brenda	MEd, Ohio State University; BSBA, Ohio State University
Krawczyk, Carl-Michal	MA, University of Houston; BA, University of Maryland, European Division; AA, University of Maryland European Division
LaBarre, Mary	MSN, Otterbein; BSN, Mt. Carmel
Lang, Judith	BSN, Kent State University
Marasco, Frank	DC, Chiropractic National University of Health; BS, National University of Health; Pre-Health (Undergraduate Community College of Allegheny County 90 credits)
McAfee, Tracy	MA, Ohio State University; BA, Baldwin-Wallace
McVey, Lindsay	MLIS, Kent State University; BA, Kent State University
Moegling, Larry	MEd, Ohio University; BS, Bowling Green State University
Nelson, Stefanie	MA, Ohio University; BA, Muskingum College
Nutter, Mark	PhD, Ohio University; MA, Ohio University; BS, Ohio University
Owen, Frieda	PhD, New York University; MAT, Augustana College; BA
Phillips, Aimee	MS, West Virginia University; BS, West Virginia University; Camden Clark School of Radiologic Technology
Richards, Patrick	DMA, The University of Southern Mississippi; M.Mus, West Virginia University; B.Mus, West Virginia University
Richmond, Alicia	MA, West Virginia University; RBA, WVU Parkersburg; AA, WVU Parkersburg
Rode, Donald	BS, University of Illinois
Roe, Elizabeth	BSN, Mt. St. Joseph; RN, Good Samaritan
Russell, R. Steve	EdD, West Virginia University; BS, West Virginia University
Salyers, Kim	MAEd, University of Phoenix; BS, Ohio Valley University; AAS, Central Ohio Technical College

WSCC Faculty

Adjunct Faculty

Name	Credentials
Scott, Saundra	MEd, Ohio University; BS, Trine University (formerly Tri-State University)
Stanley, Amy	BSN, Ohio University; ADN, Washington State Community College
Stauffer, Kara	BS, West Virginia University
Thompson, Michal	BA, Hiram College; AAS, Lakeland Community College
VanNoy, Gerri	MA, West Virginia University; BA, WVU-P; AA, WVU-P; AAS, WSCC
Vaughan, Dixie	PhD, Ohio University; MEd, Ohio University; BS, Marshall University
Weber, Sheila	BA, Ohio Valley University; AB, Washington State Community College
Welch, Clint	JD, Capital University; MHA, Ohio State University; BA, Ohio University; ADN, Hocking College
Williamson, Rebecca	MA, Marietta College; AAS, WVU-P
Wilson, Robert	MEd, Rio Grande University; BS, Ohio University; AAS, Washington State Community College
Wright, John	AAS, Jefferson Technical College
York, James	MS, Ohio University; BS, Purdue University
Yost, Dody	MA, Marietta College; BA, Marietta College
Zoller, Lynne	MSN, Otterbein; MHSA, Ohio University; BSN, West Virginia University; ADN, WVU-P