2022-2023

ACADEMIC Catalog

ZANE STATE COLLEGE

ZSC

ZANE STATE COLLEGE

ZSC

VISION

A Promising Future for Every One

MISSION

Empowering People through Education

CORE VALUE STATEMENT

Zane State College values respect, integrity, and collaboration.

2022-2023 Academic Catalog

TABLE OF CONTENTS

ZANE STATE COLLEGE
1555 Newark Road • Zanesville, Ohio 43701
740-454-2501
www.zanestate.edu

ZANE STATE COLLEGE
Academic Catalog
Fall 2022

Chartered by	The Ohio Board of Regents, 1969
Accredited by	The Higher Learning Commission 230 South LaSalle Street, Suite 7-500 Chicago, Illinois 60604 (800) 621-7440 www.hlcommision.org
Member	American Association of Community Colleges National Institute for Staff and Organizational Development Ohio Association of Community Colleges

SPECIALIZED ACCREDITATION

Culinary Arts is accredited by
American Culinary Federation, Inc.
Accrediting Commission
10 San Bartola Drive
St. Augustine, FL 32086
(800) 624-9458

Electrical/Electronics Engineering Technology (EEET) Associates of Applied Science degree is accredited by
The Engineering Technology Accreditation Commission of ABET
https//www.abet.org

Health Information Management - Coding and Reimbursement is accredited by
Commission on Accreditation for Health Informatics and Information Management (CAHIIM)
233 N. Michigan Ave. 21st Floor
Chicago, IL 60601-5800
(312) 233-1100
www.cahiim.org

Medical Assisting is accredited by
Commission on Accreditation of Allied Health Education Programs
25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763
(727) 210-2350
www.caahep.org

Medical Laboratory Technology is accredited by
National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Rd., Suite 720
Rosemont, IL 60018-5119
(773) 714-8880
www.naacls.org

Occupational Therapy Assistant is accredited by
Accreditation Council for Occupational Therapy Education (ACOTE)
6116 Executive Boulevard, Suite 200
North Bethesda, MD 20852-4929
(301) 652-6611
www.acoteonline.org

Physical Therapist Assistant Program is accredited by
Commission on Accreditation in Physical Therapy Education (CAPTE)
3030 Potomac Avenue, Suite 100
Alexandria, VA 22305-3085
Telephone: (703) 706-3245
accreditation@apta.org
http://www.capteonline.org

Radiologic Technology is accredited by
Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
(312) 704-5300
www.jrcert.org

Wildlife Conservation is accredited by
North American Wildlife Technology Association (NAWTA)
Al Bertschi, Executive Director
Portage College
P.O. Box 417
Lac La Biche, AB T0A C2O Canada
www.nawta.org

ZANE STATE COLLEGE

Zane State College, established in 1969, values people through our commitment to quality, equity, and stewardship. Zane State offers one-year and less than one-year certificates, programs that lead to an associate degree, and one baccalaureate program, all focused on regional workforce needs.

As a comprehensive community college, students can reduce their bachelor's degree costs through 2+2 and 3+1 transfer options to a wide selection of public and private universities. Visit www.zanestate.edu for more information.

Zane State College is a public college accredited by the Higher Learning Commission (www.hlcommission.org).

EDUCATIONAL

Zane State College has facilities located in Zanesville and Cambridge. In addition, the College has a 150-acre Natural Resources Center west of the Zanesville campus.

Zanesville Campus

Advanced Science and Technology Center (ASTC) - This state-of-the-art building is dedicated to the growing fields of science, technology, engineering, math, and medicine. Opened in January 2014, the ASTC contains flexible classrooms, laboratories, lecture hall, digital video studio, and faculty and staff offices. The ASTC houses the Center for Workforce Solutions and Entrepreneurship and the Chief Academic Officer. The ASTC also boasts an alternative energy source from its outdoor learning environment and The Community Bank Energy Courtyard which consists of a 1.0 kW wind turbine and a 17.3 kW solar photovoltaic array. In 2020, American Electric Power donated a Drop in Control Module (DICM) for laboratory use in the bachelor's degree program.

The Campus Center (TCC) - This facility contains classrooms, health laboratories, a culinary arts laboratory, campus bookstore, student lounge, food service, café, and a conference center with seating for up to 300. Faculty offices for the Business and Engineering Technology division are located here.

College Hall (CH) - This complex provides classrooms, laboratories, and office space for faculty and administration. College Hall houses Admissions, Advising, Business Office, Career Services, Financial Aid, , the IDEA Makers Space Lab, Registrar's Office and Veterans Affairs, the Testing Center, the Technology Solutions Center, TRIO Student Support Services, and Veterans Resource Center and Lounge. The President's Office, Human Resources, the Foundation Office, general education faculty, and information technology faculty are also located in College Hall.

Health Science Hall (HSH) - This building houses classrooms, laboratories, and a 126-seat lecture hall. Faculty offices for the Health and Public Service division are located here.

Herrold Hall - This learning resource center includes the campus library and student study areas.

Holdren-Watton Law Laboratory - This facility contains a classroom as well as a seven-lane pistol range for use by Criminal Justice programs and Ohio Peace Officer Training Academy students.

Littick Hall - The facility includes a gymnasium that supports one or two basketball layouts, volleyball courts and special fitness areas. Littick Hall is connected to and operates in conjunction with the Muskingum County Family YMCA.

Muskingum County Family YMCA - The YMCA houses an eight-lane competition/lap pool, activity pool, locker rooms, steam rooms and saunas, fitness equipment, gymnasium, group exercise rooms, and a "Kids Korner" for child care. In addition to the community, Zane State College provides memberships to the YMCA for students who are enrolled at least 3 credit hours per term.

Cambridge Center

Willett-Pratt Training Center - Classrooms are available Center for Workforce Solutions and Entrepreneurship as well as for use by local business and industry on a rental basis.

Natural Resources Center (NRC)

The NRC is a 150-acre facility located five miles west of the Zanesville campus near Dillon State Park. The facility is leased from the U.S. Army Corps of Engineers, Dillon State Park and the Ohio Department of Natural Resources. It is used by students and faculty members of environmental-related programs, such as Wildlife Conservation.

High School Locations

Zane State College has been granted approval from the Higher Learning Commission to operate at Maysville High School, Morgan High School, and Shenandoah High School. Students can earn over 50 percent of a degree at these sites.

ASSESSMENT OF INSTITUTIONAL EFFECTIVENESS

A goal of Zane State College is to enable individuals to develop to their fullest potential and prepare them for their chosen fields. To this end, an assessment program is conducted College-wide to measure student progress toward educational goals, to determine academic progress, to improve teaching and learning, and to evaluate institutional effectiveness. Student assessment is part of the College's educational program. What Zane State College discovers through the assessment program is used in making decisions about everything the College does from curriculum planning to student activities to support services.

From the time students apply to the College until the time they leave, students are expected to participate in a series of evaluations, projects, surveys, and other assessment activities intended to:

- Assess students' backgrounds, academic skills, and interests for accurate advisement and program placement at entry;
- Obtain information about students' satisfaction with College courses, programs and services;
- Measure gains and competencies students have achieved academically while at the College; and
- Demonstrate mastery of skills.
- These evaluations, projects, surveys, and other assessment activities are used to help students achieve their individual goals and to improve College services and programs for all students. Students' earnest and sincere participation in surveys, tests, learning tasks, exit exams, capstone experiences, and portfolio development provides the College with accurate information to plan increasingly effective programs and services. In this effort, students become partners in the assessment and learning process.

DEGREES AND CERTIFICATES

ACADEMIC CALENDAR

FALL SEMESTER 2022

DAY ABBREVIATIONS: M – Monday • T – Tuesday • W – Wednesday • R – Thursday • F – Friday • S – Saturday • U - Sunday

TERM CODES: FF - Fall Full Semester •F1 - Fall First Term •F2 - Fall Second Term

Date	Day	
August 8	M	First Day to Purchase Books with Financial Aid
August 17	W	Last Day to be Admitted for Full and First Terms
August 17	**W**	**Welcome Day for Fall Semester**
August 22	**M**	**Fall Semester (FF) Courses Begin**
August 22	**M**	**First Term (F1) Courses Begin**
August 25	R	Last Day to Register or Add First Term Courses on Campus
August 25	R	Last Day to Register or Add Full Term Courses on Campus
August 25	R	Last Day to Drop First Term Courses on Campus
August 27	S	Last Day to Add/Drop First Term Courses-Online*
September 1	R	Last Day to Drop Full Term Courses on Campus
September 3	S	Last Day to Drop Full Term Courses-Online*
September 4	U	Last Day to Remove Summer Session 2022 Incomplete Grades
September 5	M	Holiday (Labor Day) – Campus Closed
September 22	R	Last Day to Withdraw from First Term Courses on Campus**
September 24	S	Last Day to Withdraw from First Term Courses-Online*
October 10-11	M-T	Fall Break – No Classes – Offices Open
October 15	**S**	**First Term (F1) Courses End**
October 17	**M**	**Second Term (F2) Courses Begin**
October 20	R	Last Day to Register or Add Second Term Courses on Campus
October 20	R	Last Day to Drop Second Term Courses on Campus
October 22	S	Last Day to Register or Add Second Term Courses-Online*
October 22	S	Last Day to Drop Second Term Courses-Online*
October 27	R	Last Day to Withdraw from Full Term Courses on Campus**
October 29	S	Last Day to Withdraw from Full Term Courses-Online*
November 10	R	Holiday (Veterans' Day) – Campus Closed
November 17	R	Last Day to Withdraw from Second Term Courses on Campus**
November 19	S	Last Day to Withdraw from Second Term Courses-Online*
November 23-26	W-S	Holiday (Thanksgiving) – Campus Closed
December 12-17	M-S	Fall Full-Term Courses Final Examinations
December 17	**S**	**Fall Semester (FF) Courses End**
December 17	**S**	**Fall Semester (FF) and Second Term (F2) Courses End**

*A day marked with an asterisk is either a weekend day, holiday, and/or the campus is closed. Online registration is open during these days. New students should meet with their program advisor to obtain registration clearance.

** Withdrawing from a course may leave a student with a financial responsibility to the College. Please talk with financial aid or the Business Office before withdrawing.

ACADEMIC CALENDAR

SPRING SEMESTER 2023

DAY ABBREVIATIONS: M – Monday • T – Tuesday • W – Wednesday • R – Thursday • F – Friday • S – Saturday • U - Sunday

TERM CODES: PF - Spring Full Semester ● P1 - Spring First Term ● P2 - Spring Second Term

Date	Day	
December 22-January 3	R-T	Holiday – Campus Closed
January 4	W	First Day to Purchase Books with Financial Aid
January 11	W	Last Day to be Admitted for Full and First Terms
January 11	**W**	**Welcome Day for Spring Semester**
January 16	M	Holiday (Rev. Dr. Martin Luther King Day) – Campus Closed
January 17	**T**	**Spring Semester Begins (PF)**
January 17	**T**	**Spring Semester Begins (P1)**
January 19	R	Last Day to Register or Add First Term Courses on Campus
January 19	R	Last Day to Register or Add Full Term Courses on Campus
January 19	R	Last Day to Drop First Term Courses on Campus
January 21	S	Last Day to Register or Add First Term Courses-Online*
January 21	S	Last Day to Drop First Term Courses Online*
January 21	S	Last Day to Register or Add Full Term Courses Online*
January 26	R	Last Day to Drop Full Term Courses on Campus
January 28	S	Last Day to Drop Full Term Courses Online*
January 29	U	Remove Fall Semester 2022 Incomplete Grades
February 9	R	Last Day to Withdraw from First Term Courses on Campus**
February 11	S	Last Day to Withdraw from First Term Courses-Online*
March 11	**S**	**First Term (P1) Courses End**
March 13-18	M-S	Spring Break – No Classes; Offices Open
March 20	**M**	**Second Term (P2) Courses Begin**
March 23	R	Last Day to Register or Add Second Term Courses on Campus
March 23	R	Last Day to Withdraw from Full Term Courses on Campus**
March 23	R	Last Day to Drop Second Term Courses on Campus
March 25	S	Last Day to Register or Add Second Term Courses-Online*
March 25	S	Last Day to Drop Second Term Courses-Online*
March 25	S	Last Day to Withdraw from Full Term Courses Online*
April 20	R	Last Day to Withdraw from Second Term Courses on Campus**
April 22	S	Last Day to Withdraw from Second Term Courses-Online*
May 8-13	M-S	Spring Full Term Final Examination
May 11	R	Spring Commencement
May 13	**S**	**Full Term (PF) and Second Term (P2)Courses End**

*A day marked with an asterisk is either a weekend day, holiday, and/or the campus is closed. Online registration is open during these days. New students should meet with their program advisor to obtain registration clearance.

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ACADEMIC CALENDAR

SUMMER SESSION 2023

DAY ABBREVIATIONS: M – Monday • T – Tuesday • W – Wednesday • R – Thursday • F – Friday • S – Saturday • U - Sunday

TERM CODES: SF - Summer Full Session ● S1 - Summer First Term ● S3 - Summer 8-week Term ● SM - May-mester

Date	Day	
May 8	M	First Day to Purchase Books with Financial Aid
May 15-20	M-S	Summer Break
May 15	**M**	**May-mester (SM) Courses Begin**
May 18	R	Last Day to Register or Add May-mester Courses on Campus
May 18	R	Last Day to Drop May-mester Courses on Campus
May 18	R	Last Day to be Admitted for Full Session
May 20	S	Last Day to Register or Add May-mester Courses-Online*
May 20	S	Last Day to Drop May-mester Courses-Online*
May 22	**M**	**Summer Full Session (SF) Courses Begin**
May 22	**M**	**Summer First Term Session (S1) Courses Begin**
May 25	R	Last Day to Register/Add Full Session Courses on Campus
May 25	R	Last Day to Register/Add First Term Courses on Campus
May 25	R	Last Day to Drop Summer Full Session Courses on Campus*
May 25	R	Last Day to Drop First Term Courses on Campus*
May 27	S	Last Day to Register/Add Full Session Courses-Online*
May 27	S	Last Day to Register/Add First Term Courses-Online*
May 27	S	Last Day to Drop First Term Courses – Online*
May 27	S	Last Day to Drop Summer Full Session Courses - Online*
May 29	M	Holiday (Memorial Day) – Campus Closed
June 1	R	Last Day to Withdraw from May-mester Courses on Campus*
June 3	S	Last Day to Withdraw from May-mester Courses - Online*
June 4	U	Last Day to Remove Spring Semester 2023 Incomplete Grades
June 15	R	Last Day to Withdraw from First Term Courses on Campus*
June 17	**S**	**May-mester (SM) Courses End**
June 17	S	Last Day to Withdraw from First Term Courses-Online*
June 19	**M**	**Summer Eight-Week Term (S3) Courses Begin**
June 19	M	Holiday (Juneteenth) **–** Campus Closed
June 22	R	Last Day to Register for Eight-Week Courses on Campus
June 22	R	Last Day to Drop Eight-Week Courses on Campus
June 24	S	Last Day to Register for Eight-Week Courses-Online*
June 24	S	Last Day to Drop Eight-Week Courses - Online*
July 1	**S**	**First Term Courses End**
July 4	T	Holiday (Independence Day) – Campus Closed
July 13	R	Last Day to Withdraw from Full Session Courses on Campus*
July 15	S	Last Day to Withdraw from Full Session Courses - Online*
July 20	R	Last Day to Withdraw from Eight-Week Courses on Campus*
July 22	S	Last Day to Withdraw from Eight-Week Courses-Online*
August 12	**S**	**Summer Session Term Courses End**

*A day marked with an asterisk is either a weekend day, holiday, and/or the campus is closed. Online registration is open during these days. New students should meet with their program advisor to obtain registration clearance.

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***May-mester begins the week before summer session and lasts six weeks.

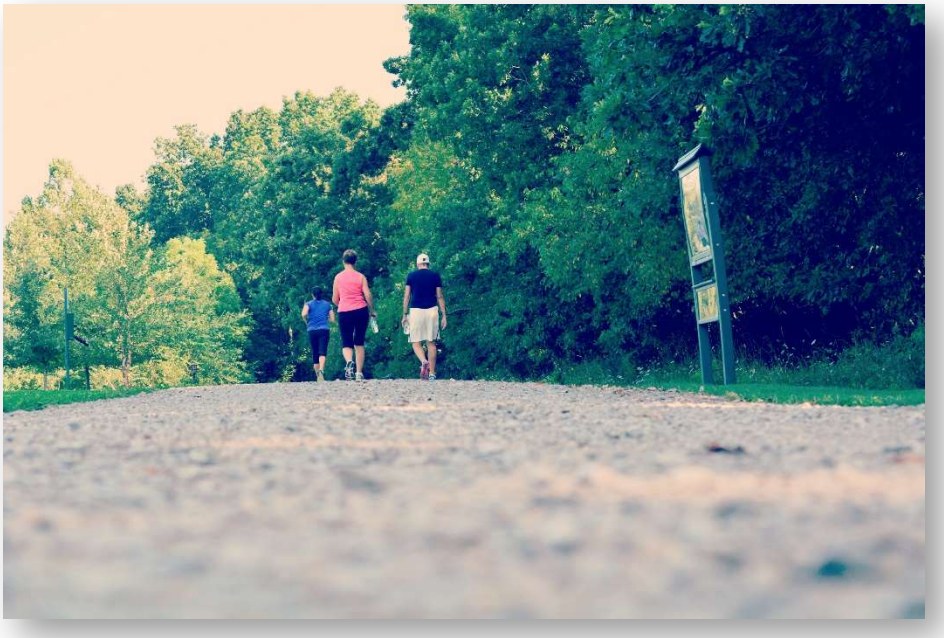
DISCLAIMERS

Subject to Change
This catalog furnishes prospective students and interested persons with pertinent information about Zane State College. In order to facilitate the advancement of the College, the material contained herein is subject to change without notice and should not be regarded as binding on the College.

Student Responsibility
Students enrolled at Zane State College are responsible for understanding all regulations contained in this catalog. Students also are responsible for keeping up to date on changes or additions to regulations which are posted in various College publications.

Equal Opportunity
Zane State College is committed to equal opportunity for all and does not discriminate in admission or access to, or treatment or employment in, its programs or activities on the basis of race, sex, sexual orientation, color, national origin, ancestry, religion, age, marital status, disability, or veteran status. The College's policies and practices concerning the admission and treatment of students follow federal guidelines set forth in Title VI, Title IX, and Section 504. Inquiries or concerns should be directed to the Zane State College Human Resources Office in College Hall or by calling 740-454-2501.

Harassment Policy
The College adheres to all federal and state laws and regulations concerning harassment encountered by students or employees. A complete copy of the Harassment Policy may be obtained by contacting the Human Resources Office in College Hall.



ACADEMIC POLICIES AND PROCEDURES

Academic Assessment for Course Placement
Currently, all Ohio high school students are provided the opportunity to take the ACT® or SAT® (depended on school district choice). If the exam scores are below college readiness thresholds, the student is encouraged to take the ACCUPLACER®, a test that measures current abilities in reading, writing, math, and algebra so that students can begin their work in these subjects at the appropriate levels. To provide students with all the information they need to make good scheduling decisions, students are encouraged to take the ACCUPLACER® prior to meeting with an advisor to schedule for their English (ENGL) or mathematics (MATH) courses. Selective programs may have college level ENGL/MATH requirements for admission to program courses. Contact the Testing Center in College Hall for more information. ACCUPLACER® tests are not needed if students have:

- Appropriate ACT® or SAT® scores;
- Credit for a college-level ENGL or MATH course with a grade of "D" or better within the last five years; or
- An associate degree or a higher degree. College transcripts should be submitted to the Zane State College Registrar's Office at least two weeks prior to the planned semester of enrollment.

Academic Semester and Academic Year
The College schedules classes on a semester system. An academic semester is comprised of fifteen weeks of classes and one week of examinations and registration. The academic year consists of fall and spring semesters and a summer session.

Academic Course Load and Student Credit Hour Overload
The minimum load for a full-time student is 12 credit hours. The average load of a full-time student is 16-18 credit hours which consist of 4 or 5 courses. Information concerning class loads for students on probation is found in this catalog.

Students who want to take more than 19 credit hours during any given semester are required to obtain appropriate Department Chair or Academic Dean approval.

Catalog in Force
Requirements to earn a degree or certificate are based on the catalog which is in force at the time of the student's initial enrollment. Students have five years to complete their degree program from initial enrollment under the catalog in force at the time of initial enrollment. However, the College reserves the right to change course offerings and academic requirements without notice. In this regard, the following guidelines determine which catalog a student must follow in meeting program requirements:

- Students may elect to complete their coursework under the most recent catalog and must comply with all of the new requirements for their program.
- Students who change majors or are admitted to selective programs must meet requirements of the catalog which is in force at the time they make said change.
- Students who transfer to another college or university and return to Zane State College will be readmitted under the catalog which is in force at the time of readmission.
- Students who do not earn any credit hours toward their degree requirements in two calendar years must satisfy requirements of the catalog in force at the time of re-enrollment.
- Dismissed students are readmitted under the catalog which is in force at the time of readmission.

Exceptions to the above may be necessary when changes in certification, accreditation, or licensure standards and changing technology mandate changes in academic requirements or in College programs.

Students who take longer than five years must meet the requirements of the most recent catalog. Questions concerning this policy should be directed to the Registrar's Office in College Hall or email registrar@zanestate.edu.

Selective Health Programs
Students who apply for a selective health program at Zane State College will be placed into the Associate of Science degree program as their first major while pursuing acceptance into the health program applied for. If the student achieves acceptance into the health program, the Associate of Science program will automatically move to the student's second major unless the student submits a Change of Program form to either change the second major or remove it. If a prospective student is not admitted to their desired health program, the student can continue to pursue the Associate of Science degree as their first major or meet with a success coach or program advisor to select another Zane State program to pursue.

Prerequisites and Co-requisites
Certain courses assume that all students enrolled have completed another course or by some other identified requirement. The term "prerequisite" designates courses, experiences, or permission which must be satisfied before a student may enroll in that course. Courses students are required to take simultaneously in order to enroll in another course are called "co-requisites." The Programs and Curricula section of this catalog lists prerequisites and/or co-requisites at the end of each course description. Students who enroll without having satisfied all prerequisites and/or co-requisites will be administratively removed from coursework.

Adding Courses
Students may add courses to their schedules during the first week of a full semester or term through My ZSC. Students who have not earned 30 credit hours must contact their program advisor or success coach in Student Services for registration clearance. Courses offered in a nonstandard term may be subject to prorated dates.

After the last date to add courses, students who wish to make an addition must obtain the written approval of the faculty member teaching the course using the Course Add/Drop/Withdraw Authorization form. Schedule changes may impact billing and/or financial aid status.

Dropping Courses
During the first two weeks of a full semester or term, classes may be dropped online through My ZSC (online access may not available for students under 30 credit hours earned; students should contact their program advisor or success coach in Student Services for assistance). Courses offered in a nonstandard term may be subject to prorated dates. No entry will be made on the student's transcript.

Refund percentages for dropped coursework is based on the Refund Time Frame stated on My ZSC (Finances/Refunds). Schedule changes may impact billing and/or financial aid status.

Withdrawing Courses
From the third week through the tenth week of a full semester, or the third week through the fifth week of an eight week term, students may withdraw from a course on campus through My ZSC (online access may not available for students under 30 credit hours earned; students should contact their program advisor or success coach in Student Services for assistance). Courses offered in a nonstandard term may be subject to prorated dates. A grade of "W" will appear on the student's transcript for courses withdrawn. If a student ceases to attend a course without withdrawing, a grade of "FN" may be recorded.

Withdrawals may impact billing and/or financial aid status. Students who have already earned a grade for a course are ineligible to withdraw from that course.

After the last date to withdraw from courses, students who have an extenuating circumstance (such as a serious medical illness or injury that prohibits the student from completing the term due to the student's incapacitation) may submit a withdrawal request by completing a Late Withdrawal form. Appropriate documentation outlined in the form must be submitted in order to be considered. Contact the Registrar's Office at 740-588-1280 for assistance.

Credit/No-Credit Courses (Passed/Not Passed)
Certain courses offered at the College may be graded on a credit or no-credit basis instead of a letter grade. The College may at its discretion provide a "Passed/Not Passed" option in extreme situations (such as a health pandemic) that may impact students' successful term completion. A student agreeing to the option of a course being graded on a credit or no-credit basis cannot later change to the option of a letter grade; other parameters may apply.

The grade of "P" will be recorded when a grade of "D" or higher is earned on a credit or no-credit basis. Credit hours earned will count toward graduation requirements (except programs that require coursework with a minimum grade policy). The grade point average will not be affected. The grade of "NP" will be recorded to indicate the course was not passed. Hours of "NP" will not count toward graduation and the grade point average will also not be affected.

No grade other than "P" or "NP" will be kept on file and students may encounter difficulty in receiving transfer credit from other institutions for courses taken on a credit/no-credit basis.

Special Topics Courses
The Special Topics courses are designed to provide credit for special projects, workshops, and unique programs which are not listed as credit courses but could contribute substantially to a student's background or skills in his/her program. A total of nine credit hours may be taken in Special Topics courses toward degree requirements.

Course Substitution
A student may receive approval from their program advisor to substitute coursework according to the course substitution guidelines. Such substitutions will be considered within the context of the approved curriculum and should not significantly alter expected program learning outcomes. The College builds curriculum according to business and industry needs and expectations and/or statewide transfer guidelines. Therefore, modifications to the approved course of study should be minimal. The following guidelines will apply:

- **Associate degrees**: Course substitutions will not exceed 12 credit hours and no more than two courses of the technical credit hours required for the two-year degree program.
- **Bachelor of Applied Science degree**: Because the student must have an associate degree to enter this program, course substitutions will not exceed 12 credit hours and no more than two courses of the technical credit hours required for the BAS degree.
- **One-year certificate**: Course substitutions will not exceed a total of 6 credit hours of general or basic coursework and will not be approved for technical credit hours, except with Academic Dean approval.
- **Less than One-year certificate:** Course substitutions are not permitted, except with Academic Dean approval.
- Students whose transcripts show course subject credit at higher levels than program requirements may have those courses applied without counting toward substitution limits.
- Technical courses can only be substituted with another technical course; general education and basic courses can only be substituted with a general education or basic course (substitution of general education courses must be in the same distribution, i.e.; math for math, art and humanities for arts and humanities, etc.).

Course substitution requires the approval of the Registrar in consultation with the area Academic Dean to ensure compliance with state requirements. If a course being substituted is not the same number of credit hours, the student is still required to meet the minimum hours required for their degree and must meet minimum technical and general/basic credit hours.

Non-Degree Seeking Students
Students may take courses at Zane State College without pursuing a degree. This is often done by those interested in learning a subject for personal growth, fulfilling professional goals, updating or gaining new skills, or staying current in a subject area.

If a student later decides to pursue a degree, the credits earned may apply to degree or certificate requirements. Non-degree seeking students are subject to the same registration and academic policies that apply to degree-seeking students. Financial aid is not available for non-degree seeking students.

Fee Waiver for Senior Citizens
Persons 60 years and older who have resided in Ohio for at least one year are eligible to enroll in up to four credit hours per semester on a space-available basis without payment of tuition for instructional and general fees. However, some courses may require fees for security, lab supplies, books, or other materials. These fees are not covered by the senior citizen fee waiver. For more information, contact Student Services at 740-588-5000.

Veterans Benefits and Transition Act of 2018
Zane State College permits any student veteran who receives the GI Bill® Chapter 31 or Chapter 33 to attend or participate in courses of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement and ending on the earlier of the following dates:

- The date on which payment from Veteran Affairs is made to the institution
- 90 days after the date the institution certified tuition and fees following the receipt of the Certificate of Eligibility (COE).

Zane State College ensures no penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement of funding from the Department of Veterans Affairs under chapter 31 or 33.

ALTERNATIVE CREDIT

Advanced Placement Credit
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. The Ohio Department of Higher Education provides a site to review how Advanced Placement (AP) scores translate into college credit (visit https://transfercredit.ohio.gov/ and click on High School).

- Students obtaining an AP exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam areas(s) successfully completed.
- General Education courses and credits received will be applied towards graduation and will satisfy a general requirement if the course(s) to which the AP area is equivalent fulfills a requirement.
- If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.

Students can view their AP scores and request to have an official copy sent to Zane State College by visit the official CollegeBoard website at https://apscore.collegeboard.org/scores.

Credit by Examination
A student may, upon submission of a completed Credit by Examination form to The Testing Center, take a proficiency examination in order to receive credit for selected courses. A $50 fee is charged for each proficiency examination taken and must be paid prior to scheduling the exam. Upon successfully passing the examination, the earned credit will be officially entered onto the transcript as a grade of "P" (Passed).

A credit by examination for any course may be taken only one time. The exam must be taken prior to the completion of the first five business days of the semester in which the student desires to take the exam. Students may apply for and take the exam prior to enrollment. In some situations, exams can be scheduled throughout the semester. Students who fail a course are not permitted to apply for credit by examination and must retake the failed course. Students who do not pass a credit by examination will not be permitted to gain credit by completing another proficiency exam. Credits earned by proficiency examinations may not be accepted by other colleges for transfer credit.

College Level Examination Program (CLEP)
The Ohio Department of Higher Education, working with public institutions of higher education and statewide faculty panels, has developed policies to recognize students' prior learning and to facilitate the articulation and guaranteed transfer of such learning among Ohio's public colleges and universities.

College credit is guaranteed for students who achieve an established College-Level Examination Program (CLEP) test score for exams that have been endorsed statewide as college level. Statewide faculty panels have aligned CLEP exams to equivalent Ohio Transfer 36 (OT36) and Transfer Assurance Guide (TAG) courses, as appropriate. If an equivalent course is not available for the CLEP exam area, the student will still receive credit applied towards graduation with a comparable elective or other bearing course.

More information about the Zane State College courses aligned with CLEP can be found online at the Ohio Department of Higher Education CLEP webpage (https://www.ohiohighered.org/transfer/clep).

Prior Learning Assessment
A student may apply for Prior Learning Assessment credit as substitution for academic program/course curricula requirements. Non-traditional credits awarded should not exceed two-thirds of the program courses required to complete a program. Students receiving non-traditional credit must meet the residency requirement for their degree. Credits earned through Prior Learning Assessment may not be accepted by other colleges for transfer credit.

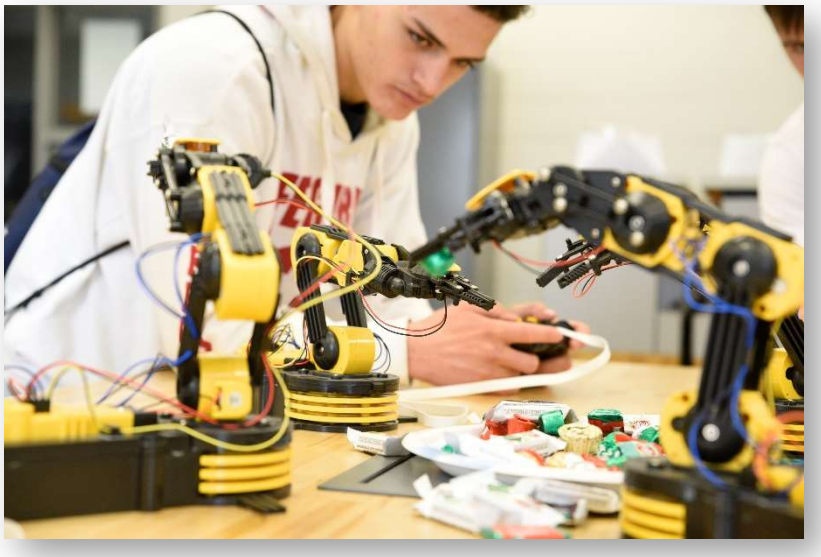
Students may apply for either portfolio review or certification and credentialed experience. Applications and guidelines may be obtained from the Registrar's Office. Those completing standardized state recognized credentials will be reviewed on a case-by-case basis. Graduates of a state recognized Ohio Peace Officer Training Academy (OPOTA) will be awarded the same credit hours that are granted to Zane State College OPOTA graduates, with a waiver of the residency requirement.

If students are uncertain about how past experience may relate to coursework, an appointment with a program advisor or course subject expert is recommended.

Students will be assessed a minimum fee for evaluation of a portfolio or certification/credential. This fee is charged regardless of credit status after evaluation. Additional cost will be incurred when evaluating a portfolio for more than one course . Please refer to the on-line published fee schedule.

Military Training and Academic Credit
Some training courses provided by the Armed Forces may be the equivalent of college courses and transfer credit may be obtained by forwarding an official military transcript to the Registrar's Office for evaluation. A Guide to the Evaluation of Educational Experiences in the Armed Services provided by the American Council on Education (ACE) and the recommendation of the appropriate Academic Dean are used to determine the amount of credit to be awarded.

Career-Technical Education Experience
Students who have satisfactorily completed an approved secondary or post-secondary program in career-technical education may be eligible to receive credit in similar programs at Zane State College. Credit will be evaluated by the student's advisor and approved by the appropriate Academic Dean. Articulation agreements exist with several career centers in specific subject areas. There is no charge for an evaluation in these cases.



TRANSFER POLICIES AND PROCEDURES

Transfer to/from an Ohio Public College or University
The Ohio Department of Higher Education, following the directive of the Ohio General Assembly, developed a statewide policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements.

Ohio Transfer 36 (OT36) is a subset or entire set of a college's or university's general education requirements and consists of a minimum of 36 semester hours of courses in the following areas: English, mathematics, arts and humanities, social and behavioral sciences, natural and physical sciences, and interdisciplinary study.

The OT36 completed at one college or university will automatically meet the requirements of OT36 at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements beyond OT36 at the institution to which they transfer.

Since many degree programs require specific courses that may be taken as a part of the general education program or OT36 at an institution, students are encouraged to meet with an academic advisor at the institution to which they plan to transfer early in their academic career. Because of specific major requirements, early identification of a student's intended major is encouraged. Advisors at the institution to which a student wishes to transfer should be consulted regarding OT36 or general education courses and any specific program requirements that can be completed before transfer.

Ohio Transfer 36 (visit http://www.ohiohighered.org/transfer/transfermodule/modules for most current issue)

English/Oral Communication (Minimum of 9 credit hours)

ENGL	1500 – Composition I	3 credits
ENGL	2500 – Composition II	3 credits
ENGL	2800 – Professional Writing	3 credits
COMM	2610 – Public Speaking	3 credits

Mathematics (Minimum of 3 credit hours)

MATH	1050 – Quantitative Reasoning	4 credits
MATH	1250 – Algebra and Trigonometry	4 credits
MATH	1340 – College Algebra	4 credits
MATH	1350 – Pre-Calculus	5 credits
MATH	1650 – Statistics	3 credits
MATH	2510 – Calculus I	5 credits
MATH	2520 – Calculus II	5 credits

Natural Science (Minimum of 6 credit hours)

BIOL	1070 – Environmental Science	3 credits
BIOL	1210 – General Biology I	4 credits
BIOL	1220 – General Biology II	4 credits
BIOL	1510 – Zoology	3 credits
BIOL	2010 – General Microbiology	3 credits
BIOL	2050 – Tropical Field Biology	3 credits
BIOL	2300 – Introduction to Limnology	3 credits
BIOL	2400 – Anatomy and Physiology I *(must be taken with BIOL 2410 – Anatomy and Physiology I Laboratory)*	3 credits
BIOL	2420 – Anatomy and Physiology II *(must be taken with BIOL 2430 – Anatomy and Physiology II Laboratory)*	3 credits
CHEM	1010 – Introduction to Chemistry	3 credits
CHEM	1210 – General Chemistry I	4 credits
CHEM	1220 – General Chemistry II	4 credits
GEOL	1350 – Earth Science	3 credits
PHYS	1100 – Introductory Physics	4 credits
PHYS	2010 – Physics I	4 credits
PHYS	2020 – Physics II	4 credits

Arts and Humanities (Minimum of 9 credit hours)

Courses must be taken in at least two different subject areas

ARTS	1010 – Art History I	3 credits
ARTS	1020 – Art History II	3 credits
ENGL	2520 – British Literature since 1780s: Empire and Beyond	3 credits
ENGL	2600 – American Literature since 1865: The Making of a Diverse U.S.	3 credits
ENGL	2700 – World Literature: Global Culture and Perspectives	3 credits
PHIL	1010 – Introduction to Philosophy	3 credits
PHIL	1020 – Introduction to Ethics	3 credits
PHIL	1030 – Critical Thinking	3 credits
THTR	1010 – Introduction to Theater	3 credits
THTR	1020 – Script Analysis	3 credits

Social and Behavioral Sciences (Minimum of 9 credit hours)

Courses must be taken in at least two different subject areas

ECON	1510 – Microeconomics	3 credits
ECON	1520 – Macroeconomics	3 credits
HIST	1100 – Western Civilization to 1492	3 credits
HIST	1110 – Western Civilization from 1492 to Present	3 credits
HIST	1200 – U.S. History I	3 credits
HIST	1210 – U.S. History II	3 credits
POLS	1010 – American National Government	3 credits
PSYC	1010 – Introduction to Psychology	3 credits
PSYC	2010 – Abnormal Psychology	3 credits
PSYC	2030 – Child and Adolescent Psychology	3 credits
PSYC	2170 – Social Psychology	3 credits
PSYC	2310 – Educational Psychology	3 credits
SOCI	1010 – Introduction to Sociology	3 credits
SOCI	2050 – Deviant Behavior	3 credits
SOCI	2060 – Race and Ethnicity	3 credits
SOCI	2270 – Criminology	3 credits

Total hours: 36. Ohio Transfer 36 are subject to change as directed by the Ohio Department of Higher Education.

Computer Accessible Transfer Information

The Ohio Department of Higher Education also established a Transfer Assurance Guide (TAG) system in conjunction with a nationwide computerized Course Applicability System (CAS). This combined system enables college and university advisors and individual students to access via computer course transfer potential information at virtually all public (and a few private) institutions of higher education in the State of Ohio and even more participants throughout the nation. In Ohio, higher education institutions have matched standard courses for transfer potential. All public institutions are mandated to investigate transfer potential with institutions from which they receive a set minimum number of transfer students annually. This Ohio data is available online at https://www.transferology.com/index.htm.

Transfer to/from an Independent College or University

Because independent and proprietary colleges do not participate in Ohio Transfer 36, transferring credit to/from independent institutions will vary. Students endeavoring to transfer to Zane State College from an independent or proprietary college should schedule an appointment with the Registrar's Office and/or the program director of the desired program to determine if credit will transfer. During the process, students will be required to provide transcript information and supporting documentation such as syllabi which must describe in detail the learning outcomes and course content, in detail, of courses taken at the independent college. Based on a thorough review of the provided material, credit may or may not be awarded. Students transferring to an independent or proprietary college from Zane State College are encouraged to check with that college's registrar's office to verify ability to transfer credit.

Transfer Credit

Prior to official determination of whether college coursework taken at another institution will be accepted and applied toward a degree, an official transcript must be on file in the Registrar's Office. When course content is similar to a course offered at Zane State College with a recorded grade of D or better, credit will be awarded if taken at a regionally accredited institution. Transfer credit appears as "TA", "TB", "TC", "TD" on Zane State College transcripts and is not used in computing grade point average. Admission to Zane State College does not guarantee that a transfer student will be automatically admitted to all programs at the College. 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 prior to the granting of a degree.

Transfer students who do not submit an official college transcript from their prior institution should submit their high school transcript or take placement tests for appropriate academic advising and registration. Students who choose to submit an official college transcript at a later date will not be awarded transfer credit and will not receive a refund for equivalent courses currently enrolled in or previously completed at Zane State College, no matter what grade was earned.

The Financial Aid Office requires official college transcripts from all previous colleges attended for students selected for verification due to unusual enrollment history. Veteran Affairs also requires that any student utilizing Veterans Educational Benefits submit official transcripts from all institutions of higher education attended. Failure to provide them will result in ineligibility for federal financial aid and/or Veterans Educational Benefits. Students who apply to a selective entry health program may be required to submit official college transcripts from all previous colleges as part of the application.

Waiver of General Education Requirements for Earned Degrees Policy

A student submitting a transcript demonstrating completion of an associate degree or higher from a regionally accredited institution will be deemed to have completed Zane State College's general education requirements for an associate of applied business or associate of applied science program. However, the student may be required to complete additional general education courses in order to satisfy a program's curriculum and/or accreditation requirements if the student does not have the required transfer course equivalency.

Transfer Credit Appeals Process

A student disagreeing with the application of transfer credit by the College may appeal the decision by contacting the Registrar's Office. If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee. This committee shall review and recommend to institutions the resolutions of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, students who intend to transfer from Zane State College to another college should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify, early in their collegiate studies, an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

Transfer of Zane State College Credits to Another Institution

Students who decide to transfer to another college before or after completing a certificate or degree program at Zane State College should check carefully with the receiving institution to determine what transfer credit will be awarded. The exact amount of transfer credit students can expect to receive depends upon the program pursued at Zane State College and the type of program entered at another college. Transcripts can be requested from the Registrar's Office online at www.zanestate.edu. Transcripts will not be released if there are financial or other obligations to Zane State College.

Zane State College Transient Students

A student in good standing may be approved to take courses at another regionally accredited institution on a transient basis. Zane State College students must complete a Transient Student Form available at the Registrar's Office or online for each term utilized. The completed form must be delivered to the intended institution prior to course enrollment. Courses taken without an approved form may not be accepted for credit at Zane State College. Transfer credit will be awarded for those approved courses where a grade of "D" or better is earned (with the exception of courses that require a "C" or better as determined by certain programs at Zane State College). Students may not take courses for transfer credit at another institution while on suspension or dismissal from Zane State College. Students may not enroll in courses at another institution for which they have not met Zane State College prerequisites if the intent is to transfer those courses back to Zane State College.

GRADING SYSTEM

A grade will be given in each course and that grade will reflect the student's progress and achievement in knowledge of the subject, ability to apply this knowledge, and work habits and practices. Grades will be awarded on the four-point system and translate typically as follows:

Grade	Quality Grade	Numerical Grade	Grade Point
A	Superior	90-100	4.0 per credit hour points
B	Excellent	80-89	3.0 per credit hour points
C	Average	70-79	2.0 per credit hour points
D	Below Average	60-69	1.0 per credit hour points
F	Failure	below 60	0.0 credit hour points
FN	Failure-Lack of Attendance		0.0 credit hour points

In all cases, decisions concerning final grades for courses are the responsibility of the individual instructor.

The following grades are not included in grade point averages:

AP	Advanced Placement
AU	Audit
CE	Credit by Exam
CL	CLEP Exam
CT	Career Technical Assurance Guide (CTAG)
DZ	Fresh Start D Grade
FZ	Fresh Start F Grade
I	Incomplete
IT	Industry Technical Assurance Guides (ITAG)
MC	Military Credit - Other
MT	Military Transfer Assurance Guide (MTAG)
NC	Non Credit
NP	Not Passed (Failure) in Credit/No Credit Course
OT	Other Non-Institutional Credit
P	Passed in Credit/No Credit Course
PO	Prior Learning Assessment-Certification/Credentialed Experience
PP	Prior Learning Assessment-Portfolio Review
S	Satisfactory
TA	Transfer Credit with an A
TB	Transfer Credit with a B
TC	Transfer Credit with a C
TD	Transfer Credit with a D
TP	Transfer Credit Pass
TR	Transfer Credit
U	Unsatisfactory
W	Withdrawal
WV	Waived Credit

Grade Point Average (GPA)
Quality points are determined by multiplying the credit hours for a course by the grade points earned for each mark. A student's grade point average is obtained by dividing the total number of quality points by the number of hours for courses with grades of A, B, C, D, F, and FN. Example:

	HOURS	X	(letter grade) GRADE POINTS	=	QUALITY POINTS
MATH 1050	4	X	(A) 4	=	16
BMCA 1300	3	X	(C) 2	=	6
Total credits	**7**				**Total points 22**

Grade Point Average: 22 ÷ 7 = 3.14

Academic Standards for Probation, Dismissal, and Readmission
Course credit levels for probation and dismissal are based on cumulative grade point average.

	GPA	
Course Credits	Probation	Dismissal
0-11	1.4	0.7
12-23	1.5	0.8
24-35	1.6	0.9
36-47	1.7	1.2
48-59	1.8	1.4
60-72	1.9	1.6
73 +	1.9	1.8

Academic Probation
Students on academic probation may carry a maximum load of 16 course credits during their next semester. If the student remains on probation for a second consecutive semester, he/she may carry a maximum load of 12 course credits of work.

Academic Dismissal/Readmission
Students dismissed for lack of academic achievement may not enroll for a minimum of one academic semester before consideration will be given for a readmission review. Deadlines have been established one month prior to the end of each semester for those students wishing to be considered for a readmission review.

Students who desire a readmission review must contact the Admissions Office and complete a Request for Readmission prior to the published deadlines.

Incomplete Grades
The grade of "I" (Incomplete) can be given by an instructor when, for some acceptable reason, a student fails to take the final examination or fails to meet some other definite requirement of a course. The grade of "I" may be replaced with another grade when the student meets the requirements to the satisfaction of the instructor. Unless an extension of time is granted by submitting an Incomplete Grade Agreement to the Registrar, a grade of "I" must be removed within two weeks after the beginning of the succeeding semester. If the grade of "I" is not removed within the time limit, it becomes an "F" on the student's permanent record.

Grade Report
Students may review semester grades by logging into My ZSC and selecting Academics.

Student Class Ranking
A student's class rank is determined by the cumulative credit hours earned. Non-degree seeking students do not possess class rank.

Class Rank	Cumulative Hours Earned
Freshman	0-29.99
Sophomore	30-59.99
Junior	60-89.99
Senior	90-no upper limit

Auditing Courses
Students auditing courses should understand that these are for information purposes only and that no college credit may be earned or later claimed for the course audited. Class attendance, completing assignments, and taking exams is the prerogative of the student in an audited course.

Students may register for a course on an audit basis during the first two weeks of a given semester or the first week of a term course on a space-available basis. Students auditing a class pay regular tuition and fees.

Failed Courses
Students must repeat and earn a passing grade any course for which the grades of "F," "FN," or "NP" (failing) are received must be repeated. Upon successfully repeating such a course, the failing grade is disregarded in grade point calculation and the student's grade point average is adjusted. All grades continue to be shown on the transcript. In some specific programs, grades below "C" in program courses must be repeated to continue.

Fresh Start
Fresh Start is intended to assist students who previously had academic difficulties at Zane State College by providing them with the opportunity to have grades of "D," "F," or "FN" excluded from their grade point average (GPA). Students must meet eligibility requirements and agree to the Fresh Start policy in order to qualify for approval. An application for Fresh Start is available in the Registrar's Office.

Eligibility Requirements:
1. A minimum of two consecutive years (six consecutive semesters) of non-attendance at the College.
2. Completion of a minimum of 18 credit hours at the College following the two years of non-attendance with a grade of "C" or better in each course. Courses taken as credit/no-credit are not eligible for consideration.

Policy:
- Only grades of "D" or "F" or "FN" may be excluded from the student's GPA. The grades to be excluded must have been earned prior to the minimum two-year non-attendance.
- Courses must be retaken if needed to meet program requirements.
- A student may use Fresh Start one time only. Upon approval, the action taken is non-reversible.
- A student may not take a proficiency examination in a course that has been forgiven.
- The courses approved under Fresh Start will be disregarded in computing the student's cumulative GPA; however, all courses and grades remain on the student's transcript. Courses approved under Fresh Start will be noted as the original grade with the letter Z next to it (i.e., DZ or FZ).
- A student may not use a forgiven course as a substitution for another course.
- Once Fresh Start is in effect for a student and the updated GPA is calculated, a student may be eligible for any honors, awards, or other recognitions related to specific GPA standards.

Archiving of Final Exams
The final examination is often a significant part of a student's final grade. At times, students feel the necessity of questioning a final grade. In such cases, it is convenient to use the final exam papers as a basis for discussion between the faculty member and the student, even though grades are also based on other work: tests, papers, quizzes, class response, etc. For this reason, each faculty member retains final exam papers for a minimum period of 30 days after the end of a given semester.

Split Lectures and Labs
Students taking a series of coursework that represents separately scheduled lecture and lab sections for a single content area will be expected to pass both. Students who fail the lab, but pass the lecture portion will be permitted to retake only the lab course as long as it is taken in the next term the course is offered. Failure to successfully complete the lab in the subsequent semester will necessitate repeating both the lecture and lab coursework. Students who fail the lecture portion of the course must retake both the lecture and lab courses. All students must successfully complete both the lecture and lab portions of the course before moving on to the next higher-level course.

Repeating Courses

If a course is repeated, the grade received for the most recent course enrollment will be utilized in calculating the student's grade point average. All other grades for the course will be disregarded and an appropriate notation will be made on the student's official transcript. All grades will show on the official transcript. Specific programs may have restrictions reducing the number of times a course may be repeated. (See Minimum Grades for Specific Programs).

Minimum Grades for Specific Programs

Business Management - Accounting Students

Students must obtain a grade of "C" or better in ACCT 1010, ACCT 2220, ACCT 2250, ACCT 2410, and ACCT 2420 to satisfy course credit requirements in the Business Management - Accounting program.

Business Management - Real Estate and Real Estate Certificate Students

Students must obtain a "C" or better in BUSM 2730, BUSM 2740, BUSM 2750, BUSM 2760 and BUSM 2770 to satisfy course credit requirements in the Business Management - Real Estate program and Real Estate certificate.

Health and Public Services Students

The following policy on minimum grades applies to selected Health and Public Services programs:

1. A student may not enroll in a technical course unless his or her overall cumulative grade point average is 2.0 or higher.
2. All course prerequisites must be met before admission to a course.
3. A grade of "C" or better is required in each technical course in order to continue in the course sequence.
4. A student receiving a grade of "D" or below in any technical or specified foundational course required by the Criminal Justice, Education, Health Information Management - Coding and Reimbursement, Medical Assisting, Medical Laboratory, Occupational Therapy Assistant, Physical Therapist Assistant, Radiologic Technology, or Social Work Assistant programs has these options:
    a. Assume a health/general studies core status;
    b. Withdraw from the respective program; or
    c. Remain in the technical program and take the technical course (on advice of advisor) for which the student has achieved a grade of "C" in the prerequisite course. General and basic courses may be taken at this time also. The student must then repeat any course in which he or she did not achieve at least a "C" grade.
5. Note that the College does not offer each course every semester. Students may repeat the course only once to raise the grade to the "C" level. Upon successful completion of the repeated course (grade of at least a "C"), the student must then be reevaluated for continuation in the program. Due to the arrangements of the curriculum sequence, this may require an extra year in the program.
6. A student who will likely earn an unsatisfactory grade in a course prior to the deadline to drop is ineligible to withdraw from that course.

Information Technology Students

Students must obtain a "C" or better in all technical courses in order to graduate in the Information Technology – Networking and Server Operations and Information Technology – Programming and Web Development programs.

Wildlife Conservation Students

Wildlife Conservation students must obtain a grade of "C" or better in all WILD subject courses in order to graduate in the Wildlife Conservation program.

GRADUATION REQUIREMENTS

First Year Experience and Computer Literacy Requirements
A First Year Experience (FYEX) course and computer literacy requirement must be completed in order to graduate with an associate degree. Both requirements are designated in each program's curriculum and may be met by passing a specified course or by transferring an equivalent course from another college. A number of computer literacy courses may be completed by passing a proficiency exam; contact The Testing Center at 740-588-1323 for more information regarding credit by examination.

Minimum Distribution Requirements for General Education
In the general education curriculum, the College defines these minimum distribution requirements to graduate with a degree:

- 6 credits of English Composition (ENGL 1500 and ENGL 2500 or ENGL 2800)
- 3 credits of Communication (COMM 1220 or COMM 2610)
- 3 credits of Mathematics (1 course)

A minimum of six credit hours must come from two of the following three categories. Each program has predetermined the two selected categories to meet this minimum distribution requirement.

- 3 credits of Social and Behavioral Sciences (1 course)
- 3 credits of Arts and Humanities (1 course)
- 3 credits of Natural Science (1 course)

Degree Audit
The Degree Audit is an academic advising tool that lists all courses in a student's program of study that have been completed (taken at Zane State College, approved as transfer credit from another institution, and/or alternative credit) and those that are still needed to meet graduation requirements at Zane State College. The Degree Audit allows advisors and students to see how students are progressing toward graduation. Each student has access to their own Degree Audit through their My ZSC account. The student's program advisor can also provide a Degree Audit for each student.

Residency Requirement
Students must meet residency requirements by completing a minimum number of credit hours as a student of Zane State College. The Associate of Arts, Associate of Science, and Associate of Technical Study require 20 credit hours of Zane State coursework; the 20 credit hours for the Associate of Applied Business and the Associate of Applied Science require these to be courses designated as technical coursework. For the Bachelor of Applied Science, 20 credit hours of technical coursework at the 3000 and 4000 level are required. Contact the Registrar's Office with questions concerning this requirement.

One-Year Certificate
Certificates are awarded for the completion of a 30 semester credit hour course of study with the majority of the coursework completed in a prescribed technical area. One-year certificates can serve as building blocks toward an associate degree.

These requirements must be completed for a **One-Year Certificate**:

- Earn a minimum of 30 credit hours of course work,
- Fulfill all course requirements of a particular certificate,
- Satisfy program accreditation standards that may have additional requirements,
- Earn an overall cumulative grade point average of at least 2.0,
- Resolve all financial and other obligations to the College, and
- Be certified by the Registrar as having met all requirements for the one-year certificate.

Associate of Applied Business and Associate of Applied Science Degrees
The Associate of Applied Business and the Associate of Applied Science degrees prepare students for entry into specific occupations and may be designed to articulate with baccalaureate programs. The Ohio Department of Higher Education's Guidelines and Procedures for Academic Program Review (last updated April 2015) establishes the following criteria for the Associate of Applied Science and Associate of Applied Business degrees:

- 30 semester credit hours minimum in the technical area
- 30 semester credit hours in non-technical studies to include:
    - general education studies (written communication, oral communication)
    - social and behavioral sciences, natural sciences, arts and humanities, math
    - applied general education (basic education) courses emphasizing the application of general education to an occupational or technical area

These Zane State College requirements must be completed for an **Associate of Applied Business (A.A.B.)** or **Associate of Applied Science (A.A.S.) Degree**:

- Earn a minimum of 60 credit hours of coursework and meet the specific requirements of the student's program,
- Complete a minimum of 20 credit hours of technical courses as a student of Zane State College,
- Satisfy program accreditation standards that may have additional requirements,
- Complete the College's general education course requirements as identified in the catalog,
- Earn an overall cumulative grade point average of at least 2.0,
- Complete the First Year Experience (FYEX) requirement,
- Complete the computer literacy requirement,
- Resolve all financial and other obligations to the College, and
- Be certified by the Registrar as having met all requirements for the degree.

Associate of Arts and Associate of Science Degrees

Also referred to as the Transfer Program, these degrees are designed for students who plan to complete their first two years of college work at Zane State College and then transfer as juniors or seniors to a four-year institution of their choice.

In accordance with the Ohio Department of Higher Education, academic associate degrees (Associate of Arts and Associate of Science) must include a minimum of 36 semester hours of general education coursework. The academic associate degrees serve as the first two years of a bachelor's degree and are designed to provide for maximum transferability of courses from the associate's level to the bachelor's level. As such, the coursework used to fulfill the minimum 36 semester credit hours in general education must be from Zane State College's approved Ohio Transfer 36 (OT36) courses. The remaining 24 semester credit hours may be chosen from other general education courses or technical and basic courses (developmental courses do not count toward the Associate of Arts or the Associate of Science degrees).

These Zane State College requirements must be completed for an **Associate of Arts (A.A.)** or **Associate of Science (A.S.) Degree**:

- Earn a minimum of 60 credit hours of coursework and meet the specific requirements of the student's program,
- Complete a minimum of 20 credit hours as a student of Zane State College,
- Complete the College's general education course requirements as identified in the catalog,
- Earn an overall cumulative grade point average of at least 2.0,
- Complete the First Year Experience (FYEX) requirement,
- Complete the computer literacy requirement,
- Resolve all financial and other obligations to the College, and
- Be certified by the Registrar as having met all requirements for the degree.

Associate of Technical Study Degree

The Associate of Technical Study degree is awarded for successful completion of an individually planned program of study designed to respond to the need for specialized technical education not currently available in the formal degree programs at the College.

These Zane State College requirements must be completed for an **Associate of Technical Study (A.T.S.) Degree**:

- Obtain approval of program of study by the appropriate Academic Dean,
- Earn a minimum of 60 credit hours of course work,
- Complete a minimum of 20 credits at Zane State College and
- Earn at least a "C" in all courses identified as major program requirements,
- Earn the minimum credit requirements in the following distribution:
    - 30 credits in the major technical requirements area with at least 16 credits in one discipline
    - 30 credits in general education and basic studies
- Complete the College's general education course requirements as identified in the catalog,
- Earn an overall cumulative grade point average of 2.0,
- Complete the First Year Experience (FYEX) requirement,
- Complete the computer literacy requirement,
- Resolve all financial and other obligations to the College, and
- Be certified by the Registrar as having met all requirements for the degree.

Bachelor of Applied Science Degree

The Bachelor of Applied Science degree prepares students for entry into specific occupations. Students must have met the requirements and earned an Associate of Applied Science degree in electrical/electronics engineering technology from an ABET accredited institution.

These Zane State College requirements must be completed for a **Bachelor of Applied Science (B.A.S) Degree**:

- Earn a minimum of 120 credit hours of coursework and meet the specific requirements of the student's program,
- Complete a minimum of 40 credit hours of technical courses as a student of Zane State College,
- Satisfy program accreditation standards that may have additional requirements,
- Complete the College's minimum distribution requirements for general education as identified in the catalog,
- Earn an overall cumulative grade point average of at least 2.0,
- Resolve all financial and other obligations to the College, and
- Be certified by the Registrar as having met all requirements for the degree.

GRADUATION AND COMMENCEMENT

Petition for Graduation
Graduating with a degree from Zane State College does not automatically occur. Students are responsible for accessing the Petition for Graduation instructions via email. Potential graduates must review their degree audit with their program advisor, and complete the online Petition to Graduate on My ZSC by the date listed for processing. Please note that a separate Petition for Graduation form must be filed if a student anticipates graduating with more than one degree or certificate in a different term.

Without a completed Petition for Graduation form, the College will not award a degree. Students are subject to the requirements associated with the catalog in force listed on the student's record. For those who file a late petition form, the completion date may be posted in the current term pending the results of the degree or certificate review.

Students who will utilize credit by examination, alternative credit, or transfer credit must have that credit earned and posted on their Zane State College transcript prior to the end of the graduating term. Students who petition to graduate and then do not meet degree requirements for a specified term must submit another petition form by the deadline for the projected term of graduation.

Embedded Certificates
Some degree programs contain embedded certificates, which are certificates that contain select courses that are also required for an associate degree. Upon completing the requirements of the certificate while pursuing a degree program, students are automatically awarded the certificate on their academic record.

Graduation Honors
Students may earn the following honors through sustained scholarly achievements during completion of an associate degree:

Summa Cum Laude	Cumulative Grade Point Average of 3.900 - 4.000
Magna Cum Laude	Cumulative Grade Point Average of 3.750 - 3.899
Cum Laude	Cumulative Grade Point Average of 3.500 - 3.749

Final Graduation Approval/Denial
After the close of the term, updated Degree Audits are reviewed by the Registrar to officially confer or deny each degree and/or one-year certificate. This process takes approximately six to eight weeks. Students who petition to graduate and then do not meet degree requirements for a specified term must submit another petition form by the deadline for the projected term of graduation.

Commencement Policies
The College awards degrees during an annual commencement ceremony held in May that is governed by the following policies:

1. Students who are enrolled in courses needed to complete degree and/or one-year certificate requirements by the end of the summer session following commencement are eligible to participate in the May commencement ceremony.
2. The listing of degree candidates in the commencement program is tentative, pending completion of required work and submission of final grades. Printed graduation honors are calculated using the student's current grades. Final graduation honors are indicated on the terminal transcript and reflect all course grades earned. Graduation honors are not indicated in the commencement program for summer session candidates.
3. Diploma covers are distributed during commencement. Diplomas are mailed to the student's address on file after final grades have been processed, degree requirements have been fulfilled, and financial and other obligations have been satisfied.

Replacement Diploma Policy
To request a replacement of your original diploma, a completed Replacement Diploma Request form (which can be obtained on My ZSC) must be sent to the Registrar's Office with payment. The following policy applies:

1. The name printed on the replacement diploma will be the same as the name printed on the original diploma unless there is a legal name change. For legal name changes, a Change of Personal Information form should be completed and submitted with all requested documentation.
2. The replacement diploma will bear the signatures of current college officials; the term "official replacement" will be printed at the bottom.
3. There is a fee for the replacement diploma. Please allow approximately four weeks for delivery of the replacement diploma.

RECOGNITION PROGRAMS

All Ohio Academic Team
Each year two Zane State College students may be nominated by faculty members to enter the All Ohio Academic Team competition. In conjunction with Phi Theta Kappa, the entrants are judged on state and national levels. Students may place on one of three state teams. Recognition may include a monetary award.

Phi Theta Kappa
Phi Theta Kappa (PTK) is the national honorary society for two-year college students. The purpose of Phi Theta Kappa is to encourage academic excellence. Students initiated into the group must have demonstrated sustained academic achievement at Zane State College. The criterion for membership is a 3.5 cumulative grade point average (GPA) with at least 12 college-level credit hours earned.

Presidential Scholar
The purpose of the Presidential Scholar award is to promote and recognize excellence in academic achievement while attending Zane State College. Students who earn this honor receive engraved medallions and are recognized at the annual Honors Day event.

Presidential Scholar Criteria:

1. Must have completed a minimum of 36 college-level credit hours after fall semester.
2. Must have a minimum of 31 semester credit hours with grades A – F which are counted in determining grade point average.
3. Must have a minimum overall cumulative GPA of 3.95.
4. Must have a declared major.
5. Must have no violation of the Academic Integrity Policy.
6. Recognition can only be received once.

Dean's List
Students who demonstrate academic excellence in their studies will be named to the Dean's List. To be eligible, full-time students must achieve a 3.5 GPA or higher during a given semester excluding credit/no-credit courses. Part-time students must achieve a 3.5 GPA or higher and complete a minimum of nine credit hours excluding credit/no-credit courses.

Student of the Year
Prior to sixth week of the spring semester, the Chief Academic Officer will initiate an annual request to the faculty for nominations of Student of the Year. Faculty from each academic division will nominate associate and baccalaureate degree-seeking candidates through their respective Deans' offices to be recognized as Student of the Year.

Student of the Year Criteria:
<u>Associate Degree</u>

1. Must have earned a minimum of 30 semester hours.
2. Must have a sophomore standing.
3. Must have a minimum overall cumulative grade point average of 3.5 (either full or part-time).
4. Must have been actively involved in a college and/or community activity.

<u>Baccalaureate Degree</u>

1. Must have earned a minimum of 90 semester hours.
2. Must have junior standing.
3. Must have a minimum overall cumulative grade point average of 3.5.
4. Must have been actively involved in a college and/or community activity.

For either degree level, the nominator must provide the student's name, student ID if available, and a brief narrative description of why the nominator has selected this student.

The names and narratives of the nominated students will be distributed to the division faculty for a vote to choose the Student of the Year for that division. If the academic division has at least one baccalaureate degree, then that division can have two students selected, one at each degree level. The voting must be completed before the mid-semester break. By the ninth week, the Student of the Year information will be sent to the President's office for inclusion in the annual Honors Day event. Students will receive a framed recognition certificate and a gift certificate. Students of the Year who are graduating will also be recognized within the commencement program.

STUDENT RIGHTS AND RESPONSIBILITIES

Academic Integrity Policy

Academic integrity is fundamental to a successful academic community. At Zane State College, every faculty member and student subscribes to the Fundamental Values of Academic Integrity as defined by the Center for Academic Integrity: honesty, trust, fairness, respect, and responsibility (http://www.academicintegrity.org). This Academic Integrity Policy addresses behaviors that are considered to be academic misconduct and establishes procedures to be followed when such behaviors and/or acts occur. Academic integrity is expected not only in formal class and coursework situations, including online courses, but in all college relationships and interactions connected to the educational process, including the use of College resources. Both students and faculty are responsible for supporting and adhering to the fundamental values of Academic Integrity.

Academic Misconduct

Failure to act in accordance with the Academic Integrity Policy will be considered academic misconduct. The following statements outline infractions, which cannot be listed exhaustively for every case, that constitute academic misconduct. The Chief Academic Officer reserves the right to make final determinations of academic misconduct, especially for behaviors that are not listed here.

AIDING or ABETTING ACADEMIC MISCONDUCT: Providing material(s), information, or other assistance to another person with knowledge that such aid could be used in any of the violations stated in this policy or providing false information in connection with any inquiry regarding academic integrity.

CHEATING: Use and/or possession of unauthorized material or technology, such as portable electronic devices, audio recordings, notes, tests, calculators, or computer programs, during any written or oral work, including examinations, submitted for evaluation and/or grade; obtaining assistance from another person, with or without that person's knowledge, on any written or oral work submitted for evaluation or a grade; furnishing another person with assistance or answers to any written or oral work submitted for evaluation or a grade; possessing, using, distributing, or selling unauthorized copies of any computer program and/or any written or oral work submitted for evaluation or a grade; allowing another person to do one's work, written or oral, and submitting that work under one's own name; taking an examination in place of another person; obtaining unauthorized access to the computer files of another person or agency and/or altering or destroying those files; altering a graded work after it has been returned, then submitting the work for regrading; submitting identical or similar papers for credit in more than one course without prior permission from the course instructors; aiding or assisting another student(s) in gaining an unfair advantage; completing another student(s) work for them and/or allowing another student(s) to use your work as their own; or, collaboration on assignments unless it is a team/group assignment unless permission is given by instructor.

DISHONESTY: Acts of academic fraud; attempt(s) by a student(s) to deceive an instructor; attempt(s) to hide or cover up information pertinent to student(s) coursework; or, falsification of records and or documentation.

FABRICATION: The falsification or inventing of any information, data, or citation in an academic exercise.

FALSIFICATION OF RECORDS AND OFFICIAL DOCUMENTS: Altering documents affecting academic records; forging signatures of authorization or falsifying information on an official academic document, grade report, letter of permission, petition, drop/add form, ID card, or any other official Zane State College document.

PLAGIARISM: Submitting another's published or unpublished work, in whole, in part, or in paraphrase, as one's own without fully and properly crediting the author with footnotes, citations, or bibliographical reference; submitting as one's own original work, material obtained from an individual or agency without reference to the person or agency as the source of the material; submitting as one's own original work, material that has been produced through unacknowledged collaboration with others without release in writing from collaborators; or, obtaining another person's work through purchase, or otherwise, and submitting it as one's own; or using one's own work from previously submitted assignments without clearly identifying the work and/or without the permission of the instructor.

OBTAINING AN UNFAIR ADVANTAGE: Stealing, reproducing, circulating, or otherwise gaining access to examination materials prior to the time authorized by the instructor; stealing, destroying, defacing, or concealing library materials with the purpose of depriving others of their use; unauthorized collaborating on an academic assignment; retaining, possessing, using, or circulating previously given examination materials, where those materials clearly indicate that they are to be returned to the instructor at the conclusion of the examination; intentionally obstructing or interfering with another student's academic work; or, undertaking an activity with the purpose of creating or obtaining an unfair academic advantage over other students' academic work.

UNAUTHORIZED ACCESS TO COMPUTERIZED ACADEMIC OR ADMINISTRATIVE RECORDS OR SYSTEMS: Viewing or altering computer records; modifying computer programs or systems; releasing or dispensing information gained via unauthorized access; or interfering with the use or availability of computer systems or information.

Misconduct has NOT occurred when students:

- Have permission to work together on written or oral work and all contributors are named;
- Receive assistance from instructors, teaching assistants, or staff members involved in the course;
- Share knowledge about technology specific jargon or other language-specific information during the preparation of written or oral work;
- Engage in a general discussion about an assignment, the requirements for an assignment, or general strategies for completion of an assignment;
- Compare their solutions to an assignment in order to better understand the assignment overall; or
- Engage in discussion about course content or strategies in preparation for an assignment or examination.

General Responsibilities of the Faculty Member

The faculty member:

- Accepts responsibility for knowing and understanding the Academic Integrity Policy;
- Promotes academic integrity by making expectations clear on syllabi concerning assignments, examinations, homework, research, and group projects;
- Makes an effort to detect and prevent incidents of dishonesty and to report evidence of infractions; or
- Displays academic integrity.

General Responsibilities of the Student

The submission of work for academic credit indicates that the work has been done by the student. Sources for all work should be acknowledged and truthfully reported by the student. The student:

- Accepts responsibility to read and seek understanding of the Academic Integrity Policy,
- Accurately represents his or her work,
- Refuses to be part of another student's academic misconduct,
- Does not use fraud or dishonesty to advance his or her academic position,
- Works with faculty in mutual cooperation in complying with the Academic Integrity Policy, or
- Does not in any other manner violate the principle of academic integrity.

Academic Integrity Procedure

Incidents of academic violations (whether suspected or proven) are documented in the Maxient© system. The procedure to follow for reporting violations of this policy are as follows:

1. Prior to reporting, the instructor collects the physical evidence. This may include original assignments, exams, email correspondence, etc.
2. The instructor will contact and inform the student that there is evidence indicating that an act of academic misconduct involving that student may possibly have occurred.
3. Before meeting with the student, the instructor will consult with the appropriate Academic Dean to discuss the range of possible academic consequences that may be appropriate, recognizing that the final determination will not be decided upon without first giving the student the opportunity to offer an explanation. The Academic Dean will check the student's record for prior academic integrity violations at this time and report findings back to the instructor. If none are found, the process will continue with step 4. If a violation occurred previously, go directly to step 10.
4. The instructor will meet with the student to allow the student to review the evidence and provide a verbal and/or written explanation. NOTE: If a physical meeting is not possible, this step may take place by phone, email, virtual meeting system, etc. The instructor should document and summarize conversations in writing.
5. After hearing the student's explanation, the instructor makes one of the following determinations:
    a. No academic dishonesty has occurred. In this case, no further action is needed.
    b. Academic dishonesty has occurred, but the instructor believes it was unintentional, stemmed from lack of knowledge, or for some other reason believes there was no intention to deceive on the part of the student. In this case, the instructor would move to step 6 and file a Maxient© report, indicating the specific conversation and document that no further discipline is needed.
    c. Intentional academic dishonesty has occurred. In this case, proceed to step 6.

6. The instructor will file the Academic Integrity Reporting Form in the Maxient© system. The steps to file the report are as follows:
    a. In MyZSC, access the link "Report an Incident/Complaint" under Quick Links in the left sidebar.
    b. Select "Submit report for Academic Integrity Violations."
    c. Complete the instructor information at the top of the form.
    d. For the section entitled "Involved Students," provide student name, role, and student ID number. Note that multiple students can be reported in this area.
    e. Under "Incident Information," complete all prompts and provide as much detail as possible regarding the violation.
    f. For the "Supporting Documentation" section, attach any documentation related to the incident, including summarized conversations.
    g. Submit the report.
7. Upon submission, the report is sent to the Chief Academic Officer. The Chief Academic Officer forwards the report to the appropriate Academic Dean without review.
8. The Academic Dean of the division receives the report and reviews the evidence. If the instructor deemed that academic dishonesty occurred but was unintentional, the Academic Dean simply reviews the report and closes the record. The Academic Dean will then formally notify the student that an incident has been recorded by certified mail delivery and electronic mail to the student's college email account within five (5) business days. If intentional academic dishonesty has occurred and the instructor and Academic Dean agree regarding the consequence, the Academic Dean will formally notify the student of the consequence via certified mail delivery and electronic mail to the student's college email account within five (5) business days. The Academic Dean will note the decision in the Maxient© system, indicating completion of the record.
9. If the faculty member and Academic Dean are not in agreement regarding the consequence, the Chief Academic Officer will be consulted collectively by the instructor and Academic Dean. If necessary, the Chief Academic Officer will make the final decision within five (5) business days of meeting and formally notify the student of the consequence via certified mail delivery and electronic mail to the student's college email account. The Chief Academic Officer will document the final decision in the Maxient© system, indicating completion of the record.
10. If there are prior academic integrity violations, the instructor will be asked to document the current violation in Maxient©. The Academic Dean will then provide additional documentation in Maxient© and assign the appropriate consequence. The student will meet with the Academic Dean to discuss the potential violation. The Academic Dean may ask for the instructor's assistance, if needed. Once the Academic Dean determines academic dishonesty has occurred, the Academic Dean formally notifies the student of the consequence via certified mail delivery and electronic mail to the student's college email account within five (5) business days. At this time, the Academic Dean closes the case in Maxient©.
11. If a student requests a hearing, procedures will be followed as outlined under the Student Code of Conduct, "Hearings and Appeals" section.

GRADE APPEALS AND ACADEMIC COMPLAINTS

Grade Appeals

Appeals and concerns regarding the validity of final grades must be initiated within 30 days after the end of a given semester. Students must adhere to the following steps when addressing grade appeals or academic complaints:

Step 1: Contact the instructor to discuss the issue.
Step 2: If not satisfied with the results of Step 1, visit My ZSC (https://my.zanestate.edu) and click "Report an Incident/Complaint" under Quick Links. Follow the instructions to submit a report. The report will be forwarded to the appropriate Academic Dean who will contact the student for further investigation and resolution.
Step 3: If still dissatisfied, a letter should be addressed to the Chief Academic Officer. The letter should clearly detail the steps that have already been taken and contain the facts of the case. A request for a hearing before the Chief Academic Officer should also be included.
Step 4: Upon considering information provided at the student hearing, the Chief Academic Officer shall make a final and binding decision regarding action of the grade appeal.

If no grade appeal is initiated within 30 days, the final, relevant academic decision will stand except for a case in which there has been an error in the mathematical calculation of the grade.

Academic Complaints

Students with academic complaints such as disruptive or inappropriate classroom environment, inappropriate instructor conduct, or degree completion must adhere to the following steps when addressing their concern:

Step 1: It is highly recommended that the student contact the instructor to discuss the issue.
Step 2: If not satisfied or if the student is not comfortable meeting with the instructor, visit My ZSC (https://my.zanestate.edu) and click "Report an Incident/Complaint" under Quick Links. Follow the instructions to submit a report. The report will be forwarded to the appropriate Academic Dean who will contact the student for further investigation and resolution.
Step 3: If still dissatisfied, the student should submit a letter to the Chief Academic Officer. The letter should clearly detail the steps that have already been taken and contain the facts of the case. A request for a hearing before the Chief Academic Officer should also be included.
Step 4: Upon considering information provided at the student hearing, the Chief Academic Officer shall make a final and binding decision regarding action of the academic complaint.

GENERAL EDUCATION

General Education Definition

Zane State College has adopted the definition of general education approved by the Higher Learning Commission, North Central Association of Colleges and Schools. That definition reads as follows:

> "*General education is 'general' in several clearly identifiable ways: it is not directly related to a student's formal technical, vocational, or professional preparation; it is a part of every student's course of study, regardless of his or her area of emphasis, and it is intended to impart common knowledge, intellectual concepts, and attitudes that every educated person should possess*."

General Education Mission Statement

General education at Zane State College prepares students for participation in a rapidly changing and diverse world and forms the foundation for lifelong learning. Through the general education curriculum, students will acquire the skills necessary to:

- Demonstrate information literacy by effectively locating, evaluating, and utilizing acquired knowledge
- Communicate effectively with both written and oral formats to meet the needs of diverse audiences
- Think critically and solve problems by employing higher level thinking skills
- Demonstrate professionalism required by business and community

General Education Course Requirements

Zane State College takes very seriously its commitment to provide an education that allows students to develop the abilities needed for a lifetime of learning and adapting to evolving workplace requirements. Therefore, the following general education courses are required in each degree program.

<u>Composition – a minimum of two courses (ENGL 1500 and a second writing course)</u>

ENGL 1500 – Composition I ..... 3 credits
ENGL 2500 – Composition II ..... 3 credits
ENGL 2800 – Professional Writing ..... 3 credits

<u>Communication – a minimum of one course</u>

COMM 1220 – Interpersonal Communication ..... 3 credits
COMM 2610 – Public Speaking ..... 3 credits

<u>Mathematics – a minimum of one course</u>

MATH 1040 – Industrial Technical Mathematics with Trigonometry ..... 4 credits
MATH 1050 – Quantitative Reasoning ..... 4 credits
MATH 1250 – Algebra and Trigonometry ..... 4 credits
MATH 1340 – College Algebra ..... 4 credits
MATH 1350 – Pre-Calculus. ..... 5 credits
MATH 1650 – Statistics ..... 3 credits
MATH 2510 – Calculus I ..... 5 credits
MATH 2520 – Calculus II ..... 5 credits

<u>Natural Science – per program minimum distribution requirements</u>

BIOL 1070 – Environmental Science ..... 3 credits
BIOL 1210 – General Biology I ..... 4 credits
BIOL 1210H – Honors General Biology I ..... 4 credits
BIOL 1220 – General Biology II ..... 4 credits
BIOL 1510 – Zoology ..... 3 credits
BIOL 2010 – General Microbiology ..... 3 credits
BIOL 2050 – Tropical Field Biology ..... 3 credits
BIOL 2300 – Introduction to Limnology ..... 3 credits
BIOL 2400 – Anatomy and Physiology I *(must be taken with BIOL 2410 – Anatomy and Physiology I Laboratory)* ..... 3 credits
BIOL 2420 – Anatomy and Physiology II *(must be taken with BIOL 2430 – Anatomy and Physiology II Laboratory)* ..... 3 credits
CHEM 1010 – Introduction to Chemistry ..... 3 credits
CHEM 1210 – General Chemistry I ..... 4 credits
CHEM 1220 – General Chemistry II ..... 4 credits
CHEM 2510 – Organic Chemistry and Laboratory I ..... 4 credits

CHEM 2520 – Organic Chemistry and Laboratory II ..... 4 credits
GEOL 1350 – Earth Science ..... 3 credits
PHYS 1100 – Introductory Physics ..... 4 credits
PHYS 2010 – Physics I ..... 4 credits
PHYS 2020 – Physics II ..... 4 credits

Arts and Humanities – per program minimum distribution requirements

ARTS 1010 – Art History I ..... 3 credits
ARTS 1020 – Art History II ..... 3 credits
ENGL 2520 – British Literature since 1780s: Empire and Beyond ..... 3 credits
ENGL 2600 – American Literature since 1865: The Making of a Diverse U.S. ..... 3 credits
ENGL 2700 – World Literature: Global Culture and Perspectives ..... 3 credits
PHIL 1010 – Introduction to Philosophy ..... 3 credits
PHIL 1020 – Introduction to Ethics ..... 3 credits
PHIL 1030 – Critical Thinking ..... 3 credits
THTR 1010 – Introduction to Theater ..... 3 credits
THTR 1020 – Script Analysis ..... 3 credits

Social and Behavioral Sciences – per program minimum distribution requirements

ECON 1510 – Microeconomics ..... 3 credits
ECON 1520 – Macroeconomics ..... 3 credits
HIST 1100 – Western Civilization to 1492 ..... 3 credits
HIST 1110 – Western Civilization from 1492 to Present ..... 3 credits
HIST 1200 – U.S. History I ..... 3 credits
HIST 1210 – U.S. History II ..... 3 credits
POLS 1010 – American National Government ..... 3 credits
PSYC 1010 – Introduction to Psychology ..... 3 credits
PSYC 2010 – Abnormal Psychology ..... 3 credits
PSYC 2030 – Child/Adolescent Psychology ..... 3 credits
PSYC 2170 – Social Psychology ..... 3 credits
PSYC 2310 – Educational Psychology ..... 3 credits
SOCI 1010 – Introduction to Sociology ..... 3 credits
SOCI 2050 – Deviant Behavior ..... 3 credits
SOCI 2060 – Race and Ethnicity ..... 3 credits
SOCI 2270 – Criminology ..... 3 credits


ZANE STATE COLLEGE
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LESS THAN ONE-YEAR CERTIFICATES FOR CAREER ENHANCEMENT

The objective of these certificates is to prepare students with basic occupational skills for job entry, upgrading, cross training, and retraining purposes. Courses taken may also be embedded in a related associate degree program. Description of courses and prerequisites are listed in this catalog.

Cybersecurity Technician (SE-C)

CYBR	1300	Security+	3
CYBR	2000	Penetration Testing	3
CYBR	2600	Digital Forensics	3
ITCS	1400	Linux+	3
ITCS	2500	Windows Server Administration	3
Cybersecurity Technician Technical Electives (choose 1)			
CYBR	1200	Introduction to Cisco Networking	3
ITCS	1010	Introduction to Networking	3
ITCS	2510	Cisco Routers I	6
			18

Entry Networking Technician (EN-C)

ITCS	2510	Cisco Routers I	6
			6

Game Design (GA-C)

DCMT	1020	Graphic Design	3
ITCS	1030	Introduction to Programming Logic	3
ITCS	1230	Web Site Applications	3
ITCS	1410	Introduction to C#	3
ITCS	2020	Java Programming	3
ITCS	2100	Introduction to Open Source Programming	3
ITCS	2230	Developing Mobile Applications for Android Devices	3
			21

Industrial Systems (IS-C)

ISET	1100	Industrial Electricity	3
ISET	2400	Motor Controls	3
ISET	2500	Programmable Controllers	3
ISET	2650	Mechanical Systems	4
MECH	2500	Hydraulics and Pneumatics	3
			16

Medical Coding (ME-C)

BIOL	2400	Anatomy and Physiology I	3
BIOL	2420	Anatomy and Physiology II	3
HIMT	1500	Clinical Classification Systems I	4
HIMT	2110	Basic Pharmacology and Pathophysiology	3
HIMT	2150	Clinical Classification Systems II	3
HIMT	2400	Insurance Reimbursement Methodologies	2
HIMT	2500	Clinical Classification Systems III	3
HIMT	2900	Professional Practicum and Seminar II	2
HLTH	1210	Medical Terminology	2
			25

Network Associate (NA-C)

ITCS	2510	Cisco Routers I	6
ITCS	2550	Cisco Routers II	6
			12

Ohio Peace Officer Training Academy (OP-C)

POTA	1010	Criminal Law	3
POTA	1060	Introduction to Criminal Justice	3
POTA	1100	Civil Liability	2
POTA	1120	Defense Tactics	2
POTA	1150	Defensive Driving	2
POTA	1230	Investigations	4
POTA	1910	Police Operations	3
POTA	1980	Introduction to Homeland Security	2
POTA	2200	Constitutional Law	2
POTA	2660	Firearms	3
			26

Phlebotomy (PBTC)

PBTC	1100	Theory and Practice	3
PBTC	1200	Phlebotomy Lab Experience	2
PBTC	1300	Clinical Experience	1
			6

Real Estate (RE-C)

BUSM	2730	Real Estate Principles and Practices	3
BUSM	2740	Real Estate Law	3
BUSM	2750	Real Estate Finance	3
BUSM	2760	Real Estate Appraising	3
			12

ONE-YEAR CERTIFICATES

ACCOUNTING AND BOOKKEEPING (AB-1)

Students pursuing the Accounting and Bookkeeping certificate have the opportunity to learn the knowledge and associated applications necessary to provide basic accounting functions in an office setting. In addition to traditional college-level studies, students learn the language of accounting, computerized software applications, and basic individual tax accounting, and Excel spreadsheets for accountants. If the student chooses to continue their education, this certificate applies toward the Business Management - Accounting program's (BACT) two-year associate degree. To learn more about this certificate, contact the program director for the Business Management - Accounting program.

Curriculum for Accounting and Bookkeeping Certificate

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
ACCT	1200	Excel Business Applications	B	3
ACCT	2110	Income Tax Accounting	T	3
FYEX	1010	First Year Success Strategies	B	1
		*Mathematics Elective	G	3
		Total:		**13**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2050	Computer-Aided Accounting	T	3
ACCT	2220	Managerial Accounting	T	3
ENGL	1500	Composition I	G	3
		*Program Elective	T/B/G	3
		*Program Elective	T/B/G	3
		*Program Elective	T/B/G	3
		Total:		**18**

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Program Electives			
BUSM	1310	Legal Environment	3
BUSM	2070	Small Business Management and Entrepreneurship	3
BUSM	2720	Financial Management	3
ECON	1510	Microeconomics	3

CERTIFICATE IN APPLIED BUSINESS (31 credit hours)

DRINKING WATER/WASTEWATER TECHNOLOGY (WT-1)

The Water Technology certificate is a one year program designed to prepare the student for a career in water treatment. The State of Ohio requires licensed operators to treat domestic sewage, industrial wastewater, and drinking water for human consumption. The certificate program prepares the student to sit for the state exam and provides additional education and training in the areas of industrial safety, hazardous materials, water ecology, and laboratory services. The program is a combination of traditional classroom lecture, laboratory, field visits, and hands-on activities. Participants completing the one year certificate program also receive industry-recognized training certificates in hazardous waste operations and emergency response (HAZWOPER) and OSHA general industry safety (OSHA 30).

Curriculum for Drinking Water/Wastewater Technology Certificate

Fall Semester I					
Course ID		**Course Name**		**T/B/G**	**Credits**
BIOL	1070	Environmental Science		G	3
ENVS	1710	Wastewater Treatment		T	3
ENVS	2300	Environmental Instrumentation		T	3
ENVS	2550	HAZWOPER		T	3
ENVS	2850	OSHA 30-Hour General Industry Safety and Health		T	2
			Total:		**14**

Spring Semester I					
Course ID		**Course Name**		**T/B/G**	**Credits**
ENVS	2710	Drinking Water Treatment		T	3
MATH	1040	Industrial Technical Mathematics with Trigonometry		G	4
		*Technical Elective		T	3
			Total:		**10**

Summer Session I					
Course ID		**Course Name**		**T/B/G**	**Credits**
BIOL	2300	Introduction to Limnology		G	3
		*Technical Elective		T	3
			Total:		**6**

***Technical Electives**			
ISET	1100	Industrial Electricity	3
ISET	2500	Programmable Controllers	3
MECH	2500	Hydraulics and Pneumatics	3
NAFS	2001	Cooperative Work Experience*	2
NAFS	2002	Seminar*	1

*Must be taken together

CERTIFICATE IN APPLIED SCIENCE (30 credit hours)

GENERAL BUSINESS (GB-1)

Students have the opportunity to earn a one-year certificate in General Business to prepare for entry-level jobs in management. This certificate includes courses in management principles, economics, accounting, marketing, and computer applications and provides the first year of the Business Management program associate degree. Students may choose to continue their education in pursuit of an Associate of Applied Business degree. This course of study requires two semesters of full-time enrollment.

Curriculum for General Business Certificate

Fall Semester I					
Course ID		**Course Name**		**T/B/G**	**Credits**
BUSM	1110	Principles of Management		T	3
BUSM	1600	Business Ethics		B	3
HRMG	2650	Human Resources Management		T	3
MKTG	1000	Marketing		T	3
		*Mathematics Elective		G	3
			Total:		**15**

Spring Semester I					
Course ID		**Course Name**		**T/B/G**	**Credits**
BUSM	1310	Legal Environment		B	3
BUSM	2720	Financial Management		T	3
COMM	1220	Interpersonal Communication		G	3
HRMG	2250	Cultural Diversity		B	3
ECON	1510	Microeconomics		G	3
			Total:		**15**

CERTIFICATE IN APPLIED BUSINESS (30 credit hours)

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

MULTI-SKILLED HEALTH TECHNICIAN (MH-1)

Students pursuing the Multi-Skilled Health Technician certificate have the opportunity to obtain the knowledge and associated applications necessary to provide basic patient care in a variety of healthcare settings. This course of study requires three semesters of enrollment. Students will learn the language of medicine, high level anatomy and physiology, office and business management, and clinical skills that include phlebotomy. If the student chooses to continue their education, this certificate applies toward the Medical Assisting (MEDA) associate degree. To enroll for this certificate, students must have met the prerequisites for BIOL 2400, BIOL 2410, and HLTH 1210. To learn more about this certificate, contact the Medical Assisting program director.

Curriculum for Multi-Skilled Health Technician Certificate

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I	G	3
BIOL	2410	Anatomy and Physiology I Lab	G	1
HLTH	1210	Medical Terminology	T	2
MEDA	1010	Introduction to Medical Assisting	T	3
MEDA	1012	Administrative Medical Office Practices	T	3
		Total:		**12**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II	G	3
BIOL	2430	Anatomy and Physiology II Lab	G	1
HLTH	1730	Disease and the Disease Process	B	2
MEDA	1020	Basic Medical Laboratory Techniques	T	3
MEDA	1022	Medical Assisting Clinical Procedures I	T	3
MEDA	1024	Pharmacology and Drug Administration	T	3
		Total:		**15**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
HLTH	1410	First Aid and Safety	B	1
MEDA	1032	Clinical Practicum/Seminar I	T	2
		Total:		**3**

CERTIFICATE IN APPLIED SCIENCE (30 credit hours)

RETAIL SALES (RS-1)

The Retail Sales certificate introduces students to various areas of marketing including retail management, computer applications, economics, and basic marketing concepts. This certificate enables students to prepare for entry-level marketing positions in the world of retail and provides them with the necessary skills to gain and maintain successful employment. This certificate applies toward the Associate of Applied Business degree in Marketing Management. This course of study requires two semesters of full-time enrollment.

Curriculum for Retail Sales Certificate

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	T	3
BUSM	1600	Business Ethics	B	3
ENGL	1500	Composition I	G	3
MKTG	1000	Marketing	T	3
		*Mathematics Elective	G	3
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
DCMT	1020	Graphic Design	T	3
ECON	1510	Microeconomics	G	3
MKTG	1010	Retail Management	T	3
MKTG	2020	Advertising	T	3
		Total:		**15**

CERTIFICATE IN APPLIED BUSINESS (30 credit hours)

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

ASSOCIATE DEGREES

ASSOCIATE OF ARTS DEGREE (AART)

The Associate of Arts degree prepares a student for transfer to a four year college or university. Students take required courses in the areas of English, communications, mathematics, natural sciences, arts and humanities, and social and behavioral sciences consistent with the College's general education requirements and the Ohio Transfer 36. In addition, students work with their advisor to select elective courses to complete the degree requirement. Upon completion of 60 credit hours, the student will be awarded an Associate of Arts degree. The Associate of Arts degree fulfills the general education requirements (typically the first two years) of a four year bachelor's degree program.

Curriculum for Associate of Arts Degree

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
		*Computer Literacy Elective	G	1-3
		*Natural Science OT36 Course	G	3-5
		*Social and Behavioral Science OT36 Course	G	3
		*Elective(s)	T/B/G	2-5
		*Elective(s)	T/B/G	2-5
		Total:		**15**

Spring Semester I			
Course ID	**Course Name**	**T/B/G**	**Credits**
	*Arts and Humanities OT36 Course	G	3
	*English Composition OT36 Second Writing Course	G	3
	*Mathematics OT36 Course	G	3-5
	*Social and Behavioral Science OT36 Course	G	3
	*Elective(s)	T/B/G	3-5
	Total:		**15**

Fall Semester II			
Course ID	**Course Name**	**T/B/G**	**Credits**
	*Arts and Humanities OT36 Course	G	3
	*Arts and Humanities or Social and Behavioral Science OT36 Course	G	3
	*Natural Science OT36 Course	G	3-4
	*Elective(s)	T/B/G	3-5
	*Elective(s)	T/B/G	3-5
	Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	2610	Public Speaking	G	3
		*Arts and Humanities OT36 Course	G	3
		*Social and Behavioral Science OT36 Course	G	3
		*Elective(s)	T/B/G	3-5
		*Elective(s)	T/B/G	3-5
		Total:		**15**

ASSOCIATE OF ARTS DEGREE (60 credit hours)

*Computer Literacy Electives			
BMCA	1010	Introduction to Microcomputer Concepts and Applications	3
BMCA	1020	Introduction to Windows and Word	1
BMCA	1050	Introduction to Microcomputer Software Applications	2

Please note – the following criteria must be met:

- **Ohio Transfer 36 (OT36)** – Students' course selections marked "OT36" must be from the list of approved Ohio Transfer 36 courses found in the catalog and course of study sheet.
- **Mathematics and Sciences** – Students must take at least one approved course in mathematics and two approved courses in the natural sciences, which include biology, chemistry, physics, or geology. One course must be a laboratory course with at least one laboratory meeting per week.
- **Arts and Humanities** – Students must take three approved courses in arts, humanities, literature, or philosophy. Courses must be taken in at least two subject areas.
- **Social and Behavioral Sciences** – Students must take three approved courses in economics, geography, history, political science, psychology, or sociology. Courses must be taken in at least two subject areas.
- An additional course from either arts and humanities or social and behavioral sciences must be taken to meet the AA degree requirement.
- **Electives** – Students can choose any general, basic, or technical course at the 1000 or 2000 level in the College catalog in order to meet their elective requirements. Developmental courses do not count toward the AA or AS degrees.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for AART is BMCA 1010, BMCA 1020, or BMCA 1050.

ASSOCIATE OF ARTS DEGREE – ENGLISH CONCENTRATION (AAEN)

The Associate of Arts Degree - English Concentration is designed for students planning to transfer to a four-year institution as a junior in pursuit of a Bachelor of Arts in English Language and Literature. Course work will focus on studies of English, literature, arts, and social sciences.

Objectives:

- communicate effectively in both written and oral forms
- research and demonstrate skills pertaining to information literacy
- conduct close analysis of primary and secondary source materials in order to produce quality analytical and persuasive writing
- analyze and think critically about information and a variety of poetic and prose texts in various literary and multimedia forms
- understand the connection between historical/cultural events and literature
- produce quality texts and professional documents following a variety of structural and formatting guidelines

A degree with a focus on English opens doors for students moving into careers requiring skills in critical thinking, analysis, information literacy, and clear and effective communication. Students graduating with an associate degree with an English concentration will find diverse opportunities for future study and have a strong foundation for careers in education, law, publishing, editing, content developing, advertising, public relations, administration, writing, and library science.

Curriculum for Associate of Arts Degree – English Concentration

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BMCA	1020	Introduction to Windows and Word	B	1
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
		*Mathematics OT36 Course	G	3-5
		*Natural Science OT36 Course	G	3-5
		*Social and Behavioral Science OT36 Course	G	3
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	2610	Public Speaking	G	3
ENGL	2500	Composition II	G	3
ENGL	2800	Professional Writing	G	3
		*Social and Behavioral Science OT36 Course	G	3
		*Program Elective	G	3
		Total:		**15**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
AMSL	1010	American Sign Language I	B	3
ENGL	2600	American Literature since 1865: The Making of a Diverse U.S.	G	3
ENGL	2700	World Literature: Global Culture and Perspectives	G	3
		*Natural Science OT36 Course	G	3-5
		*Program Elective	G	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
AMSL	1020	American Sign Language II	B	3
ENGL	2520	British Literature since 1780s: Empire and Beyond	G	3
		*Arts and Humanities OT36 Course	G	3
		*Social and Behavioral Science OT36 Course	G	3
		*Program Elective	T/B/G	3
		Total:		**15**

ASSOCIATE OF ARTS DEGREE – ENGLISH CONCENTRATION (60 credit hours)

*Arts and Humanities OT36 Courses			
ARTS	1010	Art History I	3
ARTS	1020	Art History II	3
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3
THTR	1010	Introduction to Theater	3
THTR	1020	Script Analysis	3

*Mathematics OT36 Courses			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4

*Natural Science OT36 Courses			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4
BIOL	1220	General Biology II	4
BIOL	1510	Zoology	3
BIOL	2010	General Microbiology	3
BIOL	2050	Tropical Field Biology	3
BIOL	2300	Introduction to Limnology	3
BIOL	2400	Anatomy and Physiology I	3
BIOL	2420	Anatomy and Physiology II	3
CHEM	1010	Introduction to Chemistry	3
CHEM	1210	General Chemistry I	4
CHEM	1220	General Chemistry II	4
PHYS	1100	Introductory Physics	4
PHYS	2010	Physics I	4
PHYS	2020	Physics II	4

*Program Electives			
HIST	1200	U.S. History I	3
HIST	1210	U.S. History II	3
PSYC	2010	Abnormal Psychology	3
PSYC	2030	Child/Adolescent Psychology	3
PSYC	2170	Social Psychology	3
PSYC	2310	Educational Psychology	3
SOCI	2050	Deviant Behavior	3
SOCI	2060	Race and Ethnicity	3

*Social and Behavioral Science OT36 Courses			
HIST	1100	Western Civilization to 1492	3
HIST	1110	Western Civilization from 1492 to Present	3
PSYC	1010	Introduction to Psychology	3
SOCI	1010	Introduction to Sociology	3

Ohio Transfer 36 (OT36) - Students' course selection marked "OT36" must be from the list of approved Ohio Transfer 36 courses found in the catalog and course of study sheet.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for AAEN is BMCA 1020.

ASSOCIATE OF SCIENCE DEGREE (ASCI)

The Associate of Science degree prepares a student for transfer to a four year college or university. Students take required courses in the areas of English, communications, mathematics, natural sciences, arts and humanities, and social and behavioral sciences consistent with the College's general education requirements and the Ohio Transfer 36. In addition, students work with their advisor to select elective courses to complete the degree requirement. Upon completion of 60 credit hours, the student will be awarded an Associate of Science degree. The Associate of Science degree fulfills the general education requirements (typically the first two years) of a four year bachelor's degree program.

Curriculum for Associate of Science Degree

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
		*Computer Literacy Elective	G	1-3
		*Natural Science OT36 Course	G	3-5
		*Social and Behavioral Science OT36 Course	G	3
		*Elective(s)	T/B/G	2-5
		*Elective(s)	T/B/G	2-5
				15

Spring Semester I			
Course ID	**Course Name**	**T/B/G**	**Credits**
	*Arts and Humanities OT36 Course	G	3
	*English Composition OT36 Second Writing Course	G	3
	*Mathematics OT36 Course	G	3-5
	*Social and Behavioral Science OT36 Course	G	3
	*Elective(s)	T/B/G	3-5
	Total:		**15**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	2610	Public Speaking	G	3
		*Arts and Humanities OT36 Course	G	3
		*Natural Science OT36 Course	G	3-4
		*Elective(s)	T/B/G	3-5
		*Elective(s)	T/B/G	3-5
		Total:		**15**

Spring Semester II			
Course ID	**Course Name**	**T/B/G**	**Credits**
	*Arts and Humanities OT36 Course	G	3
	*Mathematics or Natural Science OT36 Course	G	3
	*Social and Behavioral Science OT36 Course	G	3
	*Elective(s)	T/B/G	3-5
	*Elective(s)	T/B/G	3-5
	Total:		**15**

ASSOCIATE OF SCIENCE DEGREE (60 credit hours)

*Computer Literacy Electives			
BMCA	1010	Introduction to Microcomputer Concepts and Applications	3
BMCA	1020	Introduction to Windows and Word	1
BMCA	1050	Introduction to Microcomputer Software Applications	2

Please note – the following criteria must be met:

- **Ohio Transfer 36 (OT36)** – Students' course selections marked "OT36" must be from the list of approved Ohio Transfer 36 courses found in the catalog and course of study sheet.
- **Mathematics** – Students must take at least one approved course in mathematics.
- **Sciences –** Students must take at least two approved courses in the natural sciences, which include biology, chemistry, physics, or geology. One course must be a laboratory course with at least one laboratory meeting per week.
- An additional approved course from either mathematics or natural sciences must be taken to meet the AS degree requirement.
- **Arts and Humanities** – Students must take three approved courses in arts, humanities, literature, or philosophy. Courses must be taken in at least two subject areas.
- **Social and Behavioral Sciences** – Students must take three approved courses in economics, geography, history, political science, psychology, or sociology. Courses must be taken in at least two subject areas.
- **Electives** – Students can choose any general, basic, or technical course at the 1000 or 2000 level in the College catalog in order to meet their elective requirements. Developmental courses do not count toward the AA or AS degrees.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for ASCI is BMCA 1010, BMCA 1020, or BMCA 1050.

ASSOCIATE OF SCIENCE DEGREE – BIOLOGY CONCENTRATION (ASBI)

The Associate of Science Degree – Biology Concentration is designed for students planning to transfer to a four-year institution as a junior in pursuit of a Bachelor of Science degree in Biology. Graduates of this program can also use this degree to further their education in related biological sciences, chemistry, medicine, and other health related fields. A degree with a focus on biology will prepare graduates to enter the workforce with skills such as critical thinking, data analysis, oral and written communication, and laboratory experience.

Coursework in the Associate of Science – Biology Concentration focuses on studies in biology, chemistry, mathematics, and general education. This provides students with a base of knowledge for understanding the principles guiding life and its processes across multiple levels, from cellular to organismal.

Program Objectives:

- apply the scientific method to address biological questions and problems.
- evaluate quantitative data
- apply concepts form other scientific disciplines to explain biological processes
- communicate effectively about biological subjects
- develop an ability to think critically and make insightful observations about the natural world
- gain experience and skill in using modern laboratory equipment and making precise measurements
- critically evaluate scientific literature

Curriculum for Associate of Science Degree – Biology Concentration

Fall Semester I

Course ID		Course Name	T/B/G	Credits
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
BIOL	1210	General Biology I	G	4
MATH	1350	Pre-Calculus	G	5
		*Computer Literacy Elective	B	1-3
				14

Spring Semester I

Course ID		Course Name	T/B/G	Credits
BIOL	1220	General Biology II	G	4
MATH	2510	Calculus I	G	5
		*Arts and Humanities OT36 Course	G	3
		*English Composition OT36 Second Writing Course	G	3
		Total:		**15**

Fall Semester II

Course ID		Course Name	T/B/G	Credits
COMM	2610	Public Speaking	G	3
CHEM	1210	General Chemistry I	G	4
PSYC	1010	Introduction to Psychology	G	3
		*Arts and Humanities OT36 Course	G	3
		*Program Elective (BIOL 2400/2410 recommended for pre-med)	G	4
		Total:		**17**

Spring Semester II

Course ID		Course Name	T/B/G	Credits
CHEM	1220	General Chemistry II	G	4
SOCI	1010	Introduction to Sociology	G	3
		*Arts and Humanities OT36 Course	G	3
		*Social and Behavioral Science OT36 Course	G	3
		*Elective (BIOL 2420/2430 recommended for pre-med)	G	3
		Total:		**16**

ASSOCIATE OF SCIENCE DEGREE – BIOLOGY CONCENTRATION (62 credit hours)

***Arts and Humanities OT36 Courses**			
ARTS	1010	Art History I	3
ARTS	1020	Art History II	3
ENGL	2520	British Literature since 1780s: Empire and Beyond	3
ENGL	2600	American Literature since 1865: The Making of a Diverse U.S.	3
ENGL	2700	World Literature: Global Culture and Perspectives	3
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3
THTR	1010	Introduction to Theater	3
THTR	1020	Script Analysis	3
***Computer Literacy Electives**			
BMCA	1010	Introduction to Microcomputer Concepts and Applications	3
BMCA	1020	Introduction to Windows and Word	1
BMCA	1050	Introduction to Microcomputer Software Applications	2
***English Composition OT36 Second Writing Courses**			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3
***Program Electives**			
BIOL	1070	Environmental Science	3
BIOL	1510	Zoology	3
BIOL	2010	General Microbiology	3
BIOL	2400	Anatomy & Physiology I	3
BIOL	2410	Anatomy & Physiology II Lab	1
PHYS	2010	Physics I	4
***Social and Behavioral Science OT36 Courses**			
ECON	1510	Microeconomics	3
ECON	1520	Macroeconomics	3
HIST	1100	Western Civilization to 1492	3
HIST	1110	Western Civilization from 1492 to Present	3
HIST	1200	U.S. History I	3
HIST	1210	U.S. History II	3
POLS	1010	American National Government	3
PSYC	2010	Abnormal Psychology	3
PSYC	2030	Child/Adolescent Psychology	3
PSYC	2170	Social Psychology	3
PSYC	2310	Educational Psychology	3
SOCI	2050	Deviant Behavior	3
SOCI	2060	Race and Ethnicity	3

Ohio Transfer 36 (OT36) - Students' course selection marked "OT36" must be from the list of approved Ohio Transfer 36 courses found in the catalog and course of study sheet.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for ASBI is BMCA 1010, BMCA 1020, or BMCA 1050.

ASSOCIATE OF TECHNICAL STUDY

A two-year, specially designed, multi-disciplinary program leading to an Associate of Technical Study (ATS) degree is available for those needing a measure of curriculum flexibility. This degree program utilizes courses from the college, other postsecondary institutions, and prior learning experience. Students must complete a minimum of 20 credit hours at Zane State College to meet the residency requirement.

Students with a special career goal can combine past training and collegiate education with coursework at Zane State College. Through the Associate of Technical Study program, a degree is designed with the student, who gets a tailored program that has been reviewed as academically sound by the College.

Students should schedule an appointment with an Academic Dean preferably during the first 21 hours of Zane State College enrollment and follow the steps outlined below:

1. The student prepares a portfolio that includes a goal statement, transcripts of previous study to be considered, and any evidence of prior learning experience, if applicable
2. The student works with the Academic Dean to develop a course of study that includes a minimum of 60 credit hours (30 hours technical coursework and 30 hours general education/basic coursework)
3. The Academic Dean determines whether the application of any transfer credit or alternative credit is appropriate
   a. The student must request official transcripts be sent to the Registrar's Office for evaluation of any transfer work
   b. The student must submit an appropriate application for Prior Learning Assessment to the Registrar's Office for any prior learning experience review
4. The Academic Dean grants preliminary approval and reviews with the student the program and graduation requirements for the Associate of Technical Study degree found in the academic catalog
5. The Academic Dean submits degree requirements with program title to the Chief Academic Officer for final approval
6. The student receives the approved curriculum requirements from the Academic Dean

BUSINESS MANAGEMENT (MGMT)

The Business Management program curriculum is designed to meet the needs of the person preparing for an entry-level management position or planning to own and operate one's own business. The important concept of interrelation of all business activities is presented and brought together in the small business management capstone course. The business courses encompass the best technical knowledge, computer software applications, economic principles, management practices, understanding of human behavior, and realization of social responsibilities and influences.

Through the Business Management program, students can select from several areas of emphasis and six independent majors: Accounting, Healthcare Management, Human Resources Management, Marketing Management, Real Estate, and Entrepreneurship. The Business Management program is accredited by Accreditation Council for Business Schools and Programs (ACBSP), a national business program council.

Graduates of the Business Management program find employment in banking, real estate, retail, marketing, manufacturing, and warehousing. Graduates qualify for many different management and office positions including: supervisor, sales representative, office manager, human resource assistant, customer service representative, insurance agent, and many other similar positions.

Curriculum for Business Management

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	T	3
ENGL	1500	Composition I	G	3
MKTG	1000	Marketing	T	3
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**13**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
ECON	1510	Microeconomics	G	3
		*Communication Elective	G	3
		*English Elective	G	3
		*Excel Elective	T	3
		*Natural Science Elective	G	3
		Total:		**18**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2220	Managerial Accounting	T	3
BUSM	1600	Business Ethics	B	3
BUSM	2620	Organizational Behavior	T	3
HRMG	2650	Human Resource Management	T	3
		*Program Elective	B/G	3
		Total:		**15**

Start HERE.

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1310	Legal Environment	B	3
BUSM	2070	Small Business Management and Entrepreneurship	T	3
BUSM	2130	International Business	T	3
BUSM	2720	Financial Management	T	3
HRMG	2250	Cultural Diversity for Human Resources	B	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication**	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing**	3

*Excel Electives			
ACCT	1200	Excel Business Applications	3
BMCA	1200	Excel	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science**	3
BIOL	1210	General Biology I	4

*Program Electives			
BUSM	1530	Consumer Economics	3
ECON	1520	Macroeconomics	3

*Students should meet with an advisor for mathematics course selection.
**Suggested course

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for MGMT is BUSM 1110.

BUSINESS MANAGEMENT - ACCOUNTING (BACT)

The Accounting program prepares students for careers in public, private, and cost accounting. It also provides the foundation for students who are interested in transferring to a four-year university and completing their bachelor's degree.

Students learn to perform accounting functions, record and verify transactions, prepare payrolls, monitor inventory, prepare financial statements, and analyze financial information. Emphasis is placed on both manual and computer accounting programs with the student learning accounting packages along with word processing and spreadsheet software.

The demand for accounting personnel continues to increase. Graduates are employed as bookkeepers, auditors, tax preparers, compilers of financial information, cost accountants, and financial analysts.

Curriculum for Business Management - Accounting

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
BUSM	1110	Principles of Management	T	3
ECON	1520	Macroeconomics	G	3
ENGL	1500	Composition I	G	3
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**16**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2220	Managerial Accounting	T	3
BUSM	1310	Legal Environment	B	3
ECON	1510	Microeconomics	G	3
		*English Elective	G	3
		*Communication Elective	G	3
		Total:		**15**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1200	Excel Business Applications	T	3
ACCT	2110	Income Tax Accounting	T	3
ACCT	2250	Cost Accounting	T	3
ACCT	2410	Intermediate Accounting I	T	3
BUSM	1600	Business Ethics	B	3
		*Natural Science Elective	G	3
		Total:		**18**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2050	Computer-Aided Accounting	T	3
ACCT	2420	Intermediate Accounting II	T	3
ACCT	2850	Accounting Practicum	T	1-2
ACCT	2851	Accounting Seminar	T	1
BUSM	2070	Small Business Management and Entrepreneurship	B	3
BUSM	2720	Financial Management	T	3
		Total:		**14**

ASSOCIATE OF APPLIED BUSINESS DEGREE (63 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication**	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing**	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
CHEM	1010	Introduction to Chemistry	3
GEOL	1350	Earth Science	3
PHYS	1100	Introductory Physics	4

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for ACCT is ACCT 1200.

BUSINESS MANAGEMENT – ENTREPRENEURSHIP (ENTR)

The Entrepreneurship major of Business Management is designed to prepare students for careers in the management and operation of one's own business. Students will be prepared to recognize and create new ventures to fuel the local economy and adapt to the dynamic marketplace. The program develops the skills necessary to start and manage a new business through hands-on learning. The Entrepreneurship courses provide up-to-date technical knowledge, office management skills, computer software applications, economic theory, marketing principles, in-depth accounting curriculum, internship opportunities, and the development of a business plan.

Graduates will be prepared to make a difference in the organizations in which they are employed and help drive business growth. This exciting major should appeal to those who thrive on challenges, enjoy working with people, and have the ultimate goal of running or starting their own business.

Curriculum for Business Management – Entrepreneurship Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	T	3
ENGL	1500	Composition I	G	3
MKTG	1000	Marketing	T	3
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**13**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
ECON	1510	Microeconomics	G	3
		Communication Elective	G	3
		*English Elective	G	3
		*Natural Science Elective	G	3
		Total:		**15**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2220	Managerial Accounting	T	3
BUSM	1600	Business Ethics	B	3
HRMG	2650	Human Resource Management	T	3
ITCS	2090	Project Management Methodologies	T	3
MKTG	2150	Principles of Professional Sales	T	3
		*Program Elective	B/G	3
		Total:		**18**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2050	Computer Aided Accounting	T	3
BUSM	1310	Legal Environment	B	3
BUSM	2070	Small Business Management and Entrepreneurship	T	3
BUSM	2720	Financial Management	T	3
HRMG	2250	Cultural Diversity	T	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4

*Program Electives			
BUSM	1530	Consumer Economics	3
ECON	1520	Macroeconomics	3

*Students should meet with an advisor for mathematics course selection.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for ENTR is BUSM 1110.

BUSINESS MANAGEMENT – HEALTHCARE MANAGEMENT (HCMT)

The Business Management – Healthcare Management major targets individuals who want to manage or supervise the business aspects in the healthcare industry. This may be in a hospital, physician's office, assisted living, or long-term care facilities. This degree will provide an education and background in the management or administration path in the healthcare field, providing a foundation of medical knowledge that include medical terminology, the healthcare system, and healthcare information management. The business specific courses include study in the principles of management, organizational behavior, financial management, and human resources management with an application of business concepts to the management and administration of healthcare processes. Management of medical records, medical reports, and data interpretation for the medical field are key processes in managing a healthcare facility. This major uses business concepts in a manner that emphasizes customer service while maintaining profitability for the business.

Curriculum for Business Management – Healthcare Management Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	B	3
ENGL	1500	Composition I	G	3
HIMT	1100	Introduction to Health Information Management	T	3
HLTH	1210	Medical Terminology	B	2
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
ECON	1510	Microeconomics	G	3
		*Communication Elective	G	3
		*English Elective	G	3
		Total:		**12**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
HIMT	1300	Health Information Management and Data Governance	T	3
HIMT	1700	Legal Aspects	T	2
		*Excel Elective	B	3
		Total:		**8**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2220	Managerial Accounting	T	3
BUSM	2620	Organizational Behavior	T	3
HIMT	1600	Comparative Health Information	T	2
HIMT	2700	Health Care Information Technology and Services	T	3
MKTG	1000	Marketing	T	3
		Total:		**14**

Start HERE.

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1310	Legal Environment	B	3
BUSM	2720	Financial Management	T	3
HIMT	2220	Healthcare Statistics and Registries	T	2
HRMG	2650	Human Resources Management	T	3
		*Natural Science Elective	G	3
		Total:		**14**

ASSOCIATE OF APPLIED BUSINESS DEGREE (63 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Excel Electives			
ACCT	1200	Excel Business Applications	3
BMCA	1200	Excel	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4

* Students should meet with an advisor for mathematics selection.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for HCMT is BUSM 1110.

BUSINESS MANAGEMENT – HUMAN RESOURCES MANAGEMENT (HRMG)

The Human Resources Management major of Business Management is dedicated to preparing students for careers in human resources, one of the fastest growing and most interesting career fields in business and nonprofit institutions. Graduates qualify for various human resources entry-level positions including jobs in employee and labor relations, compensation and benefits, health and safety, and affirmative action fields. Emphasis is placed on real world applications in a broad array of practical course offerings. Graduates of the Human Resources Management program have the opportunity to transfer to bachelor degree programs.

According to the U.S. Department of Labor's Bureau of Labor Statistics, employment in human resources specialists and managers is expected to continue to grow. Upon completion of the program, graduates will be qualified for positions in a variety of business environments including manufacturing, banking, retail, and non-profit organizations.

Curriculum for Business Management – Human Resources Management Major

Fall Semester I

Course ID		Course Name	T/B/G	Credits
BUSM	1110	Principles of Management	T	3
ENGL	1500	Composition I	G	3
MKTG	1000	Marketing	T	3
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**13**

Spring Semester I

Course ID		Course Name	T/B/G	Credits
ACCT	1010	Financial Accounting	T	3
ECON	1510	Microeconomics	G	3
		*Communication Elective	G	3
		*English Elective	G	3
		*Excel Elective	T	3
		*Natural Science Elective	G	3
		Total:		**18**

Fall Semester II

Course ID		Course Name	T/B/G	Credits
ACCT	2220	Managerial Accounting	T	3
BUSM	1600	Business Ethics	B	3
HRMG	1200	Staffing and Employment Functions	T	3
HRMG	2650	Human Resource Management	T	3
		*Program Elective	B/G	3
		Total:		**15**

Spring Semester II

Course ID		Course Name	T/B/G	Credits
BUSM	1310	Legal Environment	B	3
BUSM	2130	International Business	T	3
HRMG	1330	Strategic Compensation	T	3
HRMG	2250	Cultural Diversity for Human Resources	B	3
HRMG	2300	Labor Relations	T	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Excel Electives			
ACCT	1200	Excel Business Applications	3
BMCA	1200	Excel	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4

*Program Electives			
BUSM	1530	Consumer Economics	3
ECON	1520	Macroeconomics	3

*Students should meet with an advisor for mathematics course selection.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for HRMG is BUSM 1110.

BUSINESS MANAGEMENT – MARKETING MANAGEMENT (MKTG)

The Marketing Management major of Business Management is dedicated to preparing students for careers in a variety of marketing and management positions. Learning opportunities, including internships, are provided which introduce and develop academic and occupational knowledge, skills, and attitudes required for success on the job. Students will study aspects of marketing including retail management, sales promotion, and advertising. During marketing classes, students will be able to design comprehensive advertising campaigns, conduct marketing research, and develop sales presentations.

Graduates qualify for careers in store management, buying, advertising, publicity, sales, and other related marketing positions. This exciting and expanding field should appeal to the individual who thrives on challenge, likes people, and relates well to others.

Curriculum for Business Management – Marketing Management Major

Fall Semester I

Course ID		Course Name	T/B/G	Credits
BUSM	1110	Principles of Management	T	3
ENGL	1500	Composition I	G	3
MKTG	1000	Marketing	T	3
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**13**

Spring Semester I

Course ID		Course Name	T/B/G	Credits
ACCT	1010	Financial Accounting	T	3
ECON	1510	Microeconomics	G	3
		*Communication Elective	G	3
		*English Elective	G	3
		*Excel Elective	T	3
		*Natural Science Elective	G	3
		Total:		**18**

Fall Semester II

Course ID		Course Name	T/B/G	Credits
ACCT	2220	Managerial Accounting	T	3
BUSM	1600	Business Ethics	B	3
MKTG	1010	Retail Management	T	3
MKTG	2150	Principles of Professional Sales	T	3
		*Program Elective	B/G	3
		Total:		**15**

Spring Semester II

Course ID		Course Name	T/B/G	Credits
BUSM	1310	Legal Environment	B	3
BUSM	2130	International Business	T	3
DCMT	1020	Graphic Design	T	3
HRMG	2250	Cultural Diversity for Human Resources	B	3
MKTG	2020	Advertising	T	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Excel Electives			
ACCT	1200	Excel Business Applications	3
BMCA	1200	Excel	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4

*Program Electives			
BUSM	1530	Consumer Economics	3
ECON	1520	Macroeconomics	3

*Students should meet with an advisor for mathematics course selection.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for MKTG is BUSM 1110.

BUSINESS MANAGEMENT – REAL ESTATE (REAL)

The Real Estate major of Business Management is designed to prepare students for entry-level positions and grow their career within the real estate field. The major provides students with the skills necessary to buy, sell, appraise, develop and manage real estate. Students will be prepared to analyze markets, understand real estate law, and understand real estate finance, brokerage, and appraising. The real estate courses encompass the comprehensive real estate process from the perspective of the developer, lender, and consumer.

The core courses in this major enable the student to sit for the sales agent licensing exam in Ohio. Graduates of the Real Estate major can find employment as a real estate agent, analyst, broker assistant, facility coordinator, leasing agent, project consultant, and real estate appraiser.

Curriculum for Business Management – Real Estate Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	T	3
ENGL	1500	Composition I	G	3
MKTG	1000	Marketing	T	3
		*First Year Experience Elective	B	1
		*Mathematics Elective	G	3
		Total:		**13**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
BUSM	2730	Real Estate Principles and Practices	T	3
BUSM	2740	Real Estate Law	T	3
BUSM	2750	Real Estate Finance	T	3
BUSM	2760	Real Estate Appraising	T	3
ECON	1510	Microeconomics	G	3
		Total:		**18**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2220	Managerial Accounting	T	3
BUSM	1600	Business Ethics	B	3
		*Communication Elective	G	3
		*English Elective	G	3
		*Natural Science Elective	G	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1310	Legal Environment	B	3
BUSM	2720	Financial Management	T	3
BUSM	2770	Real Estate Brokerage	T	3
HRMG	2250	Cultural Diversity for Human Resources	B	3
		*Excel Elective	T	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Excel Electives			
ACCT	1200	Excel Business Applications	3
BMCA	1200	Excel	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4

* Students should meet with an advisor for mathematics selection.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for REAL is BUSM 1110.

CRIMINAL JUSTICE (CJUS)

The Criminal Justice major emphasizes areas of criminal justice designed for students who intend to pursue careers in the criminal justice profession which includes law enforcement and corrections, the courts, probation and parole, investigations, victim advocacy, and criminology. Some of the career paths include, but are not limited to, police officer, sheriff's deputy, highway patrol trooper, court bailiff, security officer, adult and juvenile corrections officer, correctional case managers, and wildlife officers.

The degree program is suitable for those professionals who wish to enter the criminal justice field, those who are already employed in the field and wish to advance, as well as those who seek to continue their education at the baccalaureate or master's level. Specific admission requirements are available from the Criminal Justice Program Director.

Curriculum for Criminal Justice

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
CJUS	1010	Criminal Law	T	3
CJUS	1060	Introduction to Criminal Justice	T	3
CJUS	1120	Defensive Tactics	T	1
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MATH	1050	Quantitative Reasoning	G	4
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
CJUS	1100	Civil Liabilities	T	2
CJUS	1150	Defensive Driving	T	1
CJUS	1230	Investigations	T	3
CJUS	2200	Constitutional Law	T	2
ENGL	2800	Professional Writing	G	3
PSYC	1010	Introduction to Psychology	G	3
SOCI	1010	Introduction to Sociology	G	3
		Total:		**17**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
CJUS	1090	Corrections	T	3
CJUS	1280	Evidence and Criminal Procedures	T	2
CJUS	1910	Police Operations	T	3
CJUS	1980	Introduction to Homeland Security	T	2
CJUS	2660	Firearms	T	2
		*Communication Elective	G	3
		*Computer Literacy Elective	B	2
		Total:		**17**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
CJUS	2080	Victimology	T	2
CJUS	2770	Seminar in Administration of Criminal Justice	T	3
SOCI	2060	Race and Ethnicity	G	3
SOCI	2270	Criminology	G	3
		*Arts and Humanities Elective	G	3
		Total:		**14**

ASSOCIATE OF APPLIED SCIENCE DEGREE (63 credit hours)

*Arts and Humanities Electives			
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*Computer Literacy Electives			
BMCA	1010	Introduction to Microcomputer Concepts and Applications	3
BMCA	1050	Introduction to Microcomputer Software Applications	2

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for CJUS is BMCA 1010 or BMCA 1050.

CULINARY ARTS (CULA)

The Culinary Arts program prepares students for employment in the food service industry at mid-management level. Graduates are able to meet the food service industry's needs for trained professionals who are knowledgeable in areas such as basic and classical food preparation, baking, menu and facility planning, nutrition, sanitation, accounting, and management techniques. Students gain valuable hands-on and practical experience in the kitchen-lab and classroom setting.

The Culinary Arts program is fully accredited by the American Culinary Federation. Zane State College's Culinary Arts program is one of only five such programs accredited in the state of Ohio.

Graduates of the Culinary Arts program find employment in a variety of places in the food service industry. These include restaurants, private clubs, hotels, schools, hospitals, cafeterias, and extended care facilities.

Curriculum for Culinary Arts

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
CULA	1020	Orientation to Culinary Arts	T	1
CULA	1040	Sanitation	T	2
CULA	1060	Fundamentals of Food Preparation	T	3
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MATH	1650	Statistics	G	3
		Total:		**13**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	B	3
BMCA	1050	Introduction to Microcomputer Software Applications	B	2
CULA	1080	Professional Baking	T	3
CULA	1130	Meat Technology	T	3
CULA	1140	Nutrition and Menu Planning	T	2
		Total:		**13**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
CULA	1180	Professional Table Service	T	2
CULA	1200	Culinary Field Experience	T	2
ENGL	2800	Professional Writing	G	3
		Total:		**7**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
CULA	2020	Food and Beverage Cost Control	T	2
CULA	2060	Classical Cuisine	T	3
CULA	2080	Food Service Equipment/Facilities	T	2
CULA	2160	Classical Desserts	T	3
COMM	1220	Interpersonal Communication	G	3
		*Social and Behavioral Science Elective	G	3
		Total:		**16**

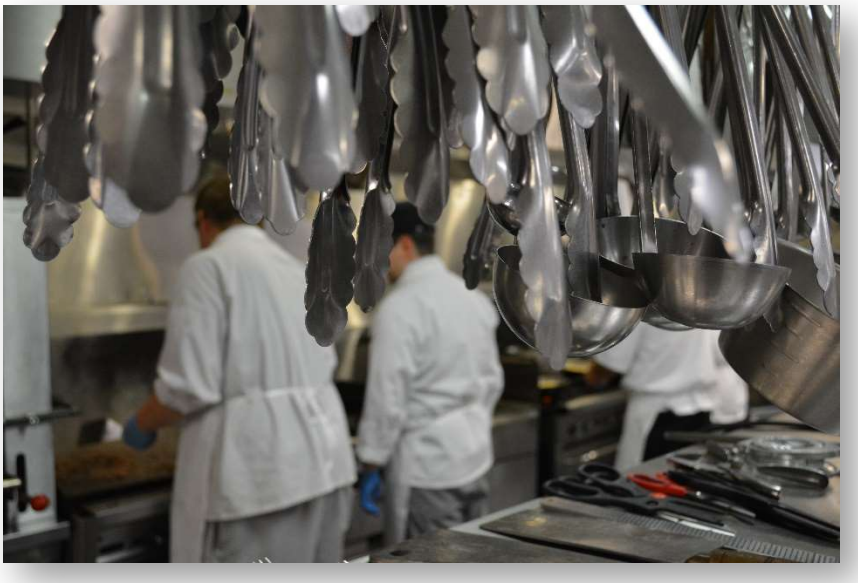
Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	1070	Environmental Science	G	3
BUSM	2070	Small Business Management and Entrepreneurship	B	3
CULA	2180	Garde-Manger	T	3
CULA	2220	Food Service Management	T	3
		*Arts and Humanities Elective	G	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (64 credit hours)

*Arts and Humanities Elective			
ARTS	1010	Art History I	3
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*Social and Behavioral Science Electives			
ECON	1510	Microeconomics	3
PSYC	1010	Introduction to Psychology	3
SOCI	1010	Introduction to Sociology	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for CULA is BMCA 1050.



CYBRSECURITY (CYBR)

Technology is evolving and expanding at a very rapid pace. To this end, organizations are finding it difficult to maintain current business practices while updating technology initiatives and at the same time ensuring the data and systems are secure. Organizations that will not only survive but thrive are those which embrace the technological changes as they occur, and at the same time, implement measures to ensure data security.

The Cybersecurity (CYBR) curriculum is designed to meet this need. Students will be required to complete a core set of classes which prepares them in the following disciplines: networking, operating systems (e.g., Windows, Linux, etc.), security, and penetration testing. Upon completion of the coursework, students may also be prepared to sit for certifications such as: Linux+, Security+, Network+, and CeH.

Mastery of skills will prepare the students for employment in positions such as: network security analyst, IT security engineer, senior network security analyst, information security analyst, computer security technical specialist, or network and computer systems administrator.

Curriculum for Cybersecurity Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
CYBR	1000	Ethics in the Information Age	B	3
CYBR	1100	Introduction to Information Assurance and Security Strategies	B	3
CYBR	1200	Introduction to Cisco Networking	T	3
ENGL	1500	Composition I	G	3
ITCS	1500	Microcomputer Hardware	B	3
		*First Year Experience Elective	B	1
		Total:		**16**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
CYBR	1300	Security+	T	3
CYBR	2200	Cisco Routing and Switching	T	3
ITCS	1400	Linux+	T	3
		*English Elective	G	3
		*Mathematics Elective	G	3
		Total:		**15**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
CYBR	2000	Penetration Testing	T	3
ITCS	2100	Introduction to Open Source Programming	T	3
ITCS	2500	Windows Server Administration	T	3
PHIL	1030	Critical Thinking	G	3
		* Communication Elective	G	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	B	3
CYBR	2300	Security Compliance	T	3
CYBR	2400	Disaster Recovery	T	3
CYBR	2600	Digital Forensics	T	3
PSYC	1010	Introduction to Psychology	G	3
		Total:		**15**

Start HERE.

ASSOCIATE OF APPLIED BUSINESS DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030	Honors Freshman Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Mathematic Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1250	Algebra and Trigonometry	4
MATH	1340	College Algebra	4
MATH	1350	Pre-Calculus	5
MATH	1650	Statistics	3
MATH	2510	Calculus I	5
MATH	2520	Calculus II	5

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for CYBR is CYBR 1100.

EDUCATION (EDUC)

Education is a continuously growing and ever changing field of study. By enrolling in the Education program, students are better able to gain the foundational content that will prepare them to take the next step in the field of education. Students have the ability to select coursework that meets their unique interests, whether that is teaching school-aged children in grades K-12, working in the field as an intervention specialist, or specializing in reading. This program is the perfect degree for individuals who want to pursue a bachelor's degree at a four-year college. Regardless of the goal, the Education program is the place to start.

Studies focus on education, special education, child development, classroom management, educational technology, and more. With the opportunity to choose technical electives that meet each student's future goals, the program truly can be as unique as every student and child.

Graduates from the Education program will be qualified to enter the field of education as a paraprofessional or teacher's aide in a P-12 setting, allowing for a wide range of employment opportunities. An individual in the position of paraprofessional or teacher's aide would be expected to work with a teacher to ensure student success in learning. This can be accomplished through one-on-one instruction, small group lessons, assistance in classroom management, and routine task completion.

Students interested in the program must be admitted to the College before acceptance into the program. A copy of the Education program handbook, which includes the requirements for conditional and formal acceptance to the program as well as the eligibility criteria for the field experiences, may be obtained from the Education Department.

Curriculum for Education

Fall Semester I

Course ID		Course Name	T/B/G	Credits
EDUC	1010	Introduction to Education	T	3
EDUC	1090	Effective Classroom Management	T	3
EDUC	1450	Introduction to Special Education	T	3
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
		*Mathematics Elective	G	4
		Total:		**17**

Spring Semester I

Course ID		Course Name	T/B/G	Credits
EDUC	1110	Observation and Assessment	T	3
EDUC	1250	Early Childhood Literacy	T	3
EDUC	1350	Classroom Mathematics	T	3
ENGL	2500	Composition II	G	3
PSYC	1010	Introduction to Psychology	G	3
		Total:		**15**

Fall Semester II

Course ID		Course Name	T/B/G	Credits
COMM	2610	Public Speaking	G	3
EDUC	1830	Child Development	B	4
EDUC	2070	Technology for Educators	B	3
PSYC	2310	Educational Psychology	G	3
		*Technical Elective(s)	T	3
		Total:		**16**

Start HERE.

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
EDUC	2030	Behaviors and Transitions	T	3
EDUC	2110	Family, School and Community	T	3
EDUC	2720	Professionalism in Education	T	1
		*Arts and Humanities Elective	G	3
		*Natural Science Elective	G	3
		*Technical Elective	T	2
		Total:		**15**

ASSOCIATE OF APPLIED SCIENCE (63 credit hours)

*Arts and Humanities Electives			
ARTS	1010	Art History I	3
ARTS	1020	Art History II	3
ENGL	2600	American Literature since 1865: The Making of a Diverse U.S.	3
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4

*Technical Electives			
EDUC	2210	Reading to Learn	3
EDUC	2250	Phonics	2
EDUC	2450	High and Low Incidence Disabilities	4
EDUC	2800	Current Issues in Education	3
EDUC	2850	Appalachian Impact Seminar	2

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for EDUC is EDUC 2070.

ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY (EEET)

This program prepares electronic engineering technicians to design, build, troubleshoot, repair, maintain, and program electrical and electronic equipment for business, industry, and government. Students work in modern labs using test and measurement, diagnostic, and controls equipment manufactured by companies such as Tektronix, Agilent, and Allen-Bradley. Students learn to use digital and analog oscilloscopes, logic analyzers, spectrum analyzers (telecommunications), network cable analyzers (networked computer systems), and programmable logic controllers (PLCs).

The curriculum builds from the basics of D.C. and A.C. circuit analysis, electronic devices, and digital signal processing through more advanced course work in electronic amplifiers, industrial instrumentation, microprocessor interfacing, PLC wiring and programming, motors and controls, designing and installing networked computer systems, and telecommunications.

Students completing the EEET program can become certified engineering technicians by passing the NICET exam. Students may pursue careers as engineering design technicians, protection and control technicians, station electricians, meter electricians, telecommunications technicians, generation dispatchers, transmission dispatchers, distribution dispatchers, instrument and control electricians, bio-medical technicians, and network technicians.

The Electrical/Electronics Engineering Technology (EEET) Associates of Applied Science degree is nationally recognized for its quality. It is accredited by the Engineering Technology Accreditation Commission of ABET, https//www.abet.org.

The rapid growth of electronic, telecommunication, and computer industries worldwide has led to a demand for electronics technicians that has far exceeded supply. As a result, wages and benefits for electronics technicians rank among the top for two-year graduates, often exceeding those of four-year graduates in other disciplines. Graduates work for such well-known companies as American Electric Power, Goodyear, Ralston Purina, SBC, EASi, First Energy, Basic Systems, Bi-Con, AK Steel, MPW, Columbia Gas, and Colgate Palmolive.

Over the next decade electric and natural gas utilities in our region and the nation are forecasting a need for a significant number of new hires to replace a retiring workforce. Demand for degreed technicians by the utility industry is very strong. The Electrical/Electronics Engineering Technology faculty work closely with electric and natural gas utilities to identify skills needed by those industries. Students interested in careers in the electrical or natural gas utility industry should work closely with the program faculty to select technical elective courses in preparation for careers in one of these industries.

Curriculum for Electrical/Electronics Engineering Technology

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	1110	D.C. Circuit Analysis	T	4
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MATH	1250	Algebra and Trigonometry	G	4
MECH	1000	Engineering Graphics	B	3
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	1130	Electronic Devices	T	4
EEET	1230	A.C. Circuit Analysis	T	4
		*Mathematics Elective	G	4
		*Natural Science Elective	G	3
		Total:		**15**

Start HERE.

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	2150	Digital Circuits	T	4
EEET	2210	Industrial Instrumentation and Controls	T	4
EEET	2450	Rotating Machinery and Controls	T	4
		*Social and Behavioral Science Elective	G	3
		*Technical Elective	T	2
		Total:		**17**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	2510	Programmable Logic Controllers	T	4
		*Communication Elective	G	3
		*English Elective	G	3
		*Natural Science Elective	G	3
		*Technical Elective	T	2
		Total:		**15**

ASSOCIATE OF APPLIED SCIENCE DEGREE (62 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Mathematic Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1350	Pre-Calculus	5
MATH	2510	Calculus I	5
MATH	2520	Calculus II	5

*Natural Science Electives			
BIOL	1070	Environmental Science	3
BIOL	1210	General Biology I	4
BIOL	1220	General Biology II	4
CHEM	1010	Introduction to Chemistry	3
CHEM	1210	General Chemistry I	4
CHEM	1220	General Chemistry II	4
PHYS	2010	Physics I	4
PHYS	2020	Physics II	4

*Social and Behavioral Science Electives			
ECON	1510	Microeconomics	3
ECON	1520	Macroeconomics	3
HIST	1100	Western Civilization to 1492	3
HIST	1110	Western Civilization from 1942 to Present	3
HIST	1200	U.S. History I	3
HIST	1210	U.S. History II	3
POLS	1010	American National Government*	3
PSYC	1010	Introduction to Psychology	3
SOCI	1010	Introduction to Sociology	3

*EEET Technical Electives by Career Field-Electric Power Utility			
ALTE	1800	Photovoltaic Energy Systems	2
ALTE	2200	Wind Power Systems	2
BMCA	1200	Excel	3
BUSM	1110	Principles of Management	3
ITCS	1010	Introduction to Networking	3
ITCS	1410	Introduction to C#	3
ITCS	1500	Microcomputer Hardware	3
NAFS	2150	Geographic Information Systems	3
SURV	2190	Fundamentals of Surveying	3

*EEET Technical Electives by Career Field-Maintenance			
CAMT	1000	Measurement and Layout	4
CAMT	2000	CNC Machining	4
EEET	2600	Electronics Technician Certification	2
ENVS	2850	OSHA 30 Hr. General Industrial Safety and Health	2
ISET	2650	Mechanical Systems	4
MECH	2500	Hydraulics and Pneumatics	3
MECH	2550	Computer-Aided Machining	3
MECH	2800	Robotics	3
MECH	2900	Statistical Process Control	2
MECH	2920	Field Experience I	1-4
WELD	1700	Maintenance Welding	4

*EEET Technical Electives by Career Field-Mechanical Engineering			
MECH	1100	Mechanical 3-D Modeling	3
MECH	1200	Manufacturing Processes	3
MECH	1500	Survey of Mechanical 3D Modeling	3
MECH	2100	Engineering Economy*	3
MECH	2200	Statics	3
MECH	2300	Strength of Materials	3
MECH	2600	Machine Design	3
MECH	2700	Project Management	3

* CCP students must take the courses with an asterisk to meet high school graduation requirements.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for EEET is MECH 1000.

ELECTRO-MECHANICAL ENGINEERING TECHNOLOGY (EMET)

Electro-Mechanical technicians combine knowledge of mechanical technology with knowledge of electrical and electronic circuits. They operate, test, and maintain automated, robotic, or electro-mechanical equipment.

The Electro-Mechanical Engineering Technology program prepares students to read blueprints, schematics, and diagrams, to use precision measuring instruments, to repair and calibrate hydraulic and pneumatic assemblies, to test the performance of electro-mechanical assemblies using test instruments, to install electronic parts and hardware using soldering equipment and hand tools, to operate, test, or maintain robotic equipment, to analyze and record test results, and to prepare written documentation.

The curriculum includes engineering graphics, 3D modeling, robotics, DC and AC circuit analysis, electronic devices, and hydraulics and pneumatics.

Electro-Mechanical technicians work closely with electrical engineers and mechanical engineers. They work in many industrial environments, including energy, plastics, computer and communications equipment manufacturing, and aerospace. They often work both at production sites and in offices.

Curriculum for Electro-Mechanical Engineering Technology

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	1110	D.C. Circuit Analysis	T	4
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MATH	1250	Algebra and Trigonometry	G	4
MECH	1000	Engineering Graphics	B	3
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
MECH	1100	Mechanical 3D Modeling	T	3
MECH	2800	Robotics	T	3
PHYS	2010	Physics I	G	4
		*English Elective	G	3
		*Mathematics Elective	G	3
		Total:		**16**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
CHEM	1010	Introduction to Chemistry	G	3
MECH	2200	Statics	T	3
MECH	2500	Hydraulics and Pneumatics	T	3
		*Social and Behavioral Science Elective	G	3
		*Technical Elective	T	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	1130	Electronic Devices	T	4
EEET	1230	A.C. Circuit Analysis	T	4
MECH	2300	Strength of Materials	T	3
		*Communication Elective	G	3
		*Technical Elective	T	2
		Total:		**16**

ASSOCIATE OF APPLIED SCIENCE DEGREE (62 credit hours)

***Communication Electives**			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking*	3
***English Electives**			
ENGL	2500	Composition II*	3
ENGL	2800	Professional Writing	3
***Mathematics Electives**			
MATH	1350	Pre-Calculus	5
MATH	1650	Statistics	3
***Social and Behavioral Science Electives**			
ECON	1510	Microeconomics	3
ECON	1520	Macroeconomics	3
HIST	1100	Western Civilization to 1492	3
HIST	1110	Western Civilization from 1942 to Present	3
HIST	1200	U.S. History I	3
HIST	1210	U.S. History II	3
POLS	1010	American National Government*	3
PSYC	1010	Introduction to Psychology	3
SOCI	1010	Introduction to Sociology	3
***Technical Electives**			
ALTE	1800	Photovoltaic Energy Systems	2
ALTE	2200	Wind Power Systems	2
CAMT	1000	Measurement and Layout	4
CAMT	2000	CNC Machining	4
EEET	2150	Digital Circuits	4
EEET	2210	Industrial Instrumentation and Controls	4
EEET	2450	Rotating Machinery and Controls	4
ENVS	2850	OSHA 30 Hr. General Industrial Safety and Health	2
ISET	2650	Mechanical Systems	4
MECH	1200	Manufacturing Processes	3
MECH	1500	Survey of 3D Mechanical Modeling	3
MECH	1800	VEX Robotics	3
MECH	2100	Engineering Economy*	3
MECH	2600	Machine Design	3
MECH	2700	Project Management	3
MECH	2900	Statistical Process Control	2
MECH	2920	Field Experience I	2-4
ROBT	1010	Robotics Programming I	4
ROBT	1020	Robot Vision Systems	4
WELD	1700	Maintenance Welding	4

*CCP students must take the courses with an asterisk to meet high school graduation requirements.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for EMET is MECH 1000.

HEALTH INFORMATION MANAGEMENT – CODING AND REIMBURSEMENT (HIMT)

The Health Information Management - Coding and Reimbursement program prepares students for a professional career in the fast-changing field of health informatics and information management. Students will learn how to maintain and communicate sensitive medical and patient information in accordance with established medical, administrative, ethical, legal, accreditation, and regulatory requirements of the health care delivery system. In all types of health care facilities, health information management professionals possess the technical knowledge and skills necessary to process, maintain, compile, and report health information data for reimbursement, facility planning, marketing, risk management, utilization management, quality assessment, and research.

As the health information management professional is often responsible for functional supervision of the various components of the health information system, this program is grounded in the importance of applied knowledge. Through internships at local health care agencies under the direction of program faculty, students will gain hands-on, clinical experience essential to developing the skills necessary to succeed in this expanding career. According to the Ohio Department of Jobs and Family Services, health information specialists constitute one of the fastest growing occupations throughout the state. Health information management professionals are employed in a variety of settings including hospitals, physician's offices, urgent care centers, long-term care centers, medical billing service providers, and insurance companies.

The Health Information Management - Coding and Reimbursement program is accredited through the Commission on Accreditation of Health Informatics and Information Management Education (CAHIIM). Students who graduate from an accredited associate degree program are eligible to sit for the Registered Health Information Technician certification. With additional work experience, students who complete this program may also be eligible for other certifications including the Certified Coding Associate, Certified Coding Specialist, and Certified Coding Specialist-Physician-based.

Curriculum for Health Information Management - Coding and Reimbursement

Fall Semester I					
Course ID		**Course Name**		**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I		G	3
ENGL	1500	Composition I		G	3
FYEX	1100	Introduction to Online Learning		B	1
HIMT	1100	Introduction to Health Information Management		T	3
HLTH	1210	Medical Terminology		B	2
			Total:		**12**

Spring Semester I					
Course ID		**Course Name**		**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II		G	3
ENGL	2800	Professional Writing		G	3
HIMT	1500	Clinical Classification Systems I		T	4
HIMT	2110	Basic Pharmacology and Pathophysiology		B	3
HIMT	2150	Clinical Classification Systems II		T	3
			Total:		**16**

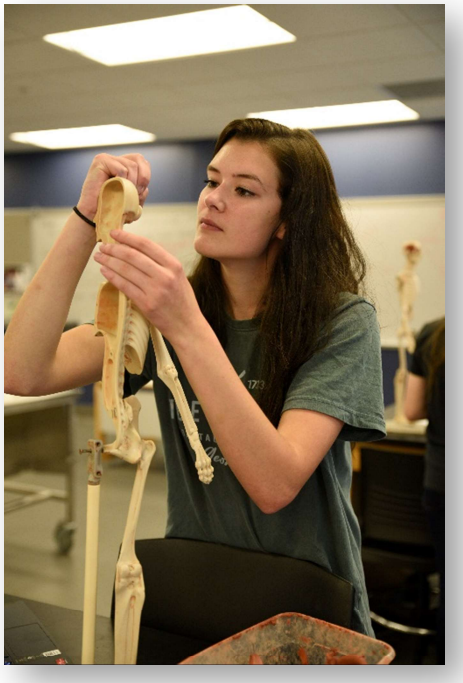
Summer Session I					
Course ID		**Course Name**		**T/B/G**	**Credits**
HIMT	1300	Health Information Management and Data Governance		T	3
HIMT	1700	Legal Aspects in Health Care		T	2
HIMT	2400	Insurance Reimbursement Methodologies		T	2
MATH	1650	Statistics		G	3
			Total:		**10**

Fall Semester II					
Course ID		**Course Name**		**T/B/G**	**Credits**
HIMT	1600	Comparative Health Information		T	2
HIMT	1900	Professional Practicum and Seminar l		T	2
HIMT	2010	Health Care Quality Improvement		T	2
HIMT	2500	Clinical Classification Systems III		T	3
HIMT	2700	Health Care Information Technology and Systems		T	3
PHIL	1030	Critical Thinking		G	3
			Total:		**15**

Spring Semester II					
Course ID		**Course Name**		**T/B/G**	**Credits**
BMCA	1200	Excel		B	3
COMM	1220	Interpersonal Communication		G	3
HIMT	2220	Healthcare Statistics and Registries		T	2
HIMT	2650	Management of Health Information Services		T	2
HIMT	2900	Professional Practicum and Seminar II		T	2
			Total:		**12**

ASSOCIATE OF APPLIED SCIENCE DEGREE (65 credit hours)

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for HIMT is BMCA 1200.



INFORMATION TECHNOLOGY – DIGITAL CONTENT MEDIA TECHNOLOGY (DCMT)

The Information Technology - Digital Content Media program (DCMT) prepares students to be digital content creators. This program is for those interested in vlogging, podcasting, streaming, storytelling, and social influencing. Our focus is the perfect blend of technical, creative, and business training if you want to start a career immediately or transfer to earn a bachelor's degree at a university.

This program is also an excellent complement for those interested in a career in marketing, real estate, business, web development, education, and entrepreneurship. Students will gain skills in graphic design, video production and editing, audio production, and commercial drone operations.

Graduates of the Digital Content Media program are prepared to pursue positions in business and industry that involve both graphic design, video, and audio production. These include graphic designers, video editors, commercial drone operators, and related positions that continue to emerge in the Digital Content field.

Curriculum for Information Technology – Digital Content Media Technology Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BMCA	1110	Office Keyboarding Skills	B	1
DCMT	1020	Graphic Design	B	3
DCMT	1115	Fundamentals of Content Creation	T	3
DCMT	1120	Commercial Drone Operator	T	3
ENGL	1500	Composition I	G	3
		*First Year Experience Elective	B	1
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
DCMT	1125	Presentation and Collaboration Management	B	1
DCMT	1130	Digital Storytelling	B	3
DCMT	1440	Digital Photography	T	3
DCMT	2040	Video Capture	T	3
ITCS	1230	Web Site Applications	T	3
		*English Elective	G	3
		Total:		**16**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
PHIL	1030	Critical Thinking	G	3
		*Mathematics Elective	G	3
		Total:		**6**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
DCMT	1150	Audio Production	T	3
DCMT	2240	Video Production and Editing	T	3
ITCS	1010	Introduction to Networking	T	3
ITCS	2090	Project Management Methodologies	B	3
MKTG	1000	Marketing	T	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
DCMT	2310	Live Streaming and Production	T	3
DCMT	2320	Emerging Media Technologies	T	3
ITCS	2290	Capstone	B	1
PSYC	1010	Introduction to Psychology	G	3
		*Communication Elective	G	3
		Total:		**13**

ASSOCIATE OF APPLIED BUSINESS DEGREE (64 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030	Honors Freshman Seminar	3
FYEX	1100	Introduction to Online Learning	1

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1250	Algebra and Trigonometry	4
MATH	1340	College Algebra	4
MATH	1350	Pre-Calculus	5
MATH	1650	Statistics	3
MATH	2510	Calculus I	5
MATH	2520	Calculus II	5

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for DCMT is ITCS 1010.

INFORMATION TECHNOLOGY – NETWORK AND SERVER OPERATIONS (NSOP)

The Information Technology programs allow students to prepare themselves for a variety of careers in the evolving communications and information industries. Through an innovative and integrated Information Technology curriculum, students complete a series of core computer courses and have the choice to major in networking and server operations, programming and web development, or digital content media technology. Students gain valuable experience in internships and systems projects using the latest information systems and technology while continuously updating or migrating to new technology.

As part of the program students will analyze an IT related problem and select and develop an appropriate solution including appropriate consideration for security, use critical thinking and problem solving skills to address IT needs and solve IT problems, communicate clearly and concisely, and identify and explain how changes in the IT discipline affect business, industry, and their work environment.

The demand for technology-savvy individuals in the career tracks of Information Technology has never been greater. This exciting and rapidly expanding field should appeal to the individual who desires to meet the many challenges of creating or managing computer generated media or data using the most modern computer hardware and software.

Graduates of Information Technology majoring in Network and Server Operations are prepared to pursue positions in business and industry such as network technicians, network specialists, network managers, systems administrators, help desk technicians, technical support representatives, customer support professionals, PC support specialists, user support specialists, cybersecurity analysts, and related positions that continue to emerge in the information technology field.

Curriculum for Information Technology – Network and Server Operations Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BMCA	1110	Office Keyboarding Skills	B	1
DCMT	1020	Graphic Design	B	3
ITCS	1010	Introduction to Networking	T	3
ITCS	1030	Introduction to Programming Logic	T	3
ITCS	1500	Microcomputer Hardware	B	3
		*First Year Experience Elective	B	1
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	1500	Composition I	G	3
ITCS	1400	Linux+	T	3
ITCS	2500	Windows Server Administration	T	3
MATH	1050	Quantitative Reasoning	G	4
PSYC	1010	Introduction to Psychology	G	3
		Total:		**16**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ITCS	2100	Introduction to Open Source Programming	T	3
PHIL	1030	Critical Thinking	G	3
		Total:		**6**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	2800	Professional Writing	G	3
ITCS	2090	Project Management Methodologies	B	3
ITCS	2510	Cisco Routers I	T	6
		*Technical Elective	T	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	1220	Interpersonal Communication	G	3
ITCS	2170	Packet Analysis	T	3
ITCS	2290	Capstone	B	1
ITCS	2550	Cisco Routers II	T	6
		Total:		**13**

ASSOCIATE OF APPLIED BUSINESS DEGREE (64 credit hours)

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030	Honors Freshman Seminar	3
FYEX	1100	Introduction to Online Learning	1

*Technical Electives by Career Field-Programming and Web Development			
ITCS	1230	Web Site Applications	3
ITCS	1430	Server-side Scripting	3
ITCS	2020	Introduction to Java	3

*Technical Electives by Career Field-Cybersecurity			
CYBR	1300	Security+	3
CYBR	2000	Penetration Testing	3
CYBR	2300	Security Compliance	3
CYBR	2400	Disaster Recovery	3
CYBR	2600	Digital Forensics	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for NSOP is ITCS 1010.

INFORMATION TECHNOLOGY – PROGRAMMING AND WEB DEVELOPMENT (ITPD)

The Information Technology programs allow students to prepare themselves for a variety of careers in the evolving communications and information industries. Through an innovative and integrated Information Technology curriculum, students complete a series of core computer courses and have the choice to major in technical services or programming and web development. Students gain valuable experience in internships and systems projects using the latest information systems and technology while continuously updating or migrating to new technology.

As part of the program students will analyze an IT related problem and select and develop an appropriate solution including appropriate consideration for security, use critical thinking and problem solving skills to address IT needs and solve IT problems, communicate clearly and concisely, and identify and explain how changes in the IT discipline affect business, industry, and their work environment.

The demand for technology-savvy individuals in the career tracks of Information Technology has never been greater. This exciting and rapidly expanding field should appeal to the individual who desires to meet the many challenges of creating or managing computer generated media or data using the most modern computer hardware and software.

Graduates of Information Technology majoring in Programming and Web Development are prepared to pursue positions in business and industry such as application developers/programmers, web developers, webmasters, internet specialists, software developers, data managers, information designers, customer support professionals, and related positions that continue to emerge in the information technology field.

Curriculum for Information Technology – Programming and Web Development Major

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BMCA	1110	Office Keyboarding Skills	B	1
DCMT	1020	Graphic Design	T	3
ENGL	1500	Composition I	G	3
ITCS	1010	Introduction to Networking	T	3
ITCS	1030	Introduction to Programming Logic	T	3
		*First Year Experience Elective	B	1
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	2800	Professional Writing	G	3
ITCS	1230	Web Site Applications	T	3
ITCS	1410	Introduction to C#	T	3
MATH	1050	Quantitative Reasoning	G	4
		Total:		**13**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ITCS	1400	Linux+	T	3
PHIL	1030	Critical Thinking	G	3
		Total:		**6**

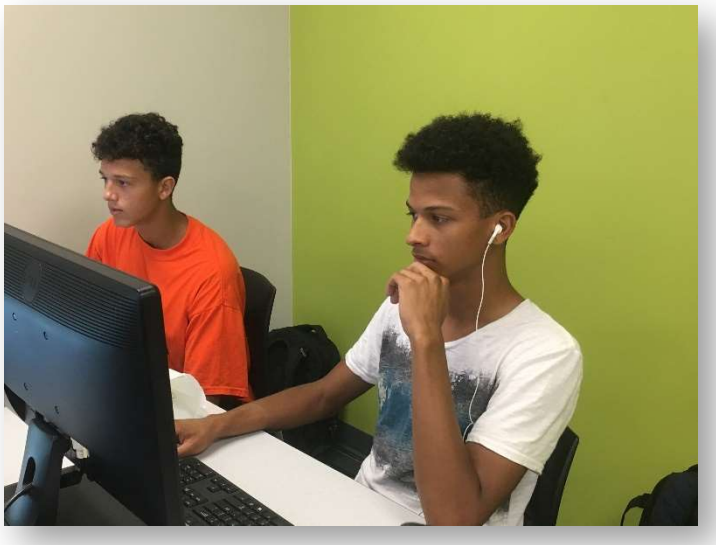
Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	1220	Interpersonal Communication	G	3
ITCS	2020	Introduction to Java	T	3
ITCS	2090	Project Management Methodologies	B	3
ITCS	2250	Database Management Systems	T	3
ITCS	2230	Developing Mobile Applications for Android	T	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ITCS	1430	Server-side Scripting	T	3
ITCS	2100	Introduction to Open Source Programming	T	3
ITCS	2110	Security in the Information Age	B	3
ITCS	2290	Capstone	B	1
MATH	1650	Statistics	G	3
PSYC	1010	Introduction to Psychology	G	3
		Total:		**16**

ASSOCIATE OF APPLIED BUSINESS DEGREE (64 credit hours)

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030	Honors Freshman Seminar	3
FYEX	1100	Introduction to Online Learning	1

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for ITPD is ITCS 1010.



MECHANICAL ENGINEERING TECHNOLOGY (MECH)

The Mechanical Engineering Technology program focuses students on the design of products and the machinery required to manufacture those products. A solid foundation in analytical skills utilizing algebra, trigonometry, and physics is developed. Computer-aided drafting and design skills are developed thoroughly for utilization in applications such as machine design, tool and die design, computer-aided machining, and robotics.

Courses in machine tools, industrial materials and processes, statistical process control, and hydraulics and pneumatics prepare graduates with valuable skills for a wide variety of positions within manufacturing companies. Graduates are skilled in CAD drafting, 3-D modeling, machining principles, industrial materials and processes, and analytical design techniques.

Technical courses incorporate the computer as an integral engineering tool and involve hands-on practical lab activities appropriate to the types of functions performed by graduates in the industrial environment. Students also have several opportunities to tour regional companies to see firsthand the type of skills required and equipment used in industry.

Graduates have found placement to be good in our local service area; however, opportunities are exponentially increasing in larger urban areas such as Columbus. Graduates have been placed with engineering firms, utility companies, and in the public sector, but the majority of graduates obtain positions within the manufacturing industry. Careers in product, tool, machine, and facilities design are prevalent. Positions such as manufacturing technician and process technician are also common. With multiple courses meeting Ohio TAGs (Transfer Assurance Guides), graduates find excellent in-state transfer to four-year bachelor program in Mechanical Engineering Technology as well.

Curriculum for Mechanical Engineering Technology

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MATH	1250	Algebra and Trigonometry	G	4
MECH	1000	Engineering Graphics	B	3
		*Technical Elective 1	T	3
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
MECH	1100	Mechanical 3D Modeling	T	3
MECH	1150	Tools, Measurement, and Layout	T	2
PHYS	2010	Physics I	G	4
		*English Elective	G	3
		*Mathematics Elective	G	3
		Total:		**15**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
CHEM	1010	Introduction to Chemistry	G	3
MECH	1200	Manufacturing Processes	T	3
MECH	2200	Statics	T	3
MECH	2500	Hydraulics and Pneumatics	T	3
		*Social and Behavioral Science Elective	G	3
		*Technical Elective 2	T	2
		Total:		**17**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
MECH	2300	Strength of Materials	T	3
MECH	2550	Computer-Aided Machining	T	3
MECH	2600	Machine Design	T	3
MECH	2700	Project Management	T	3
		*Communication Elective	G	3
		Total:		**15**

ASSOCIATE OF APPLIED SCIENCE DEGREE (61 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking*	3

*English Electives			
ENGL	2500	Composition II*	3
ENGL	2800	Professional Writing	3

*Mathematics Electives			
MATH	1350	Pre-Calculus	5
MATH	1650	Statistics	3

*Social and Behavioral Science Electives			
ECON	1510	Microeconomics	3
ECON	1520	Macroeconomics	3
HIST	1100	Western Civilization to 1492	3
HIST	1110	Western Civilization from 1942 to Present	3
HIST	1200	U.S. History I	3
HIST	1210	U.S. History II	3
POLS	1010	American National Government*	3
PSYC	1010	Introduction to Psychology	3
SOCI	1010	Introduction to Sociology	3

*MECH Technical Electives 1			
EEET	1110	D.C. Circuit Analysis	3
ISET	1100	Industrial Electricity	3

*MECH Technical Electives 2			
ALTE	1800	Photovoltaic Energy Systems	2
ALTE	2200	Wind Power Systems	2
EEET	1130	Electronic Devices	4
EEET	1230	A.C. Circuit Analysis	4
ENVS	2850	OSHA 30 Hr. General Industrial Safety and Health	2
ISET	2650	Mechanical Systems	4
ITCS	1030	Introduction to Programming Logic	3
ITCS	1500	Microcomputer Hardware	3
MECH	2100	Engineering Economy*	3
MECH	2800	Robotics	3
MECH	2920	Field Experience I	2-4
ROBT	1010	Robotics Programming I	4
ROBT	1020	Robot Vision Systems	4
WELD	1700	Maintenance Welding	4

*CCP students must take the courses with an asterisk to meet high school graduation requirements.

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for MECH is MECH 1000.

MEDICAL ASSISTING (MEDA)

The Medical Assisting program prepares students to become allied health professionals who function as members of the health care delivery team. Medical assistants are the central figures in promoting and maintaining cooperative relationships between patients and physicians. Program coursework involves both administrative and clinical procedures. Students are prepared to take vital signs, medical histories, and perform basic laboratory procedures while also engaging in the administrative duties of scheduling appointments, receiving patients, managing medical records, and handling telephone calls. Graduates are eligible to take the national board examination which qualifies students to work in all fifty states as a Certified Medical Assistant.

The Medical Assisting program is accredited by the Commission on Accreditation of Allied Health Education Programs, 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763, 727-210-2350, (www.caahep.org) upon the recommendation of the Medical Assistant Educational Review Board (MAERB).

According to the U.S. Bureau of Labor Statistics, medical assisting is one of the fastest growing occupations. Job opportunities involve many employment settings such as physicians' offices, clinics, hospitals, and out-patient or ambulatory settings. Certified Medical Assistants are clinically trained to assist in out-patient medical procedures, office administration, and interaction with patients.

Admission to the Medical Assisting program is selective. Applicants are required to show evidence of satisfactory completion of high school and/or previous college work with a minimum grade point average of 2.5. For detailed information on the admission process, contact the program director.

Curriculum for Medical Assisting

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I	G	3
BIOL	2410	Anatomy and Physiology I Lab	G	1
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
HLTH	1210	Medical Terminology	T	2
MEDA	1010	Introduction to Medical Assisting	T	3
MEDA	1012	Administrative Medical Office Practices	T	3
		Total:		**16**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II	G	3
BIOL	2430	Anatomy and Physiology II Lab	G	1
ENGL	2800	Professional Writing	G	3
MEDA	1020	Basic Medical Laboratory Techniques	T	3
MEDA	1022	Medical Assisting Clinical Procedures I	T	3
MEDA	1024	Pharmacology and Drug Administration	T	3
		Total:		**16**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
HLTH	1410	First Aid and Safety	B	1
MEDA	1032	Clinical Practicum/Seminar I	T	2
		*Mathematics Elective	G	3
		Total:		**6**

Start HERE.

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	1220	Interpersonal Communication	G	3
HLTH	2210	Nutrition and Diet Therapy	T	3
MEDA	2040	Medical Assisting Clinical Procedures II	T	3
		*Arts and Humanities Elective	G	3
		Total:		**12**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BMCA	1500	Word	T	3
COMM	2610	Public Speaking	G	3
HLTH	1730	Disease and the Disease Process	B	2
MEDA	2050	Clinical Practicum/Seminar II	T	2
PSYC	1010	Introduction to Psychology	G	3
		Total:		**13**

ASSOCIATE OF APPLIED SCIENCE DEGREE (63 credit hours)

*Arts and Humanities Electives			
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for MEDA is BMCA 1500.

MEDICAL LABORATORY (MLTP)

The Medical Laboratory program is designed to prepare students to function as members of the clinical laboratory health care team. Medical laboratory science professionals are vital healthcare detectives, uncovering and providing laboratory data that assist physicians in patient diagnosis and treatment, as well as in disease monitoring and prevention. Medical laboratory science professionals use sophisticated biomedical instrumentation and methods requiring manual dexterity to generate accurate laboratory data. One of the strengths of the program is the strong hands-on laboratory skills that the graduate possesses. These skills can be applied to a variety of settings including hospital labs, reference labs, doctor's offices and clinics, industrial labs, environmental testing, and quality control testing.

Clinical laboratory testing encompasses such disciplines as clinical chemistry, hematology, immunology, microbiology, and transfusion medicine. Students in the program learn to perform routine laboratory testing such as identification of microorganisms, chemical analysis of patient specimens, identification of blood cells, and the cross-matching of blood for transfusion. The program includes student learning experiences both on campus and in the clinical laboratory. These educational experiences allow students to acquire the basic entry-level competencies necessary to function in a clinical laboratory setting.

Job demand is predicted to continue to rise for the medical laboratory technician. According to the Bureau of Labor Statistics (2016), Ohio is one of the largest employers of medical laboratory technicians in the country. The annual mean wage for medical laboratory technicians in Ohio is currently $43,700. Employment of medical laboratory technicians nationwide is projected to grow 13 percent from 2016 to 2026, much faster than the average for all occupations. The Medical Laboratory program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119, 773-714-8880, https://www.naacls.org. After successful completion of the program, the graduate is eligible to take the national certification exam given by The American Society for Clinical Pathology (ASCP).

The Medical Laboratory program is a selective program limited to a maximum of 20 students per year. A complete list of admission criteria, including prerequisites, may be obtained from the following: www.zanestate.edu/programs/medical-laboratory.

Curriculum for Medical Laboratory

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I	G	3
BIOL	2410	Anatomy and Physiology I Lab	G	1
CHEM	1210	General Chemistry I	G	4
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MLTP	1000	Introduction to Medical Laboratory Science	T	2
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II	G	3
BIOL	2430	Anatomy and Physiology II Lab	G	1
CHEM	1220	General Chemistry II	G	4
MLTP	1100	Clinical Hematology I	T	3
MLTP	1200	Clinical Immunology	T	2
		*English Elective	G	3
		Total:		**16**

Start HERE.

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2010	General Microbiology	G	3
MATH	1650	Statistics	G	3
		*Communication Elective	G	3
		Total:		**9**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
MLTP	2000	Clinical Body Fluids	T	2
MLTP	2100	Clinical Hematology II	T	3
MLTP	2200	Clinical Chemistry	T	4
MLTP	2300	Clinical Microbiology	T	4
MLTP	2400	Clinical Immunohematology	T	3
		Total:		**16**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
MLTP	2500	Directed Practice 1: Clinical Chemistry	T	2
MLTP	2510	Directed Practice 2: Clinical Immunohematology	T	2
MLTP	2520	Directed Practice 3: Clinical Hematology and Coagulation	T	2
MLTP	2530	Directed Practice 4: Clinical Microbiology and Immunology	T	2
MLTP	2600	Medical Laboratory Technician Seminar	T	2
		*Arts and Humanities Elective	G	3
		Total:		**13**

ASSOCIATE OF APPLIED SCIENCE DEGREE (68 credit hours)

*Arts and Humanities Electives			
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for MLTP is BMCA 1020.

OCCUPATIONAL THERAPY ASSISTANT (OTAP)

Occupational therapy is a valuable healthcare profession that uses "occupations," those activities that are meaningful and purposeful to an individual or group, to increase their successful participation in the roles and routines of their daily life. Working under the supervision of a licensed occupational therapist, occupational therapy assistants help people of all ages acquire, improve, or regain the ability to engage in their daily occupations to lead independent, productive, and satisfying lives. Occupational therapy practitioners work with a diverse population of clients with varying levels of physical, developmental and emotional abilities.

The Occupational Therapy Assistant curriculum engages the student in academically challenging coursework, which combines biological and behavioral sciences with specific courses in theories of occupational therapy and occupational therapy treatment methods. Students are required to be active and self-directed learners with guidance from the faculty to establish the ability to plan and implement therapeutic treatments, adapt and grade activities to increase their client's independence, and educate individuals and groups in skills and techniques to improve their daily lives.

The Occupational Therapy Assistant program consists of four full-time semesters and one summer session of academic work. The student will have lecture and discussion-based classes, combined with on campus hands-on learning labs and off campus clinical fieldwork experiences. The OTAP program requires two full-time, eight-week fieldwork placements of supervised practical experience in a variety of healthcare practice settings that must be completed within 18 months of completion of the student's academic preparation.

The Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), c/o Accreditation Department of the American Occupational Therapy Association (AOTA), 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929, (301) 652-6611 and the website is www.acoteonline.org. Graduates of the program are eligible to take the National Board for Certification of Occupational Therapy's (NBCOT) examination to earn certification as an occupational therapy assistant. States also require certified occupational therapy assistants to complete a licensing process to practice in their respective state. A felony conviction may limit an individual's ability to be certified or licensed. Individuals with a felony record should contact the NBCOT to determine eligibility before applying to the program. The contact information is: National Board for Certification in Occupational Therapy (NBCOT) located at One Bank Street, Suite 300, Gaithersburg, MD, 20878. NBCOT's phone number is 301-990-7979 and its website is https://www.nbcot.org

Admission to the Occupational Therapy Assistant program is selective. A complete list of admission criteria may be obtained from the program director or at www.zanestate.edu/programs/occupational-therapy-assistant.

Curriculum for Occupational Therapy Assistant

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I	G	3
BIOL	2410	Anatomy and Physiology I Lab	G	1
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
HLTH	1210	Medical Terminology	B	2
PSYC	1010	Introduction to Psychology	G	3
		Total:		**13**

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II	G	3
BIOL	2430	Anatomy and Physiology II Lab	G	1
HLTH	1730	Disease and the Disease Process	B	2
OTAP	1070	Foundations of Occupational Therapy	T	2
OTAP	1130	Fundamentals of Occupation and Occupational Analysis	T	4
SOCI	1010	Introduction to Sociology	G	3
		Total:		**15**

Start HERE.

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
OTAP	1302	Directed Practice in Physical Dysfunction and Mental Health	T	1
OTAP	1520	Mental Health Concepts and Techniques for the Occupational Therapy Assistant	T	4
OTAP	2170	Physical Dysfunction in Occupational Therapy	T	5
		*Communication Elective	G	3
		*English Elective	G	3
		Total:		**16**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
MATH	1650	Statistics	G	3
OTAP	2100	Physical Agent Modalities in Occupational Therapy	T	1
OTAP	2210	Occupational Therapy in Geriatrics and Alternative Settings	T	4
OTAP	2250	Occupational Therapy in Pediatrics	T	5
		Total:		**13**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
OTAP	2320	Practicum I (Term I)	T	4
OTAP	2330	Seminar II (full semester)	T	1
OTAP	2420	Practicum II (Term II)	T	4
		Total:		**9**

ASSOCIATE OF APPLIED SCIENCE DEGREE (66 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for OTAP is BMCA 1020.

PATHWAYS TO BUSINESS – BUSINESS ADMINISTRATION AND MANAGEMENT (PBUS)

The Pathways to Business program is geared toward academically advanced high school juniors and seniors with an interest in business administration and management. The goals of the program are to prepare students for direct employment or to continue on with advanced studies in business management.

Students in the program earn college credits and high school credits simultaneously. At the conclusion of their senior year, graduates of the program earn an associate degree from Zane State College and a high school diploma from their home high school. Students in the program attend classes on the Zane State College campus with Zane State College faculty. They receive a solid foundation in business, economics, human resources management, marketing, and accounting. They learn and apply business management concepts which are fundamental to careers and advanced study in business management and business administration. Technical courses typically incorporate project based assignments, online labs, and in-class discussions. Technical classes may have guest speakers who are business managers. Field trips to businesses support the course curriculum.

Program graduates have opportunities to directly enter the workplace with their associate degree or pursue a bachelor's degree in business management, marketing, or human resources management at a university. Zane State College collaborates very closely with many other universities to allow our students to transfer directly as college juniors after graduation from Zane State. Admission to the Pathways to Business program is selective. Demonstrated academic readiness for college level math and English is required for acceptance into the program.

Curriculum for Pathways to Business – Business Administration and Management

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1110	Principles of Management	T	3
ECON	1520	Macroeconomics	G	3
ENGL	1500	Composition I	G	3
MATH	1050	Quantitative Reasoning	G	4
MKTG	1000	Marketing	T	3
		*First Year Experience Elective	B	1
		Total:		**17**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	1010	Financial Accounting	T	3
BMCA	1200	Excel	T	3
COMM	1220	Interpersonal Communication	G	3
ECON	1510	Microeconomics	G	3
ENGL	2800	Professional Writing	G	3
MATH	1650	Statistics	G	3
		Total:		**18**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
ACCT	2220	Managerial Accounting	T	3
BIOL	1070	Environmental Science	G	3
BUSM	2620	Organizational Behavior	T	3
HRMG	2650	Human Resource Management	T	3
POLS	1010	American National Government	G	3
		Total:		**15**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
BUSM	1310	Legal Environment	B	3
BUSM	2070	Small Business Management and Entrepreneurship	T	3
BUSM	2130	International Business	T	3
BUSM	2720	Financial Management	T	3
PHIL	1030	Critical Thinking	G	3
		Total:		**15**

ASSOCIATE OF APPLIED BUSINESS DEGREE (65 credit hours)

*First Year Experience Electives			
FYEX	1010	First Year Success Strategies	1
FYEX	1030H	Honors Freshmen Seminar	3
FYEX	1100	Introduction to Online Learning	1

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for PBUS is BUSM 1110.

PHYSICAL THERAPIST ASSISTANT (PTHA)

The Physical Therapist Assistant program is designed to provide students with the experiences and knowledge necessary to function as an integral part of the rehabilitation team.

Graduates will work under the supervision and direction of a physical therapist in treating neurological and orthopedic disorders utilizing interventions such as therapeutic exercise, hot and cold modalities, electrical stimulation, and gait training. Employment opportunities for physical therapist assistants may be found in hospitals, rehabilitation centers, nursing facilities, home health, outpatient and sports clinics, and schools. Learning experiences include classroom and laboratory activities as well as directed clinical practice under the supervision of a clinical instructor. The Physical Therapist Assistant graduate will be eligible to take the licensure examinations required by the state of Ohio. The Physical Therapist Assistant program is fully accredited by the Commission on Accreditation in Physical Therapy Education.

Admission to the Physical Therapist Assistant program is selective. Applicants must complete observation in the field and demonstrate readiness for college level math, English, and anatomy and physiology. A detailed list of application criteria may be obtained by visiting: www.zanestate.edu/programs/physical-therapist-assistant.

Curriculum for Physical Therapist Assistant

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I	G	3
BIOL	2410	Anatomy and Physiology I Lab	G	1
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
		*Computer Literacy Elective	B	1
		Total:		**9**

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II	G	3
BIOL	2430	Anatomy and Physiology II Lab	G	1
HLTH	1210	Medical Terminology	B	2
PTHA	1010	Introduction to the Physical Therapy Profession	T	3
PTHA	1070	Physical Therapy Procedures I	T	3
PTHA	1240	Functional Anatomy & Kinesiology for the Physical Therapy Assistant	T	3
		Total:		**15**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
PTHA	1050	Clinical Documentation for the Physical Therapist Assistant	T	2
PTHA	1060	Pathophysiology for the Physical Therapist Assistant	T	3
PTHA	1110	Physical Therapy Procedures II	T	3
PTHA	1120	Neurological Conditions in Physical Therapy	T	3
		*Communication Elective	G	3
		Total:		**14**

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
PTHA	2270	Rehabilitation - Concepts and Applications	T	3
PTHA	2320	Therapeutic Exercises - Concepts and Applications	T	3
PTHA	2400	Practicum I for the Physical Therapist Assistant	T	2
		*English Elective	G	3
		*Mathematics Elective	G	3
		Total:		**14**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
PTHA	2500	Practicum II for the Physical Therapist Assistant (Term I)	T	2
PTHA	2600	Practicum III for the Physical Therapist Assistant (Term II)	T	2
PTHA	2650	Role Transition and Professionalism for the Physical Therapist Assistant	T	2
		*Arts and Humanities Elective	G	3
		*Social and Behavioral Sciences Elective	G	3
		Total:		**12**

ASSOCIATE OF APPLIED SCIENCE DEGREE (64 credit hours)

*Arts and Humanities Electives			
ARTS	1010	Art History I	3
ENGL	2600	American Literature since 1865: The Making of a Diverse U.S.	3
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

*Computer Literacy Electives			
BMCA	1010	Introduction to Microcomputer Concepts and Applications	3
BMCA	1020	Introduction to Windows and Word	1
BMCA	1050	Introduction to Microcomputer Software Applications	2

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Mathematics Electives			
MATH	1050	Quantitative Reasoning	4
MATH	1650	Statistics	3

*Social and Behavioral Science Electives			
PSYC	1010	Introduction to Psychology	3
SOCI	1010	Introduction to Sociology	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for PTHA is BMCA 1010, BMCA 1020, or BMCA 1050.

RADIOLOGIC TECHNOLOGY (RADT)

This associate degree program is a career oriented, college-level technology consisting of classroom, laboratory, and clinical experiences. The curriculum includes communication, sociology, mathematics, biology, physics, and medical and radiography courses. Upon completion of this program, graduates will be able to obtain diagnostic radiographs while maintaining radiation protection and patient safety. They can also assist the radiologist in the detection, diagnosis, and treatment of diseases and injury through the use of x-ray. Additional duties may involve research, administration, and record keeping at the physician's discretion. Graduates of this program will be eligible to take the examination for certification and registration prepared by the American Registry of Radiologic Technologists and apply for licensure through the Ohio Department of Health.

Employment opportunities for qualified radiologic technologists exist in hospitals, clinics, physician's offices, government agencies, equipment manufacturers, research facilities, and colleges and universities.

Admission to the Radiologic Technology program is selective. For detailed information on the admission procedure and process, please contact the program director.

Curriculum for Radiologic Technology

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2400	Anatomy and Physiology I	G	3
BIOL	2410	Anatomy and Physiology I Lab	G	1
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
HLTH	1210	Medical Terminology	B	2
RADT	1010	Patient Care in Medical Imaging	B	3
		Total:		**13**

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2420	Anatomy and Physiology II	G	3
BIOL	2430	Anatomy and Physiology II Lab	G	1
MATH	1650	Statistics	G	3
RADT	1015	Directed Practice I	T	2
RADT	1230	Radiographic Procedures I	T	4
		Total:		**13**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	2500	Composition II	G	3
RADT	1050	Radiation Equipment and Protection	T	3
RADT	1100	Directed Practice II	T	2
RADT	1250	Radiographic Procedures II	T	4
SOCI	2060	Race and Ethnicity	G	3
		Total:		**15**

Summer Session II				
Course ID		**Course Name**	**T/B/G**	**Credits**
RADT	2020	Radiographic Pathology	B	2
RADT	2400	Directed Practice III	T	2
		*Communication Elective	G	3
		Total:		**7**

Start HERE.

Fall Semester II					
Course ID		**Course Name**		**T/B/G**	**Credits**
RADT	2030	Radiobiology/Radiation Protection		T	2
RADT	2040	Image Production and Evaluation		T	3
RADT	2250	Sectional Anatomy and Imaging Modalities		T	2
RADT	2500	Directed Practice IV		T	3
			Total:		**10**

Spring Semester II					
Course ID		**Course Name**		**T/B/G**	**Credits**
RADT	2100	Radiographic Image Analysis		T	2
RADT	2110	Medical Imaging Ethics and Law		T	1
RADT	2600	Directed Practice V		T	3
RADT	2990	Preparation for Role Transition		T	2
			Total:		**8**

ASSOCIATE OF APPLIED SCIENCE DEGREE (66 credit hours)

*Communication Electives			
COMM	1220	Interpersonal Communication	3
COMM	2610	Public Speaking	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for RADT is BMCA 1020.

SOCIAL WORK ASSISTANT (SWKA)

The Social Work Assistant program prepares students to begin entry level employment as direct service providers in the field of social work. A Social Work Assistant will find employment in the areas of aging, mental health, addiction, developmental disabilities, healthcare, and will work with families and children. Employment opportunities are found in both public and private social service agencies and organizations.

Graduates of the program may register as a Social Work Assistant (SWA) with the State of Ohio Counselor, Social Worker and Marriage and Family Board. It may also be possible for students to apply for the first credential in the field of chemical dependency counseling as a Chemical Dependency Counselor Assistant (CDCA) or as an Ohio Prevention Specialist Registered Applicant (RA).

The curriculum includes extensive exploration of the biological, psychological, and sociological aspects of human development. In addition, the student will develop skills in communication, problem assessment, documentation, case management, and group facilitation.

Successful students in this program demonstrate an interest in people, a capacity for empathy, an interest in social justice, and a tolerance of intense emotional situations.

Curriculum for Social Work Assistant

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
MATH	1050	Quantitative Reasoning	G	4
PSYC	1010	Introduction to Psychology	G	3
SWKA	1010	Introduction to Social Work	T	3
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	2500	Composition II	G	3
SWKA	1050	Group Dynamics	T	3
SWKA	1090	Interviewing	T	3
SWKA	1110	Learning and Behavior Theory	T	3
PSYC	2040	Lifespan Development	G	3
		Total:		**15**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	2610	Public Speaking	G	3
PSYC	2010	Abnormal Psychology	G	3
SOCI	1010	Introduction to Sociology	G	3
		Total:		**9**

Fall Semester II					
Course ID		**Course Name**		**T/B/G**	**Credits**
BMCA	1020	Introduction to Windows and Word		B	1
SWKA	2050	Introduction to Addiction Studies		T	3
SWKA	2210	Family Dynamics		T	3
SWKA	2230	Case Management		T	3
SWKA	2300	Practicum I		T	4
			Total:		**14**

Spring Semester II					
Course ID		**Course Name**		**T/B/G**	**Credits**
SOCI	2060	Race and Ethnicity		G	3
SWKA	2150	Social Welfare System		T	3
SWKA	2310	Practicum II		T	4
		*Arts and Humanities Elective		G	3
			Total:		**13**

ASSOCIATE OF APPLIED SCIENCE DEGREE (65 credit hours)

*Arts and Humanities Electives			
ARTS	1010	Art History I	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for SWKA is BMCA 1020.

WILDLIFE CONSERVATION (WILD)

Wildlife conservation technicians are educated in the natural sciences disciplines to meet the staffing needs of our region, state, and nation. Coursework includes study in the biological sciences such as botany, ecology, and zoology. Students learn practical applications and techniques in wildlife science, conservation, natural resource policy, biometrics, and outdoor recreation through courses that are hands-on and field oriented. Equipment use and safety, fish and wildlife management, natural history, and GIS are key components to training graduates. Ecology serves as a capstone course where material learned during the program is integrated into a final field research project report, report, and presentation. All WILD technical courses require a "C" grade or better for graduation.

Educational facilities include the College's 150-acre Natural Resources Center located adjacent to Dillon State Park and a 70-acre wetland located on Shannon Valley Road. The Muskingum County area provides numerous outdoor laboratory sites, having one of the highest concentrations of state parks, lakes, rivers, and wildlife and forest management areas in the state.

The Wildlife Conservation program is accredited by the North American Wildlife Technology Association. Certifications which may be obtained during this program include: Hunter, Trapper and Boater Education; Project Wild; Level 1 Chainsaw; and partial completion of USFS Firefighters Red Card.

Career opportunities include local, state and federal positions with parks, wildlife, and conservation agencies. Private organizations such as The Wilds, zoos, arboretums, campgrounds, and landscape nurseries also employ graduates. The Ohio Peace Officer Training Academy at Zane State College is available for students seeking park, wildlife, or watercraft officer positions.

Curriculum for Wildlife Conservation

Fall Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
ENGL	1500	Composition I	G	3
FYEX	1010	First Year Success Strategies	B	1
GEOL	1350	Earth Science	G	3
NAFS	1000	Natural Science Computer Applications	B	1
NAFS	1300	Soil Science	B	2
WILD	1080	Field Skills	T	2
WILD	1410	Botany	B	2
		Total:		**14**

Spring Semester I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	1510	Zoology	G	3
WILD	1300	Natural Resources Power Equipment	T	1
WILD	2900	Field Botany	T	1
		*Arts and Humanities Elective	G	3
		*English Elective	G	3
		*Mathematics Elective	G	3
		Total:		**14**

Summer Session I				
Course ID		**Course Name**	**T/B/G**	**Credits**
BIOL	2300	Introduction to Limnology	G	3
NAFS	2700	Fisheries Management	T	3
		Total:		**6**

Start HERE.

Fall Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
WILD	2170	Mammalogy	T	1
WILD	2400	Field Entomology	T	1
WILD	2500	Wildlife Habitat Management	T	3
WILD	2540	Outdoor Area Construction	T	2
WILD	2570	Forestry	T	3
WILD	2610	Recreation Law, Management and Policy	T	2
WILD	2740	Nature Interpretation	T	1
		Total:		**13**

Spring Semester II				
Course ID		**Course Name**	**T/B/G**	**Credits**
COMM	2610	Public Speaking	G	3
NAFS	2150	Geographic Information Systems	T	3
WILD	2150	Field Ornithology	T	1
WILD	2200	Field Herpetolgy	T	1
WILD	2550	Field Biometry	T	2
WILD	2600	Ecology Capstone	T	3
		Total:		**13**

Summer Session II				
Course ID		**Course Name**	**T/B/G**	**Credits**
NAFS	2002	Seminar	T	1
		*Technical Elective	T	1
		Total:		**2**

ASSOCIATE OF APPLIED SCIENCE DEGREE (62 credit hours)

*Arts and Humanities Electives			
PHIL	1010	Introduction to Philosophy	3
PHIL	1020	Introduction to Ethics	3
PHIL	1030	Critical Thinking	3

*English Electives			
ENGL	2500	Composition II	3
ENGL	2800	Professional Writing	3

*Mathematics Electives			
MATH	1340	College Algebra	4
MATH	1650	Statistics	3

*Technical Electives			
NAFS	2001	Cooperative Work Experience	1
WILD	2003	Wildlife Practicum	1

In order to graduate, students must complete the Computer Literacy requirement, which is determined by each program. The computer literacy requirement for WILD is NAFS 1000.

BACHELOR DEGREES

ELECTRICAL ENGINEERING TECHNOLOGY IN PROTECTION AND CONTROL (BSET)

The Bachelor of Applied Science in Electrical Engineering Technology was designed in response to the critical need for an electric utility workforce. The electric utility industry is an essential service that underpins operations of all businesses, industries, and homes that rely on an uninterrupted, on-demand electrical infrastructure facing a wave of retirements and rapidly changing technology. Smartgrid technologies and advancing protection and control systems are forcing companies to demand a better educated workforce.

The curriculum was developed by faculty from Zane State College's ABET accredited Electrical Electronics Engineering Technology program, public utility partners, the manufacturing sector, and high school educators. The collaboration spanned across the region, with each entity adding supporting documentation with a focus on industry recognized credentials that align with in-demand occupations.

Students completing the Bachelor of Applied Science in Electrical Engineering Technology (BSET) specialize in the design, analysis, installation, testing, commissioning, and maintenance of protection and control systems used across our nation's high voltage power grid. Graduates of this program will have the skills and knowledge to excel in a variety of entry-level engineering roles related to protection and control of power industry equipment. Major employers may include power generation facilities, power transmission design and construction service companies, substation equipment vendors, and large manufacturing facilities.

The BSET program is designed to grow student knowledge beyond their ABET-accredited associate's degree in engineering technology. Applicants will first complete Zane State's Electrical/Electronics Engineering Technology (EEET) two-year associate's degree program or transfer in with a qualifying equivalent degree. Then, BSET students proceed to upper level courses via the following curriculum.

Curriculum for Electrical Engineering Technology in Protection and Control (junior and senior years)

Summer Session II				
Course ID		**Course Name**	**T/B/G**	**Credits**
PHIL	1010	Introduction to Ethics	G	3
PHYS	2020	Physics II	G	4
		Total:		**7**

Fall Semester III				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	3000	Introduction to Electric Utility Industry	T	2
EEET	3100	Introduction to Protection Systems	T	2
EEET	3150	Workplace Skills Seminar	T	1
EEET	3200	Electric Utility Print Reading	T	2
EEET	3250	Electric Utility Safety	T	1
MATH	2510	Calculus I	G	5
		Total:		**13**

Spring Semester III				
Course ID		**Course Name**	**T/B/G**	**Credits**
EEET	3300	Substation Design and Construction	T	3
EEET	3340	Three-Phase Circuit Phasor Analysis	T	3
EEET	3400	Generation, Transmission, and Distribution	T	2
EEET	3450	High Voltage Power Circuit Breakers	T	2
MATH	2520	Calculus II	G	5
		Total:		**15**

Fall Semester IV					
Course ID		**Course Name**		**T/B/G**	**Credits**
EEET	4100	Protective Relaying I		T	4
EEET	4150	High Voltage Power Transformers		T	3
EEET	4350	Substation Communications		T	3
ITCS	2090	Project Management Methodologies		B	3
			Total:		**13**

Spring Semester IV					
Course ID		**Course Name**		**T/B/G**	**Credits**
EEET	4200	Metering and Energy Management		T	2
EEET	4300	Industrial Equipment Protection		T	3
EEET	4400	Protective Relaying II		T	4
EEET	4500	Protection and Control Capstone		T	3
			Total:		**12**

BACHELOR OF APPLIED SCIENCE DEGREE (120 credit hours total when combined with associate degree)

COURSE DESCRIPTIONS

Key to Course Description Codes:

B	**Basic course:** those courses within applied associate degrees that emphasize the application of general education to an occupational or technical area
G	**General Education course:** those courses in written and oral communication, quantitative principles, biological and physical sciences, social and behavioral sciences and the arts and humanities that provide the foundation and common experience expected among individuals holding associate and baccalaureate degrees
T	**Technical course:** those courses clearly identifiable with the skills that provide the proficiency and knowledge required for career competency and designed to prepare students for immediate employment upon graduating with an applied associate degree
V	**Developmental Education course:** those courses emphasizing academic skill development in preparation for college level work; developmental education courses cannot be applied toward the minimum requirements for a certificate or degree program
CTAG	**Career-Technical Assurance Guide course:** specified and approved technical programs taken at an Ohio career center that have been matched to technical credit for transfer at public colleges and universities
OT36	**Ohio Transfer 36 course:** 36 semester hours of coursework in general education that is a subset or complete set of general education requirements at each public college or university
TAG	**Transfer Assurance Guide course:** equivalent pre-major/beginning major courses in a specific subject area guaranteed to transfer and apply toward the specific major at any of Ohio's public colleges and universities

Credit Hours

Credit hours are awarded for course work taken at the College each semester. Credit hours at Zane State College are based on the following criteria:

- Lecture: One hour of formalized classroom lecture/instruction per week, with an expectation of approximately two hours of out-of-class study and assignments (one credit hour is awarded for each 750 minutes of instruction per semester).
- Laboratory: Three hours of laboratory instruction per week with no assigned homework (one credit hour is awarded for each 2250 minutes laboratory time) or two hours of laboratory instruction per week with at least one hour of out of class assignments (one credit hour is awarded for each 1500 minutes laboratory time and 750 minutes out of class assignments)
- Clinical laboratory, directed practice, practicum, and cooperative work experience are awarded one credit hour for a determined number of contact hours for the experience. The contact hours per week are listed after the credit hours in the catalog course description.

Example of contact hours: A 3 credit hour course - 2 lecture 3 lab indicates that the course meets each week for two 50-minute lecture periods and three 50-minute laboratory periods.

ACCT 1010-Financial Accounting
(3 credit hours - 2 lecture 2 lab - T/B) TAG – OBU010
An introduction to financial accounting. Topics include the nature of business and accounting, the language of accounting, the preparation and analysis of basic corporate financial statements and the impact of simple accounting transactions on financial statements. Accounting principles applicable to income measurement; cash and internal control; investments and receivables; inventories; current and long-term liabilities; operating assets and stockholder's equity are covered. Time-value of money concepts are introduced. Prerequisite: MATH 0995 with a "C" or better or placement into college level math.

ACCT 1110-Accounting I
(4 credit hours - 4 lecture 0 lab - T/B)
An introduction to accounting, covering the basic structure of accounting; journals and ledgers; the accounting cycle for a service enterprise; sales and purchases; deferrals and accruals; accounting for merchandise activities under both periodical and perpetual inventory systems, inventory valuation, and cost of goods sold; accounting for information systems, cash and internal controls, receivables, plant assets, natural resources, and intangibles. Co-requisite: MATH 0990.

ACCT 1120-Accounting II
(4 credit hours - 4 lecture 0 lab - T)
A continuation of Accounting I with emphasis on concepts and principles in accounting for current liabilities, payroll, partnerships, corporations, long-term payables, investments, international operations, statement of cash flow, and analysis of financial statements. Prerequisite: ACCT 1110.

ACCT 1200-Excel Business Applications
(3 credit hours - 2 lecture 3 lab - T/B)
Accounting applications applied using Microsoft Excel. Financial statement preparation, aging of accounts receivable, loan amortization, ratio analysis, payroll, depreciation, fixed assets covered. Emphasis on sorting, filtering, and formatting. Prerequisite or co-requisite: ACCT 1010 or ACCT 1110.

ACCT 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ACCT 2050-Computer-Aided Accounting
(3 credit hours - 2 lecture 2 lab - T)
An introduction to computerized accounting using QuickBooks Pro accounting software, covering creating a company, working with vendors, customers, banking, correcting and customizing, accounting cycle and using classes, inventory, payroll, working with estimates and time tracking, budgets, closing and adjusting, and reporting. A fee applies to this course. Prerequisite: ACCT 1010 or ACCT 1110.

ACCT 2100-Payroll Accounting
(3 credit hours - 3 lecture 0 lab - T)
A study of payroll tax procedures, record-keeping regulations, payroll data collection, and reporting requirements. The course will introduce topics on taxing entities, federal, state, and local taxing authorities, wage-hour laws, mandatory and optional payroll deductions, and how to record payroll journal entries. Prerequisite or co-requisite: ACCT 1120.

ACCT 2110-Income Tax Accounting
(3 credit hours - 3 lecture 0 lab - T)
A study of current Internal Revenue Code as it relates to the individual taxpayer with practice in the preparation of individual tax returns. Prerequisite or co-requisite: ACCT 1010 or ACCT 1110.

ACCT 2220-Managerial Accounting
(3 credit hours - 3 lecture 0 lab - T) TAG – OBU011
A study of the gathering and application of information by accountants and managers. Introduces the elements of cost and covers how to plan, make decisions, evaluate performance and control an organization. Prerequisite: ACCT 1010 or ACCT 1110.

ACCT 2250-Cost Accounting
(3 credit hours - 3 lecture 0 lab - T)
A study of the accumulation and analysis of cost data. Introduces the elements of cost and the methods of accounting for these costs. It also covers cost-volume-profit relationships, budgeting, decision-making, direct costing and inventory management. Prerequisite: ACCT 1010 or ACCT 1110.

ACCT 2310-Auditing
(3 credit hours - 3 lecture 0 lab - T)
A study of auditing theory, procedures, and practices of independent examinations of financial statements and records. The course will introduce the essential principles of audit field work, to include basic auditing principles, the preparation of audit work papers and the evaluation of the internal control system. Prerequisite or co-requisite: ACCT 1120.

ACCT 2410-Intermediate Accounting I
(3 credit hours - 3 lecture 0 lab - T)
An advanced study and analysis of accounting theory, accounting process, the income statement, the balance sheet, cash flows, receivables, inventories and inventory methods, plant and equipment acquisition and retirement, depreciation, Impairments, depletion, and intangible assets. Prerequisites: ACCT 1120 and MATH 1340.

ACCT 2420-Intermediate Accounting II
(3 credit hours - 3 lecture 0 lab - T)
A continuation of ACCT 2410 (Intermediate Accounting I). The advanced study of: current liabilities, long-term liabilities, stockholder's equity, dilutive securities, earnings per share, investments, revenue recognition, accounting for income tax, pensions, leases, disclosure, accounting changes, changes in cash flows and analysis of financial statements. Prerequisite: ACCT 2410.

ACCT 2850-Accounting Practicum
(1-2 credit hours - 105 clock hours per credit hour - T)
Directed work experience allowing the student to apply classroom knowledge and discover aspects of the workplace in a supervised setting. Students encounter the application process, on-the-job instruction by accounting professionals, and evaluations. The practicum is coordinated by a faculty member of the college who assists the student in planning the experience, visits the practicum site for a conference with the student and his/her supervisor at least once during the semester, and assigns the course grade to the student after the appropriate consultation with the employer/supervisor. Prerequisite: ACCT 1120; Co-requisite: ACCT 2851.

ACCT 2851-Accounting Seminar
(1 credit hour - 1 lecture 0 lab - T)
This seminar class is a partner course to ACCT 2850-Accounting Practicum. The course is a less formal learning experience. Students will engage in active discussion directed by a faculty member in an online setting. Assignments related to the field experience will allow students to reflect, share, and discuss their internships. Prerequisite: ACCT 1120; Co-requisite: ACCT 2850.

ACCT 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

AGRP 1110-Animal Science I
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTASM001
Concepts of animal production and management are introduced in this course. Aspects of animal nutrition and growth, health and sanitation, and husbandry are examined. Included is the identification of breeds, their anatomy and physiology, and behavior. Prerequisite: High school biology.

AGRP 1120-Plant Science I
(3 credit hours - 2 lecture 3 lab - T)
The traditional and sustainable methods used to increase the efficient production of plant products. Plant taxonomy, anatomy, physiology, and propagation methods are examined. Prerequisite: High school biology.

AGRP 2540-Agricultural Equipment and Construction
(2 credit hours - 1 lecture 2 lab - T)
Equipment and structures found on farms. Basic mechanical systems and the operation, maintenance, and safety of equipment used in agriculture are explored. Basic construction methods and materials are identified and their uses determined. Labs include operation and/or maintenance of chainsaws, tractors, and welding equipment, hand and shop power tools. Lab projects may include seed bed preparation, outdoor construction, and/or small scale logging. Prerequisite: Sophomore status.

ALTE 1010-Introduction to Energy Resources
(3 credit hours - 2 lecture 2 lab - T) TAG – ORE001; CTAG – CTAE001
This course provides an overview of traditional and alternative (renewable) energy technology, including fossil fuels, solar (photovoltaic and thermal), wind, geothermal, and transportation fuels (including biofuels and hydrogen). The basic technology of how each system works, advantages and disadvantages and design/cost issues will also be covered. Prerequisite: Placement into college level math.

ALTE 1800-Photovoltaic Energy Systems
(2 credit hours - 1 lecture 2 lab - T)
This course explores the design and installation of solar photovoltaic systems and their applications, both off-grid and on-grid. Topics include: the science of photovoltaic technology, the economics of solar energy, basic photovoltaic systems, a review of electrical concepts, residential and light commercial photovoltaic systems, PV module I-V characteristics, PV module performance ratings and construction as well as environmental effects on performance, PV array characteristics, solar battery operation, charge controller operation, stand-alone and grid-connected PV systems, PV troubleshooting concepts, and site analysis and selection for photovoltaic systems. A fee applies to this course. Prerequisite: Placement into college level math.

ALTE 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ALTE 2200-Wind Power Systems
(2 credit hours - 1 lecture 2 lab - T) TAG – ORE005; CTAG – CTAE002
This course will apply fundamental principles of the thermodynamics, fluid mechanics and mechanical systems to wind turbine engineering. Fundamentals of horizontal-axis wind turbines will be emphasized: wind energy conversion to useful work, wind turbine, aerodynamics, performance and design of wind turbine components. An overview of the wind resource and historical development of wind turbines and introduction of wind turbine installation and wind farm operation will also be covered. Prerequisite: Placement into college level math.

ALTE 2500-Energy Systems Management
(4 credit hours - 3 lecture 3 lab - T)
Prepares students to perform basic energy efficiency audits. The US EPA's Energy Star program and the Department of Energy's ASRAE codes are evaluated. Learn how to increase a company's efficiency by 20-50 percent and save them significant money. Prerequisite: Placement into college level math.

ALTE 2800-Alternative Energy Capstone Experience
(4 credit hours - 2 lecture 4 lab - T)
This course will provide the students an opportunity to interact with professionals in the alternative energy resource technologies. Students will develop authentic projects while integrating their academic and technical skills. Students will be mentored by faculty and industry professionals. The capstone experience will result in the design and implementation of a product that will have the potential to be included in an actual project's overall energy plan. Students will be expected to prepare a prototype or complete design of their project and present a written report and an oral presentation. These products will be assessed by a panel of experts. Prerequisite: Completion of all previous ALTE courses.

ALTE 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

AMSL 1010-American Sign Language I
(3 credit hours - 3 lecture 0 Lab - B) TAG – OFL025
American Sign Language I is an introduction into the world of deafness. This course focuses on the basics of American Sign Language, the natural language used by deaf individuals and the deaf community. The students will focus on the grammatical structure of ASL and will begin to develop both receptive and expressive skills in ASL. The students will learn the alphabet, numbers, time, colors, how to introduce themselves, exchange personal information, talk about people and family members, descriptive vocabulary, giving and receiving directions, making requests, action words and common sentences and phrases used in everyday situations. Deaf culture, its characteristics and Deaf History will also be discussed. Prerequisite: None.

AMSL 1020-American Sign Language II
(3 credit hours - 3 lecture 0 Lab - B) TAG – OFL026
American Sign Language II is a continuation of an introduction into the world of deafness. This course focuses on the basics of American Sign Language, the natural language used by deaf individuals and the deaf community. The students will focus on the grammatical structure of ASL and will continue to develop both receptive and expressive skills in ASL. The class will focus on vocabulary development such as descriptors, time concepts, direction concepts, verbs in more depth, asking and answering questions, giving explanations, comparing and contrasting. Students will also learn to use classifiers, appropriate hand, body and facial gestures in highly practiced situations. Deaf culture, its characteristics and Deaf History will also be discussed. During this course, students perform better and stronger in the Novice range while some abilities emerge in the Intermediate range. Prerequisite: AMSL 1010.

AMSL 1100-Sign Language for the Health Professions
(3 credit hours - 3 lecture 0 Lab - B)
Sign Language for the Health Professions will focus on sign language for students in the medical fields who may need to communicate with deaf individuals in their jobs. This course will focus on building vocabulary, basic conversation necessary in medical areas, as well as learning about deaf culture, technology, and different sign systems used by deaf individuals. Prerequisite: None.

AMSL 1950-Special Topics
(0.1-8 credit hours - B)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

AMSL 2950-Special Topics
(0.1-8 credit hours - B)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ARTS 1010-Art History I
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH005 when taken with ARTS 1020
This course is an introduction to major works of Western art from prehistory to the Medieval period. Students will become acquainted with some of the most important monuments and images from Western history and learn key artistic and historical terms, concepts and styles. Material will focus on the influence of historical and cultural context in shaping the production and development of art in different regions. This is a writing-intensive course that will instruct students on how to view, analyze, discuss, and write about art. Prerequisite or co-requisite: ENGL 1500.

ARTS 1020-Art History II
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH005 when taken with ARTS 1010
This course is an introduction to major works of Western art from the late Medieval period to the Modern/Contemporary era. Students will become acquainted with some of the most important monuments and images from European and American history and learn key artistic and historical terms, concepts and styles. Material will focus of the influence of historical and cultural context in shaping the production and development of art in different regions. This is a writing-intensive course that will instruct students on how to view, analyze, discuss and write about visual culture. Prerequisite or co-requisite: ENGL 1500.

ARTS 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ARTS 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

BIOL 1070-Environmental Science
(3 credit hours - 2 lecture 3 lab - G) OT36 – TMNS; CTAG – CTNRM001
A laboratory science course for non-science majors. Provides an introduction to science, the scientific method, basic biological and ecological concepts and applies these to current environmental issues. A fee applies to this course. Prerequisite: None.

BIOL 1210-General Biology I
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS; TAG – OSC003
A study of cellular and molecular biology. This laboratory-based course focuses on life and its classification, scientific method, chemistry of life, cell structure and function, bioenergetics, DNA and proteins synthesis, cell division, principles of inheritance, and evolution. A fee applies to this course. Prerequisite: None.

BIOL 1210H-Honors General Biology I
(4 credit hours - 3 lecture 3 lab - G)
A study of cellular and molecular biology. This laboratory-based course focuses on life and its classification, scientific method, chemistry of life, cell structure and function, bioenergetics, DNA and proteins synthesis, cell division, principles of inheritance, and evolution. It also includes the completion of an independent research project. A fee applies to this course. Prerequisite: Acceptance into the Zane State College Honors Program.

BIOL 1220-General Biology II
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS; TAG – OSC004
A study of organismal biology and ecology. This laboratory-based course focuses on phylogeny, diversity of organisms, form and function of plants and animals, animal behavior, ecology, and conservation biology. Students perform multiple dissections and conduct a research project. A fee applies to this course. Prerequisite: BIOL 1210.

BIOL 1510-Zoology
(3 credit hours - 2 lecture 3 lab - G) OT36 – TMNS; CTAG – CTNRM003
A survey of anatomy, physiology, morphology, behavior and the taxonomy of the major animal phyla to provide an introduction to the principles, skills, and applications of biology to students interested in wildlife conservation, and the biological and environmental sciences. The course emphasizes the diversity and evolutionary adaptations of animal groups, taxonomy, general principles in biology, and the process of science. Laboratory investigations include data collection and analysis, examinations of animal anatomy through direct observation and dissection, morphology, and behavior. A fee applies to this course. Prerequisite: None.

BIOL 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. A fee applies to this course. Prerequisite: Academic Dean approval.

BIOL 2010-General Microbiology
(3 credit hours - 2 lecture 2 lab - G) OT36 – TMNS
Introduction to the study of general microbiology. Emphasis on the structure, metabolism, growth, and isolation of pathogenic microorganisms. Introduction to plating, isolation, and staining techniques used to identify microorganisms. A fee applies to this course. Prerequisites: Grade of “C” or better in BIOL 1210 or high school biology with a grade of “C” or better within the last three years and permission of the instructor or department chair.

BIOL 2050-Tropical Field Biology
(3 credit hours - 2 lecture 3 lab - G) OT36 – TMNS
Students will learn basic concepts of tropical ecosystems by participating in a field study in the Bahamas. Course will be taught at the Forfar Field Station on Andros Island in the Bahamas. Prerequisite: High school or college science course with a "C" or better.

BIOL 2300-Introduction to Limnology
(3 credit hours - 2 lecture 3 lab - G) OT36 – TMNS
BIOL 2300 explores the chemical, physical, and geological factors of inland waters. Provides both field and laboratory practice in sampling techniques and chemical analysis (wet chemistry, instrumentation) of inland surface waters as well as the interpretation and reporting of water quality data. An overview of the ecology of lentic and lotic ecosystems is included. A fee applies to this course. Prerequisite: None.

BIOL 2400-Anatomy and Physiology I
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMNS
An introduction to the study of the structure and function of the human body stressing the chemical basis of life, molecular biology, human tissues, and the interrelation of the skeletal, muscular, and nervous systems. Prerequisites: Grade of "C" or better in BIOL 1210 or high school biology with a grade of "C" or better within the last three years and permission of the instructor; Co-requisite: BIOL 2410.

BIOL 2410-Anatomy and Physiology I Laboratory
(1 credit hour - 0 lecture 3 lab - G) OT36 – TMNS
An introduction to structure and function of the human body stressing the anatomical terminology, cellular and tissue structure and function and the interrelation of the skeletal, muscular, and nervous systems. A fee applies to this course. Prerequisite: BIOL 1210 with a grade of "C" or better or advanced high school biology within the last three years with a grade of "C" or better as evidenced by high school transcripts with instructor permission or department chair; Co-requisite: BIOL 2400.

BIOL 2420-Anatomy and Physiology II
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMNS
A continuation of the study of the structure and function of the human body stressing the interrelation of cardiovascular, lymphatic, immune, endocrine, respiratory, digestive, urinary, and reproductive systems. Prerequisites: Grade of "C" or better in BIOL 2400 and BIOL 2410; Co-requisite: BIOL 2430.

BIOL 2430-Anatomy and Physiology II Laboratory
(1 credit hour - 0 lecture 3 lab - G) OT36 – TMNS
A continuation of the study of the structure and function of the human body stressing the interrelation of the cardiovascular, lymphatic, immune, endocrine, respiratory, digestive, urinary, and reproductive systems. A fee applies to this course. Prerequisites: Grade of "C" or better in BIOL 2400 and BIOL 2410; Co-requisite: BIOL 2420.

BIOL 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

BMCA 1000-Crucial Computer Skills
(1 credit hour - 1 lecture 0 lab - B)
This course is designed to help students develop the computer skills most college instructors or employers expect everyone to possess. These skills include fluency with Microsoft Word and the Windows operating system, as well as how to appropriately save, retrieve, and upload files. Prerequisite: None.

BMCA 1010-Introduction to Microcomputer Concepts and Applications
(3 credit hours - 2 lecture 2 lab - B) TAG – OBU003
This is a general survey course covering a variety of computer topics and applications. Computer history, concepts, and terminology will be explored. You will also be introduced to Windows and the Internet as well as Word, Access, Excel and PowerPoint. Prerequisite: None.

BMCA 1020-Introduction to Windows and Word
(1 credit hour - 0 lecture 2 lab - B)
This course covers Microsoft Windows and Word utilizing a hands-on approach. The basics of Windows will be explored as well as how to create a variety of documents in Microsoft Word. (FL, SP, SU) Prerequisite: None.

BMCA 1050-Introduction to Microcomputer Software Applications
(2 credit hours - 1 lecture 2 lab - B)
This course will provide you with an in-depth introduction to the different types of software applications that are used today at home, school and by business and industry. Emphasis will not only be placed on acquiring new skills, but in applying them through the use of a variety of projects and case studies. Prerequisite: None.

BMCA 1110-Office Keyboarding Skills
(1 credit hour - 0 lecture - 2 lab - B)
This course emphasizes basic keyboarding and skill development using the touch-type method. Prerequisite: None.

BMCA 1200-Excel
(3 credit hours - 2 lecture 3 lab - T/B)
This course will introduce you to basic and advanced spreadsheet applications utilizing Microsoft Excel. You will learn to use a spreadsheet to keep track of numerical data by tracking, analyzing and evaluating a variety of financial statements. Excel will also be used as a planning tool by providing different scenarios for impending projects. A fee applies to this course. Prerequisite: None.

BMCA 1300-Access
(3 credit hours - 2 lecture 3 lab - T/B)
This course will provide you with exposure to database management systems and their business uses and applications. Providing a company with accurate information in a timely fashion is a must in business and industry. You will not only learn how to design tables and enter data, but also create forms, reports, and queries. A fee applies to this course. Prerequisite: BMCA 1010 or BMCA 1050 or ITCS 1010 or permission of instructor.

BMCA 1500-Word
(3 credit hours - 2 lecture 3 lab - T/B)
A course designed to teach the essentials of Microsoft Word for Windows. Course topics may include basic formatting, working with tabs and indents, page formatting, headers and footers, sections, merging, templates, outlines, report formatting, and graphics. Prerequisite: None.

BMCA 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

BMCA 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

BUSM 1110-Principles of Management
(3 credit hours - 2 lecture 2 lab - T/B)
A study of managerial functions including planning, organizing, leading, and controlling; and their implementation by objectives, policies, decision making, authority, executive development, communication, and attitude. Prerequisite: None.

BUSM 1310-Legal Environment
(3 credit hours - 3 lecture 0 lab - B) TAG – OBU004
This course is intended to help students attain a basic understanding of the American legal system particularly as it relates to businesses. The course will introduce the nature and operation of the court system, the legal impact of crimes and torts on businesses, and "private law" - focusing on contracts. Environmental factors such as administrative law, ethics, intellectual property, and e-commerce will be considered. Prerequisite: None.

BUSM 1530-Consumer Economics
(3 credit hours – 3 lecture 0 lab -B)
A course designed to help students successfully engage in the broad economic environment and make intelligent consumer decisions using critical thinking skills, cost/benefit analysis, and mathematical analysis. This course has a strong focus on evaluating and navigating the modern economic structure and includes: economics and the American family, budgeting, consumer problems, consumer durables, housing/debt, insurance, savings and investments, and current issues. Prerequisite: None.

BUSM 1600-Business Ethics
(3 credit hours - 3 lecture 0 lab - B)
The purpose of this course is to explore ethical issues in a rational, pragmatic, responsible, and decisive manner in order to best prepare students to resolve these issues when faced with them in their professional lives. This course will raise awareness surrounding the legal, moral and ethical challenges in business, create a sensitivity to the implications of business decisions in order to make the most effective decision possible, and study tools and strategies for managing both personal behavior and others' ethical behavior. Prerequisite: None.

BUSM 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

BUSM 2000-Field Experience I
(1-4 credit hours - 0 lecture 30-50 lab - T)
Supervised work experience for business technology students. Includes student applying for a job in a related area, on-the-go supervision, scheduled visits by coordinators, and periodic evaluations. Prerequisite: Internship positions must be approved by the Academic Dean.

BUSM 2070-Small Business Management and Entrepreneurship
(3 credit hours - 3 lecture 0 lab – B/T) CTAG – CTENTR001
This course is designed to give the student the fundamentals of managing a small business. A study of starting, managing, and financing a company, with an emphasis on the problems and risks unique to operating a small business. The student will develop a comprehensive business plan using the concepts learned throughout the course. Prerequisites: ACCT 1010 or ACCT 1110 and sophomore status or permission of instructor.

BUSM 2100-Field Experience II
(1-4 credit hours - 0 lecture 30-50 lab - T)
A continuation of Field Experience I. Prerequisite: BUSM 2000.

BUSM 2130-International Business
(3 credit hours - 3 lecture 0 lab - T)
A study of the economic, social, legal, cultural and political considerations of doing business internationally. Explores the role of international monetary systems, investment theory, financial markets and exchange rates. Prerequisite: Sophomore standing or permission of instructor.

BUSM 2620-Organizational Behavior
(3 credit hours - 3 lecture 0 lab - T) TAG – OBU012
Students will study human behavior, emphasizing career successes, in organizations including business, industry and the government. Topics include motivation, high performance organizations, group and conflict processes. The student will use both learning theory and critical thinking skills in experiential exercises and case studies relevant to the workplace. Prerequisite: None.

BUSM 2720-Financial Management
(3 credit hours - 3 lecture 0 lab - T)
Corporate structure, forms of business organization, financing through securities, sources of capital, management of assets, administration of income and expenses, expansion and combinations are studied. Prerequisites: ACCT 1010 and BMCA 1200 or permission of instructor.

BUSM 2730-Real Estate Principles and Practices
(3 credit hours - 3 lecture 0 lab - T)
Basic foundation course in real estate philosophy, theory, economics, and administration. Covers elementary physical, legal, location, and economical characteristics of real estate, real estate markets, and influences on real estate values. Prerequisite: None.

BUSM 2740-Real Estate Law
(3 credit hours - 3 lecture 0 lab - T)
Includes eleven legal areas commonly concerned with typical real estate professionals. Among topics covered are law of agency as applied to real estate brokers and salesmen, law of fixtures, estates, conveyances of real estate, mortgages and liens, license laws of Ohio, and zoning. Prerequisite: None.

BUSM 2750-Real Estate Finance
(3 credit hours - 3 lecture 0 lab - T)
Includes institutions, methods, instruments, and procedures involved in financing of real estate, nature, and characteristics of mortgage market. Effects of monetary and fiscal policies on real estate financing considered. Prerequisite: None.

BUSM 2760-Real Estate Appraising
(3 credit hours - 3 lecture 0 lab - T)
This course deals with appraisal theory, basic principles affecting value of real property; data accumulation and analysis of the city, neighborhood, site, and property; applied techniques and estimating value from three approaches; building analysis, depreciation; entire range of appraisal process; and preparation based on field experience of preparing single-family residential appraisal report. Prerequisite: None.

BUSM 2770-Real Estate Brokerage
(3 credit hours - 3 lecture 0 lab - T)
This course expands on BUSM 2730 and includes: specialized fields of real estate, principal-agent relationship, listing principles and practices, closing principles and practices, sales contract, principles of economics and real estate appraising, property insurance, real estate finance, federal laws regulating real estate practice, mathematics in real estate, and other facets of real estate needed by real estate professionals; Ohio licensing laws and requirements. Prerequisite: None.

BUSM 2950-Special Topics
(1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a Business student's program of study. Prerequisite: Academic Dean approval.

CAMT 1000-Measurement and Layout
(4 credit hours - 2 lecture 4 lab - T)
Course is designed to be an introduction to the usage of multiple measuring instruments and manual machine tool equipment. The language of measurement and systems of measurement through scaled instruments, Vernier instruments, micrometer instruments and gage blocks will be one key focus. The setup and use of manual mills and lathes to create and reproduce detailed parts will be a second focus. Prerequisite: MECH 1000; Co-requisite: MATH 1040.

CAMT 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CAMT 2000-CNC Machining
(4 credit hours - 2 lecture 4 lab - T)
Presents the introductory concepts of numerically controlled machining technology. Additional studies will focus on coordinate system, cutting tools, feeds and speeds, tool offsets, and how they are used by the machine, setup and machining of parts. Prerequisite: CAMT 1000.

CAMT 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CHEM 1010-Introduction to Chemistry
(3 credit hours - 2 lecture 3 lab - G) OT36 – TMNS
This course is an introduction to fundamental chemical concepts with topics including, but not limited to, the metric system, atomic structure, periodic classification of elements, chemical bonds and compounds, mole concept, chemical equations and reactions, stoichiometry, gas laws, solutions, chemical equilibrium, and acids and bases. Co-requisite: MATH 0990 or MATH 0995 or placement into college level math.

CHEM 1210-General Chemistry I
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS; TAG-OSC008
This course focuses on the principles of general chemistry, including measurements and chemical analysis, atomic and molecular structures, chemical formulas and equations, stoichiometry and solution reactions, periodicity, bonding and molecular geometry, states of matter, and thermochemistry. Students will complete lab experiments related to these topics. This course is recommended for students who are pursuing an associate degree in science, engineering, or an allied health related field. A fee applies to this course. Co-requisite: MATH 0990 or MATH 0995 or placement into college level math.

CHEM 1220-General Chemistry II
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS; TAG-OSC009
This course continues to investigate the principles of college chemistry, including, solutions, chemical equilibrium, acid/base chemistry, biochemistry, and organic chemistry. Students will complete lab experiments related to these topics. This course is recommended for students who are pursuing an associate degree in science, engineering, or an allied health related field. A fee applies to this course. Prerequisite: Grade of "C" or better in CHEM 1210.

CHEM 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CHEM 2510-Organic Chemistry and Laboratory I
(4 credit hours - 3 lecture 3 lab - G)
Part I of a full two semester sequence of organic chemistry lecture and lab. Topics covered include theories of bonding, nomenclature, stereochemistry, spectroscopy, acid-base chemistry, and a broad range of reactions of the major organic functional group classes with an emphasis on both reaction mechanisms and synthesis. Includes societal applications of organic chemistry. The two semesters of lab involve techniques for the separation and purification of organic compounds, and compound characterization using both NMR and IR spectroscopy. A broad range of organic transformations will be conducted, including multi-step synthesis. Prerequisites: CHEM 1210 and CHEM 1220.

CHEM 2520-Organic Chemistry and Laboratory II
(4 credit hours - 3 lecture 3 lab - G)
Part II of a full two semester sequence of organic chemistry lecture and lab. Topics covered include theories of bonding, nomenclature, stereochemistry, spectroscopy, acid-base chemistry, and a broad range of reactions of the major organic functional group classes with an emphasis on both reaction mechanisms and synthesis. Includes societal applications of organic chemistry. The two semesters of lab involve techniques for the separation and purification of organic compounds, and compound characterization using both NMR and IR spectroscopy. A broad range of organic transformations will be conducted, including multi-step synthesis. Prerequisites: CHEM 1210 and CHEM 1220.

CHEM 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CJUS 1010-Criminal Law
(3 credit hours - 3 lecture 0 lab - T)
This course is a study of jurisdiction, structure of the American courts, criminal and civil distinctions, use of criminal codes, statutes and ordnances and the introduction to the elements of particular crimes. Prerequisite: None.

CJUS 1060-Introduction to Criminal Justice
(3 credit hours - 3 lecture 0 lab - T) TAG – OSS031; CTAG – CTCJ001
This course is a study of the three branches of the criminal justice system; law enforcement, the courts, and corrections. It describes how these branches interrelate with each other. Prerequisite: None.

CJUS 1090-Corrections
(3 credit hours - 3 lecture 0 lab - T) TAG – OSS033
The course is an introduction and overview of the fundamental processes, trends and practices of juvenile and adult probation, institutional treatment, parole and contemporary community-based correctional problems. Included is a review of the history and philosophy of corrections as well as field trips to state correctional facilities. Prerequisite: None.

CJUS 1100-Civil Liabilities
(2 credit hours - 2 lecture 0 lab - T)
This course provides students with a basic understanding of civil liability. It introduces remedies and risk management techniques to help avoid and mitigate lawsuits aimed at the individual officer/criminal justice agency. Prerequisite: None.

CJUS 1120-Defensive Tactics
(1 credit hour - 0 lecture 3 lab - T)
This course combines the theoretical and practical aspects of confronting and controlling subjects in a criminal justice capacity. Appropriate levels of force, pre-incident indicators, managing unknown contacts, tactical positioning and physical defense/control techniques will be covered. Prerequisite: None.

CJUS 1150-Police/Corrections Defensive Driving
(1 credit hour - 0 lecture 3 lab - T)
This course provides a practical driving experience which instructs the student in the safe handling of a motor vehicle in both ordinary and emergency situations. Precision driving is stressed. Prerequisites: No student under the age of 18 years old, valid driver's license.

CJUS 1230-Investigations
(3 credit hours - 2 lecture 1 lab - T)
This course is a study of the investigative procedures including; initial contact by the investigator, collection and preservation of evidence, interviews/interrogations, hot and cold information, and case development. Prerequisite: None.

CJUS 1280-Evidence and Criminal Procedure
(2 credit hours - 2 lecture 0 lab - T)
This course is a study of the rules of evidence and criminal procedure; arrest, search and seizure, types of evidence and evidence admissibility in court. Prerequisite: None.

CJUS 1910-Police Operations
(3 credit hours - 3 lecture 0 lab - T) TAG – OSS032
This course introduces students to the line activities of the law enforcement professional with special emphasis on the patrol function as well as crime prevention. Prerequisite: None.

CJUS 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CJUS 1970-Concepts of Risk Management and Physical Protection
(3 credit hours - 3 lecture 0 lab - T/B)
This course introduces students to the fundamental theories and methods surrounding risk management and the concepts of physical asset protection. Prerequisite: None.

CJUS 1980-Introduction to Homeland Security
(2 credit hours - 2 lecture 0 lab - T/B)
This course provides an overview of the core concepts that constitute the emerging discipline of homeland security as it relates to the criminal justice professional. Prerequisite: None.

CJUS 2080-Victimology
(2 credit hours - 2 lecture 0 lab - T)
This course is an introduction to the study of criminal/victim relationships with emphasis on specific crimes and the plight of the crime victim throughout history. Prerequisite: None.

CJUS 2200-Constitutional Law
(2 credit hours - 2 lecture 0 lab - T)
This course is an enhancement to previous discussions and studies of important United States Supreme Court cases with particular emphasis on corrections and law enforcement. Prerequisite: None.

CJUS 2660-Firearms
(2 credit hours - 0 lecture 4 lab - T)
This course is an introduction to shooting fundamentals with an emphasis on safety and nomenclature. Shooting skill sets will be developed employing the revolver, semi-automatic pistol and shotgun. Prerequisites: No student under the age of 18 years old, must complete criminal history check with no disqualifiers.

CJUS 2770-Seminar in Administration of Criminal Justice
(3 credit hours - 3 lecture 0 lab - T)
This is the Criminal Justice Capstone Course which requires students to analyze current issues and problems in the criminal justice system. Students will be required to demonstrate sophomore level academic speaking and writing skills. Prerequisites: None.

CJUS 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

COMM 1220-Interpersonal Communication
(3 credit hours - 3 lecture 0 lab - G) TAG – OCM002
This interactive course will explore the principles of communication as it pertains to personal and workplace relationships. Perception, culture, listening, and conflict management are among the topics which will be explored. Prerequisite: None.

COMM 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

COMM 2610-Public Speaking
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMCOM; TAG – OCM013
Introduction to public speaking processes which are designed to help individuals communicate effectively in a variety of public speaking situations. This course focuses on developing, organizing, preparing, delivering, and analyzing public presentations. Prerequisite: ENGL 1500.

COMM 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CULA 1020-Orientation to Culinary Arts
(1 credit hour - 1 lecture 0 lab - T)
An introductory course for the Culinary Arts technology stressing basic food, fundamental procedures, and techniques used by the professional chef. The student will become familiar with the environment and language of the food service industry including both the public and the private sector. Prerequisite: None.

CULA 1040-Sanitation
(2 credit hours - 2 lecture 0 lab - T) CTAG – CTCF001
A study of the causes of food borne diseases and food spoilage. The student will become familiar with information on local, state and federal regulations regarding safety and sanitation. Particular attention will be given to preventing kitchen accidents, keeping sanitary facilities and equipment, correct food sanitary preparation, good practices for store sanitation, and preventing contamination. Prerequisite: None.

CULA 1060-Fundamentals of Food Preparation
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTCF005
The student will gain a working knowledge of the culinary environment including methods of cooking all types of meat, fish, vegetables, salads, soups, sauces, and desserts. Students will become familiar with vital information regarding spices, herbs, seasoning, metric conversions, weights, and measures. Students will become familiar with international culinary terms and equipment, and using practical applications in the lab. A fee applies to this course. Co-requisite: CULA 1040.

CULA 1080-Professional Baking
(3 credit hours - 2 lecture 3 lab - T)
An intensive course covering all fundamentals, principles, and applications of practical bakery food preparation and pastry making. Students will learn the production of international yeast rising bakery products and the chemistry of baking. There will also be a section on the causes of and solutions to common bakery production errors. A fee applies to this course. Prerequisites: CULA 1040 and CULA 1060 or permission of instructor.

CULA 1130-Meat Technology
(3 credit hours - 2 lecture 3 lab - T)
An introduction to all food service aspects of dealing with meat including grading, inspection, storage, butchery, and basic methods of meat preparation. The student will become familiar with different cuts of the animal and with a variety of meat including red meat, white meat, fish, poultry, and game. A fee applies to this course. Prerequisite: CULA 1040.

CULA 1140-Nutrition and Menu Planning
(2 credit hours - 2 lecture 0 lab - T)
Students will learn the characteristics of the major nutrient groups, their relationship to diet and health, and the foods in which they are found. Students will apply these principles to creating menus, marketing, food purchasing, and preparation to meet the nutritional needs and tastes of consumers both in private and public sectors. Prerequisite: CULA 1040.

CULA 1180-Professional Table Service
(2 credit hours - 1 lecture 2 lab - T)
Details relating to 'Dining Room Service' as well as full 'Beverage Management' knowledge to all table settings in a restaurant, for banquets and other food service operations. Includes table and beverage setting arrangements, specific types of service and delivery systems. Students will understand the importance of dealing with employees and customer relations in the dining room and bar environment. Proper handling and knowledge of alcoholic beverages are taught. Proper safety and sanitation for customers and employees is also discussed. Prerequisite: CULA 1040 or permission of instructor.

CULA 1200-Culinary Field Experience
(2 credit hours – 180 clock hours field experience per credit hour - T)
This practicum involves hands on experiences working in a food service site. It provides the student with an opportunity to put to practical use the knowledge obtained in the classroom under the direction of a qualified chef or food production manager and the college coordinator. The activities will involve the duties found in food preparation such as baking, vegetable preparation, grill and broiler cooking, and the dessert preparation to name a few. Prerequisite: CULA 1060.

CULA 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CULA 2020-Food and Beverage Cost Control
(2 credit hours - 2 lecture 0 lab - T) CTAG – CTCF009
A study of the application of the accounting theory to the management of food service items. Students will learn to set up and use systems including data processing to control major costs of food and beverages. Each student will develop a control routine for food and beverage operation. Prerequisite: CULA 1200.

CULA 2060-Classical Cuisine
(3 credit hours - 1 lecture 4 lab - T)
An advanced course in which the student will apply and previous knowledge by employing various preparation techniques, planning advanced menus, preparing the food, and coordinating cooking activities. Students practice culinary cuisine based on principles developed by the great classic European chefs. The student will refine the skills of a chef and test recipes culminating in a final cooking teat of classical cookery. A fee applies to this course. Prerequisite: CULA 1200.

CULA 2080-Food Service Equipment/Facility Organization
(2 credit hours - 1 lecture 3 lab - T)
Provides advice to students on the best ways to develop the elements of kitchen equipment. Design kitchens to accommodate them, and situate equipment in a manner that assures smooth operations and a pleasant work atmosphere. Making wise purchases of food service equipment and assuring the food service facility complies with health and safety codes is also included. Prerequisite: CULA 1200.

CULA 2160-Classical Desserts
(3 credit hours - 1 lecture 4 lab - T)
Through lab and lecture, the advanced student will gain a working knowledge of classical dessert making which includes menu planning, preparation, presentation, and familiarization with all varieties of classical desserts. The student will have working knowledge of hot, cold, and frozen classical desserts. A fee applies to this course. Prerequisite: CULA 1080.

CULA 2180-Garde-Manger
(3 credit hours - 2 lecture 3 lab - T)
The student will demonstrate preparation and presentation of cold foods, ice carvings, classical preparations of specialty foods, and buffet preparation. Students will become familiar with and be able to prepare nutritional cold foods, hot hors d'oeuvres, sausages, and truffles, as well as demonstrate correct carving of fruits and vegetables. A fee applies to this course. Prerequisites: CULA 1200 and CULA 2060.

CULA 2220-Food Service Management
(3 credit hours - 3 lecture 0 lab - T)
Provides the advanced student practical details related to all aspects of setting up and running a restaurant, cafeteria, or institutional food service operation. Included will be training related to basic management principles, and practices of successful food service operations purchasing and inventory management, facility design, standardized recipes, cost control techniques, food handling for health and safety, and employee management. Prerequisite: CULA 1200.

CULA 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CYBR 1000-Ethics in the Information Age
(3 credit hours - 3 lecture 0 lab - B/T)
The study of ethics and moral philosophy as a means for providing a framework for ethically grounded decision making in the information age. Prerequisite or co-requisite: FYEX 1100 or permission of CYBR program advisor.

CYBR 1100-Introduction to Information Assurance and Security Strategies
(3 credit hours - 2 lecture 3 lab - B/T)
This course is a survey of the fundamental elements of information assurance and security strategies. Topics may include confidentiality, integrity, and availability; security policies; authentication; access control; risk management; threat and vulnerability assessment; common attack/defense methods; ethical issues. Prerequisite or co-requisite: FYEX 1100 or permission of CYBR program advisor.

CYBR 1200-Introduction to Cisco Networking
(3 credit hours - 2 lecture 3 lab - T)
This course introduces fundamental networking concepts and technologies. The online course materials will assist you in developing the skills necessary to plan and implement small networks across a range of applications. Topics include: exploring the network, configuring a network operating system, network protocols and communications, network access, Ethernet, the OSI model and its layers, IP addressing, and subnetting IP networks. This course maps to Cisco Systems' first CCNA course. A fee applies to this course. Prerequisite: None.

CYBR 1300-Security+
(3 credit hours - 2 lecture 3 lab – T) CTAG – CTIT015
This course offers in-depth coverage of the current risks and threats to an organization's data, combined with a structured way of addressing the safeguarding of these critical electronic assets. The course provides a foundation for those responsible for protecting network services, devices, traffic, and data. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized security fields. It is also intended to serve the needs of individuals seeking to pass the Computing Technology Industry Association's (CompTIA) Security+ certification exam. A fee applies to this course. Prerequisite or co-requisite: CYBR 1200, ITCS 1010 or ITCS 2510.

CYBR 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CYBR 2000-Penetration Testing
(3 credit hours - 2 lecture 3 lab - T)
The goal of this course is to help the student master an ethical hacking methodology that can be used in penetration testing or ethical hacking situations. A fee applies to this course. Prerequisite: CYBR 1200, ITCS 1010 or ITCS 2510.

CYBR 2200-Cisco Routing and Switching
(3 credit hours - 2 lecture 3 lab - T)
This course is a continuation of the material learned in CYBR 1200. It continues to introduce students to the first half of the CCNA curriculum as provided by Cisco Systems, Inc. The goal of this course is to learn fundamental networking concepts and technologies. The online course materials will assist in developing the skills necessary to plan and implement small networks across a range of applications. Topics include: switched networks, basic switching concepts and configuration, VLANs, routing concepts, inter-VLAN routing, static routing, routing dynamically, Single-Area OSPF, access control lists, DHCP, and NAT for Ipv4. A fee applies to this course. Prerequisite: Grade of "C" or better in CYBR 1200.

CYBR 2300-Security Compliance
(3 credit hours - 3 lecture 0 lab - T)
This course focuses on enterprise-level information security compliance. It focuses on how to identify and implement a system of controls for security governance and regulatory compliance as well as how to plan and conduct IT audits. Prerequisite: Grade of "C" or better in CYBR 1300.

CYBR 2400-Disaster Recovery
(3 credit hours - 3 lecture 0 lab - T)
This course provides the student with a foundation in disaster recovery principles, including preparation of a disaster recovery plan, assessment of risks in the enterprise, development of policies, and procedures, and understanding of the roles and relationships of various members of an organization, implementation of the plan, and recovering from a disaster. Prerequisite: CYBR 1200 or CYBR 1300.

CYBR 2600-Digital Forensics
(3 credit hours - 2 lecture 3 lab - T)
This course introduces the student to the fundamental concepts of digital forensics. Digital evidence is used in proving or disproving allegations in civil or criminal cases. Labs using primarily open source, free software and a variety of hardware reinforce the concepts discussed. Prerequisite: CYBR 1200, ITCS 1010 or ITCS 2510.

CYBR 2900-Capstone
(1 credit hour - 1 lecture 0 lab - T)
This course will provide the students an opportunity to interact with professionals in the information assurance and systems security fields. Students will develop authentic projects while integrating their academic and technical skills. Students will be mentored by faculty and industry professionals. Students will be expected to prepare and present a written report and an oral presentation (delivered asynchronously). Prerequisite: Permission of CYBR program advisor.

CYBR 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

DCMT 1020-Graphic Design
(3 credit hours - 2 lecture 3 lab - T/B) CTAG – CTGRPH001
This course covers the fundamental principles of design and how these relate to effective communication. It explores the media and tools used to create imaging and how these tools are integrated into the image-making process. Topics include conceptual design, critical thinking in the creation of practical design, how design relates to business, human perception and the visual process. A fee applies to this course. Prerequisite: None.

DCMT 1115-Fundamentals of Content Creation
(3 credit hours - 2 lecture 3 lab - T)
This course explores the world of digital content. Students will explore digital media history, design concepts, and observe delivery platforms. This course will build fundamental concepts and core knowledge to become a successful digital content creator. Prerequisite: None.

DCMT 1120-Commercial Drone Operator
(3 credit hours - 2 lecture 3 lab - T)
This course prepares a student for the FAA Part 107 Commercial Drone Operator Exam. Students will be able to identify airspace and requirements, operating procedures, and limitations. An exploration of UAS datalinks and controls in relation to network communications and software operations are performed. Prerequisite: None.

DCMT 1125-Presentation and Collaboration Management
(1 credit hour - 1 lecture 0 lab - T)
Plan and prepare powerful presentations that engage an audience. Students will utilize a number of current collaboration suites, including but not limited to WebEx, Zoom, and Microsoft Teams. Techniques for in-person and online presentations are emphasized. Prerequisite: None.

DCMT 1130-Digital Storytelling
(3 credit hours - 2 lecture 3 lab - T)
Students will explore cohesive writing and design strategies to engage a target audience based on the content medium and platform. Prerequisite: None.

DCMT 1150-Audio Production
(3 credit hours - 2 lecture 3 lab - T)
An introduction to audio production. Professional audio tools for various mediums such as production, podcasting, and video will be utilized to capture a wide range of environments and situations. Prerequisite: None.

DCMT 1440-Digital Photography
(3 credit hours - 2 lecture 3 lab - T)
The techniques of digital photography will be covered. These include an overview of digital cameras, capturing an image with a digital camera, exposure, aperture, shutter speed, lenses, filters, lighting, use of flash, composition, and digital work flow. The language of digital imaging and digital techniques will be discussed. A fee applies to this course. Prerequisite: DCMT 1020.

DCMT 2040-Video Capture
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTIM006
Develops skills in developing, acquiring, and manipulating video and sound to be integrated into computer-based multimedia applications. Students will learn and practice the fundamentals of sound recording and video capture. A fee applies to this course. Prerequisite: DCMT 1020.

DCMT 2240-Video Production and Editing
(3 credit hours - 2 lecture 3 lab - T)
Students will learn and apply the fundamentals of digital video editing, green screen compositing, and sound manipulation through the use of editing software. An emphasis on editing and compositing as visual storytelling will form the structure of this course. Prerequisite: DCMT 1020 or permission of instructor.

DCMT 2310-Live Streaming and Production
(3 credit hours - 2 lecture 3 lab - T)
This course is an exploration of consumer and professional technology utilized in broadcasting digital content. Student will be able to stream video, sound, and content to various platforms including but not limited to social media. An emphasis will be placed on live production requirements while also scaling the setup and equipment accordingly. Prerequisite: None.

DCMT 2320-Emerging Media Technologies
(3 credit hour - 2 lecture 3 lab - T)
This course explores emerging trends and technologies in digital content creation. This includes but is not limited to topics such as augmented reality, virtual reality, 360-degree photos, and 360-degree videos. An exploration of social media trends and metrics measuring the engagement of audiences is covered. Prerequisite: None.

ECON 1510-Microeconomics
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS004
Fundamentals of microeconomics: a study of the individual firm and how it allocates resources, prices goods and services, and organizes itself to meet competition. Focuses on the behavior of customers and supplies in the marketplace which affects the kinds of goods and services produced and consumed through an understanding of demand and supply schedules, elasticity and subdivision, fixed, variable, marginal, and total revenue, and profit maximization. Prerequisite: None.

ECON 1520-Macroeconomics
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS005
A study of the overall performance of an economy of a society as a whole entity. Alternative economic systems are explored and macroeconomics studies the various mechanisms a society can use to allocate scarce resources. Prerequisite: None.

EDUC 1010-Introduction to Education
(3 credit hours - 3 lecture 0 lab - T) TAG – OED007; CTAG – CTEDU007
This introductory course explores the purposes, organizations, and outcomes of schooling from the perspectives of the field of social foundations of education. Candidates undertake critical inquiry into teaching as a profession. Licensure requirements, teachers' legal responsibilities, and the accountability of public schools are also explored. Prerequisite: None.

EDUC 1090-Effective Classroom Management
(3 credit hours - 3 lecture 0 lab - T)
Techniques for effective classroom management (P-12) and individualized behavior interventions are studied. Emphasis is placed on individual and small group management, enhanced learning environments and reflections regarding implications for the classroom (P-12). Prerequisite or co-requisite: EDUC 1010.

EDUC 1110-Observation and Assessment
(3 credit hours - 2 lecture 1 lab - T)
This course includes study of authentic and formal assessment tools used in the P-12 setting. Emphasis is placed on the development of observation skills through the study of types of observations, reliability testing, objective reporting, portfolio development, and use of observation findings. Prerequisite: EDUC 1010.

EDUC 1130-Introduction to Early Childhood Education
(2 credit hours - 2 lecture 0 lab - T)
The course provides an introduction to working with students from birth to age five. The Ohio Early Learning and Development standards and Core Knowledge standards are introduced and applied in the Pre-K setting. Students also gain a familiarity with the field of education (P-12) and the differences between the curricula/approaches found in Pre-K vs. K-12. Prerequisite: None.

EDUC 1250-Early Childhood Literacy
(3 credit hours - 3 lecture 0 lab - T)
This course studies the development of language, writing, and reading in 0-8 year olds. Emphasis is placed on the knowledge and skills needed to encourage literacy development. Prerequisite: EDUC 1010.

EDUC 1350-Classroom Mathematics
(3 credit hours - 3 lecture 0 lab - T)
A study of the nine strands of mathematics and math curriculum scope and sequences for children 2-8 years of age occurs in this course. Content focuses on the process of learning mathematics and the skills necessary for the P-12 professional to assist with learning. Prerequisites: EDUC 1010 with a grade of "C" or better and placement into MATH 0990 or MATH 0995 or college level math.

EDUC 1450-Introduction to Special Education
(3 credit hours - 3 lecture 0 lab - T) TAG – OED009
This is a survey course to prepare all educators to teach diverse learners, including those with exceptionalities. It covers developmental characteristics, assessment methods, intervention strategies, and ethical principles for students in education and community settings. Co-requisite: EDUC 1010.

EDUC 1830-Child Development
(4 credit hours - 3 lecture 2 lab - T/B) TAG – OED010
This course focuses on applying knowledge of the characteristics and needs of young children, ages 0-8, for the creation of healthy, respectful, supportive, challenging, and effective learning environments. Candidates will examine multiple and interrelated influences on the development and learning of young children. A fee applies to this course. Prerequisite: EDUC 1010.

EDUC 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

EDUC 2030-Behaviors and Transitions
(3 credit hours - 3 lecture 0 lab - T)
This course explores assessment and diagnosis of behavior disorders P-12. Focus is given to pro-social behaviors and the role of the education paraprofessional in the process. Attention is also given to the role of the paraprofessional (P-12) in the classroom. Transitions from P to K and high school to adulthood are discussed. Prerequisite: EDUC 1450.

EDUC 2070-Technology for Educators
(3 credit hours - 3 lecture 0 lab - B)
As technology continues to evolve, educators are required to create technology-enriched environments to promote student success. In this course future and current educators will work to explore technology advancements, learn how to implement technology in the classroom, and strengthen their understanding of technology trends through the use of International Society for Technology in Education (ISTE) standards. A fee applies to this course. Prerequisite: EDUC 1010 or equivalent field experience.

EDUC 2110-Family, School, and Community
(3 credit hours - 3 lecture 0 lab - T) TAG – OED011
Study of educational considerations for teachers including the policies, theories, practices, skills, and knowledge of home, school, and community partnerships. Emphasis is placed on examining the multiple influences on the whole child; accessibility of community services and supports; ethical, practical, and culturally competent decisions to foster family engagement; knowledge and skills needed to address family structure, socio-cultural and linguistic backgrounds, identities and customs, and advocacy for children and families. Prerequisite: EDUC 1010.

EDUC 2210-Reading to Learn
(3 credit hours - 3 lecture 0 lab - T)
Study skill strategies for students 8-14 years old are addressed in this content area reading course. Emphasis is given to assisting the student in using comprehension and content based reading to acquire knowledge. Prerequisite: EDUC 1250.

EDUC 2250-Phonics
(2 credit hours - 2 lecture 0 lab - T)
This course is an introduction to the linguistic elements of both written and spoken English, and their historical development. It provides the coursework necessary for formal Reading instruction in the early and middle childhood grades. Prerequisite: EDUC 1250.

EDUC 2300-Educational Placement Practicum
(2 credit hours - 1 lecture 7 practicum - T)
This 105 hour educational placement practicum emphasizes the use of observation and assessment in the classroom as well as the knowledge, skills, and disposition necessary to effectively serve as an educational assistant in the K-12 classroom. Attention is given to classroom management techniques as well as building rapport. The student is directly supervised by a licensed/certified professional and qualified college faculty. Prerequisites: EDUC 1090, EDUC 1450 and EDUC 1830.

EDUC 2450-High and Low Incidence Disabilities
(4 credit hours - 4 lecture 0 lab - T)
Candidates experience an exploration of the IDEA identified diagnoses ranging from mild to severe. Emphasis is given to federal statutory definitions and assistive technology related to these disabilities. Prerequisite: EDUC 1450.

EDUC 2720-Professionalism in Education
(1 credit hour - 1 lecture 0 lab - T)
This course is the capstone course for the ATED program, designed to provide the student with the opportunity to gain the skills necessary to successfully enter the field of education. Attention is given to building a resume, a portfolio, interviewing, networking, obtaining a license, and general professionalism in the work place. Prerequisites: EDUC 1090 and EDUC 1830.

EDUC 2800-Current Issues in Education
(3 credit hours – 3 lecture 0 lab – T)
During this course students will be looking at the impact of government, media, and diversity, equity and inclusion (DEI) on education and classroom practices. Students will gain an understanding of stakeholders, processes, and groups involved in current legislation, how to navigate media and cultural phenomena, and explain DEI and its impact on education in many ways. Prerequisite: EDUC 1010.

EDUC 2850-Appalachian Impact Seminar
(2 credit hour - 1 lecture 2 lab - T)
This course is a unique opportunity that allows students to explore Appalachian identity and its impact on education. Students will conduct research, compile their findings, and create a project with the sole focus of impacting education/employment in the Appalachian region. Students will partner with area schools and/or relevant business and organizations to advance their understanding of the factors impacting area Appalachian youth. Prerequisites: EDUC 1010, completed student paperwork and permission of instructor.

EDUC 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

EEET 1110-D.C. Circuit Analysis
(4 credit hours - 3 lecture 3 lab - T) TAG – OET001; CTAG – CTEET001
Topics include resistance, current, voltage, Kirchhoff's Current and Voltage Laws, Ohm's Law, the resistor color code, Watt's Law, sources of D.C. current and voltage, soldering and desoldering techniques, analysis of D.C. circuits using Branch Current Analysis, Thevenin's and Norton's Theorems, Superposition, and Multisim®. Devices studied include the I-C voltage regulator, the transformer in D.C. power supplies, capacitors, inductors, bridge rectifiers, and control relays. Other topics include the construction of D.C. power supplies, transient response of series R-C and R-L circuits, and magnetic circuits. Lab test equipment includes D.C. power supplies, analog and digital volt-ohm-milliammeters, function generators, and digital oscilloscopes. Prerequisite or Co-requisite: MATH 1250 or MATH 1340.

EEET 1130-Electronic Devices
(4 credit hours - 3 lecture 3 lab - T) TAG – OET005
Introduction to the theory and operation of common semiconductor devices including rectifier diodes, zener diodes, SCRs, UJTs, triacs, diacs, bipolar transistors, JFETs, MOSFETs, op-amps, LEDs, seven-segment displays, photoelectric devices, phototransistors, optoisolators, single-phase, three-phase, and pulse-width modulated power supplies, integrated circuit amplifiers, and solid-state relays. Prerequisite: EEET 1110.

EEET 1230-A.C. Circuit Analysis
(4 credit hours - 3 lecture 3 lab - T) TAG – OET003
Voltage and current phase relationships in R-L-C series, parallel, series-parallel single-phase and three-phase circuits. Other topics include apparent power, real power, VARs, power factor, and delta- and wye-connected circuits, voltage and current relationships in single-phase and three-phase transformers including kVA rating. The generation, transmission, and distribution of three-phase power will be introduced in the classroom and reinforced by a tour of a local power generating station and substation. Types of oscillators, filters, resonance, frequency response, tank circuits, Bode plots, and amplitude and frequency modulation are introduced. Prerequisite: EEET 1110; Co-requisite: MATH 1250.

EEET 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

EEET 2150-Digital Circuits
(4 credit hours - 3 lecture 3 lab - T) TAG – OET002; CTAG – CTEET002
An introduction to digital electronics including a study of binary, hexadecimal, and octal numbering systems; common TTL and CMOS logic gate functions and electrical characteristics; the use and interpretation of a manufacturer's TTL and CMOS data manuals; consistent logic symbology; Boolean Algebra; DeMorgan's Theorem; and Karnaugh Mapping. Other integrated circuits studied include flip-flops, synchronous and asynchronous counters; drivers and buffers; decoders and encoders; digital displays; multiplexers and demultiplexers; arithmetic circuits; shift registers; RAM and ROM memory devices, memory mapping, and memory decoding; D/A and A/D converters; and microprocessors, microcomputer architecture, and the basics of microcomputer system organization. Prerequisite: EEET 1130.

EEET 2210-Industrial Instrumentation and Controls
(4 credit hours - 3 lecture 3 lab - T)
Introductory course in automated process control systems. Topics include: signal conditioning, instrumentation amplifiers, strain gages, motion and position sensors, force sensors, pressure sensors, level sensors, flow sensors, temperature sensors, light sensors, radiation and thickness sensors, humidity and moisture sensors, time measurement, counters, theory of measurements, measurement techniques and hardware, transmitters, process controllers, PID control, controller hardware, application of D/A and A/D controllers, actuators, and introduction to PLCs and process automation controllers. Prerequisite: EEET 1130.

EEET 2300-Electronic Communications
(4 credit hours - 3 lecture 3 lab - T)
Study of analog and digital modulation and demodulation techniques. Topics include: AM, FM, DSB, and SSB transmitters and receivers; radio wave propagation; transmission lines and antennas; balanced modulators; PLLs; CDMA; TDMA; PCM; PAM; PWM. Students will construct a superheterodyne receiver. Students will also be prepared to take the ARRL technician-class amateur radio license exam. Students will use the spectrum analyzer and RF power meter to make signal strength measurements. Prerequisites: EEET 1130 and EEET 1230.

EEET 2450-Rotating Machinery and Controls
(4 credit hours - 3 lecture 3 lab - T)
Introduction to the construction and operation of shunt, series, and compound generators and D.C. motors; three-phase alternators; types of three-phase motors; wiring of three-phase motors in high- and low-voltage wye and delta configurations; operating and programming variable-frequency drives; autotransformers; PTs and CTs in single- and three-phase power measurements; motor controls including overload relays and magnetic contactors, start-stop, reversing, speed control and braking of motors; application of the NEC to conductor, overload, overcurrent, and motor starter sizing; servomotors. Prerequisite: EEET 1230.

EEET 2510-Programmable Logic Controllers
(4 credit hours - 3 lecture 3 lab - T) TAG – OET022
Topics include using RSLinx™ to communicate with Allen-Bradley's family of PLCs and PACs; using RSLogix 500™ to program SLC 5/04 processors and MicroLogix 1000 PLCs implementing timers, counters, sequencing instructions, arithmetic and move instructions, and conversion and comparison instructions utilizing direct, indirect, and indexed addressing; using RSLogix 5000™ to program 1769 CompactLogix Controllers; programming human machine interfaces; configuring, wiring, and determining the specifications for discrete input/output modules, thermcouple modules, analog input/output modules, and RTD modules. Prerequisites: EEET 2210 and EEET 2450.

EEET 2600-Electronics Technician Certification
(2 credit hours - 2 lecture 0 lab - T)
This course is a review of the core elements of electronics, of which EEET students should have knowledge and is intended for students who are seeking the status of Certified Electronics Technician, Associate Level, with The Electronics Technicians Association International. Topics include safety precautions, basic math used in electronic service, decibels, DC and AC circuits, capacitance, inductance, transformers, filter circuits, generators, alternators, motors, electronic components, semiconductors, discrete Solid State circuits, electronic power supplies, amplifiers, basic radio, radio frequency signal propagation, common frequencies, transmitters, basics of telephone, digital concepts, gates, logic circuits, computer basics, microprocessors, basic diagnostic techniques, test equipment, soldering, desoldering, printed circuit board repair, hand tools, recordkeeping, productivity calculation, personal behavior, and technical writing. Prerequisite: EEET 2150.

EEET 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

EEET 3000-Introduction to Electric Utility Industry
(2 credit hour - 2 lecture 0 lab - T)
This course provides the student with an overview of the electric (power) utility industry. Topics include electric utility regulation and its scope, regulatory agencies and codes, general safety, electric system overview, electric generation, electric transmission, and electric distribution. Upon completion, students should be able to understand the need for electric utilities, their structure, and regulatory requirements (such as FERC NERC) on electric utilities. Prerequisite: Completion of an ABET-accredited two-year EEET degree or permission of instructor.

EEET 3100-Introduction to Protection Systems
(2 credit hours - 2 lecture 0 lab - T)
This course will serve as an introduction to the principles of protection and control as applied to electric utility substations and switchgear in manufacturing facilities. Topics will include: introduction to instrument transformers, high voltage circuit breakers, zones of protection, protective relay types and construction, relay test equipment and testing, and the application of protective device in a substation environment. Upon completion, students will have a basic understanding of how protective relays function and how they are applied to protect a high voltage power system. Prerequisite: Completion of an ABET-accredited two-year EEET degree or permission of instructor.

EEET 3150-Workplace Skills Seminar
(1 credit hour - 1 lecture 0 lab - T)
This workplace skills seminar focuses on interpersonal skills that employers tend to seek in job applicants. Students will learn to identify these skills and recognize the importance of highlighting them in job interviews, via networking, and within the professional workplace. Topics covered include conflict resolution, emotional intelligence, recognition of implicit bias, negotiation techniques, nonverbal communication, and others. The course may include a mixture of classroom discussion, applied practice (i.e. interview techniques, conflict role playing), guest lecturers from industry, and employer facility tours. Prerequisite: Completion of an ABET-accredited two-year EEET degree.

EEET 3200-Electric Utility Print Reading
(2 credit hours - 2 lecture 0 lab - T)
This course introduces the basic principles of reading electrical drawings used in the utility industry. Topics include functional diagrams, AC and DC control schematics, wiring diagrams, one-line diagrams, control wiring diagrams, and logic diagrams. Upon completion, the student should be able understand the purpose of each type of drawing and answer questions based on the information in the drawings. Prerequisite: Completion of an ABET-accredited two-year EEET degree.

EEET 3250-Electric Utility Safety
(1 credit hour - 1 lecture 0 lab - T)
This course provides students with knowledge of the National Electrical Safety Code; FECA Safe Work Practices Handbook or the APPA Safe Work Practices Handbook and OSHA (CFR 29) Section 1910.269 Electric Power Generation, Transmission, Distribution and related sections. Prerequisite: Completion of an ABET-accredited two-year EEET degree.

EEET 3300-Substation Design and Construction
(3 credit hours - 2 lecture 2 lab - T)
The student will be able to perform a physical identification of all components in a substation including the control house. This course focuses on electric substation installation and operation of equipment for changing voltage, switching circuits, regulating output levels, interrupting faults, and providing communication and control functions. Prerequisite: EEET 3200.

EEET 3340-Three-Phase Circuit Phasor Analysis
(3 credit hours - 3 lecture 0 lab - T)
Circuit analysis of wye-wye, delta-delta, delta-wye, wye-delta transformer connections to wye or delta loads and the determination of all line-to-line voltages, phase-to-ground voltages, line currents and phase currents in mathematical and graphical form including the effect of faults, lightning strikes, motor loads, and power factor correction capacitors on the voltage and current waveforms phase shift and amplitudes. Topics include instrument transformer theory and applications, sizing instrument transformers, wiring transformers, meter installations, and electronic meter functionality. Pre-requisite: Completion of ABET-accredited two-year EEET degree; Co-requisite: MATH 2510.

EEET 3400-Generation, Transmission, and Distribution
(2 credit hours - 2 lecture 0 lab - T)
This course provides a high-level description of the process of fueling power plant generators including nuclear, coal, natural gas, and hydro as well as integrating power from solar and wind farms to the grid and coverage of the technologies required to implement. A broad understanding of what transmission voltages are and how the transmission voltages vary from point to point and the methodology to keep control of the electrical energy. Also, the role of generation dispatchers, transmission dispatchers, distribution dispatchers, station electrician, P&C technicians and technologists, meter electricians, ICE techs, engineers, and designers will be included. How voltages and currents are changed from the power plant, over the transmission lines, to the substations, and to the residential and commercial customers while maintaining a stable power supply. Prerequisite: None.

EEET 3450-High Voltage Power Circuit Breakers
(2 credit hours - 2 lecture 0 lab - T)
This course introduces the fundamentals of high voltage power circuit breakers used in the electrical utility industry with emphasis on function and criticality. Topics include understanding the various designs and interrupting mediums, how circuit breakers interrupt fault currents, Sulfur Hexafluoride gas (SF6), breaker timing, commissioning (including power factor testing) and maintenance. Upon completion, students should be able to identify various types of circuit breakers, interpret nameplate information, and perform various tests on these devices. Prerequisite: None.

EEET 3500-Work-Based Learning
(1-4 credit hours - 150-600 hours cooperative work experience - T)
The student will gain work experience in their field of study by obtaining either a paid or unpaid internship position with an approved organization involved in the generation, transmission, and distribution of three-phase power or in an industrial setting that utilizes three-phase power. Prior and/or present related work experience will be considered for credit based on the review of a portfolio of work experience submitted by the student. Prerequisite: Junior status.

EEET 3950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

EEET 4100-Protective Relaying I
(4 credit hours - 3 lecture 3 lab - T)
This course serves as an introduction to the philosophy of protective systems and how they are applied to provide line protection, bus protection, transformers protection, breaker failure protection, and generator protection. Prerequisites: EEET 3100 and EEET 3340.

EEET 4150-High Voltage Power Transformers
(3 credit hours - 3 lecture 0 lab - T)
This course covers the application, sizing, and selection of power transformers including isolation and autotransformers. Interpret nameplate data including voltage vectors, sizing, impedance, and cooling system. This course will also focus on the complex electrical testing of power transformers. Topics include understanding of transformer turns ratio testing, power factor testing, winding resistance testing, sweep frequency response analysis, dissolved gas analysis (DGA), transformer combustible gas analysis (TCG), and troubleshooting. Upon completion, students should be able to perform various tests on transformers. Prerequisite: EEET 3340.

EEET 4200-Metering and Energy Management
(2 credit hours - 2 lecture 0 lab - T)
This course provides students with knowledge of modern electric metering theory, application, and safety, together with an understanding of electric energy use and conservation management. Prerequisite: None.

EEET 4300-Industrial Equipment Protection
(3 credit hours - 2 lecture 2 lab - T)
This course provides advanced studies of protective relaying and includes single and three-phase metering principles, meter construction, and component parts. Upon completion, students should be able to describe and test overcurrent schemes, transformer differential schemes, and motor protection schemes. Perform arc flash calculations. Specify, select, and supervise the installation of switchgear including circuit breakers for large, complex power distribution and control. Prerequisite: None.

EEET 4350-Substation Communications
(3 credit hours - 2 lecture 2 lab - T)
This course will cover the communications systems utilized by electric utilities to provide real-time data for the purpose of maintaining system reliability. The student will learn how to apply pilot-relaying schemes over fiber, over pilot wires, and power line carrier, etc. The student will learn how to apply Mesh, Cellular, Wi-Fi, and LAN technologies as they currently are utilized in smartgrid (communication) applications and explain how RTUs and SCADA are used to gather data automatically to allow dispatchers to respond accordingly to system conditions. Prerequisite: EEET 3100.

EEET 4400-Protective Relaying II
(4 credit hours - 3 lecture 3 lab - T)
This course is a continuation of EEET 4100. Upon completion of the course, the student will be able to design, implement, and complete test and check out for a complex relay system including both electromechanical and digital relays. This subject will also include fault analysis and symmetrical components (zero sequence, positive sequence, and negative sequence). Perform relay coordination settings calculations. Prerequisite: EEET 4100.

EEET 4500-Protetion and Control Capstone
(3 credit hours - 2 lecture 2 lab - T)
Students will acquire project management skills through this course by completing a team design project in which they will design, build, program, test, and checkout a simulated relay network that provides real time data via SCADA, alarming functions for system anomalies, and automatic control based on system constraints provided by the project deliverables. Co-requisites: EEET 4350 and EEET 4400.

EEET 4950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ENGL 0980-College Reading and Writing
(5 credit hours - 5 lecture 0 lab - V)
To be prepared for college-level academic literacy, students need concentrated practice in the relevant skills and habits of mind. This integrated reading and writing course is intended to improve upon and further students' key foundational skills, such as basic sentence structure and active reading strategies, while also immersing students in the analysis and interpretation of rigorous academic content. The goal of this work is to prepare students for the work required in their future careers as well as the transfer-level credit-bearing class, ENGL 1500. Prerequisite: Placement into ENGL 0980.

ENGL 0990-Studio 1500
(3 credit hours - 3 lecture 0 lab - V)
Students will learn to read and analyze complex texts, use the writing process to develop a topic and organize ideas, improve research skills, and respond to writing prompts. Prerequisite: Placement into ENGL 0990 or a "D" in ENGL 0980.

ENGL 1500-Composition I
(3 credit hours - 3 lecture 0 lab - G) OT36 – TME001
This course emphasizes the writing and revising process with essay mastery as the primary goal. Students read literary examples as models and write in descriptive, narrative, expository, persuasive, and poetic modes. A research essay written in APA style is a requirement to successfully complete this course. Prerequisites: Placement into ENGL 1500 or a grade of "C" or better in ENGL 0980; word processing knowledge is necessary.

ENGL 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ENGL 2500-Composition II
(3 credit hours - 3 lecture 0 lab - G) OT36 – TME002
Students will employ the writing process introduced in Composition I. Composition II emphasizes the development of rhetorical skills for literary analysis, critical appraisal, and academic research. Students will read literary texts and create several expository and persuasive essays. Prerequisite: ENGL 1500.

ENGL 2520-British Literature since 1780s: Empire and Beyond
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH056
This survey course introduces students to a broad range of British literature (print and film) involving works from the Early Romantic Period up to the present day. The works studied will include novels, short stories, poetry, and drama. By reading and analyzing these works, students will learn about various themes, conventions, literary movements, and historical events during this time period and will also strengthen their critical thinking skills. Writers studied will include Wordsworth, Dickens, Blake, Shelley, Austen, Yeats, and Heaney. Prerequisite: Grade of "C" or better in ENGL 1500.

ENGL 2600-American Literature since 1865: The Making of a Diverse U.S.
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH054
This survey course introduces students to a broad range of American literature (print and film) involving works from the mid-nineteenth century up to the present day. The works studied will include poetry, novels, short stories, and nonfiction essays. By reading and analyzing these works, students will learn about significant themes, conventions, literary movements, and historical events during this time period and will also strengthen their critical thinking and writing skills. Writers studied will include Walt Whitman, Emily Dickinson, Mark Twain, and Robert Frost. Prerequisite: Grade of "C" or better in ENGL 1500.

ENGL 2700-World Literature: Global Culture and Perspectives
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH063
This course will introduce students to a selection of classical and modern literary works from throughout the world. Regions studied may include Asia, Africa, North and South America, Europe, and Oceania. The works studied will include poems, short stories, novels, and/or non-fiction essays. Students will analyze and discuss the works in their respective cultural and textual contexts. Issues of class, race, gender, generation, religion and others will be discussed. Lectures and secondary sources will provide historical and literary background to support students' critical engagement with the assigned works of literature. Students will write literary analysis papers designed to deepen their understanding of the material. No prior knowledge of or familiarity with the pertinent languages is required. All reading materials will be provided in English. Prerequisite: Grade of "C" or better in ENGL 1500.

ENGL 2800-Professional Writing
(3 credit hours - 3 lecture 0 lab - G) OT36 – TME002; TAG – OBU005
This course strengthens students' composition skills and introduces them to workplace writing including layout and design, graphics, reports, summaries, memos, letters, and job search documents. Students analyze and synthesize data, practice oral and small group communication, and create a professional writing portfolio. Writing these documents will require students to analyze audience, situation, and context and respond appropriately. Prerequisite: ENGL 1500.

ENGL 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ENVS 1710-Wastewater Treatment
(3 credit hours - 2 lecture 3 lab - T)
This course provides background information necessary for both the State of Ohio Class I Wastewater Operator. Emphasis is placed on both theory and design aspects of the major treatment techniques, operations problems, laboratory analysis, and issues specific for wastewater treatment. A fee applies to this course. Prerequisite: None.

ENVS 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ENVS 2300-Environmental Instrumentation
(3 credit hours - 2 lecture 3 lab - T)
ENVS 2300 focuses on the qualitative and quantitative analysis of environmental samples following standard methods and quality control. Emphasis will be placed on the theory and operation of instruments common to environmental testing laboratories. A fee applies to this course. Prerequisite: None.

ENVS 2550-HAZWOPER
(3 credit hours - 2 lecture 3 lab - T)
ENVS 2550 prepares students to effectively evaluate and safely control hazards associated with hazardous materials sites. Emphasis will be placed on PPE, decontamination, monitoring instrumentation, spill response, incident command, and emergency response. The course meets the training requirements under OSHA's HAZWOPER standard 29 CFR 1910.120 for both Waste Site Worker (paragraphs b - o) and Hazardous Materials Technician (paragraph q). A certificate will be awarded upon successful completion of the course. A fee applies to this course. Prerequisite: None.

ENVS 2710-Drinking Water Treatment
(3 credit hours - 2 lecture 3 lab - T)
This course provides background information necessary for the State of Ohio Class I Water Operator. Emphasis is placed on both theory and design aspects of the major treatment techniques, operations problems, laboratory analysis, and issues specific for drinking water treatment. A fee applies to this course. Prerequisite: None.

ENVS 2850-OSHA 30 Hr. General Industry Safety and Health
(2 credit hours - 2 lecture 0 lab – T/B)
This course is an overview of employer and employee rights and obligations to provide a safe and healthful workplace, and how to be compliant with federal, state and local regulations governing safety and environmental issues. Those students successfully completing, and meeting all OSHA requirements, will receive a 30-hour Occupational Safety and Health Training Course card for General Industry Safety and Health. A fee applies to this course. Prerequisite: None.

ENVS 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

FYEX 0990-Academic Recovery
(1 credit hour - 1 lecture 0 lab - V)
Learn about college policies, procedures, and expectations in order to be readmitted as a full-time student. Create an action plan for successful continuance at the College. Examine previous behavior and set goals to improve college success. Prerequisite: None.

FYEX 1010-First Year Success Strategies
(1 credit hour - 1 lecture 0 lab - B)
Familiarizes students with the college campus, academic divisions and program faculty, computer resources, student-related policies and procedures, and student support services. Assists with financial planning for college. Teaches effective planning and time management strategies and efficient study strategies. Examines the relationship of personal characteristics and motivation to education and career planning. Explains the various course formats. Guides students' development of an individualized first-year academic plan. A fee applies to this course. Prerequisite: None.

FYEX 1030H-Honors Freshman Seminar
(3 credit hours – 3 lecture 0 lab - B)
Familiarizes students with the college campus, academic divisions and program faculty, computer resources, student - related policies and procedures, and student support services. Addresses effective time management strategies and efficient study strategies through best practices research. Examines the motivation for learning and relates that to their educational choices. Requires students to explore their personal values as well as the perspectives of others on the seminar topic and to seek specific choices that put their personal values into action and that express those values to the community. Prerequisite: None.

FYEX 1100-Introduction to Online Learning
(1 credit hour - 1 lecture 0 lab - B)
This orientation course will help students gain the skills necessary to learn well in an online environment. The course will introduce students to the essential tools necessary to access course materials, communicate with classmates and instructors, submit homework, take tests, and check grades. At the start of any journey, it is important that students start off on the right foot, have a sense of where they are going, and make sure all of their equipment is ready for the long haul. In this course, students will find the learning outcomes for the course, a course menu legend to help plot their way through the lessons, hardware and software requirements to ensure a smooth journey, and any necessary browser plug-ins. Prerequisite: None.

FYEX 1950-Special Topics
(0.1-8 credit hours - B)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

FYEX 2950-Special Topics
(0.1-8 credit hours - B)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

GEOG 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

GEOG 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

GEOL 1350-Earth Science
(3 credit hours - 2 lecture 3 lab - G) OT36 – TMNS
An overview of basic geological and meteorological principles including rock and mineral formation and identification, plate tectonics, landforms, geologic hazards, basic historical geology, and weather data acquisition and weather forecasting. An introduction to Ohio geology is also included. Prerequisite: None.

GEOL 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

GEOL 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HIMT 1100-Introduction to Health Information Management
(3 credit hours - 3 lecture 0 lab - T) CTAG – CTHIM001
HIMT 1100 Introduction to the history, philosophy, development, and functions of HIM as well as the American Health Information Management Association. Emphasis is placed on primary and secondary record systems, content of health records and documentation requirements, analysis and storage methods, forms and screen designs, content, and structure of healthcare data sets. Investigation of storage and retrieval systems and control techniques for health records relative to numbering, filing, indexing systems, record retention, abstracting, and analysis are included. Prerequisites: Acceptance into the HIMT program and placement into ENGL 1500 or by permission of instructor.

HIMT 1300-Health Information Management and Data Governance
(3 credit hours - 3 lecture 0 lab - T)
Introduction to the evolution of health information systems and the complexities of data flow. Study the roles, functions, and practices for successfully managing healthcare data as an enterprise set and explore enterprise function such as data governance, data architecture, metadata management, master data management, data security management, business intelligence, and terminology and classification systems within healthcare departments or business unit context. Prerequisite: HIMT 1100.

HIMT 1500-Clinical Classification Systems I
(4 credit hours - 4 lecture 0 lab - T)
Introduction to the nomenclature classification and indexing systems utilized in coding outpatient diagnoses using the current edition of International Classifications of Disease. Topics include coding conventions, coding principles, and official outpatient coding guidelines. Coding compliance, the physician query process, and reimbursement systems are also discussed. Prerequisites: BIOL 2400 and HLTH 1210.

HIMT 1600-Comparative Health Information
(2 credit hours - 2 lecture 0 lab - T)
This course focuses on the role of the health information technician in non-acute care settings with an emphasis on the purposes, uses and handling of health information, departmental and facility administration, licensing and accreditation requirements, as well as an introduction to payment systems in ambulatory care and specialized treatment facilities. Prerequisite: HIMT 1100.

HIMT 1700-Legal Aspects in Health Care
(2 credit hours - 2 lecture 0 lab - T) TAG – OHL021; CTAG – CTHIM002
Evaluation of health care records as legal documents with special emphasis on confidentiality, privacy, release of confidential information, subpoenas for patient information, and security of records. Principles and organization of the judicial system, healthcare fraud and abuse, liability of health care providers, patient rights and health care compliance, and HIPAA regulations. Prerequisite: HIMT 1100.

HIMT 1900-Professional Practicum and Seminar I
(2 credit hour - 1 seminar 7 practicum - T)
Under the instruction of a professional health information professional, the students will apply their knowledge and skills in health information management in an acute, non-acute or alternative health care setting, or in a simulated HIMT environment. A fee applies to this course. Prerequisites: HIMT 1300 and HIMT 1700.

HIMT 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HIMT 2010-Health Care Quality Improvement
(2 credit hours - 2 lecture 0 lab - T)
Organization and use of data in health care quality improvement programs including quality assessment and monitoring, collecting and analyzing data utilizing performance improvement tools, case management, risk management, and credentialing under current external regulatory guidelines and accreditation requirements. Prerequisites: HIMT 1300 and HIMT 1700.

HIMT 2110-Basic Pharmacology and Pathophysiology
(3 credit hours - 3 lecture 0 lab - B)
Introduction to the basic concepts underlying various pathological processes. Students will draw on their knowledge of normal anatomy and physiology to understand how pathogenesis of disease occurs. Various diseases, diagnostic processes, appropriate testing, and treatment options, including drug medications will be discussed. Prerequisite: None.

HIMT 2150-Clinical Classification Systems II
(3 credit hours - 3 lecture 0 lab - T)
HIMT 2150 Introduces theories, concepts and applications of CPT Coding and its relationship to the Centers for Medicare and Medicaid Service's Healthcare Common Procedural Coding System. Topics include coding conventions, coding principles, and official outpatient coding guidelines. Coding compliance, the physician query process, and reimbursement systems are also discussed. Prerequisites: BIOL 2400 and HLTH 1210.

HIMT 2220-Healthcare Statistics and Registries
(2 credit hours - 2 lecture 0 lab - T)
Exploration of theory and application of health care statistics as related to data definitions, uses, mathematical review, statistical data collection, computation of statistical formulae, collection and reporting of vital statistics, the use of registries, and the presentation and interpretation of health care data. Prerequisites: HIMT 1600 and HIMT 1700; Co-requisite: HIMT program MATH elective.

HIMT 2400-Insurance Reimbursement Methodologies
(2 credit hours - 2 lecture 0 lab - T) TAG – OHL022
A study of the principles and practice of insurance and reimbursement processing including the compliance environment, payers, and reimbursement vocabulary. In addition, this course includes the completion of CMS-UB04 and CMS-1500 claims for inpatient, outpatient, and physician office encounters, EDI billing technologies, as well as claims processing and revenue cycle management. Prerequisites: HIMT 1500 and HIMT 2150.

HIMT 2500-Clinical Classification Systems III
(3 credit hours - 3 lecture 0 lab - T)
Students will apply and build upon their knowledge of coding in the clinical classification systems through advanced coding practices, study of prospective payment systems, and fraud and abuse in coding. This course also focuses on chargemaster, case mix index, nomenclature systems, and health care data sets. Prerequisite: HIMT 1500.

HIMT 2650-Management of Health Information Services
(2 credit hours - 2 lecture 0 lab - T)
Planning, organizing, staffing, budgeting and analysis of management systems along with job standards and performance evaluations emphasizing development of supervisory management and leadership skills. Prerequisites: HIMT 1300 and HIMT 2010.

HIMT 2700-Health Care Information Technology and Systems
(3 credit hours - 3 lecture 0 lab - T)
The study of information and communication technologies; data, information, and file structures; data storage and retrieval; and data security. Topics also include new trends in the management and processing of health information with an emphasis on the electronic health record (EHR). The course also explores the planning, design, selection, implementation, integration, testing, evaluation, and support of the EHR, including infrastructure required, legal issues that impact implementation, project management techniques, information technology systems, and workflow processes and redesign in health care settings (e.g., acute care, long term care, and mental health care). Prerequisite: HIMT 1300 or permission of instructor.

HIMT 2900-Professional Practicum and Seminar II
(2 credit hour - 1 seminar 7 practicum - T)
Students will apply their knowledge and skills in health information management in acute, non-acute, or alternative healthcare settings or in an HIM simulated environment. Competencies from the HIM curriculum including projects, laboratory simulations and case studies will be completed. Students are required to complete a mock Registered Health Information Technician (RHIT) examination. Prerequisite: HIMT 1900 or permission of instructor.

HIMT 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HIST 1100-Western Civilization to 1492
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OHS041
This course is a survey of Western Civilization examining ideas and cultural and political institutions from prehistory through the early part of the Reformation. Subjects covered include: ancient Middle East, Greece, Rome, Christianity, Islam, the Early Middle Ages, the High Middle Ages, the Renaissance, the Reformation, and European voyages of discovery. Prerequisite or co-requisite: ENGL 1500.

HIST 1110-Western Civilization from 1492 to Present
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OHS042
This is a survey of Western Civilization examining ideas and cultural and political institutions from the European Age of Discovery to the present day. Topics covered include: the Wars of Religion, the Scientific Revolution, Absolutism, the Enlightenment, the French Revolution, nineteenth century science and ideologies, twentieth century wars, the Cold War and Globalization. Prerequisite or co-requisite: ENGL 1500.

HIST 1200-U.S. History I
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OHS043
United States History I is an introductory overview of United States History, beginning with pre-Columbian Native American cultures and ending with the end of the Civil War. The course will highlight Native American cultures and prehistory, European exploration and colonization, the War for Independence, formation of the United States government, the War of 1812, Jacksonian democracy, economic and cultural forces, slavery, and the causes of the Civil War. Students will examine these topics from political, economic, and cultural perspectives. Students will also learn to distinguish primary from secondary sources and will critically analyze documents. Students will grapple with major historical issues such as the meaning of history, the use of history, the subjectivity of sources, the over- and under-representation of certain peoples, and evolving historical perspectives. Prerequisite or co-requisite: ENGL 1500.

HIST 1210-U.S. History II
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OHS044
This course will highlight reconstruction of the South, the Gilded Age, Imperialism, Progressivism, World War I, Roaring Twenties, Great Depression, New Deal, World War II, Cold War, 1950s, Civil Rights, Vietnam War, Nixon and Watergate, Reagan, Clinton, Obama. Students will examine these topics from political, economic, and cultural perspectives. Prerequisite or co-requisite: ENGL 1500.

HIST 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HIST 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HLTH 1010-Personal Training
(1 credit hour - 0 lecture 4 lab - B)
The student enrolled in this course will learn to improve personal fitness levels through regular participation in a prescribed exercise program. Each participant will complete seven fitness tests at the beginning and completion of the course. The results of these tests will be used to prescribe an individual fitness program focused on improving muscle strength, muscle endurance, and cardio-respiratory capacity. This course will involve weekly online lectures that are highly specific to the special physical demands of public safety services, journaling of personal progress on Blackboard, and at least one on-site workout per week. Completion of the requirements of this course should provide the student with improved fitness levels that will allow him or her meet the physical demands of working in a public safety service organization. Prerequisite: None.

HLTH 1020-Radiation Protection for the General X-Ray Machine Operator
(3 credit hours - 3 lecture 0 lab - T/B)
HLTH 1020 provides an introduction to radiation protection and includes topics such as basics of radiation physics, radiographic exposure and processing, radiation safety and protection, and radiobiology. Prerequisite: Current enrollment in an Allied Health program or current employment in Allied Health or permission of instructor.

HLTH 1050-The Health Care System: Issues and Professions
(2 credit hours - 2 lecture 0 lab - B)
HLTH 1050 is an introduction to the health care system and various allied health professions. Students explore such topics as the evolution of medicine and technology, medicolegal issues, patient rights, and acceptable behavior in the healthcare arena. Prerequisite: None.

HLTH 1060-GXMO Clinical Module Chest and Abdomen
(1 credit hour - 0 lecture 2 lab - T)
Introduces the analysis of theory in radiography of the chest and abdomen. Includes medical terminology, radiographic terminology, and image receptors. This is a course covering radiographic anatomy positioning and film critique. It will include material dealing with patient care and both film screen and digital image receptors. Prerequisite or co-requisite: HLTH 1020 or permission of instructor.

HLTH 1070-GXMO Clinical Module Extremities
(1 credit hour - 0 lecture 2 lab - T)
Introduces the analysis of theory in radiography of the upper and lower extremities. Includes medical terminology, radiographic terminology, and image receptors. This is a course covering radiographic anatomy positioning and film critique. It will include material dealing with patient care and both film screen and digital image receptors. Prerequisite or co-requisite: HLTH 1020 or permission of instructor.

HLTH 1080-GXMO Clinical Module Skull and Sinuses
(1 credit hour - 0 lecture 2 lab - T)
Introduces the analysis of theory in radiography of the skull, facial bones, nasal bones, and sinuses. Includes medical terminology, radiographic terminology, and image receptors. This is a course covering radiographic anatomy positioning and film critique. It will include material dealing with patient care and both film screen and digital image receptors. Prerequisite or co-requisite: HLTH 1020 or permission of instructor.

HLTH 1090-GXMO Clinical Module Spine
(1 credit hour - 0 lecture 2 lab - T)
Introduces the analysis of theory in radiography of the vertebral column and SI joints. Includes medical terminology, radiographic terminology, and image receptors. This is a course covering radiographic anatomy positioning and film critique. It will include material dealing with patient care and both film screen and digital image receptors. Prerequisite or co-requisite: HLTH 1020 or permission of instructor.

HLTH 1100-Personal Wellness
(2 credit hours - 1 lecture 3 lab - B)
This introductory course introduces students to the different dimensions of health: physical, psychological, spiritual, social, intellectual and environmental. Students will learn how to make informed health decisions about nutrition, stress management and active living in order to positively impact their own personal health. Prerequisite: None.

HLTH 1210-Medical Terminology
(2 credit hours - 2 lecture 0 lab - T/B) TAG – OHL020; CTAG – CTMT001
HLTH 1210 provides a study of the vocabulary used by medical personnel. Basic prefixes, suffixes, root words, and combining vowels are emphasized as the foundation for mastery. Prerequisite: None.

HLTH 1410-First Aid and Safety
(1 credit hour - 0 lecture 2 lab - T/B)
HLTH 1410 provides an introduction and application of accepted national standards for first aid and cardiopulmonary resuscitation. Prerequisite: None.

HLTH 1500-Professionalism in Healthcare
(3 credit hours - 3 lecture 0 lab - B)
HLTH 1500 introduces allied health students to professional behavior in health care. Topics such as professional demeanor, communication, ethics, and study skills are incorporated into the course. Prerequisite: ENGL 1500.

HLTH 1510-Managing Cognitive Impairments in Community-Dwelling Elders
(3 credit hours - 3 lecture 0 Lab - B)
HLTH 1510 provides a study of common impairments etiologies and non-functional behaviors seen in community-dwelling elders. This course will familiarize the learner with effective communication and redirection strategies to be used by healthcare and business personnel. Prerequisite: None.

HLTH 1650-Electrocardiography
(2 credit hours - 1 lecture 2 lab - T)
HLTH 1650 provides the allied healthcare student with the basics of electrocardiography in the healthcare facility. The course provides both didactic and clinical experiences and clinical performance is assessed. Prerequisites: BIOL 2400 and BIOL 2410.

HLTH 1730-Disease and the Disease Process
(2 credit hours - 2 lecture 0 lab - B)
HLTH 1730 provides an introduction to human diseases and various disabling conditions. It covers etiology, symptoms, diagnosis and various interventional approaches. This course reinforces and builds upon content of other allied health courses in preparation for more in-depth technical allied health coursework. Prerequisites: BIOL 2400 and BIOL 2410.

HLTH 1800-Health and Nutrition
(3 credit hours - 3 lecture 0 Lab - B)
HLTH 1800 is for the general student population. It includes guidelines for good health, nutrition and wellness across the lifespan. Content covers macronutrients and micronutrients, weight management, food safety, and lifecycle nutrition from pregnancy/birth to the older adult years. Prerequisite: BMCA 1010 or BMCA 1050.

HLTH 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HLTH 2210-Nutrition and Diet Therapy
(3 credit hours - 3 lecture 0 lab - T/B)
HLTH 2210 is and introduction to normal nutritional requirements and current theories of nutrition. Therapeutic diets used in treating specific health conditions are studied. Prerequisite: None.

HLTH 2230-Nutrition for Sport and Fitness
(3 credit hours - 3 lecture 0 lab - T)
HLTH 2230 is designed specifically for the sport and fitness enthusiast who desires to go beyond basic nutritional information. Applying the current research to physically active individuals will assist in better physical performance during sporting activities. Special emphasis is placed on maximizing training and performance with consideration given to the positive and negative physiological changes associated with a variety of dietary supplements. Prerequisite: None.

HLTH 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HRMG 1200-Staffing and Employment Functions
(3 credit hours - 3 lecture 0 lab - T)
Provides students with techniques for effective employee staffing. Topics include job search, interviewing, assessment, affirmative action, employee discipline, and termination. Prerequisite: None.

HRMG 1330-Strategic Compensation
(3 credit hours - 3 lecture 0 lab - T)
This course provides an in-depth study of the history, principles, theories, and practices of compensation and an overview of alternative reward systems and strategies. Students will review compensation surveys, policies governing benefits (including health, life, disability, pension/retirement, and pay for time not worked), and the laws governing compensation. Prerequisite: None.

HRMG 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

HRMG 2250-Cultural Diversity for Human Resources
(3 credit hours - 3 lecture 0 lab - B)
Introduces the student to diversity management and affirmative action programs. The emphasis is to increase student awareness of demographic changes, cultural differences, legal aspects, and diversity challenges. Students will learn the concepts of managing diversity and valuing differences in a workplace environment. Prerequisite: None.

HRMG 2300-Labor Relations
(3 credit hours - 3 lecture 0 lab - T)
An overview of the history, organization, and development of labor unions and other professional employee associations. Topics include union management tactics, collective bargaining, and labor laws. Prerequisite: None.

HRMG 2650-Human Resource Management
(3 credit hours - 3 lecture 0 lab - T)
A study of philosophy, principles, and methods of personnel management including organizational structure, areas of responsibility, policy making, procurement and placement, training, evaluation, wage and salary administration, employee benefit programs, and a survey of labor laws. Prerequisite: None.

HRMG 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ISET 1100-Industrial Electricity
(3 credit hours - 2 lecture 3 lab - T/B)
This course for non-EEET majors is a study of basic electrical principles including current, voltage, resistance, Ohm's law, the power law, efficiency, energy, electricity safety, series, parallel, and series-parallel circuits, and voltage sources. Electronic devices studied include diodes, capacitors, inductors, transistors, SCR's, triacs, integrated circuits, A.C. and D.C. motors, transformers, and controls. Students work with analog and digital VOMs and the oscilloscope. Co-requisite: Placement into college level math.

ISET 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ISET 2400-Motor Controls
(3 credit hours - 2 lecture 3 lab - T)
An introduction to the theory of motor controls with emphasis on green principles for energy reduction and increased efficiency. AC and DC motors along with overload, starters/stops, wiring, contactors and loads are also covered in both lecture and lab learning experiences. Prerequisite: None.

ISET 2500-Programmable Controllers
(3 credit hours - 2 lecture 3 lab - T)
An introduction to the function of Programmable Logic Controllers. Specific emphasis and learning outcomes will include ladder logic, inputs and outputs, programming, timer counters, numeric code, control instrumentation and safety. Prerequisite: None.

ISET 2650-Mechanical Systems
(4 credit hours - 3 lecture 3 lab - T)
Study of blueprint reading, mechanical safety, power and systems, lubrication principles, gears and gear ratios and bearing types and applications. Hands on labs complement the lectures to provide knowledge in fundamental machine design. Prerequisite: None.

ISET 2800-Capstone
(3 credit hours - 2 lecture 3 lab - T)
This course will provide the student with an opportunity to complete a project designed by industry professionals. The student will work directly with industry personnel and program faculty to assist in solving and implementing solutions to an actual industry problem. Skills and knowledge obtained in previous coursework will be applied during this course. Students will be assessed based on criteria developed by these professionals. Student will present final project to a panel of College personnel and industry professionals. Prerequisite: Sophomore status.

ISET 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ITCS 1010-Introduction to Networking
(3 credit hours - 2 lecture 3 lab - T)
This course is designed for students interested in pursuing a career in the field of Information Technology. Topics include the OSI model, network media, TCP/IP protocol suite, IP addressing and connectivity devices. A client-server environment will be used to provide experience in configuration, installation, operation, and administration of a local area network. Other topics and skills for success in the information technology field, such as ethics and security, will also be discussed. This class covers the objectives for the CompTIA Network+ certification. A fee applies to this course. Prerequisite: None.

ITCS 1030-Introduction to Programming Logic
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTPROG001
Covers the basic concepts of program flowcharting, pseudocode and design. Provides an understanding of the fundamental concepts of the programming structures that are used in designing, testing, and implementing a program. These basic programming structures will be applied to a programming language which is object oriented using an object oriented programming language. A fee applies to this course. Prerequisite: None.

ITCS 1210-Visual Basic
(2 credit hours - 1 lecture 3 lab - T)
Introduction to the Visual Basic language. Topics include: building a graphical user interface, working with controls, variables, constants, data types, expressions, selection structures, loops, procedures, functions and menus. Designing, developing, testing and debugging Visual Basic Applications will be covered. A fee applies to this course. Prerequisites: ITCS 1030 or EEET 2150 and placement into college level math.

ITCS 1230-Web Site Applications
(3 credit hours - 2 lecture 3 lab - T)
Provides coverage of HTML and CSS, including guidelines for Web accessibility and in depth coverage of Cascading Style Sheets. Design styles and Cascading Style Sheets are used to enhance Web page layout and appearance which creates interactive Web pages with dynamic content and styles. HTML is also used to create mobile applications. A fee applies to this course. Prerequisite: None.

ITCS 1400-Linux+
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTIT016
This course introduces students to the Computing Technology Industry Association's (CompTIA) Linux+ objectives. Linux+ is a vendor neutral certification that validates the fundamental knowledge and skills required of junior Linux administrators. In order to receive CompTIA Linux+ certification, a candidate must pass two exams. A fee applies to this course. Prerequisite or co-requisite: CYBR 1200 or ITCS 1010 or ITCS 2510.

ITCS 1410-Introduction to C#
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTPROG003
The course provides the programmer with complete coverage of all introductory and many advanced programming topics, with emphasis on the C# programming language. The course introduces basic object oriented programming concepts such as abstraction, polymorphism, inheritance and encapsulation. Application of basic programming concepts such as structure, decision-making, looping, arrays, classes, methods as well as enforcing good style and logical thinking. Intermediate-level topics include exceptions, GUIs, events and files. Advanced topics include multithreading, graphics, dynamic data structures and generics. A fee applies to this course. Prerequisites: ITCS 1030 and placement into college level math.

ITCS 1420-Interactive Web Projects
(2 credit hours - 1 lecture 3 lab - T)
Covers the layering levels of Flash, a powerful animation tool used in Web applications, as well as a programming language which gives Flash flexibility. All this will be done in a hands-on environment where the students have the opportunity to practice the concepts being taught. A fee applies to this course. Prerequisite: DCMT 1020.

ITCS 1430-Server-side Scripting
(3 credit hours - 2 lecture 3 lab - T)
ASP.NET is one of the most powerful technologies for providing dynamic content on the web. It is utilized for the purpose of calling and using programming language which manipulate data, query databases, generate customization graphics, and perform related tasks in the building of server applications. Hands-on development of projects using this powerful technology enables skill building for using ASP.NET and similar tools. A fee applies to this course. Prerequisites: ITCS 1030 and placement into college level math.

ITCS 1500-Microcomputer Hardware
(3 credit hours - 2 lecture 3 lab - T/B) CTAG – CTIT014
This course explores related topics in microcomputer operations, including hardware, system maintenance, configurations, upgrades and trouble shooting. Operating system software maintenance and troubleshooting of the operating system will also be discussed. Decision making regarding hardware and software purchases is also included. A fee applies to this course. Prerequisite: None.

ITCS 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ITCS 2020-Introduction to Java
(3 credit hours - 2 lecture 3 lab - T) CTAG – CTPROG002
An introduction to programming with Java. Hands-on knowledge of the Java basics including primitive types and strings, constants, objects, methods, classes and instance variables are covered. Intermediate topics include stand-alone applications, arrays, exceptions and interfaces. Advanced topics such as GUIs, multithreading and data structures will also be covered. A fee applies to this course. Prerequisites: ITCS 1030 and placement into college level math.

ITCS 2090-Project Management Methodologies
(3 credit hours - 2 lecture 3 lab - T/B)
This course is an introduction to project management methodologies. Students will examine: the organization, planning, and controlling of projects as well as project scope, scheduling and resource management. Students will become familiar with the tools used to manage projects. A fee applies to this course. Prerequisite: Sophomore standing.

ITCS 2100-Introduction to Open Source Programming
(3 credit hours - 2 lecture 3 lab - T)
This course provides an introduction to the fundamentals of programming. Concepts will include the structures used in creating expressions, variables, conditions, functions, objects and exceptions. Prerequisite: None.

ITCS 2110-Security in the Information Age
(3 credit hours - 2 lecture 3 lab - T/B)
This course introduces the principles and fundamentals of information and system security. It is designed to prepare students for future roles as business decision-makers. Topics such as network and applications security, communication security, threats and vulnerabilities as well as ethics, disaster recovery, and operational/organizational security will be covered. A fee applies to this course. Co-requisite: FYEX 1100 or ITCS 1010.

ITCS 2170-Packet Analysis
(3 credit hours - 2 lecture 3 lab - T)
This course introduces the principles and fundamentals of packet analysis. This course offers hands-on training in network analysis and troubleshooting using Wireshark. Core tasks and techniques of protocol analysis (for example: IP, TCP, UDP, ARP, DHCP, HTTP, ICMP) are covered as well as capture and analysis techniques used for network troubleshooting and network security. A fee applies to this course. Prerequisite: CYBR 1100 or CYBR 1400 or ITCS 1010.

ITCS 2230-Developing Mobile Applications for Android Devices
(3 credit hours - 2 lecture 3 lab - T)
This is a hands-on course for designing and building mobile applications using Android open-source platform. The course explains the philosophy of developing applications for the Android through its main application development building blocks and their interaction with one another. This hands-on course encourages students to learn by building increasingly more sophisticated and meaningful mobile applications for the Android. By the end of the course, each participant will build their own complete Android application incorporating most of the key aspects of the platform. A fee applies to this course. Prerequisite: ITCS 1210 or ITCS 1230 or ITCS 1410 or ITCS 1420 or ITCS 2020.

ITCS 2250-Database Management Systems
(3 credit hours - 2 lecture 3 lab - T)
This course presents the concepts of database management. These concepts are applied to a relational database management system. Database design and normalization, creation, tables, queries, forms, reports and other features are accomplished with the use of database management system software. Structured Query Language (SQL) will also be covered. A fee applies to this course. Prerequisite: ITCS 1010.

ITCS 2290-Capstone
(1 credit hour - 0 lecture 3 lab - T/B)
This course integrates the concepts learned in Project Management Methodologies. Concepts are applied through team projects. Students will be expected to prepare and present a written report and an oral presentation. A fee applies to this course. Prerequisites: ITCS 2090 and within 16 semester hours of graduation.

ITCS 2500-Windows Server Administration
(3 credit hours - 2 lecture 3 lab - T)
This course explores the planning, installation, configuration, administration, troubleshooting, and securing of Microsoft Windows Server operating systems. This course prepares students for one of the Microsoft Certified Professional (MCP) exams required for the Microsoft Certified Systems Administrator (MCSA) and/or Microsoft Certified Systems Engineer (MCSE) certifications. Prerequisite or co-requisite: CYBR 1200, ITCS 1010, or ITCS 2510.

ITCS 2510-Cisco Routers I
(6 credit hours - 4 lecture 4 lab - T) CTAG – CTIT007; CTAG – CTIT008
This course introduces fundamental networking concepts and technologies. The course materials will assist you in developing the skills necessary to plan and implement small networks across a range of applications. Topics include: Exploring the Network, Configuring a Network Operating System, Network Protocols and Communications, Network Access, Ethernet, The OSI Model and its layers, IP Addressing, and Subnetting IP Networks, Understanding Switched Networks, Describing Basic Switching Concepts and Configuration, Understanding VLANs, Explaining Routing Concepts and Inter-VLAN Routing, Configuring Static and Dynamic Routing, Configuring Single-Area OSPF, Understanding Access Control Lists, Explore DHCP and NAT. This course maps to Cisco Systems' CCENT certification. Prerequisite: ITCS 1010.

ITCS 2550-Cisco Routers II
(6 credit hours - 4 lecture 4 lab - T) CTAG – CTIT009; CTAG – CTIT010
Introduces the student to the second half of the CCNA curriculum provided by Cisco Systems, Inc. This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. Topics include: OSPF, EIGRP, ACLs, SNMP, STP, PPPoE, GRE, single-homed eBGP, Cisco SPAN, other protocols in both IPv4 and IPv6 networks, as well as review for the CCNA Exam. Prerequisite: CYBR 2200 or ITCS 2510.

ITCS 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MATH 0250-Algebra and Trigonometry Lab I
(1 credit hour - 0 lecture 2 lab - V)
This course provides students enrolled in MATH 1250 the support and supplemental instruction needed to ensure their success in MATH 1250. Co-requisite: MATH 1250.

MATH 0650-Statistics Lab
(1 credit hour - 0 lecture 2 lab - V)
This course provides students enrolled in MATH 1650 the support and supplemental instruction needed to ensure their success in MATH 1650. Co-requisite: MATH 1650.

MATH 0990-Introductory Algebra
(5 credit hours - 4 lecture 2 lab - V)
Students will study and apply algebra concepts that are foundational for college-level algebra courses. Topics include factoring algebraic expressions, operations involving algebraic fractions, laws of exponents, roots and radicals, linear equations and graphs, simultaneous linear equations, and solving application problems involving linear equations and/or formulas. Prerequisite: Placement by testing.

MATH 0995-Path to College Mathematics
(5 credit hours - 4 lecture 2 lab - V)
Path to College Mathematics is designed to enable students to develop conceptual understanding and problem solving competencies in numeracy, proportional reasoning, algebraic reasoning, and functions with statistics as preparation for quantitative and statistical reasoning mathematics. Students will study real numbers, solve equations and inequalities, graph simple linear equations, systems of linear equations, inequalities, and determine the slope of a line. Students will apply exponent rules and work with scientific notation. Students will study geometry and measurement, including conversion of units in both the U.S. and Metric systems. Student will also determine measures of central tendency and dispersion. Students will solve real-life application problems and develop critical thinking skills. Prerequisite: Placement by testing.

MATH 1040-Industrial Technical Mathematics with Trigonometry
(4 credit hours - 4 lecture 0 lab - G)
Ratio, rate, proportion, metric/U.S. customary measurement, plane geometry, solid geometry, right triangle trigonometry, trigonometric functions of any angle, radians, vectors analysis by trigonometry, Law of Sines, Law of Cosines, and graphs of trigonometric functions. A graphing calculator is required. Prerequisite: Placement into college level math or MATH 0990 with a grade of "C" or better.

MATH 1050-Quantitative Reasoning
(4 credit hours - 4 lecture 0 lab - G) OT36 – TMM011
This course is designed to develop students' quantitative and logical reasoning abilities, and improve students' ability to communicate quantitative ideas. This project-based course requires the student to create, analyze, and interpret mathematical models based on real world problems. Prerequisite: 1) Placement into college level math; or 2) Pass Math 0995 with a grade of "B" or better; or 3) Pass MATH 0995 with a grade of "C" or better. *(MATH 0995 students are permitted to advance to MATH 1050 with a grade of "C", but are required to register for a section of the co-requisite lab, MATH 1051).

MATH 1051- Quantitative Reasoning Lab
(1 credit hour - 0 lecture 2 lab - V)
This course provides students enrolled in MATH 1050 the support and supplemental instruction needed to ensure their success in MATH 1050. Co-requisite: MATH 1050.

MATH 1250-Algebra and Trigonometry
(4 credit hours - 4 lecture 0 lab - G) OT36 – TMMSL
MATH 1250 furnishes students with a more rigorous background in trigonometry and algebra. Included in the topics are functions and their graphs, right triangle trigonometry, trigonometric functions of any angle, radians, vectors and their applications, Law of Sines and Law of Cosines, graphs of trigonometric functions, exponents and radicals, complex numbers, logarithmic and exponential functions, systems of equations of higher degree, logarithmic and exponential equations, equations of quadratic form, and equations with radicals. A graphing calculator is required. Prerequisite: Grade of "C" or better in MATH 0990 or pass MATH 0990 credit by exam or placement into college level math.

MATH 1340-College Algebra
(4 credit hours - 4 lecture 0 lab - G) OT36 – TMM001
College Algebra in conjunction with MATH 1350, Pre-Calculus, provides the necessary background for MATH 2510, Calculus I. Topics include radicals and rational exponents, equations and inequalities, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, and systems of equations. A graphing calculator is required. Prerequisite: 1) Placement into college level math; or 2) an ACT score of 22; or 3) grade of "B" or better in MATH 0990; or 4) pass the MATH 0990 Credit-by-Exam. *(Students passing MATH 0990 with a "C" must also be concurrently enrolled in MATH 1341).

MATH 1341-College Algebra Lab
(1 credit hour - 0 lecture 2 lab - V)
This course provides students enrolled in MATH 1340 the support and supplemental instruction needed to ensure their success in MATH 1340. Co-requisite: MATH 1340.

MATH 1350-Pre-Calculus
(5 credit hours - 5 lecture 0 lab - G) OT36 – TMM002
Broadens the algebra background and affords students the opportunity to develop an extensive trigonometric background. Included are the topics of functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, systems of equations, inequalities, conic sections, sequences and series, right triangle trigonometry, trigonometric functions of any angle, graphs of the trigonometric functions, inverse trigonometric functions, oblique triangles, vectors, and trigonometric identities, equations, and formulas. MATH 1350 provides students with the necessary background for MATH 2510, Calculus I. A graphing calculator is required. Prerequisite: 1) Grade of "C" or better in MATH 1250; or 2) pass the MATH 1250 Credit-by-Exam; or 3) grade of "C" or better in MATH 1340; or 4) pass the MATH 1340 Credit-by-Exam.

MATH 1650-Statistics
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMM010
Equips student with understanding of statistical concepts dealing with the processing and interpretation of numerical information. Basic statistical applications including measures of central tendencies and variations, probability, sampling, hypothesis testing, and correlation analysis will be studied. A scientific or graphing calculator is required. Prerequisite: Placement into college level math or grade of "C" or better in MATH 0995. *(Students passing MATH 0995 with a "C" must also be concurrently enrolled in MATH 0650).

MATH 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MATH 2510-Calculus I
(5 credit hours - 5 lecture 0 lab - G) OT36 – TMM005
This course is a first course in a sequence of two covering the fundamental concepts of single variable calculus and their applications. Topics in this course are functions and graphing, limits and continuity, derivatives, derivative applications, integrals, applications of integration, and integration by substitution. Concepts of differential and integral calculus as applied to trigonometric, inverse trigonometric, and transcendental functions are included. Prerequisite: Grade of "C" or better in MATH 1350.

MATH 2520-Calculus II
(5 credit hours - 5 lecture 0 lab - G) OT36 – TMM006
This course is a second course in a sequence of two covering the fundamental concepts of single variable calculus and their applications. Topics in this course are indeterminate forms and L' Hospital's rule, techniques of integration including integration by parts, trigonometric substitution, and the method of partial fractions, the Trapezoid Rule, the Midpoint Rule, improper integrals, further applications of integration, sequences and series, parametric equations, polar coordinates, conic sections, and differential equations. Prerequisite: Grade of "C" or better in MATH 2510.

MATH 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MECH 1000-Engineering Graphics
(3 credit hours - 2 lecture 2 lab - T/B)
MECH 1000 introduces the concepts of reading and creating engineering prints. Topics include orthographic projection, dimensioning systems, sections, auxiliary views, and general drawing layout. The basics of AutoCAD software are taught and utilized for print creation. AutoCAD topics include interface, 2-D entity construction, layers, text, dimensioning, plotting, and simple 3-D objects. Prerequisite: None.

MECH 1100-Mechanical 3-D Modeling
(3 credit hours - 2 lecture 2 lab - T) TAG – OET021; CTAG – CTMET005
MECH 1100 introduces parametric solid modeling as used in the mechanical design environment. Students will learn to create parts, assemblies, and drawings in a commercially used 3-D package. The theory of bottom-up design is mainly the focus, with an introduction to top-down design. Prerequisite: Grade of "C" or better in MECH 1000.

MECH 1150-Tools, Measurement, and Layout
(2 credit hours – 1 lecture 3 lab – T)
This course is an introduction to the use of fasteners, hand tools, portable power tools, measuring instruments, and machine tool equipment. Students will learn to identify, describe, and properly use wrenches, screwdrivers, pliers, hammers, torque wrenches, portable power tools, scaled instruments, Vernier instruments, micrometer instruments and gage blocks. Prerequisite: None.

MECH 1200-Manufacturing Processes
(3 credit hours - 2 lecture 2 lab - T) TAG – OET010; CTAG – CTMET004
MECH 1200 introduces students to the industrial processes of manufacturing. Typical industrial processes for metals and plastics are studied. Relationships among materials, processes, and design are established. Labs consist of hands-on projects in manufacturing as well as industry visits to local manufacturing facilities Co-requisite: MECH 1000.

MECH 1300-Industrial Materials
(3 credit hours - 2 lecture 2 lab - T) TAG – OET013
MECH 1300 is an introductory study of material science. Material families of metals, polymers, and ceramics are covered. Lab includes various projects relating to material properties. Prerequisite: MATH 1250.

MECH 1400-Industrial Mechanics
(2 credit hours - 1 lecture 2 lab - T)
This course provides instruction and hands-on experience in the basic skills and the proper utilization of common hand and power tools associated with industrial maintenance. Prerequisite: None.

MECH 1500-Survey of 3D Mechanical Modeling
(3 credit hours - 2 lecture 2 lab - T)
This course is a survey of common industrially used 3D modeling software packages. Basic concepts from MECH 1100 and MECH 1200 will be examined in 2 additional software packages; Dassault Systemes Solidworks and Parametric Technologies Corp Creo. Parametric feature based solid models, assemblies, and drawing extraction are the main software topics. The theories and applications of both bottom-up and top-down design are illustrated. In addition, advanced drafting of both detailed and assembly drawings are incorporated. Co-requisite: MECH 1100.

MECH 1800-VEX Robotics
(3 credit hours - 2 lecture 2 lab - T)
Students will design and build a robot that performs a specified task in a sport-like competition environment. Principles of mechanical and electrical engineering technologies will be emphasized with some additional use of computer programming. Prerequisite: None.

MECH 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MECH 2100-Engineering Economy
(3 credit hours - 3 lecture 0 lab - T) TAG – OES005
Economic analysis of engineering projects and methods of operation, introduction to the analysis of engineering economic decisions. Topics include time value of money, cost estimation, equipment comparison, break-even analysis, replacement and risk analysis. Prerequisite: MATH 1250.

MECH 2200-Statics
(3 credit hours - 3 lecture 0 lab - T) TAG – OET007
Analysis of forces and effects of forces acting upon rigid bodies at rest. The course focuses on force analysis, i.e., the determination of the total internal forces produced in members of a structure in equilibrium by externally applied loads. Prerequisite: MATH 1250.

MECH 2300-Strength of Materials
(3 credit hours - 3 lecture 0 lab - T) TAG – OET008
The study of internal stresses and deformation on members due to externally applied loads. Utilization of the derived data is used in designing members which will safely support the imposed loads. Prerequisite: MECH 2200.

MECH 2400-Dynamics
(3 credit hours - 3 lecture 0 lab - T)
Study of the motion of a given body with and without considering the forces which produce these motions. Emphasis is on the fundamentals of motion, analysis of machine members, and mechanism design. A detailed study of the effect of unbalanced forces on moving rigid bodies. Prerequisite: MECH 2200.

MECH 2500-Hydraulics and Pneumatics
(3 credit hours - 2 lecture 2 lab - T) TAG – OET009
A study of the principles of fluid and air power and how to use the power in a manufacturing setting and on mobile or portable equipment. Includes how to utilize cylinders and motors to perform work as required, how to size fluid power circuit components, connect them together, and control them to form a functional system. Prerequisites: MATH 1040 or MATH 1250.

MECH 2550-Computer-Aided Machining
(3 credit hours - 2 lecture 2 lab - T)
This course builds on the 3D modeling skills learned in previous MECH classes. Students create 3D CAD models, generate toolpaths using computer-aided manufacturing (CAM) software, and operate CNC machines. Topics include 3D modeling, 2D and 3D toolpath generation, stock setup, machining simulations, tool selection, speed/feed selection, part setup, work holding basics, and CNC machine operation. Prerequisite: MECH 1100.

MECH 2600-Machine Design
(3 credit hours - 2 lecture 2 lab - T)
Study of design and determination of the size and shape of various machine components such as bearings, brakes, shafts, fasteners, gears, drive belts/chains, and flywheels. Utilizes previously learned CAD knowledge including solid modeling. A term project is required as well as a capstone proficiency exam. Prerequisites: MECH 1100 and MECH 2200.

MECH 2700-Project Management
(3 credit hours - 3 lecture 0 lab - T)
This course emphasizes the study of project management as it relates to construction and industry, including the background knowledge and application of the project management process from concept and selection to completion and closure. Prerequisite: MATH 1250.

MECH 2800-Robotics
(3 credit hours - 2 lecture 2 lab - T)
An introduction to robotics including coordinate systems, drives, programming, and applications. Labs will include programming electric servo robots and their integration into work cells. Prerequisite: None.

MECH 2900-Statistical Process Control
(2 credit hours - 2 lecture 0 lab - T)
Study of statistical applications of on-line quality control functions of process control. Includes capability analysis and construction of control charts by variable and attributes with computer utilization. Also includes an introduction to statistics and quality control in general. Prerequisite: MATH 1250.

MECH 2920-Field Experience I
(1-4 credit hours - T)
This course allows students to gain on-the-job experience. It is accompanied by scheduled visits by coordinators and periodic evaluations. Prerequisite: Academic Dean or Chair approval.

MECH 2930-Field Experience II
(1-4 credit hours - T)
This course is a continuation of MECH 2900. It is accompanied by scheduled visits by coordinators and periodic evaluations. Prerequisites: MECH 2900 and Academic Dean or Chair approval.

MECH 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MEDA 1010-Introduction to Medical Assisting
(3 credit hours - 2 lecture 3 lab - T)
MEDA 1010 introduces the student to the field of medical assisting with emphasis on the administrative and clinical duties. The course highlights scheduling, telephone appointments, records maintenance, medical law and ethics, vital signs, and communications. Prerequisites: 1) Acceptance into the MEDA program; and 2) placement into ENGL 1500 and college level math; and 3) successful completion of BIOL 1210.

MEDA 1012-Administrative Medical Office Practices
(3 credit hours - 2 lecture 3 lab - T)
MEDA 1012 introduces students to administrative skills needed for medical office operation. Maintaining financial records and insurance claims, filing techniques, banking procedures, and managing office equipment also are introduced. Co-requisite: MEDA 1010.

MEDA 1020-Basic Medical Laboratory Techniques
(3 credit hours - 2 lecture 3 lab - T)
MEDA 1020 introduces the medical assisting student with basic lab techniques in the medical laboratory including specimen collection and performing basic laboratory testing in a physician's office. Methods of specimen collection include venipuncture, capillary puncture, and urine collection. This course contains both classroom instruction and clinical experiences for successful completion. Prerequisites: Grade of "C" or better in MEDA 1010 and MEDA 1012.

MEDA 1022-Medical Assisting Clinical Procedures I
(3 credit hours - 2 lecture 3 lab - T)
Application of clinical skills is the focus of this course. Common therapeutic procedures, minor surgery procedures, aseptic technique, and patient preparation are included. A fee applies to this course. Prerequisite: Acceptance into the MEDA program; Co-requisite: MEDA 1020.

MEDA 1024-Pharmacology and Drug Administration
(3 credit hours - 2 lecture 3 lab - T)
MEDA 1024 provides the medical assisting student with basic knowledge of symbols and abbreviations used in writing prescriptions for drugs frequently prescribed by the physician. The responsibility of the medical assistant and other health professionals in providing the patient with drug therapy is emphasized. Co-requisite: MEDA 1020.

MEDA 1032-Clinical Practicum/Seminar I
(2 credit hours - 1 lecture 13 lab - T)
MEDA 1032 is supervised, unpaid work experience required for students in the Medical Assisting Program. Students seek area physician's offices where practical experience and direct observation of job performance and requirements are afforded. Medical assisting students are required to meet both administrative and clinical objectives in the office setting. Prerequisites: Grade of "C" or better in MEDA 1020, MEDA 1022, MEDA 1024, BIOL 2420, and BIOL 2430.

MEDA 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MEDA 2040-Medical Assisting Clinical Procedures II
(3 credit hours - 2 lecture 3 lab - T)
MEDA 2040 focuses on advanced clinical procedures used by a medical assistant in the medical office. Areas of study include diagnostic imaging and IV therapy. Prerequisite: Grade of "C" or better in MEDA 1032.

MEDA 2050-Clinical Practicum/Seminar II
(2 credit hours - 1 lecture 13 lab - T)
MEDA 2050 is an unpaid clinical experience required to strengthen administrative and clinical skills of the sophomore medical assisting student. Students may be required to participate at two clinical sites in order to complete the program competencies. A fee applies to this course. Prerequisite: Grade of "C" or better in MEDA 2040.

MEDA 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MKTG 1000-Marketing
(3 credit hours - 3 lecture 0 lab - T) TAG – OBU006
A critical study of the field of marketing institutions and functions with an emphasis on problems and practices in marketing. Presents the development and present status of the marketing system in the United States. Areas covered are consumer and industrial markets, retailing and wholesaling structure, and marketing functions and policies. Prerequisite: None.

MKTG 1010-Retail Management
(3 credit hours - 3 lecture 0 lab - T)
A study of the development of retailing in the American economy, including opportunities and historical perspectives of the field, legal aspects, planning considerations in developing strategies, choice of location, store design and layout, and managing and supervising retail personnel. Prerequisite: MKTG 1000 or permission of instructor.

MKTG 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MKTG 2020-Advertising
(3 credit hours - 3 lecture 0 lab - T) TAG – OCM012
A study of the principles of advertising and promotion, stressing history and the development of advertising and advertising techniques, including illustration, copy, slogans, and layout, as well as various advertising media, and direct-mail marketing. Prerequisite: MKTG 1000 or permission of instructor.

MKTG 2150-Principles of Professional Sales
(3 credit hours - 3 lecture 0 lab - T)
A study of the principles of professional selling, including its economic aspects, types of selling, and background of professional sales to include products, companies, customers, motivation, and competition, and all aspects of the sales process and techniques. Prerequisite: MKTG 1000 or permission of instructor.

MKTG 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MLTP 1000-Introduction to Medical Laboratory Science
(2 credit hours - 1 lecture 2 lab - T) TAG – OHL008; CTAG – CTMLT001
Introduces students to the medical laboratory profession. Topics include laboratory safety, professional roles, basic equipment operation, types of specimens and their collections, basic laboratory calculations, and common laboratory departments and tests. Students will competently perform phlebotomy procedures and operate basic lab equipment upon completion of this course. A fee applies to this course. Prerequisite: Acceptance into the MLTP program.

MLTP 1100-Clinical Hematology I
(3 credit hours - 2 lecture 3 lab - T) TAG – OHL009
MLTP 1100 is an introduction to the basic principles and laboratory techniques used in hematology and coagulation. Includes basic manual and automated methods used in the study of hematology and hemostasis. A fee applies to this course. Prerequisite: Grade of "C" or better in MLTP 1000.

MLTP 1200-Clinical Immunology
(2 credit hours - 1 lecture 3 lab - T)
MLTP 1200 is the study of the immune system and associated laboratory testing on antigen-antibody reactions. Calculations, disease correlation, and lab techniques associated with immunology are emphasized. A fee applies to this course. Prerequisite: Grade of "C" or better in MLTP 1000.

MLTP 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

MLTP 2000-Clinical Body Fluids
(2 credit hours - 1 lecture 3 lab - T) TAG – OHL010
MLTP 2000 involves the microscopic and macroscopic evaluation of urine and other non-blood body fluids. Includes a review of the urinary system, specimen collection and preservation procedures and quality assurance. A fee applies to this course. Prerequisites: Grade of "C" or better in MLTP 1100 and MLTP 1200.

MLTP 2100-Clinical Hematology II
(3 credit hours - 2 lecture 3 lab - T)
MLTP 2100 focuses on advanced principles and procedures used in hematology and coagulation. Disease states associated with hematology and hemostasis are studied. A fee applies to this course. Prerequisites: Grade of "C" or better in MLTP 1100 and MLTP 1200.

MLTP 2200-Clinical Chemistry
(4 credit hours - 3 lecture 3 lab - T)
In MLTP 2200, students learn physiologic theory of routinely tested analytes in the clinical chemistry department. Students will develop a portfolio to help them evaluate the relationship of clinical chemistry results to normal and diseased states. Laboratory activities include using basic instrumentation, lab math calculations, and activities to correlate quality control and statistics to a laboratory quality assurance program. A fee applies to this course. Prerequisites: Grade of "C" or better in CHEM 1220, MATH 1650, MLTP 1100 and MLTP 1200.

MLTP 2300-Clinical Microbiology
(4 credit hours - 3 lecture 3 lab - T)
MLTP 2300 is an introduction to the identification of pathogenic organisms and associated diseases in humans. Laboratory instruction emphasizes isolation, identification, and evaluation of clinically significant microorganisms. A fee applies to this course. Prerequisites: Grade of "C" or better in BIOL 2010, MLTP 1100 and MLTP 1200.

MLTP 2400-Clinical Immunohematology
(3 credit hours - 2 lecture 3 lab - T)
MLTP 2400 introduces the student to the basic genetics of red cell antigens. Students will also study the significance of the blood cell antigens and antibodies, uses of specific blood components for transfusion, component processing, donor requirements and various transfusion associated disease states. Laboratory instruction emphasizes ABO and Rh typing, antibody detection and identification, and cross matching procedures. A fee applies to this course. Prerequisites: Grade of "C" or better in MLTP 1100 and MLTP 1200.

MLTP 2500-Directed Practice I: Clinical Chemistry
(2 credit hours - 0 lecture 26 lab - T)
MLTP 2500 begins the clinical portion of the MLT Program. An off-campus experience introduces the student to the operation of an actual clinical chemistry and phlebotomy department in the clinical setting. This supervised instruction will enable the student to apply skills and theory learned during the didactic portion of their curriculum. Prerequisites: Grade of "C" or better in MLTP 2000, MLTP 2100, MLTP 2200, MLTP 2300 and MLTP 2400; Co-requisite: MLTP 2600.

MLTP 2510-Directed Practice II: Clinical Immunohematology
(2 credit hours - 0 lecture 26 lab - T)
MLTP 2510 continues the off-campus clinical experience by introducing the student to the operation of an actual clinical immunohematology department. This supervised instruction will enable the student to apply skills and theory learned during the didactic portion of the curriculum. Prerequisites: Grade of "C" or better in MLTP 2000, MLTP 2100, MLTP 2200, MLTP 2300 and MLTP 2400; Co-requisite: MLTP 2600.

MLTP 2520-Directed Practice III: Clinical Hematology and Coagulation
(2 credit hours - 0 lecture 26 lab - T)
MLTP 2520 continues the off-campus clinical experience by introducing the student to the operation of an actual clinical hematology and coagulation department. Clinical urinalysis will also be covered in this rotation. This supervised instruction will enable the student to apply skills and theory learned during the didactic portion of the curriculum. Prerequisites: Grade of "C" or better in MLTP 2000, MLTP 2100, MLTP 2200, MLTP 2300, and MLTP 2400; Co requisite: MLTP 2600.

MLTP 2530-Directed Practice IV: Clinical Microbiology and Immunology
(2 credit hours - 0 lecture 26 lab - T)
MLTP 2530 completes the off-campus clinical experience by introducing the student to the operation of an actual microbiology/immunology department. This supervised instruction will enable the student to apply skills and theory learned during the didactic portion of the curriculum. Prerequisites: Grade of "C" or better in MLTP 2000, MLTP 2100, MLTP 2200, MLTP 2300 and MLTP 2400; Co-requisite: MLTP 2600.

MLTP 2600-Medical Laboratory Technician Seminar
(2 credit hours - 2 lecture 0 lab - T)
MLTP 2600 is a seminar that prepares students for attaining employment in the medical laboratory profession. Topics covered include professionalism, ethics, job seeking skills and the development of a professional portfolio. This course also prepares students for the national certification exam through simulated exams and the presentation of clinical case studies. Prerequisites: MLTP 2000, MLTP 2100, MLTP 2200, MLTP 2300 and MLTP 2400; Co-requisites: MLTP 2500, MLTP 2510, MLTP 2520 and MLTP 2530.

MLTP 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

NAFS 1000-Natural Science Computer Applications
(1 credit hour - 0 lecture 2 lab - B)
Introduction to computers, computer concepts, and terminology, as well as the impact of computers on today's society. Graphical and statistical analysis of natural science data are combined with the use of word processing, spreadsheet, and presentation graphics software on microcomputers. In addition, the student will learn how to access and search online journal databases and other useful internet tools utilized in natural sciences research. Prerequisite: None.

NAFS 1300-Soil Science
(2 credit hours - 1 lecture 3 lab - B)
NAFS 1300 introduces students to soil science including the physical, chemical, and biological properties related to land use, environmental quality, and plant growth. Soil conservation practices are examined. Prerequisite: None.

NAFS 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

NAFS 2001-Cooperative Work Experience
(1-4 credit hours - 150 clock hours cooperative work experience per credit hour - T)
Cooperative work experience is on- or off- campus paid employment. It augments formal classroom instruction. The experience is coordinated by a faculty member of Zane State College who visits the job site for a conference with the student and supervisor at least once during the semester, and assigns the course grade to the student after appropriate consultation with the supervisor/employer. Prerequisite: Permission of Program Director.

NAFS 2002-Seminar
(1 credit hour - 1 lecture 0 lab - T)
A seminar is a less formal educational experience than a classroom/lecture/discussion class. A relatively small number of students engage in discussions directed by a faculty member. Prerequisite: Permission of instructor.

NAFS 2003-Field Experience
(1-3 credit hours – 180 clock hours field experience per credit hour - T)
Field Experience is planned, paid work activity that relates to an individual student's occupational objectives. With permission of a faculty advisor, the field experience replaces elective or required courses in the student's associative degree program. The experience is coordinated by a faculty member of the college who assists the student in planning the experience, visits the site of the experience for a conference with the student and his/her supervisor at least once during the semester and assigns the course grade to the student after appropriate consultation with the employer/supervisor. Prerequisites: Permission of instructor and Department Chair or Academic Academic Dean.

NAFS 2150-Geographic Information Systems
(3 credit hours - 2 lecture 3 lab - T)
NAFS 2150 provides an introduction to the concepts and application of geographic information systems (GIS). Emphasis is placed on basic cartographic principles, data sources, data acquisition, data presentation in tabular and thematic formats, and basic project design. The basic platform for presentation will be ArcGIS software. A fee applies to this course. Prerequisite: None.

NAFS 2200-Guided Experience
(1 credit hour - 0 lecture 3 lab - T)
Guided experiences utilize a one to three day field learning experience concerning natural sciences subjects which are coordinated and led by one or more full time faculty members. Locations and topics of this experience vary. A fee applies to this course. Prerequisite: None.

NAFS 2700-Fisheries Management
(3 credit hours - 2 lecture 3 lab - T)
Fresh water fish are examined in terms of their taxonomy, morphology, life history, and ecology. Aquatic habitat evaluation is combined with management practices for lakes, ponds, and stream systems. Population studies, age and growth, food habits, and stocking techniques are incorporated into sound ecological practices. Prerequisite: BIOL 1510.

NAFS 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

OGET 1700-Compression Station Operation I
(3 credit hours - 3 lecture 0 lab - T)
An introductory study of the compression and transmission of gases. The course introduces transmission, instrumentation and general distribution terminology of operator of compression stations. Prerequisite: None.

OGET 1710-Compression Station Operation II
(3 credit hours - 3 lecture 0 lab - T)
A continuation of OGET 1700's study of compression/transmission of gases. Primarily covers reciprocating engines, turbines and compression theory. Also explores reciprocating and centrifugal compressor theory. Prerequisite: OGET 1700.

OGET 1720-Compression Station Operation III
(3 credit hours - 3 lecture 0 lab - T)
Final course in the compression station operations sequence. Introduces theory of electrical generation. Covers pumps, pressure vessels, heat exchangers and gas measurement. Prerequisites: OGET 1710 and ISET 1100.

OTAP 1070-Foundations of Occupational Therapy
(2 credit hours - 2 lecture 0 lab - T)
OTAP 1070 will cover the history, philosophy, ethics, and definitions of occupational therapy; overview of occupational therapy practice areas and theories; differences between the roles of occupational therapist and occupational therapy assistant; functions of professional and regulatory agencies and the occupational therapy process. The course will also present the bio-psycho-social dimensions of human development through the lifespan as relevant to the occupational therapy assistant. Prerequisite: Acceptance into the OTAP program.

OTAP 1130-Fundamentals of Occupation and Occupational Analysis
(4 credit hours - 3 lecture 3 lab - T)
OTAP 1130 introduces students to the meaning and dynamics of occupation and activity, along with the interactions of occupation with an individual's performance skills and patterns, activity demands, context(s), and client factors. Occupational analysis and the therapeutic use of occupations, including adaptation and gradation of activities to achieve client goals will be emphasized based on the occupational therapy domain and process. Emphasis will be placed on clinical reasoning and skill development. Prerequisite: Acceptance into the OTAP program.

OTAP 1302-Directed Practice in Physical Dysfunction and Mental Health
(1 credit hour - 0 lecture 5 lab - T)
OTAP 1302 provides students with the opportunity for observation and participation in the community, the occupational therapy clinic, and/or related service program. This experience is integrated with coursework for OTAP 2170. Focus of the learning experience is on development of professional communication skills with clients, colleagues, other health providers, and the public, and accurately documenting observations. In addition, skill development in case study, intervention planning and occupational therapy interventions will be initiated. A fee applies to this course. Co-requisites: OTAP 1520 and OTAP 2170.

OTAP 1520-Mental Health Concepts and Techniques for the Occupational Therapy Assistant
(4 credit hours - 3 lecture 3 lab - T)
In OTAP 1520 students will learn the diagnostic criteria for mental disorders, classes of mental disorders, and residual effects of the condition or impairment on the occupational, cognitive, psychological and social functions of individuals, groups and populations. The development and documentation of occupation-based intervention plans and strategies for both mental health practice and the psychosocial needs of clients from all treatment settings will be emphasized. Prerequisites: OTAP 1070 and OTAP 1130.

OTAP 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

OTAP 2100-Physical Agent Modalities in Occupational Therapy
(1 credit hour - 0 lecture 3 lab - T)
OTAP 2100 is an introduction to the use of thermal, mechanical, and electrotherapeutic modalities as a preparatory method to facilitate occupational performance of individuals. Safe and effective administration of these modalities will be emphasized, including adhering to contraindications and precautions while implementing the intervention plan to achieve client-centered, therapeutic goals. Prerequisites: BIOL 2420 and BIOL 2430.

OTAP 2170-Physical Dysfunction in Occupational Therapy
(5 credit hours - 4 lecture 3 lab - T)
OTAP 2170 provides instruction in occupational therapy theories, assessment, intervention planning and intervention for individuals with physical dysfunction in a variety of treatment settings. Emphasis is on therapeutic use of self, occupations and activities to restore, maintain, and facilitate physical health and engagement in occupations for various disabling conditions and ages. Documentation skills are incorporated into the intervention planning process and intervention implementation. Prerequisites: BIOL 2420, BIOL 2430, HLTH 1730, OTAP 1070 and OTAP 1130.

OTAP 2210-Occupational Therapy in Geriatric and Alternative Settings
(4 credit hours - 3 lecture 3 lab - T)
OTAP 2210 content includes theories and current research related to health and aging in place for elders in their natural environments. Emphasis is on understanding and treatment of complex neurologic and orthopedic conditions that are common to medically complex elders. The student gains knowledge in abilities-based dementia care, falls prevention, and documentation requirement in traditional and alternative settings. Prerequisite: OTAP 1520; Co-requisite: OTAP 2170.

OTAP 2250-Occupational Therapy in Pediatrics
(5 credit hours - 4 lecture 3 lab - T)
OTAP 2250 course content includes theories and current research related to the growth and development of the child from conception through adolescence and the development and documentation of occupation-based interventions and strategies for practice in pediatrics as an occupational therapy assistant. Course will include instruction in theories, assessment, intervention planning and role delineation within pediatric occupational therapy in a variety of treatment settings. Prerequisites: OTAP 1070 and OTAP 1130.

OTAP 2320-Practicum I
(4 credit hours - 0 lecture 35 lab - T)
OTAP 2320 is the first of two eight-week assignments of advanced clinical experience under the supervision of a licensed occupational therapist or occupational therapy assistant. The student will have 35 contact hours per week in the clinical setting. The student will have an in-depth experience in delivering occupational therapy services to a variety of clients and the application of purposeful and meaningful occupation across the lifespan. Prerequisite: Successful completion of all prior OTAP courses; Co-requisite: OTAP 2330.

OTAP 2330-Seminar
(1 credit hour - 1 lecture 0 lab - T)
OTAP 2330 facilitates problem-solving and critical thinking during practicum experiences, including documentation, professional and ethical issues and transitioning to the professional role. Co-requisites: OTAP 2320 and OTAP 2420.

OTAP 2420-Practicum II
(4 credit hours - 0 lecture 35 lab - T)
OTAP 2420 is the second of two eight-week assignments that will continue the opportunity of advanced clinical experience under the supervision of a licensed occupational therapist or occupational therapy assistant. The student will have 35 contact hours in the clinical setting. The student will have a further in-depth experience in delivering occupational therapy services to a variety of clients and the application of purposeful and meaningful occupations across the lifespan. Prerequisite: OTAP 2320; Co-requisite: OTAP 2330.

OTAP 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PBTC 1100-Theory and Practice
(3 credit hours – 3 lecture 0 lab – T)
Students in this course will evaluate the roles and responsibilities of the phlebotomist including: appropriate communication with clients and other healthcare professionals, proper use of medical terminology, legal and ethical issues faced by the phlebotomist, review of safety standards and compliance, universal precautions, and applicable knowledge of frequently ordered lab tests. A brief review of venous and circulatory anatomy will be conducted. The course will also review basic skills for the healthcare workforce including critical thinking, organization, and clerical skills. Prerequisite: None.

PBTC 1200-Phlebotomy Lab Experience
(2 credit hours – 0 lecture 6 lab – T)
This 8-week course provides supervised experience in the performance of venipuncture and micro collection techniques in a classroom setting. Emphasis is placed on universal precautions compliance, proper collection and preservation techniques for various specimens, special procedures performed by phlebotomists, specimen handling, and data management/storage. Upon completion, students should be able to safely perform procedures necessary for specimen collections on human subjects in various health care settings. Co-requisite: PBTC 1100.

PBTC 1300-Clinical Experience
(1 credit hour – 0 lecture 5 directed practice – T)
Students in this course will be in an off campus clinical facility. This setting will provide students with the opportunity to attain no less than 100 successful lab sticks and to apply skills and theory learned during the didactic portion of the curriculum. This experience must be no less than 50% based in an inpatient setting (hospital or other emergent care center). Prerequisite: PBTC 1200.

PHIL 1010-Introduction to Philosophy
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH045
This course begins with the most basic question of philosophy, "What should we believe?" –about God, religion, morality, politics, the nature of the self, the nature of the world around us, and even about knowledge itself. Students will study the process of figuring out what to believe—of becoming enlightened—as defined by Immanuel Kant. As Kant acknowledges, the process of enlightenment requires courage as it may lead us to change some of our beliefs and the process of changing one's beliefs is often difficult, both intellectually and socially. In this course, students will seek answers to the previous questions, and many more, by looking at what philosophers throughout history have had to say about these topics. Prerequisite or co-requisite: ENGL 1500.

PHIL 1020-Introduction to Ethics
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH046
This course is a course on philosophical ethics, and thus, will investigate philosophical questions regarding morality, such as the following: What is the good? What is virtue? Where do moral obligations come from? Is morality objective or relative to society and culture? Do we have proof for a moral claim such as lying is morally wrong? The course will be organized historically around some of the most important Philosophers and philosophical theories which have attempted to answer these questions. Included in this course is an investigation into applied ethical issues such as lying, abortion, euthanasia, and sexual ethics. Particular attention will be paid to how the various philosophical theories studied in the course can affect one's analysis of applied ethical problem. Prerequisite or co-requisite: ENGL 1500.

PHIL 1030-Critical Thinking
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH060
Critical Thinking is the general term given to a wide range of cognitive skills related to accurately making, understanding, and evaluating arguments. Students will learn to identify good and bad arguments and evaluate empirical evidence by learning about the logical structure of various forms of argument; drawing inferences from data; identifying language problems, including ambiguity and vagueness; recognizing hidden assumptions; and developing the skill of making rationally defensible choices. Students will be challenged to identify their own styles of critical thought and to apply new techniques to real-life issues. This course is designed to enhance one's ability to think critically, a crucial skill for academic, personal, and professional success. Co-requisite: ENGL 1500.

PHIL 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PHIL 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PHYS 1100-Introductory Physics
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS
Physics 1100 is a general introduction to contemporary physics. Topics covered include kinematics, forces, energy, rotation, fluids, heat, electricity/magnetism, and optics. The course is designed with an emphasis on comprehension of terms and their relation to one another, as well as problem solving strategies and techniques for handling various classes of physics problems. PHYS 1100 serves as a general overview of the field of physics for the non-science major or as a preparatory course in physics for the science or engineering major planning to take additional higher-level physics curriculum. Prerequisite or co-requisite: MATH 1250.

PHYS 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PHYS 2010-Physics I
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS; TAG – OSC014
Physics 2010 covers the mechanics of solids and liquids, mechanical waves, sound, and heat. Mechanics is the branch of physics that is concerned with describing the behavior of objects that are in motion or at rest. Topics covered in Physics I include physics math, kinematics, Newton's Laws of Motion, forces, uniform circular motion, work, energy, impulse and momentum, rotational motion, materials analysis, the physics of fluids, simple harmonic motion, mechanical waves, sound, heat, temperature, thermal physics, and the kinetic theory of gases. Physics I builds the foundation for understanding the topics covered in Physics II and gives students a better understanding of the way the physical world around them works. Prerequisite: Placement into college level math.

PHYS 2020-Physics II
(4 credit hours - 3 lecture 3 lab - G) OT36 – TMNS; TAG – OSC015
Physics 2020 covers the topics of electricity, circuits, magnetism, optics, quantum physics, special relativity, modern physics, and astronomy. Physics II builds on the foundation formed in Physics I and is the second half of a full-year introductory physics sequence. Prerequisite: Grade of "C" or better in PHYS 2010.

PHYS 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

POLS 1010-American National Government
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS011
American National Government is an introduction to the nature, purpose, and structure of the national government in the United States. The process of and participants in the creation of public policy are emphasized, including a citizen's role in a democracy. The positive and negative aspects of broad participation are compared. Prerequisite or co-requisite: ENGL 1500.

POLS 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

POLS 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

POTA 1010-Criminal Law
(3 credit hours - 3 lecture 0 lab - T)
This course is a study of jurisdiction, structure of the American courts, criminal and civil distinctions, use of criminal codes, statutes and ordinances and the introduction to the elements of particular crimes. Prerequisite: None.

POTA 1060-Introduction to Criminal Justice
(3 credit hours - 3 lecture 0 lab - T)
This course is a study of the three branches of the criminal justice system; law enforcement, the courts, and corrections. It describes how these branches interrelate with each other. Prerequisite: None.

POTA 1100-Civil Liabilities
(2 credit hours - 2 lecture 0 lab - T)
This course provides students with a basic understanding of civil liability. It introduces remedies and risk management techniques to help avoid and mitigate lawsuits aimed at the individual officer/criminal justice agency. Prerequisite: None.

POTA 1120-Defensive Tactics
(2 credit hours - 1 lecture 3 lab - T)
This course combines the theoretical and practical aspects of confronting and controlling subjects in a criminal justice capacity. Appropriate levels of force, pre-incident indicators, managing unknown contacts, tactical positioning, and physical defense/control techniques will be covered. Prerequisite: None.

POTA 1150-Defensive Driving
(2 credit hours - 1 lecture 3 lab - T)
This course provides a practical driving experience which instructs the student in the safe handling of a motor vehicle in both ordinary and emergency situations. Precision driving is stressed. Prerequisite: Valid driver's license.

POTA 1230-Investigations
(4 credit hours - 3 lecture 2 lab - T)
This course is a study of the investigative procedures including; initial contact by the investigator, collection and preservation of evidence, interviews/interrogations, hot and cold information, and case development. Prerequisite: None.

POTA 1910-Police Operations
(3 credit hours - 3 lecture 0 lab - T)
This course introduces students to the line activities of the law enforcement professional with special emphasis on the patrol function as well as crime prevention. Prerequisite: None.

POTA 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

POTA 1980-Introduction to Homeland Security
(2 credit hours - 2 lecture 0 lab - T)
This course provides an overview of the core concepts that constitute the emerging discipline of homeland security as it relates to the criminal justice professional. Prerequisite: None.

POTA 2200-Constitutional Law
(2 credit hours - 2 lecture 0 lab - T)
This course is an enhancement to previous discussions and studies of important United States Supreme Court cases with particular emphasis on corrections and law enforcement. Prerequisite: None.

POTA 2660-Firearms
(3 credit hours - 0 lecture 4 lab - T)
This course is an introduction to shooting fundamentals with an emphasis on safety and nomenclature. Shooting skill sets will be developed employing the revolver, semi-automatic pistol, and shotgun. Prerequisite: None.

POTA 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PSYC 1010-Introduction to Psychology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS015
An overview of major theories, concepts, and biological processes involved in the study of human behavior. Topics include history of psychology, research methods, biological bases of behavior, sensation and perception, consciousness, learning, memory, cognition and intelligence, motivation and emotion, lifespan development, personality, stress and coping, psychological disorders and their treatment, and social behavior. Prerequisite or co-requisite: ENGL 1500.

PSYC 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PSYC 2010-Abnormal Psychology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS017
Explores the causes, treatments, and underlying theories of anxiety, cognitive, developmental, dissociative, eating, gender identity, mood, personality, psychophysiological, schizophrenic, sexual, somatoform, and substance-related disorders. Students will learn the DSM classification system of mental disorders. Prerequisite: PSYC 1010.

PSYC 2030-Child/Adolescent Psychology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS049
Examines normative and non-normative physical, cognitive, social, and emotional development in children and adolescents. Utilizes developmental theories to understand how developmental problems arise and may be treated in this age group. Prerequisite: PSYC 1010.

PSYC 2040-Lifespan Development
(3 credit hours - 3 lecture 0 lab - G) TAG – OSS048
Study of the biological, psychological, and social dimensions of human development from conception through older adulthood. Special emphasis will be included on the needs of older adults. Prerequisite: None.

PSYC 2170-Social Psychology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS016
Examines how people influence the thoughts, feelings, and behaviors of individuals. Topics include perception toward self and others, attitudes, interpersonal attraction, social influences on behavior (obedience, conformity, etc.), group processes, prosocial behavior, aggression, and prejudice and discrimination. Prerequisite: PSYC 1010.

PSYC 2310-Educational Psychology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OED008
A study of theory, research, and practice pertaining to teaching and learning. Topics include: major theories of human development, motivation, and learning; student differences and exceptionalities; classroom management and instructional strategies; and planning and assessment. Prerequisite: PSYC 1010.

PSYC 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PTHA 1010-Introduction to the Physical Therapy Profession
(3 credit hours - 3 lecture 0 lab - T)
PTHA 1010 introduces the history and principles of physical therapy and the role of the Physical Therapist Assistant within the field. The course initiates problem solving to resolve clinical dilemmas related to legal and ethical questions. Concepts of professionalism and patient-provider interactions are introduced. Additionally, the course provides an opportunity to visit various clinical settings. Prerequisites: Acceptance into the PTHA program and BMCA 1010 or BMCA 1020 or BMCA 1050.

PTHA 1050-Clincal Documentation for the Physical Therapist Assistant
(2 credit hours - 2 lecture 0 lab - T)
PTHA 1050 provides skill training in both documentation and billing for physical therapy services. This course includes information on the role of the physical therapist assistant and their responsibilities specific to patient care, documentation and communication as a member of the healthcare team. Common patterns of delivery for physical therapy services, methods of referral, and an introduction to medical abbreviations are presented. The role of professional ethics and legal issues will be explored as they relate to documentation and reimbursement. Prerequisites: Grade of "C" or better in PTHA 1010, PTHA 1070 and PTHA 1240.

PTHA 1060-Pathophysiology for the Physical Therapist Assistant
(3 credit hours - 3 lecture 0 lab - T)
PTHA 1060 emphasizes the effects of disease and injury on the musculoskeletal, cardiopulmonary and integumentary systems and the therapeutic options available to treat the resulting dysfunctions. This course introduces basic principles of pharmacology as related to dysfunctions presented. Prerequisites: Grade of "C" or better in PTHA 1010, PTHA 1070 and PTHA 1240.

PTHA 1070-Physical Therapy Procedures I
(3 credit hours - 2 lecture 3 lab - T)
PTHA 1070 is a competency based course that introduces fundamental treatment considerations and techniques including body mechanics, gait training, mobility and basic transfers. This course presents the principles, concepts and application of objective measurement techniques including manual muscle testing and goniometry. A fee applies to this course. Prerequisite: Acceptance into the PTHA program.

PTHA 1110-Physical Therapy Procedures II
(3 credit hours - 2 lecture 3 lab - T)
PTHA 1110 is a competency based course that presents principles, concepts and applications of physical therapy procedures including physical agents, deep heat modalities, electrical modalities, traction and soft tissue mobilization. A fee applies to this course. Prerequisites: Grade of "C" or better in PTHA 1010, PTHA 1070 and PTHA 1240.

PTHA 1120-Neurological Conditions in Physical Therapy
(3 credit hours - 3 lecture 0 lab - T)
PTHA 1120 presents the principles and concepts associated with neuroanatomy and neurophysiology and their relationship to conditions treated with physical therapy. This course introduces concepts and principles regarding the treatment of various neurological conditions. Prerequisites: Grade of "C" or better in PTHA 1010, PTHA 1070 and PTHA 1240.

PTHA 1240-Functional Anatomy and Kinesiology for the Physical Therapist Assistant
(3 credit hours - 2 lecture 3 lab - T)
PTHA 1240 integrates the principles and concepts of anatomy, biomechanics and physics with the functions and movements of the human body. The course presents the principles and concepts of introductory level therapeutic exercises as they relate to biomechanical impairments. Prerequisites: Grade of "C" or better in BIOL 2400 and BIOL 2410.

PTHA 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

PTHA 2270-Rehabilitation - Concepts and Applications
(3 credit hours - 2 lecture 3 lab - T)
PTHA 2270 presents the concepts, principles and application of physical therapy procedures with an emphasis on therapeutic techniques for rehabilitation of persons with severe or chronic conditions or disabilities. This course includes advanced handling techniques to improve a patient's mobility and functional ability. Prerequisites: Grade of "C" or better in PTHA 1050, PTHA 1110, PTHA 1120 and PTHA 2100.

PTHA 2320-Therapeutic Exercises - Concepts and Applications
(3 credit hours - 2 lecture 3 lab - T)
PTHA 2320 is a competency based course that emphasizes the concepts of advanced therapeutic exercises and the application of specific exercise techniques. This course provides opportunity for clinical decision making as it applies to exercise progression to achieve functional patient outcomes. Prerequisites: Grade of "C" or better in PTHA 1050, PTHA 1110, PTHA 1120 and PTHA 2100.

PTHA 2400-Practicum I for the Physical Therapist Assistant
(2 credit hours - 1 lecture 16 lab - T)
PTHA 2400 provides students with the opportunity to apply classroom knowledge and laboratory skills in the clinical setting while closely supervised by a licensed physical therapist assistant and/or physical therapist. This course begins with a comprehensive review of first year content. A fee applies to this course. Prerequisites: Grade of "C" or better in PTHA 1050, PTHA 1110, PTHA 1120 and PTHA 2100.

PTHA 2500-Practicum II for the Physical Therapist Assistant
(2 credit hours - 1 lecture 15 lab - T)
PTHA 2500 requires the student PTA to apply classroom knowledge and laboratory skills in a clinical setting with an increasing emphasis on independence while under the guidance and direction of a licensed PTA and/or PT. This course includes the first of two advanced modules which address the special considerations associated with the treatment of older adults. Prerequisites: Grade of "C" or better in PTHA 2270, PTHA 2320 and PTHA 2400.

PTHA 2600-Practicum III for the Physical Therapist Assistant
(2 credit hours - 1 lecture 15 lab - T)
PTHA 2600 requires the student PTA to apply both theory and advanced skills with entry level competence while under the guidance and direction of a licensed PTA and/or PT. This course includes the second of two advanced modules which address the special considerations associated with the treatment of children. Prerequisites: Grade of "C" or better in PTHA 2270, PTHA 2320 and PTHA 2400; Co-requisite: PTHA 2500.

PTHA 2650-Role Transition and Professionalism for the Physical Therapist Assistant
(2 credit hours - 2 lecture 0 lab - T)
PTHA 2650 prepares the student for the transition to practice as a physical therapist assistant including job search strategies, licensure examination preparation and professional association membership opportunities. Prerequisites: Grade of "C" or better in PTHA 2270, PTHA 2320 and PTHA 2400.

PTHA 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

RADT 1010-Patient Care in Medical Imaging
(3 credit hours - 2 lecture 3 lab - B)
RADT 1010 provides an introduction to the profession, patient care assessments, radiation protection, and basic radiographic equipment. The lab setting will permit application of these skills. A fee applies to this course. Prerequisite: Acceptance into the RADT program or permission of instructor.

RADT 1015-Directed Practice I
(2 credit hours - 0 lecture 14 directed practice - T)
RADT 1015 is a clinical application of radiographic techniques where students will acquire competencies of office, transport, and patient examinations. Students observe, assist, and perform basic radiographic procedures. A fee applies to this course. Prerequisites: Acceptance into the RADT program, current CPR certification, and grade of “C” or better in RADT 1010 and HLTH 1210.

RADT 1050-Radiation Equipment and Production
(3 credit hours - 3 lecture 0 lab - T)
RADT 1050 is designed to establish a knowledge base of radiographic and fluoroscopic equipment design. The nature and characteristics of radiation, x-ray production, and photon interaction with matter are also included. Prerequisites: RADT 1010 and grade of “C” or better in MATH 1650.

RADT 1100-Directed Practice II
(2 credit hours - 0 lecture 14 directed practice - T)
RADT 1100 is a continuation of RADT 1015 and is a clinical application of radiographic techniques. Students will acquire competencies of patient examinations and begin rotations in more advanced areas. Students observe, assist, and perform basic radiographic procedures. A fee applies to this course. Prerequisites: Current CPR certification and grade of “C” or better in RADT 1015.

RADT 1230-Radiographic Procedures I
(4 credit hours - 3 lecture 3 lab - T)
RADT 1230 introduces analysis and theory in radiography and radiographic terminology. Examinations covered include the extremities, chest, abdomen, urinary tract, and vertebral column. Prerequisites: Grade of “C” or better in BIOL 2400 and BIOL 2410.

RADT 1250-Radiographic Procedures II
(4 credit hours - 3 lecture 3 lab - T)
RADT 1250 is a continuation of RADT 1230, emphasizing theory of radiography of the bony thorax, alimentary canal, skull, and facial bones. The principles of mobile radiography and advanced radiographic procedures are also discussed. Prerequisites: Grade of “C” or better in RADT 1230, BIOL 2420 and BIOL 2430.

RADT 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

RADT 2020-Radiographic Pathology
(2 credit hours - 2 lecture 0 lab - B)
RADT 2020 will emphasize common pathologies of the different body systems and how these pathologies are demonstrated radiographically or through other imaging modalities. Prerequisite: Grade of "C" or better in RADT 1250.

RADT 2030-Radiobiology/Radiation Protection
(2 credit hours - 2 lecture 0 lab - T)
A study of radiation effects upon living tissue and the protective procedures which reduce undesirable radiobiologic effects. Topics include radiation detection and measurement, principles of radiobiology, principles of radiation protection, and radiation protection standards. Prerequisite: Grade of "C" or better in RADT 1050.

RADT 2040-Image Production and Evaluation
(3 credit hours - 2 lecture 3 lab - T)
This course is designed to establish a knowledge base in factors that govern and influence the production and processing, including post-processing, of digital radiologic images. Prerequisites: MATH 1650 and RADT 1050.

RADT 2100-Radiographic Image Analysis
(2 credit hours - 1 lecture 3 lab - T)
RADT 2100 provides an in-depth analysis of radiographic images. Application of concepts provided in previous courses, such as positioning and technical factors, will be included in the image evaluation. Prerequisites: Grade of "C" or better in RADT 1250 and RADT 2040.

RADT 2110-Medical Imaging Ethics and Law
(1 credit hour - 1 lecture 0 lab - T)
RADT 2110 provides for discussion of the background of ethical principles, legal issues, and ethical behavior required in the radiologic sciences profession. Prerequisite: Grade of "C" or better in RADT 1010.

RADT 2200-Introduction to Mammography
(2 credit hours – 2 lecture 0 lab – T)
This course provides a complete overview of breast health and the theory and practice of diagnosing and treating the patient with breast disease. Topics to be covered include the following: pathology, mammographic positioning, patient education, diagnostic intervention and digital breast imaging. The assurance of quality and the selection of radiation parameters will also be discussed. Prerequisite: Current registration with American Registry of Radiologic Technologists or permission of Program Director.

RADT 2250-Sectional Anatomy and Imaging Modalities
(2 credit hours - 2 lecture 0 lab - T)
RADT 2250 emphasizes basic sectional anatomy as it appears utilizing modern medical imaging modalities, including transverse, sagittal, and coronal planes. This course also covers an overview of basic principles associated with allied imaging modalities. Prerequisites: Grade of "C" or better in RADT 1050, RADT 1250, BIOL 2420 and BIOL 2430.

RADT 2300-CT Patient Care & Management
(4 credit hours – 4 lecture 0 lab – T)
This course provides formal specialized training in CT whole body imaging prior to independent performance. Topics included in this course are patient care and management, whole body cross-sectional anatomy, pathology, imaging procedures with protocols, and special procedures in CT. Prerequisite: A grade of "C" or better in RADT 2030 and 2040 or current registration with American Registry of Radiologic Technologists or permission of Program Director.

RADT 2310-CT Physics
(4 credit hours – 4 lecture 0 lab – T)
This course is one of a two course set in whole body Computed Tomography (CT) imaging. The complete set provides formal specialized training in CT whole body imaging prior to independent performance. Topics included in this course are history of computed tomography, fundamentals of computers, scanning methods, digital imaging, quality control, and radiation protection. Prerequisite: A grade of "C" or better in RADT 2030 and 2040 or current registration with American Registry of Radiologic Technologists or permission of Program Director.

RADT 2400-Directed Practice III
(2 credit hours - 0 lecture 21 directed practice - T)
RADT 2400 is a continuation of clinical experience requiring increased student responsibility in preparation, care, and radiographic exposure of the patient. Students perform routine radiographic procedures with technologist supervision. A fee applies to this course. Prerequisites: Current CPR certification and grade of "C" or better in RADT 1100.

RADT 2500-Directed Practice IV
(3 credit hours - 0 lecture 21 directed practice - T)
RADT 2500 is a continuation of clinical experience in a different clinical affiliate. Students will complete off-shift and allied imaging rotations. A fee applies to this course. Prerequisites: Current CPR certification and grade of "C" or better in RADT 2400.

RADT 2600-Directed Practice V
(3 credit hours - 0 lecture 21 directed practice - T)
Final semester of supervised clinical experience. Emphasis is placed on areas for student improvement and progression is evaluated in all clinical areas. A fee applies to this course. Prerequisites: Current CPR certification and grade of "C" or better in RADT 2500.

RADT 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. A fee applies to this course. Prerequisite: Academic Dean approval.

RADT 2990-Preparation for Role Transition
(2 credit hours - 2 lecture 0 lab - T)
RADT 2990 seminar discusses the radiographer's role as a healthcare professional, job seeking skills, and methods of preparation for the ARRT registry exam. Prerequisite: Grade of "C" or better in RADT 2030; Co-requisites: RADT 2100 and RADT 2110 or permission of instructor.

ROBT 1010-Robotics Programming I
(4 credit hours - 3 lecture 3 lab - T)
This course provides the student with instruction on the fundamentals needed to program an industrial robot. This course utilizes FANUC robots, and students will learn to program using FANUC programming language. Students will use FANUC robot teach pendants to program a virtual robot using FANUC simulation software, then transfer the program to an actual robot cell for fine tuning. Utilizing industrial robot cells, this course will provide the student with an actual industrial robot programming and troubleshooting experience. A fee is applied to this course. Co-requisite: MATH 0990 or placement into MATH 1250.

ROBT 1020-Robot Vision Systems
(4 credit hours - 3 lecture 3 lab - T)
In this course, the student will learn the fundamentals of using integrated camera systems to enable an industrial robot to intelligently interact with an object by seeing it and identifying its characteristics. The labs will use three different robot cells to provide a variety of different industrial environments. A fee is applied to this course. Prerequisite: ROBT 1010.

ROBT 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

ROBT 2030-Industrial Systems Integration
(4 credit hours - 3 lecture 3 lab - T)
Students will learn how to integrate robotic systems with industrial machines and other robots. The labs will incorporate the integration of a robot with a CNC mill in addition to programming two robots to work together. Two independent FANUC robots cells will be coupled with an automation unit for one lab application, and a robot cell integrated with a CNC will provide the second lab application. A fee is applied to this course. Prerequisite: ROBT 1020.

ROBT 2040-Motoman© Robotics Programming
(4 credit hours - 3 lecture 3 lab - T)
This course provides the student with additional expertise programming a Motoman© industrial robot. Students will use robot teach pendants to program a virtual robot using simulation software, then transfer the program to an actual robot cell for fine tuning. The labs will utilize Yaskawa Motoman robot cells to provide an actual industrial robot programming and troubleshooting situation. A fee is applied to this course. Co-requisite: MATH 0990 or placement into MATH 1250.

ROBT 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

SFSC 1050-Introduction to Sport and Fitness Studies
(3 credit hours - 3 lecture 0 lab - T)
This introductory course showcases the multiple facets of the sports industry. The knowledge gained in this course will help students identify different career paths within the sport and fitness field as well as provide a foundation for other SFSC courses. Prerequisite: None.

SFSC 2010-Fundamentals of Coaching
(2 credit hours - 1 lecture 3 lab - T)
In this sport and fitness neutral course, students utilize research-supported methods to learn about the dynamic aspects of coaching. Emphasis is placed on establishing coaching philosophies, strengthening interpersonal communication skills, and developing an athlete and client centered approach to coaching. Prerequisite: None.

SFSC 2150-Applied Personal Training
(2 credit hour - 1 lecture 3 lab - T)
This course provides the opportunity for supervised practical experience in an area of the sport, fitness and recreation industry. Through this experience, students will work side-by-side with industry professionals to apply knowledge and develop leadership and managerial skills. Prerequisite: None.

SFSC 2200-Resistance Training
(3 credit hours - 1 lecture 4 lab - T)
This class builds upon the introductory coursework information to broaden the student's knowledge about the benefits and application of resistance training. Students will develop individual exercise programs by exploration and application of major resistance training concepts and demonstration of appropriate spotting, safety and lifting techniques. Co-requisites: BIOL 2420 and BIOL 2430.

SFSC 2300-Management of Athletic Injuries
(3 credit hours - 2 lecture 3 lab - T)
The focus of this course is upon the initial management of common injuries resulting from physical activity. By understanding risk factors associated with participation in a variety of sports, students learn skills related to prevention, recognition and treatment of common injuries. Prerequisites: BIOL 2420 and BIOL 2430.

SOCI 1010-Introduction to Sociology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS021
Introduces students to the basic concepts, theories, perspectives and processes in sociology. Topics include culture, socialization, groups, organization, social deviance, social class and inequality, social change and institutions. This course will help students better understand themselves as well as their relationship to the larger society. Prerequisite or co-requisite: ENGL 1500.

SOCI 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

SOCI 2050-Deviant Behavior
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS
An examination of the concepts and issues which embody the study of deviant behavior/deviance such as criminal behavior, abuse, obesity, the paranormal, and suicide. Theoretical approaches to these issues will explore the various viewpoints held by different cultures and sub-culture. Co-requisite: ENGL 1500.

SOCI 2060-Race and Ethnicity
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG –OSS050
An exploration of American diversity in terms of the dynamics of intergroup relations, focusing on selected racial and ethnic groups. In addition, other diversities that may be included in the exploration: religion, gender, sexual preference, and the Appalachian area. Prerequisite or co-requisite: ENGL 1500.

SOCI 2270-Criminology
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMSBS; TAG – OSS034
This course introduces the student to the sociological statement of the crime problem including an examination of the characteristics, etiology and correction of crime with emphasis on the problem and its relation to social norms. Co-requisite: ENGL 1500.

SOCI 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

SURV 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

SURV 2190-Fundamentals of Surveying
(3 credit hours - 1 lecture 4 lab - T)
An introduction to basic land measurement including horizontal distance, elevation, and angle measurements. An introduction to global positioning is included. Students will operate transits, level and total stations. Students will prepare basic surveying drawings. Prerequisite: MATH 1250.

SURV 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

SWKA 1010-Introduction to Social Work
(3 credit hours - 3 lecture 0 lab - T) TAG – OSS029
Overview of the knowledge, values, and skills necessary for providing direct services to diverse populations. Students will also be exposed to the NASW Code of Ethics, standards for culturally competent practice, and organizational structures of practice settings. Prerequisite: None.

SWKA 1050-Group Dynamics
(3 credit hours - 2 lecture 3 lab - T/B)
Theoretical knowledge and practical experiences to prepare students for understanding the dynamics of group behavior. Course includes learning how to facilitate various forms of groups, how to develop treatment plans, and how to conduct recreational, diversional, and educational activities for those with mental illness, intellectual disabilities, and older adults. Prerequisite: None.

SWKA 1090-Interviewing
(3 credit hours - 3 lecture 0 lab - T)
Introduction to the theory and practice of structuring an interview using various techniques for questioning including Motivational Interviewing. Practical experiences include gathering, analyzing, and synthesizing information. Prerequisite: Grade of "C" or better in SWKA 1010.

SWKA 1110-Learning and Behavior Theory
(3 credit hours - 3 lecture 0 lab - T)
Study of the principles of learning and behavior as they relate to the process of developing behavioral change interventions including understanding the features of behavior modification. This course will include the areas of application for behavior modification, measurement of behavior and behavior change, basic principles of behavior, and how to establish new behaviors.. Prerequisite: None.

SWKA 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

SWKA 2050-Introduction to Addiction Studies
(3 credit hours - 3 lecture 0 lab - T)
This is an introductory course, which provides an overview of addictions studies. The course will include trends and the impact of addiction on individuals, families, the community, and nation, assessment and recognition of substance use disorders, ethics, and treatment and recovery methods. Students will develop knowledge and skill in the area of addiction studies to be able to identify, provide, and/or refer services to individuals with addiction. Prerequisite: Sophomore status.

SWKA 2150-Social Welfare System
(3 credit hours - 3 lecture 0 lab - T) TAG – OSS030
Introduction to the historical foundation of the U.S. social welfare system as well as the identification and analysis of current policies. Also included will be an understanding of globalization and other issues in regard to human diversity and the provision of services to vulnerable populations. Prerequisite: Sophomore status.

SWKA 2210-Family Dynamics
(3 credit hours - 3 lecture 0 lab - T)
Study of the structures and processes of family forms in a multi-cultural context with special emphasis on family violence including physical indicators, risk factors, interventions, and legal issues of child, spousal, and elder abuse. Prerequisite: None.

SWKA 2230-Case Management
(3 credit hours - 2 lecture 3 lab - T)
Study of the specific knowledge and skills needed for the assessment, planning, and implementation of interventions to meet the needs of clients. The process of case recording and documentation will be emphasized. Prerequisite: SWKA 1090.

SWKA 2300-Practicum I
(4 credit hours - 2 lecture 14 lab - T)
First of two placements in social service agencies in the community to give students the opportunity to observe and assist with direct client contact and related activities under supervision. This course includes a seminar for students to share their experiences and to facilitate the integration of classroom knowledge with practical application. Prerequisite: SWKA 1090;
Co-requisite: SWKA 2230

SWKA 2310-Practicum II
(4 credit hours - 2 lecture 14 lab - T)
Second of two placements in social service agencies in the community for students to have the opportunity to expand their experiences in direct client contact while under supervision. This course includes a seminar for students to share their experiences with other students and to prepare them for employment in the field. Prerequisite: SWKA 2300.

SWKA 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

THTR 1010-Introduction to Theater
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH
Theater 1010 is an introductory course designed to give students the skills to recognize contemporary theatrical practices and observe their historical lineage and cultural context. In doing so, this class also seeks to examine the relevance of theater in modern life and subsequently teaches students to be appreciative audience members. The material will focus on key theatrical terms and dramatic concepts. Students will explore the major movements in dramatic literature from Greek Festival Theater to American Naturalism to contemporary theater. The course will consist of lectures, discussions, and participation opportunities, as well as reading and analyzing plays, viewing filmed versions of plays, and attendance at a live theatrical event. Prerequisite or co-requisite: ENGL 1500.

THTR 1020-Script Analysis
(3 credit hours - 3 lecture 0 lab - G) OT36 – TMAH; TAG – OAH024
Introduction to the methods of reading, studying and analyzing play scripts for production. The script as a vehicle for performance and the understanding of it from the perspective of the actor, director, and technician. Prerequisite: THTR 1010.

THTR 1950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

THTR 2950-Special Topics
(0.1-8 credit hours - G)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

WELD 1100-Introduction to Welding/Cutting Safety and Processes
(1 credit hour - 1 lecture 0 lab - T)
An introduction to basic welding and cutting safety, an overview of general welding terminology and principles, including electrical theory as it applies to the welding process. Instruction on electrode selection and the AWS classification system. Covers identification of different types of weld joints and how to prepare joints to be welded. Laboratory exercises in safe operation of the oxy-fuel torch (handheld and machine versions) and plasma arc cutter. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1130-Basic SMAW I
(4 credit hours - 1 lecture 9 lab - T)
Introduction to structural welding of carbon steel with Fill Freeze (E6013 and E6012), Fast Freeze (E6010), Fast Fill (E7024) and Low Hydrogen (E7018) electrode groups in the flat, horizontal, vertical and overhead positions. The ability to maintain correct arc length, electrode angle and travel speed is emphasized. Students will become familiar with the techniques for making stringer and weave beads on plate and learn to evaluate the quality of their welds. This includes learning to recognize the common weld defects and their causes. The fillet weld will also be introduced on lap and T-joints. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1140-Basic SMAW II
(3 credit hours - 1 lecture 6 lab - T)
A continuation of the skills learned in SMAW II with the Low Hydrogen electrode group, in the 3G, 4G and 5F positions. Introduction of the groove weld and guided-bend testing. Begin utilizing hardfacing electrodes. Time permitting students will have the opportunity to take the ODOT (AWS D1.5) State Certification Test. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1150-SMAW Supplemental
(3 credit hours - 0 lecture 9 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in the Basic SMAW series (WELD 1100-1140). A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1200-GMAW (MIG)/FCAW
(4 credit hours - 1 lecture 9 lab - T)
An introduction to the Gas Metal Arc Welding (MIG) and Flux Cored Arc Welding processes. Topics include safe operation of equipment, proper machine settings, wire selection and classification, different modes of metal transfer and the effect of different shielding gases. Emphasis on GMAW-S welding of carbon steel with ER70S-6 and FCAW with E71T-1. Skill exercises on fillet and groove welds with and without backing, in all positions. Groove welds will be subject to guided-bend testing. The welding of aluminum and stainless steel is also introduced, along with other modes of metal transfer; GMAW-P and GMAW-PP. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1250-GMAW (MIG) Supplemental
(2 credit hours - 0 lecture 6 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in WELD 1200. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1300-GTAW (TIG)
(4 credit hours - 1 lecture 9 lab - T)
An introduction to basic Gas Tungsten Arc Welding (TIG) safety, setup, equipment and process. Emphasis is on skill exercises with and without filler metal, on steel, stainless steel and aluminum flats 1/8" thickness. Stainless tubing is also introduced. Edge, butt, lap and T-joints are included, in all positions. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1350-GTAW (TIG) Supplemental
(2 credit hours - 0 lecture 6 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in WELD 1300. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1500-Welding Symbols
(1 credit hour - 1 lecture 0 lab - B)
This course serves as an introduction to the interpretation and use of welding symbols and abbreviations and their application to blueprints. Other topics include the use of welding symbols software for AutoCAD, structural shapes and bills of materials. Also covered is the use of specialized pipe welding symbols. A fee applies to this course. Co-requisites: MECH 1000 and permission of instructor.

WELD 1550-Introduction to CNC Plasma Cutting
(3 credit hours - 2 lecture 2 lab - B)
Students are introduced to CAD-based CNC plasma cutting. Hands-on experience with CAD/CAM software and CNC Plasma cutting table is stressed. This is a project-based course, which will require students to draw and cut parts to an acceptable tolerance, as well as import digital files to design metal art/logos/signs. A fee applies to this course. Co-requisites: MECH 1000 and permission of instructor.

WELD 1600-Fabrication
(3 credit hours - 1 lecture 6 lab - T)
This course emphasizes the principles of fabricating a weldment from a print. Material on construction math, proper layout principles, jigs and fixtures, use of machinery for the bending of tubing and sheet metal is included. Students will draw a blueprint utilizing AutoCAD and/or related software, including a Bill of Materials and build a final project of their own design. A fee applies to this course. Prerequisites: MECH 1000, WELD 1500 and permission of instructor .

WELD 1700-Maintenance Welding
(4 credit hours - 1 lecture 9 lab - T/B)
This course is intended primarily for students in non-welding programs. It will provide an overview of the major welding and cutting processes: Oxy-fuel, Plasma Arc, SMAW, GMAW/FCAW and GTAW. Welding and cutting safety will be strongly emphasized. Lab exercises in the major processes will concentrate on developing welding skills in the flat and horizontal positions. Time permitting, vertical and overhead welding may be covered as well. The principles of maintenance and repair welding will be introduced. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 1900-Introduction to Robotic Welding Systems and Automation
(3 credit hours - 2 lecture 3 lab - T)
An introduction to automated welding and robotics, including the fundamentals of the teach pendant and programming language with hands-on application of robotic welding automation. Emphasis on safety, programing techniques, and the use of GMAW applications with six-axis robotic welding systems. A fee applied to this course. Prerequisite: None.

WELD 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. A fee applies to this course. Prerequisite: Academic Dean approval.

WELD 2000-Field Experience
(1-3 credit hours - 1 credit for 180 work hours - T)
This course is a supervised work experience in the welding field. Includes applying for a job in a related area, on-the-job training, scheduled visits by the instructor and periodic evaluation. Internship positions must be approved by the Academic Dean. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2100-SMAW Pipe I
(3 credit hours - 1 lecture 6 lab - T) An introduction to open root pipe welding, utilizing the SMAW process, beginning with skill exercises on open root plate welds. Students have the option of either uphill or downhill progression as their area of concentration and their efforts will be subjected to guided-bend tests in 1G, 3G, and 4G positions. Emphasis is placed on proper preparation and fit-up, prior to welding. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2130-SMAW Pipe II
(4 credit hours - 1 lecture 9 lab - T)
A continuation of WELD 2100, introducing skill exercises on pipe, primarily in the 5G position. Time permitting, the 6G position will be included as well. As in WELD 2100, students have the option of either uphill or downhill progression as their area of concentration and their efforts will be subjected to guided-bend and tensile testing in the 5G position. ASME Section IX and API 1104 code tests are possible, depending on student progress and interest. Emphasis is placed on proper preparation and fit-up prior to welding. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2150-SMAW Pipe Supplemental
(3 credit hours - 0 lecture 9 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in WELD 2100 or WELD 2130. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2200-GMAW Pipe
(5 credit hours - 1 lecture 12 lab - T)
An introduction to pipe welding, utilizing the GMAW process on carbon steel pipe. Students begin with skill exercises on pipe in the 5G position, downhill progression. Time permitting, the 6G position will be covered as well. Includes guided-bend and tensile testing of the student's efforts with the 5G position. ASME Section IX and API 1104 code tests are possible, depending on student progress and interest. Emphasis is placed on proper preparation and fit-up prior to welding. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2250-GMAW Pipe Supplemental
(3 credit hours - 0 lecture 9 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in WELD 2200. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2300-GTAW Pipe
(5 credit hours - 1 lecture 12 lab - T)
An introduction to pipe welding, utilizing the GTAW process on carbon steel pipe. Students begin with skill exercises in the 5G position. Time permitting, the 6G position will be covered as well. Includes guided-bend and tensile testing of the student's efforts with the 5G position. ASME Section IX code tests are possible, depending on student progress and interest. Emphasis is placed on proper preparation and fit-up prior to welding. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2350-GTAW Pipe Supplemental
(3 credit hours - 0 lecture 9 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in WELD 2300. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2400-Pipe Qualification I
(3 credit hours - 0 lecture 9 lab - T)
Advanced pipe welding course designed to develop the skills that should enable the student to pass a UA, ASME or API qualification test. Emphasis is on the 6G position and the student has the choice of which welding process or combination of processes to pursue. Skill exercises begin with the top half of the pipe. This course is repeatable with the SMAW, GMAW and GTAW processes. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2430-Pipe Qualification II
(4 credit hours - 0 lecture 12 lab - T)
A continuation of WELD 2400, designed to begin with skill exercises on the bottom half of the pipe and progressing until the student can produce a visually acceptable pipe coupon in the 6G position. Testing options include: UA, ASME or API type qualifications. Four guided-bend and two tensile tests are required. This course is repeatable with the SMAW, GMAW and GTAW processes. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2450-Pipe Qualification Supplemental
(3 credit hours - 0 lecture 9 lab - T)
This course is designed to give students additional lab time, if necessary, to master any of the techniques covered in WELD 2400 or WELD 2430. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2500-Independent Studies in Welding
(1-2 credit hours - 0 lecture 3-6 lab - T)
This course is designed to provide the opportunity for independent study of topics relevant to the field of Welding and Fabrication not covered in other courses. A fee applies to this course. Prerequisite: Permission of instructor.

WELD 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. A fee applies to this course. Prerequisite: Academic Dean approval.

WILD 1080-Field Skills
(2 credit hours - 1 lecture 3 lab - T)
WILD 1080 provides an orientation to field sport techniques and terminology needed by those working in natural resources fields. Includes certification in Ohio Division of Watercraft Basic Boating course, American Canoe Association flat water canoeing, and Ohio Division of Wildlife Hunter Education and Trapper Education. Labs include on-the-water and shooting range experience. Students enrolled in this course should be in good physical condition and able to lift and carry 50 pounds of weight for short distances. Individuals convicted of a felony are not permitted to participate in this course. A fee applies to this course. Prerequisite: None.

WILD 1150-Forest Fire Suppression and Safety
(2 credit hours - 2 lecture 0 lab - T)
WILD 1150 is an introduction to forest fire fighting that includes material from the U.S. Forest Service course S130, S190, L180 and Standards for Survival. A minimum number of attendances is required for certification. Successful completion permits the student to take a physical exam required to qualify for the "Team Ohio" fire fighters group. Prerequisite: None.

WILD 1300-Natural Resources Power Equipment
(1 credit hour - 0 lecture 3 lab - T)
The operation, maintenance, and safety of equipment used in outdoor recreation facilities. Includes knowledge of mechanical systems. Labs include operation and/or maintenance of chainsaws, mowers, tractors, and welding equipment. Prerequisite: None.

WILD 1410-Botany
(2 credit hours - 1 lecture 2 lab - B) CTAG – CTNRM002
A survey of the plant kingdom based on a detailed study of the morphology, anatomy and physiology of selected representative specimens. This course will provide an introduction to the principles, skills, and applications of biology to students interested in biology, environmental science, wildlife, and parks and recreation. Field intensive with strong focus on local flora.
Prerequisite: None.

WILD 1950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. A fee applies to this course. Prerequisite: Academic Dean approval.

WILD 2003-Wildlife Practicum
(1 credit hour - 1 practicum hour - T)
Wildlife Practicum is a course that gets the wildlife student into real world projects in conservation. Options for this course may include, but are not limited to, volunteering for the Ohio Department of Natural Resources-Division of Wildlife, summer habitat improvement projects on the Zane State Natural Resources Center, restoration ecology projects with private landowners or non-governmental organizations, biodiversity assessments of Shannon Valley Wetland, or other relevant topics as authorized by advisor. A minimum of 105 total hours are required and students will be expected to write a summary report of their practicum upon completion. Co-requisite: NAFS 2002.

WILD 2150-Field Ornithology
(1 credit hour - 0 lecture 3 lab - T)
An intensive, highly field-oriented course provides practical, "hands-on" experience essential to students interested in field biology. Field studies will emphasize identification and natural history of local avian species, using a variety of field techniques. In addition to field work, the course will involve lecture specimen labs and readings to examine important aspects of anatomy, physiology, behavior, ecology, and conservation as they apply to birds. Prerequisite: None.

WILD 2170-Mammalogy
(1 credit hour - 0 lecture 3 lab - T)
A field and laboratory focused course on the ecology, behavior, life history, taxonomy, and identification of mammals. Field and laboratory techniques will include field surveys, capture, necropsy, study skin preparation, disease recognition, pelage and skull identification, and behavioral observation. Field studies will emphasize identification, natural history, tracking, and ecology. Laboratory sessions will include short lectures, research topics in scientific journals, and scat analysis. Students will be creating mammal study skins, skulls, and aids for identification. Prerequisite: Sophomore status.

WILD 2200-Field Herpetology
(1 credit hour - 0 lecture 3 lab - T)
An intensive, highly field-oriented course that provides practical, "hands-on" experience essential to students interested in field biology. Field studies will emphasize identification and natural history of local reptile and amphibian species, using a variety of field techniques. In addition to field work, the course will involve short lectures, specimen labs, and readings to examine important aspects of anatomy, physiology, behavior, ecology, and conservation as they apply to reptiles and amphibians. A fee applies to this course. Prerequisite: None.

WILD 2400-Field Entomology
(1 credit hour - 0 lecture 3 lab - T)
An intensive, highly field-oriented course that provides practical, "hands-on" experience essential to students interested in field biology. Field studies will emphasize identification and natural history of local insect and invertebrate species, using a variety of field techniques. In addition to field work, the course will involve short lectures, specimen labs, and readings to examine important aspects of anatomy, physiology, behavior, pest control, ecology, and conservation as they apply to insects. Students will be creating an insect collection. A fee applies to this course. Prerequisite: None.

WILD 2500-Wildlife Habitat Management
(3 credit hours - 2 lecture 3 lab - T)
Habitat evaluation and manipulation techniques are studied and put into practice in the field. Cover mapping habitats, quantitative and qualitative vegetation analysis, release cutting, and wetland delineation are some of the operations used in the ecological assessment and management of successional stages for game and non-game species. Prerequisite: None.

WILD 2540-Outdoor Area Construction
(2 credit hours - 1 lecture 2 lab - T)
Overview of tools, materials, and techniques used in construction and maintenance of outdoor recreation facilities. Labs include use of tools and completion of one or more construction projects. A fee applies to this course. Prerequisite: WILD 1300.

WILD 2550-Field Biometry
(2 credit hours - 2 lecture 0 lab - T)
Basic principles of data collection, management, and analysis are combined with statistical concepts, such as central tendency, probability, and regression for application to students' capstone research and reported in projects completed in Ecology (BIOL 2600). A fee applies to this course. Prerequisite: Sophomore status in the WILD program.

WILD 2570-Forestry
(3 credit hours - 2 lecture 3 lab - T)
WILD 2570 provides an introduction to forestry science and dendrology. Emphasis of this course includes: tree identification, silvicultural practices, planting, harvest, and forest management methods. A fee applies to this course. Prerequisite: None.

WILD 2600-Ecology Capstone
(3 credit hours - 2 lecture 3 lab - T)
This is a capstone research project course for students in Natural Sciences. Introduces major ecological concepts and identifies the techniques used by ecologists. Examines patterns and processes at various levels of biological organization. Much of the course focuses on local ecology, but the principles learned will apply in a variety of ecosystems. The laboratory portion emphasizes techniques of modern field biology. Students will also learn quantitative methods, field techniques, and conduct an independent ecological research project. Prerequisites: BIOL 1510, WILD 1410 and sophomore status.

WILD 2610-Recreation Law, Management and Policy
(2 credit hours - 1 lecture 3 lab - T)
WILD 2610 examines natural resources law enforcement from its historic roots in constitutional law to current duties of officers. The course further introduces students to governing policy, mission, and basic business management methods used in relation to local, state, national, and private recreation agencies. Labs include field trips to recreation sites and firearms instruction. A fee applies to this course. Prerequisites: WILD 1080 and sophomore status in the WILD program.

WILD 2740-Nature Interpretation
(1 credit hour - 0 lecture 2 lab - T)
WILD 2740 is designed to acquaint students with the techniques and theories related to interpreting the natural environment. Students are expected to utilize information learned in previous courses and experiences to develop and present informative and educational interpretive programs. A fee applies to this course. Prerequisite: Sophomore status in the WILD program.

WILD 2900-Field Botany
(1 credit hour - 0 lecture 3 lab - T)
This course is an advanced field lab course in identification of winter grasses, forbs, and trees and spring ephemerals, spring flowering plants, wetland indicators, and early summer species. It follows on the heels of the fall botany course (WILD 1410) and expands the skills of students to accurately assess year round plant diversity for natural resources field positions. Prerequisite: WILD 1410.

WILD 2950-Special Topics
(0.1-8 credit hours - T)
Provides the opportunity to apply selected and current courses, seminars, directed individual study, and other quality educational experiences that contribute substantially to a student's program of study. Prerequisite: Academic Dean approval.

CENTER FOR WORKFORCE SOLUTIONS AND ENTREPRENEURSHIP

The Center for Workforce Solutions and Entrepreneurship (CWSE) is responsible for services delivered to business and industry within the region. Services are provided on the campus in Zanesville, the Zane State College Cambridge Center, and at the location of the organization being served.

The CWSE at Zane State College goes beyond the historic community outreach and public service mission of publicly supported colleges to establish “engagement” or “partnerships” in the Zane State College service area. To accomplish these goals, the CWSE employs these approaches:

1. Responsiveness—to assess the educational and training needs in the Zane State College service area, surrounding region, and organizational customers.
2. Respect for Community Partners—to encourage joint academic-community identification of problems, solutions, and successes.
3. Academic Neutrality—in its outreach to the community, the CWSE often serves as a neutral facilitator and source of information for purposes of expanding partnerships.
4. Accessibility—to help community partners understand what educational and training programs Zane State College has to offer and to understand the institution’s academic requirements and policies.
5. Integration—promote the public service mission with efforts to facilitate the learning and training of the workforce and other populations in the Zane State College service area and surrounding region.
6. Coordination—strive to coordinate its educational and training activities with other offices at Zane State College, as well as with the resources of the community, to achieve maximum benefit to community partners and businesses.
7. Partnership—establish productive relationships with government, business, labor, education, and non-profit organizations.
8. Commitment—to have a strong commitment to function as a community-serving entity at Zane State College, be democratic in purpose and operation, and be accessible to all people who can benefit from further education and training.

Services include: design and delivery of customized training for employers; and professional development seminars.

Training is developed to meet the specifications of employers and may be delivered on site or in one of the College’s classrooms. Examples of training topics include management, safety, computers, and industrial maintenance. All classes are offered as contract training programs tailored to meet the needs of the workforce and can be offered in a variety of formats at times convenient for our clients. Training may be offered for credit or non-credit.

Online Instruction Center
We offer a wide range of highly interactive courses that you can take entirely over the Internet. All of your courses include expert instructors, many of whom are nationally known authors. Our online courses are affordable, fun, fast, convenient, and geared just for you. We offer courses from the JER Group as well as Ed2go and Tooling U.

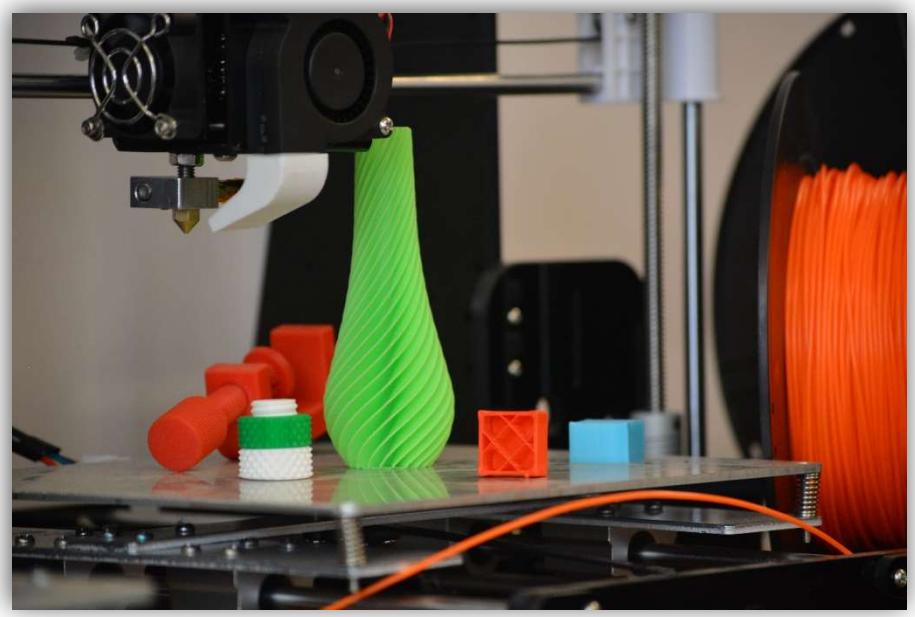
IDEA Lab
If you spend time Inventing, Designing, Engineering, and making Art, the IDEA Lab at Zane State College is a place for you. This makerspace has state-of-the-art equipment for inventors, entrepreneurs, and creative types. Turn your vision into a prototype. Make your brainstorm into a product. Bring inspiration to life.
Here's what the IDEA lab offers to members:

- Twelve 3D printers
- 3D scanner
- XCarve CNC Router
- CNC Mill
- Dell Precision 3610 work stations
- Desktop vinyl cutter
- 36" vinyl cutter
- Engraver
- Laser cutter
- Rigid belt sander

- 12" double bevel sliding miter
- Soft start router
- 20" scroll saw
- 16 speed drill press
- 14" band saw
- Table saw

If you've always had a passion for creation but never had access to the equipment you need, this is your chance. Start a new hobby or improve upon an old one. Create items you can sell (or keep for yourself). Turn your concept into a prototype and pitch it to a company, or start a company yourself. The possibilities are endless.

Our community is full of creators and innovators. Join them and make your dreams a reality. To purchase your membership, or to find out more information, email vclark1@zanestate.edu or call 740-588-1307. Zane State College employees can pay via payroll deduction.



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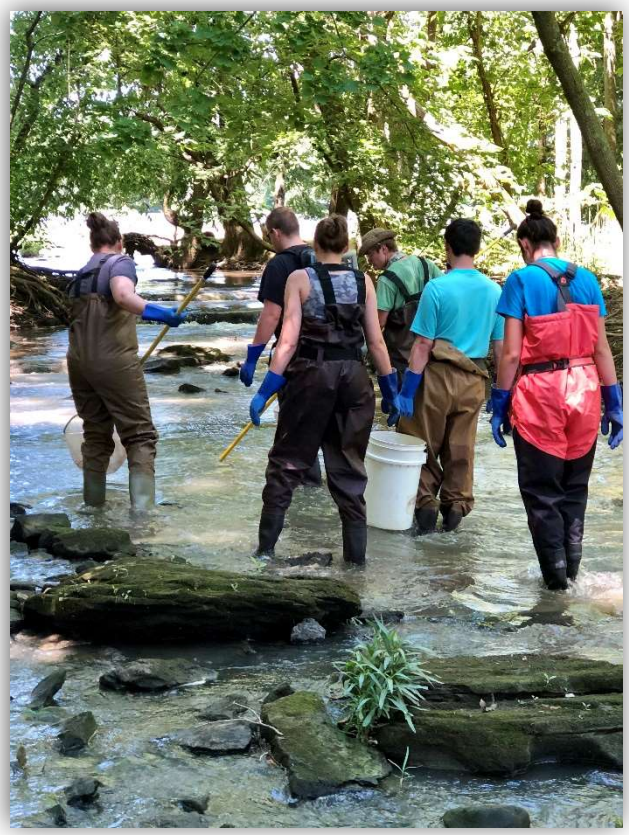
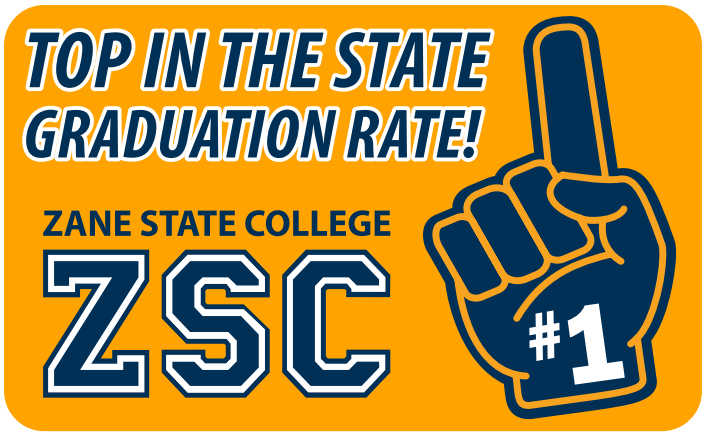


INDEX



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