

OSUIT

Oklahoma's Only University of
APPLIED Technology



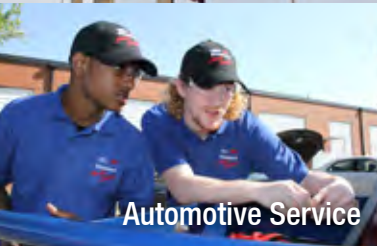
Natural Gas Compression



Orthotics & Prosthetics



High Voltage Lineman



Automotive Service



School of Watchmaking

2014-2015 University Catalog

Oklahoma State University Institute of Technology

OSU INSTITUTE *of* TECHNOLOGY

CATALOG 2014 - 2015

This Catalog offers information about the academic programs and support services of the University. This Catalog is as accurate as possible, but the information is subject to change without notice throughout the academic year. Circumstances may prompt changes in courses, course content, credit, fees, regulations, semester calendar, curriculum, degrees offered, and other University matters. Such changes authorized by the University apply both to prospective students and to those previously enrolled, unless the latter are specifically exempted.

Oklahoma State University Institute of Technology, in compliance with Titles VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This provision includes, but is not limited to, admission, employment, financial aid and educational services.

MESSAGE FROM THE PRESIDENT

Welcome to OSU Institute of Technology

When you chose to attend Oklahoma State University Institute of Technology, you effectively chose to begin your career. It can be very difficult for a young person to make long-term or even lifelong decisions, but I want you to know that a promising future awaits you at OSUIT.

In today's economic times, all too many young people are graduating from colleges and universities around the country and finding it nearly impossible to obtain work in their fields of study. The rules have changed for first-time job seekers, and it is time for all of us to change our thinking about higher education as well. Today's college-going students must make smarter



decisions about the majors they will pursue and the institutions they will attend. Now more than ever, students need an education that not only prepares them to graduate, but prepares them to succeed in today's job market. If you are one of those firsttime job seekers, you need a college degree that leads to a specific occupational outcome and a university that understands how to get graduates placed into real jobs. Plainly said, you need OSUIT.

When you are ready to get serious about your future, you need to take a serious look at OSUIT. As Oklahoma's only university of applied technology, we are an institution of higher education like no other. We offer multiple college degrees in specific work-related fields, and we coordinate our curriculum with corporate employers who are eager to hire welltrained personnel. In every discipline, we offer a hands-on education in advanced and emerging technologies that is designed to supply the expressed needs of our industry partners. We have such a proven track record of placing graduates in the job market that we are sometimes referred to as the "University of Jobs." A rather fitting description when you consider that in most of our technical programs, students have a job waiting for them upon graduation and some even have multiple job offers.

At OSUIT, we believe the ability of graduates to obtain meaningful work should be the single most important consideration in measuring and choosing a college. If you agree, then let us guide you to your future at OSUIT. Use this catalog to learn more about the different programs and services of this institution. Plan a visit to our campus and meet our exceptional faculty and staff. Above all, we want to help you succeed in today's job market. We want to be *your* "University of Jobs."

Sincerest regards,

A handwritten signature in black ink, which appears to read "Bill R. Path". The signature is written in a cursive style and is positioned above the printed name.

Dr. Bill R. Path
President

Academic Calendar

FALL SEMESTER

2014

| | |
|--|---------------|
| Enrollment | May 23–Sept 2 |
| Labor Day Holiday | Sept 1 |
| Move-in Day/Cowboy Up Orientation | Sept 2 |
| Classwork Begins | Sept 3 |
| Last day to Add (1st Half only) | Sept 5 |
| Last day to Add (Full Semester) | Sept 9 |
| Last Drop with Refund (1st Half Only) | |
| Attendance Tracker Due | Sept 12 |
| Last Drop with Refund (Full Semester) | Sept 16 |
| Withdraw with Auto “W” Grade (1st Half Only) | Oct 7 |
| Mid Trimester | Oct 17 |
| Move-in Day/Cowboy Up Orientation | Oct 21 |
| Start 2nd-Half-Only Classes | Oct 22 |
| Last day to Add (2nd Half only) | Oct 24 |
| Last Drop with Refund (2nd Half Only) | Oct 28 |
| Withdraw with Auto “W” Grade (Full Semester) | Nov 14 |
| Student Break | Nov 26 |
| Thanksgiving Day Holidays | Nov 27–28 |
| Classwork Resumes | Dec 1 |
| Withdraw with Auto “W” Grade (2nd Half Only) | Dec 2 |
| Instructional Period Ends | Dec 12 |
| Graduation Exercises | Dec 12 |
| Student Break | Dec 15–Jan 6 |

SPRING SEMESTER

2015

| | |
|--|----------------|
| Enrollment | Oct 24 – Jan 6 |
| Move-in Day/Cowboy Up Orientation | Jan 6 |
| Classwork Begins | Jan 7 |
| Last day to Add (1st Half only) | Jan 9 |
| Last Drop with Refund (1st Half only) | Jan 13 |
| Last day to Add (Full Semester) | Jan 13 |
| Martin Luther King Holiday | Jan 19 |
| Last Drop with Refund (Full Semester) | Jan 21 |
| Attendance Tracker Due | Jan 22 |
| Withdraw with Auto “W” Grade (1st Half Only) | Feb 13 |
| Mid Semester | Feb 25 |
| Move-in Day/Cowboy Up Orientation | Mar 1 |
| Classwork Begins (2nd-Half Only) | Mar 2 |
| Last day to Add (2nd Half only) | Mar 4 |
| Last Drop with Refund (2nd Half only) | Mar 6 |
| Spring Break | Mar 16–20 |
| Withdraw with Auto “W” Grade (Full Semester) | Mar 31 |
| Withdraw with Auto “W” Grade (2nd Half Only) | Apr 13 |
| Instructional Period Ends | Apr 24 |
| Graduation Exercises | Apr 24 |

SUMMER SEMESTER

2015

| | |
|---|----------------|
| Enrollment | Feb 24 – May 3 |
| Move-in Day/Cowboy Up Orientation | May 3 |
| Classwork Begins | May 4 |
| Last day to Add (1st Half only) | May 6 |
| Last Drop with Refund (1st Half only) | May 8 |
| Last day to Add (Full Semester) | May 8 |
| Last Drop with Refund (Full Semester) | May 15 |
| Attendance Tracker Due | May 18 |
| Memorial Day Holiday | May 25 |
| Interim Session | June 1–July 24 |
| Withdraw with Auto “W” Grade (1st Half Only) | June 9 |
| Mid Semester | June 19 |
| Summer Break | June 22–July 3 |
| Independence Day Holiday | July 3 |
| Move-in Day for 2nd-Half Cowboy Up Orientation | July 5 |
| Classwork Begins (2nd-Half Only) | July 6 |
| Last day to Add (2nd Half only) | July 8 |
| Last Drop with Refund (2nd Half only) | July 10 |
| Withdraw with Auto “W” Grade (Full Semester) | July 29 |
| Withdraw with Auto “W” Grade (2nd Half Only) | Aug 11 |
| Instructional Period Ends | Aug 21 |
| Graduation Exercises | Aug 21 |

INTERIM SESSION

2015

| | |
|------------------------------|-----------------|
| Enrollment | Feb 24 – May 31 |
| Classwork Begins | June 1 |
| Last day to Add | June 3 |
| Last Drop with Refund | June 5 |
| Independence Day Holiday | July 3 |
| Withdraw with Auto “W” Grade | July 10 |
| Interim Session Ends | July 24 |

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Graduate Performance Guarantee

OSU Institute of Technology certifies that this graduate has achieved graduate competencies identified by the appropriate academic department and its program advisory committee. If the graduate is judged to be lacking in job performance skills identified as exit competencies for the program of study, OSU Institute of Technology will provide up to nine tuition-free credit hours or equivalent of additional education.

Special conditions that apply to the Guarantee are as follows:

- | | |
|--|--|
| <p>1 <i>The graduate must have earned the AAS degree from OSU Institute of Technology beginning April 1993 or thereafter in a technical program identified in the current college catalog.</i></p> <hr/> <p>2 <i>The graduate must have completed the AAS degree at OSU Institute of Technology with a majority of the credits being earned at OSU Institute of Technology and must have completed the degree within a four-year time span.</i></p> <hr/> <p>3 <i>Graduates must be employed full-time in an area directly related to the program of concentration as certified by the Office of Academic Affairs.</i></p> <hr/> <p>4 <i>Employment must commence within 12 months of graduation.</i></p> <hr/> <p>5 <i>The employer must identify deficiencies and certify in writing, within 90 days of the graduate's initial employment that the employee is lacking specific entry-level skills guaranteed by OSU Institute of Technology as a part of the degree program.</i></p> | <p>6 <i>The employer, graduate, department head, chief academic officer and the appropriate faculty will develop a written educational plan for the needed education.</i></p> <hr/> <p>7 <i>Education will be limited to nine credit hours related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the education plan.</i></p> <hr/> <p>8 <i>All education must be completed within three semesters from the time the educational plan is agreed upon.</i></p> <hr/> <p>9 <i>The graduate and/or employer is responsible for the cost of books, insurance, uniforms, fees, room and board, tools and other course-related expenses.</i></p> <hr/> <p>10 <i>The Guarantee certifies only that the graduate has achieved competencies identified as appropriate by the academic department and its program advisory committee.</i></p> |
|--|--|

The Performance Guarantee process can be initiated by an employer's written notification to the OSUIT President:

OSU Institute of Technology - Office of the President

1801 East 4th Street

Okmulgee, OK 74447-3901

(918) 293-5256



History & Overview of the University

HISTORY OF OSUIT

OSU Institute of Technology has a very rich history. In facilities that served as a veteran's hospital during World War II, OSUIT opened its doors in 1946 to alleviate over-crowding on the OSU-Stillwater campus due to the post-war enrollment boom. Sponsored by the Veterans Administration, the first class of 500 veterans enrolled to learn agricultural and mechanical trades. With no state or local revenue support, the college served only veterans and other agency-sponsored students for several years, and plans were to close the campus when the veterans' demand for training had subsided.

By 1956, the college had a sound reputation for quality technical education and became a permanent part of Oklahoma's higher education system.

OSUIT is located in Okmulgee County on U.S. Highway 75, a divided four-lane highway that extends from Kansas City, Kansas south to Dallas, Texas. Cyberwise, OSUIT can be found on the World Wide Web at <http://www.osuit.edu>. Geographically, the college is in Okmulgee, Oklahoma, a town 38 miles south of Tulsa and 12 miles north of Interstate 40, a major east coast-west coast passage, in a rural, east central locale. Oklahoma, named for the Choctaw word meaning "red people," is the home of 39 federally recognized Native American tribes—a larger number of tribes than in any other state.

The town of Okmulgee, as well, enjoys a rich Native American heritage. Okmulgee is the historical, as well as the present day, national capital city for the Muscogee (Creek) Tribe. The word Okmulgee is Creek for "bubbling water." The Muscogee (Creek) Nation capitol complex is situated approximately two miles from the OSUIT campus.

OSUIT is a branch campus of Oklahoma State University-Stillwater (OSU-Stillwater) and is among very few state-supported, technical colleges with a mission focused primarily on technical-occupational career preparation. The majority of the students enroll with an expectation of full-time employment with good career advancement immediately upon graduation.

As a branch campus of the Oklahoma State University system, OSUIT enjoys a statewide mission. The year-round trimester calendar (3 full semester terms each year), campus location, and residence facilities encourage a full-time, continuously enrolled, student population. OSUIT awards Associate in Science, Associate in Applied Science, and Bachelor of Technology degrees.

PHILOSOPHY

OSU Institute of Technology believes the opportunity to participate in education should be readily available and accessible to every person without regard to race, ethnic origin, religion, gender, handicap or level of income; these should not be impediments to an individual's academic and social growth and development. The institution believes learning is a lifelong process that helps individuals develop their potential and increase their awareness of and capabilities for making reasoned choices. Differences among persons, particularly in goals, learning styles and attitudes, require a variety of means to satisfy the educational needs of individuals. The institutional environment should be responsive to varied needs of the students and other constituencies the institution serves. To this end, the institution is committed to providing educational opportunities through close collaboration with other educational institutions, the private and public sector, government entities, and the various business and industry-based organizations that serve the residents of Oklahoma.

MISSION

OSU Institute of Technology's mission is to serve as the lead institution of higher education in Oklahoma and the region providing comprehensive, high-quality, advancing technology programs and services to prepare and sustain a diverse student body as competitive members of a world-class workforce and contributing members of society.

VALUES

We value excellence and integrity in people, technology, jobs and learning.

PHILOSOPHY OF GENERAL EDUCATION

General Education at OSU Institute of Technology employs current technology and diverse learning methods to engage students in interactive learning processes. Students are introduced to broad based knowledge, skills, and analytical and evaluative tools needed to lead productive and fulfilling lives in leadership and service to the community. This latitude in learning complements each program to enhance students' flexibility and, consequently, provide them with more options in the work place.

PHILOSOPHY OF ASSESSMENT OF STUDENT LEARNING

Assessment of student learning at OSU Institute of Technology is an essential part of the enduring process of enhancing and improving curricular and co-curricular student learning. It is driven by the College's mission and vision statements.

Academic divisions determine student learning objectives and then systematically gather, document, analyze, and interpret evidence of student learning. Assessment is one way that departments and programs affirm their strengths and plan improvements that contribute to the College's overall effectiveness.

INSTITUTIONAL CORE OBJECTIVES

Core objectives are essential, broad-based workplace skills that cut across occupational and academic titles. They are distinguished from program-specific requirements needed for specialization in professional-technical programs and/or academic-transfer plans. The assessment of student learning is held in high regard at OSU Institute of Technology and, in alignment with requirements of The Higher Learning Commission, faculty have developed six core objectives that are wholly integrated in the curriculum. These Core Objectives are:

1. Effectively communicate electronically, verbally, and in writing
2. Demonstrate logical, systematic problem-solving techniques
3. Develop and display a sense of personal, social and professional ethics
4. Explain the cultural heritage and primary elements of the history and government of the U.S. people, especially as it impacts one's industry or field of study
5. Access and use technology appropriate to one's industry or field of study
6. Provide opportunities for students to effectively utilize learned technologies and processes to aid various constituencies in the community.

ACCREDITATION

OSU Institute of Technology's programs of study are approved by the Board of Regents for Oklahoma State University and the A&M Colleges, the Oklahoma State Regents for Higher Education (OSRHE) and the Oklahoma State Accrediting Agency. OSU Institute of Technology is accredited by The Higher Learning Commission (HLC), (230 South LaSalle St., Suite 7-500, Chicago, IL 60604-2504; 1-800-621-7440; <http://www.ncahlc.org>)

SPECIALIZED ACCREDITATION Nursing - NLNAC

The OSUIT Nursing Program meets the requirements of the Oklahoma Board of Nursing and is entitled to be known as an approved associate degree nursing education program in the State of Oklahoma. The program has been

awarded accreditation by the National League for Nursing Accrediting Commission (NLNAC) for achievement of Quality and Excellence in Nursing Education.

O & P – NCOPE/CAAHEP

The National Commission on Orthotic and Prosthetic Education (NCOPE) is the accreditation body for the orthotics and prosthetics (O&P) profession. As such, its primary mission and obligation is to ensure educational and residency programs meet the minimum standards of quality to prepare individuals to enter the O&P profession.

NCOPE serves in cooperation with the Commission on Accreditation of Allied Health Education Programs (CAAHEP) for accreditation of educational programs. CAAHEP is a nationally recognized non-profit organization that accredits educational programs in 22 allied health disciplines.

The CAAHEP system currently accredits over 2,000 education programs across the nation.

Civil Engineering Technologies (BT) – ABET

ABET is a nonprofit, non-governmental organization that accredits college and university programs in the disciplines of applied science, computing, engineering, and engineering technology.

ABET accreditation, which is voluntary and achieved through a peer review process, provides assurance that a college or university program meets the quality standards established by the profession for which the program prepares its students.

SCOPE

OSU Institute of Technology's scope is college level, advancing technology curricula and services, co-curricular student life and public service.

Emphasis is placed on:

- Associate degree programs in advancing technologies that fulfill a critical work force need for technical/professionals;
- General education course work that contributes to the development of critical-thinking lifelong learners, whose interpersonal and communication skills, problem-solving abilities and knowledge of ethics prepare them to be productive employees and citizens;
- Programs and services which aid in the development and retention of students;
- Continuing education and public service programs that meet the needs of Oklahoma citizens;
- Technologically-advanced learning resource facilities and educational infrastructure which meet the needs for academic excellence;

- Student experiences which foster leadership, participation and maturity;
- Recruitment and sustenance of a diverse, qualified faculty and staff;
- Institutional planning program review processes that focus on academic excellence and continuous improvement of support services;
- Strategic alliances partnerships with government, business and industry that serve to enhance the economic development;
- External resources that are required to provide program excellence;
- Accountability through assessment of student learning, competency, satisfaction, exit placement and career success.

GRADUATE PLACEMENT

OSU Institute of Technology takes great pride in its highly successful graduates. To maintain high graduate placement success, each academic division takes responsibility for working with employers to foster positive employment.

Employer information on file and graduate survey responses continually reflect that 95% – 97% of OSUIT graduates find gainful employment upon graduation, with 91% – 92% employment in full time positions related to their field of study.

DISCLOSURE OF GRADUATION RATES

OSU Institute of Technology, in compliance with the Student Right-to-Know Act, makes available to any enrolled or prospective student its completion or graduation rate. This information is available upon request in the Office of Academic Affairs.

ADMISSIONS

Office of Admissions
Grady Clack Center
918-293-4680
1-800-722-4471, Ext. 4680
www.osuit.edu/admissions
osuit.admissions@okstate.edu

ADMISSIONS PROCESS

When to Apply: It is recommended to apply several months prior to the semester in which the student would like to attend.

How to Apply: Students can apply online on the Office of Admissions website or apply in person at the Office of Admissions. www.osuit.edu/apply

Submit Documents: Student should submit required documents to the Office of Admissions.

All transcripts should be mailed in sealed envelopes from the issuing school or institution directly to the Office of Admissions. In situations where the issuing institution only transmits official

transcripts through a third party, those transcripts must be sent to the Office of Admissions official email: osuit.admissions@okstate.edu

GENERAL POLICIES

All students must meet the criteria for both the high school curricular requirements and the high school performance requirements as defined by OSRHE. The following high school curricular requirements have been established for students seeking admission to Oklahoma colleges and universities:

The 15 units of high school course work required for college admission to public colleges and universities in the State System. The following high school curricular requirements have been established for students seeking admission to Oklahoma colleges and universities. These include:

- 4 units of English (Grammar, Composition, Literature)
- 3 units of Mathematics (Algebra I, Algebra II, Geometry, Trigonometry, Math Analysis, Calculus, Advanced Placement Statistics)
- 3 units of Laboratory Science (Biology, Chemistry, Physics, or any lab science certified by the school district; General Science with or without a lab may not be used to meet this requirement.)
- 3 units of History and Citizenship Skills (including 1 unit of American History and 2 additional units for subjects of History, Economics, Geography, Government, Non-Western Culture)
- 2 additional units of courses that fit into one of the categories above or foreign language or computer science

SPECIAL PROGRAMS REQUIREMENTS

Certain programs have additional admission criteria and enrollment procedures. Admission to OSU Institute of Technology does not guarantee acceptance into any specific program of study.

The number of students allowed to enroll in these programs is often limited. Applicants must have completed the OSUIT application process and be accepted to the institution prior to being reviewed for acceptance into the special program. Additional requirements for admission to restricted programs may be obtained by contacting the respective division office.

OSUIT's admissions process includes submitting an application for admission and all necessary paperwork to complete the applicant's admission requirements which are determined by the *Admission Policies & Requirements*.

IMMUNIZATION RECORDS

All new students are required by Oklahoma law to provide evidence of having been immunized against measles, mumps, and rubella, (two shots), and against Hepatitis B, (three shot series). If this

information is not received during the student's first semester, a hold will be placed on future enrollment until the requirement is met. Students may sign a waiver if shot records cannot be provided.

ADMISSION POLICIES & REQUIREMENTS

The admission policies of OSU Institute of Technology are those approved by the Oklahoma State Regents for Higher Education on Admission to and Transfer among Oklahoma Colleges and Universities of the State System.

Students will be admitted in one of the following admission categories:

ADMISSION OF FIRST-TIME COLLEGE STUDENTS

1. Students Seeking Admission to AS, or Baccalaureate Degree Programs
Any individual who:

- a. is a graduate of a high school accredited by the appropriate regional association or by an appropriate accrediting agency of the home state or has achieved a high school equivalency certificate based on the GED;
- b. has met the curricular requirements as set forth by the OSRHE policy; and
- c. has participated in the ACT test is eligible for admission to OSUIT.

2. Students Seeking Admission to AAS Degree Programs
Any individual who:

- a. is a graduate of high school accredited by the appropriate regional association or by an appropriate accrediting agency of the home state or has achieved a high school equivalency certificate based on the GED; and
- b. has participated in the ACT test is eligible for admission to OSUIT.

FIRST TIME COLLEGE STUDENTS REQUIREMENTS

1. Graduates from an accredited high school are eligible for admission provided they:

- a. Submit an Application for Admission
- b. Participate in ACT testing or SAT testing
- c. Submit an official High School transcript, and;
- d. Participate in COMPASS assessment as explained under Academic Profiling.

2. Non-High School Graduates are eligible for admission provided they are 18 years of age or older and their high school class has graduated and they:

- a. Submit an Application for Admission
- b. Participate in ACT testing or SAT testing
- c. Submit official transcripts of previous academic history including GED certificate if taken, and;

d. Participate in COMPASS assessment as explained under Academic Profiling.

ADMISSION OF TRANSFER STUDENTS

A Transfer Student is any undergraduate student with greater than six attempted credit hours, excluding remedial/developmental (zero-level courses) or pre-college work and excluding credit hours accumulated by concurrently enrolled high school students.

1. Admission by Transfer within the State System

Undergraduate students entering OSUIT by transfer from another State System institution must meet both the high school curricular requirements and academic performance standards of OSUIT and must have a GPA high enough to meet the institution's retention standards based on at least 24 attempted semester credit hours of regularly graded (A, B, C, D, F) college work.

2. Admission by Transfer from Non-State System Institutions

Undergraduate students wishing to transfer from non-State System institutions to OSUIT may do so by meeting the entrance requirements of OSUIT; and also meet the following:

- a. Transcripts of record from colleges and universities accredited by the HLC or other regional associations will be given full value.
- b. Each nonresident applicant must be in good standing in the institution from which the applicant plans to transfer.
- c. Transcripts of record from institutions not accredited by a regional association may be accepted in transfer when appropriate to the student's degree program and when the receiving institution has had an opportunity to validate the courses or programs.

TRANSFER STUDENT REQUIREMENTS

Individuals who have enrolled in one or more colleges prior to enrollments at OSUIT must provide the following documentation depending upon the number of hours completed at previous colleges.

1. Students with fewer than 24 credit hours:

- a. Submit an Application for Admission
- b. Participate in ACT testing or SAT testing
- c. Submit an official High School transcript*, and;
- d. Submit an official college transcript* from each college attended;
- e. Participate in COMPASS assessment as explained under Academic Profiling.

2. Students with 24 or more credit hours:

- a. Submit an Application
- b. Participate in ACT testing or SAT testing, and;

c. Submit an official college transcript* from each college attended;

d. Participate in COMPASS assessment as explained under Academic Profiling.

*All transcripts should be mailed in sealed envelopes from the issuing school or institution directly to the Office of Admissions. In situations where the issuing institution only transmits official transcripts through a third party, those transcripts must be sent to the Office of Admissions official email: osuit.admissions@okstate.edu

SPECIAL ADMISSION

Under certain circumstances the institution is allowed to admit students under a special admission category. The OSRHE allow each institution to determine if the student meets one of the following criteria for special admission to the university:

A. Special Non-Degree Seeking Student

Students who wish to enroll in courses without intending to pursue a degree may be permitted to enroll in no more than nine credit hours without submitting academic credentials or meeting the academic curricular or performance requirements of the institution of desired entry. Retention standards will be enforced. Once a student has completed the designated number of hours, the student is required to meet the formal admission or transfer criteria for the institution of desired entry in order to enroll in additional course work.

B. Adult Admission

1. Students who are 21 years of age or older or on active military duty may be admitted based on criteria established at the campus level. Related to the curricular requirements, students admitted under the adult admission category must demonstrate proficiency to the satisfaction of the entering institution in the curricular area the student desires to pursue.

2. Non High School Graduate

Any student who:

- a. is not a high school graduate but whose high school class has graduated; and
- b. has participated in the ACT test is eligible for admission to OSUIT.
- c. is a GED recipient, the recipient's high school class must have graduated to be eligible for admission.

3. The student must satisfy the high school curricular requirements for the institution to which the student is applying, as certified by the school or for home study, the parent.

C. Home Study or Non-Recognized Accredited or Unaccredited High Schools

An individual who is a graduate of a private, parochial, or other nonpublic high school which is not accredited by a recognized accrediting agency is eligible for admission as follows:

1. The student must have participated in the ACT or SAT test.
2. The student's high school class of his or her peers must have graduated.

CONCURRENT ENROLLMENT OF HIGH SCHOOL JUNIORS OR SENIORS

A high school junior or senior may be enrolled in collegiate level courses provided he or she meets both the admissions and the curricular requirements set by OSRHE. Concurrent students must be able to satisfy all curricular requirements for graduation from high school (including curricular requirements for college admission) no later than the spring semester of their senior year. All concurrent students are required to submit an official High School Transcript and ACT scores along with the signed Concurrent Application.

ADMISSION REQUIREMENTS OF CONCURRENT HIGH SCHOOL STUDENTS

1. High School Senior:

A twelfth grade student enrolled in an accredited high school may, if the student meets the requirements set forth by OSRHE, be admitted provisionally as a special student. The ACT score is the composite score without the writing component. The SAT score is the combined critical reading and math scores without the writing component. Minimum standards for OSUIT are ACT/SAT at 42nd percentile OR High School GPA 3.0. Classification of Senior begins the summer after the junior year is completed. Seniors are allowed to enroll during the final semester at high school, however students that wish to enroll in the summer following graduation are required to complete the admissions process for first-time college students.

2. High School Junior:

An eleventh grade student enrolled in an accredited high school may, if the student meets the requirements set forth by OSRHE, be admitted provisionally as a special student. The ACT score is the composite score without the writing component. The SAT score is the combined critical reading and math scores without the writing component. Minimum standards for OSUIT are ACT/SAT at 58th percentile OR High School GPA 3.5. Classification of Junior begins the summer after the sophomore year is completed.

3. Home Study or Unaccredited High School Students:

Concurrent students who are receiving instruction at home or from an unaccredited high school must be 17 years of age and meet the requirements for high school seniors as listed above or be 16 years of age and meet the requirements for high school juniors as listed above.

COURSE ENROLLMENT REQUIREMENTS OF CONCURRENT HIGH SCHOOL STUDENTS

All concurrent students must submit an ACT score. ACT subject scores are used to determine eligibility for enrollment.

Seniors:

Minimum composite score of 19 ACT or 900 SAT OR have a 3.0 GPA on a 4.0 scale AND ACT subject test must be a 19 or higher for the area(s) in which they want to enroll.

Juniors:

Minimum composite score of 21 ACT or 980 SAT OR have a 3.5 GPA on a 4.0 scale AND ACT subject test must be a 19 or higher for the area(s) in which they want to enroll.

Subject tests include English, reading, mathematics and science reasoning. An ACT subject score of 19 in reading is required for enrollment in any subject area other than English, mathematics and science reasoning. Institutional secondary testing may not be used for placement. Also, concurrent students may not enroll in remedial (zero-level) coursework offered by colleges and universities and designed to remove high school deficiencies.

COURSE WORKLOAD FOR CONCURRENT HIGH SCHOOL STUDENTS

A high school student may enroll in a combined number of high school and college level courses per semester not to exceed a full-time college workload of 19 semester credit hours. For purposes of calculating workload, one-half high school unit shall be equivalent to three semester credit hours of college work. A student may enroll in a maximum of nine semester credit hours during a summer semester without being enrolled in high school classes during the summer term.

COOPERATIVE ALLIANCE AGREEMENTS

OSU Institute of Technology is a participant in a number of Cooperative Alliance Agreements which allow high school and adult students to receive college credit for coursework while they are enrolled at a participating Technology Center, and apply that credit toward an Associate in Applied Science (AAS) degree. Designated within this catalog will be courses and/or programs of study developed specifically for the Alliances. Students do not pay tuition for these courses but are charged a fee of \$8 per credit hour.

Institutions of higher education across the state of Oklahoma have committed to providing student services and career advisement to Technology Center students as a part of this program. The overall goal of the program is to improve student access to higher education and increase the number of students completing college degrees within the state. This will result in a better educated workforce and, ultimately, an improved economic climate in Oklahoma.

"The Higher Learning Commission (HLC) periodically updates its policies regarding credit awarded through cooperative alliance agreements with Oklahoma's technology centers. As a result, OSUIT must change its policies to conform to HLC's policies when these updates occur. OSUIT will make every effort to notify current cooperative alliance students in a timely manner of any changes that may affect their enrollment or awarding of credit." Bachelor of Technology Requirements Specific academic requirements are in effect for students wishing to enroll in OSU Institute of Technology's Bachelor of Technology degrees.

ADMISSIONS STANDARDS 2014-2015

Students wishing to undertake a Bachelor of Technology degree are required to meet or exceed the following admissions standards in addition to specific program requirements.

- ACT score of 19 or higher in all subcomponents, or
- COMPASS scores of 81 in Reading, 74 in English, and 45 in College Algebra.

Students may be admitted to a Bachelor of Technology program contingent on completion of an Associate in Applied Science degree or higher and submission of both OSUIT and Bachelor of Technology applications.

TRANSFER OF CREDIT

Transfer of Credit from Domestic and International Institutions

Acceptable transfer credit is evaluated on a course-by-course basis for college-level credit earned at institutions who are fully accredited by any of the recognized six U.S. regional associations. The evaluation is based on course content, as described in the catalog of the institution.

Evaluation of transfer credit may require documentation such as program requirements and course syllabi to determine acceptable transfer credit courses.

Accreditation is the process used by the State Regents or other entities recognized by the U.S. Department Education (USDE) to ensure postsecondary education providers meet and maintain minimum standards of quality and integrity regarding academics, administration, and related services.

International transcripts, submitted for transfer, must be evaluated by a member agency of the National Association of Credential Evaluation Services (NACES, <http://www.naces.org/members.htm>). Students must submit both the official college transcript and the evaluation summary prepared by the Evaluation Services Committee to the Registrar's Office.

TRANSFER OF CREDIT WITHIN THE STATE SYSTEM

Transfer of Credit from colleges and universities within the State System accredited by the HLC or other regional associations will be given full value.

UNIFORM COURSE NUMBERING WITHIN THE STATE SYSTEM

In order to provide for a more effective and efficient system of the transfer of student's credits among institutions of Oklahoma higher education, the State Regents adopted the following uniform system of numbering for identification of courses offered at all institutions in the State System.

A course number will consist of four digits as follows:

- The first digit will denote the course level.
- The second and third digits will be used to identify the course within a department.
- The fourth digit will denote the number of semester credit hours of the course.

TRANSFER OF CREDIT FROM NON-STATE SYSTEM INSTITUTIONS

Transcripts of record from institutions outside the state system will be evaluated based on course content, as described in the catalog of the institution. Evaluation of transfer credit may require documentation such as program requirements and course syllabi to determine acceptable transfer credit courses.

Acceptable transfer credit is evaluated on a course-by-course basis for college-level credit earned at institutions who are fully accredited by any of the recognized six U.S. regional associations.

Transcripts from institutions not accredited by a regional association may be accepted in transfer when appropriate to the student's degree program and when the receiving institution has had an opportunity to validate the courses or programs.

TRANSFER OF CREDIT FROM MILITARY EXPERIENCE OR SERVICE

We have a generous policy for awarding credits for military and work experience, and follow the American Council on Education (ACE) recommendations. We use the following means:

- Evaluation of military transcripts free-of-charge for application to general education and technical class credits. Military specializations are mapped and evaluated for applicability to technical degree programs.
- ACE recommendations for military training and experience, and awarding credit through examinations.
- Credits earned at accredited institutions for higher learning, including those credits transcribed through prior learning assessments, are accepted.

- Council for Adult & Experiential Learning (CAEL) to award prior learning assessment credits for life and work experiences, training, etc.

- DSST, CLEP, AP, and other industry and/or nationally recognized examinations.

- Service members may also "challenge" courses and take a proctored exam. Demonstrating mastery will result in advanced placement credit without the need to take the class.

CREDIT FOR PRIOR LEARNING

Prior learning is knowledge and skills attained outside the sponsorship of legally authorized and accredited postsecondary institutions. The term applies to learning acquired from work and life experiences, independent reading and study, and participation in formal courses sponsored by associations, business, government, industry, the military and unions. Advanced standing credit may be obtained by successfully passing a prior learning assessment (PLA). Advanced standing credit can be applied to a student's transcript upon the completion of 12 credit hours at the institution. An individual who is currently enrolled can request advanced standing credit through one or more of the following means:

1. Standardized test

- a. Completion of nationally recognized industry certification exams.
- b. The College Board Advanced Placement (AP) Program.
- c. College Level Examination Program (CLEP)
- d. DANTES Subject Standardized Tests (DSST)
- e. Excelsior College Examinations (ECE)

2. Challenge exam

Proficiency tests are developed and administered by the department responsible for the course offering. Exams may be technical in scope or a nationally normed instrument such as COMPASS. These institutionally prepared examinations over the subject area are given in a supervised setting following institutional guidelines.

3. Transcribed credit

Degree-relevant prior learning credit awarded and transcribed by other accredited institutions.

4. Evaluation of non-college training

Military Experience-Advanced standing credit for military experience is based on criteria and recommendations contained in publications of the American Council on Education (ACE).

- a. Army/ACE Registry Transcript System (AARTS)

- b. Sailor/Marine ACE Registry Transcript (SMART)

- c. Community College of the Air Force (CCAF)

- d. Coast Guard Institute (CGI)

- e. The Defense Activity for Non-Traditional Education Support (DANTES)

5. Individual student portfolio

Individual portfolios using Council for Adult and Experiential Learning (CAEL) or other standardized guidelines.

ADVANCED STANDING CREDIT

Advance standing credit awarded to a student must be validated by successful completion of twelve or more semester hours of academic work at OSUIT. All credit earned through advanced standing shall be so designated the neutral grades of pass (P) on the transcript following the course entry. All advanced standing credit evaluated institutions awarding credit for prior learning must validate credit on a course-by-course basis. Neither the ACT nor the SAT shall be utilized by State System institutions for awarding credit. Credit awarded for prior earning may be applied to a degree program subject to meeting the requirements of the institution conferring the degree.

ACADEMIC PROFICIENCY

All students at OSU Institute of Technology are required to prove academic proficiency. Academic proficiency determines one's eligibility to enroll in certain programs of study, or placement in remedial classes during a student's first semester of enrollment. Students must prove academic proficiency one of three ways:

1. Transferring in credits that prove academic proficiency in a subject area.
2. Submitting ACT test scores that prove academic proficiency with a score of 19 or better in subtest areas.
3. By taking the Compass Assessment and scoring at or above the test area on each component as listed below:

Reading Comprehension 81
English (Sentence Skills) 74
Arithmetic (Pre-algebra) 46
Elementary Algebra 68
College Algebra 45

Students that do not meet the above requirements will be required to take developmental courses to remove their deficiencies.

REMOVAL OF DEFICIENCIES

Oklahoma State Regents for Higher Education requires that students with deficiencies begin remediation of basic academic skills during the first semester and continue until prepared for college-level coursework in the

respective subject area. The Vice President of Academic Affairs may allow exceptions on an individual basis for students with extenuating circumstances.

Unless otherwise specified by program requirements, students must remove academic deficiencies within the first 24 semester credit hours attempted. Transfer students are required to remove curricular deficiencies within the first 12 semester credit hours attempted. Students may enroll in collegiate level courses within the deficiency's discipline area only after the deficiency is satisfied.

NONACADEMIC CRITERIA FOR ADMISSION

In addition to the academic criteria used by institutions in the Oklahoma State System of Higher Education as the basis for student admission, institutions consider the following nonacademic criteria in deciding whether first-time applicants or transfer students should be granted admission:

- whether applicants have been expelled, suspended, denied admission or denied readmission by any other educational institutions;
- whether applicants have been convicted of a felony or convicted of any lesser crime involving moral turpitude;
- whether applicants have conducted themselves in a manner so that if, at the time of such conduct applicants had been students at the institution, their course of conduct would have been grounds for expulsion, suspension, dismissal or denial of readmission at the institution where application is being made,

If any of said criteria should be present, then the institution may deny admission to applicants if it decides that the happening of any of the events described indicates the applicants' unfitness, at the time of application, to be accepted as a student at the institution.

If an applicant is denied admission on any of the foregoing grounds, there must be substantial evidence supporting the basis for denial. In addition, the applicant must be afforded adequate procedural safeguards, including the following:

- The applicant must be advised of the grounds of the denial;
- The applicant must be informed of the facts which form the basis of the denial; and,
- The applicant must be afforded an opportunity to appeal their admission denial before a committee

INTERNATIONAL ADMISSIONS

International Student Admission and Admission of Non-native Speakers of English International

undergraduate students are required to meet equivalent academic performance standards as domestic students. Additionally, first-time international students for whom English is a second language shall be required to present evidence of proficiency in the English language prior to admission, either as first-time students to the system or by transfer from another non-system college or university. The State Regents adopted this policy to ensure that students will have a reasonable chance to succeed at a higher education institution based on their ability to comprehend, read, and write the English language.

ADMISSION OF INTERNATIONAL STUDENTS

Students must meet one of the standards described below to demonstrate their competency in English. Institutions may not waive this admission requirement as part of the alternative admissions category within the State Regents' general policy on admission.

A. First-Time International Students

1. Standardized Testing. Students must meet the minimum score set by the State Regents on either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) Examination. Results of the TOEFL taken at international testing centers and special testing centers will be accepted at all State System colleges and universities. Results of the TOEFL administered at institutional testing centers shall not be accepted by colleges and universities other than the administering institution.

2. Intensive English Program (IEP). Students must meet a minimum score set by the State Regents on the TOEFL administered at a special testing center or an international testing center or on the IELTS Examination. In addition, after achieving the required score and immediately prior to admission, successfully complete a minimum of 12 weeks of study at an IEP approved by the State Regents. At least two-thirds of the 12 weeks must be instruction at an advanced level. A list of State Regents' approved IEPs can be found in the State Regents' Academic Affairs Procedures Handbook.

3. High School Performance. Undergraduate students must have successfully completed the high school core requirements in or graduate from high school where English is the primary language in a country where English is a primary language and demonstrate competency through the Remediation and Removal of High School Curricular Deficiencies Policy.

B. Transfer International Students

Non-native Speakers of English: Transfer students who are non-native speakers of English must meet the same transfer admission standards as domestic students, dependent upon their educational background or have attended a college or university where English is the primary teaching language in a country

where English is a primary language and that is recognized by professional organizations in the U.S. involved in admissions and international education for a minimum of 24 semester credit hours with passing grades and also meet other transfer requirements.

Student with less than 24 hours from a college or university where English is the primary teaching language in a country where English is a primary language and that is recognized by professional organizations in the U.S. involved in admissions and international education must meet the language requirements for first-time undergraduate students.

International Student Requirements:

Students who require a visa to study in the United States are eligible for admission if they:

1. have graduated from high school or secondary school
2. can show English proficiency in any of these ways:
 - TOEFL internet-based score of at least 61*
 - TOEFL computer-based score of at least 173*
 - TOEFL paper-based score of at least 500*
 - IELTS score of at least 5.5*
 - native English speaker
3. have submitted an international application for admission
4. can show financial support for the estimated cost of attendance

While there is no formal application deadline please be prepared to start the international admission process several months in advance to allow for formal VISA processing.

ENROLLMENT OF INTERNATIONAL STUDENTS

Enrollment for new international students, whether new to the U.S. college system or a newly-transferred from another U.S. college or university, requires more steps than a student who is renewing enrollment for the next academic term. For assistance or additional information please contact the International Affairs Office at:

Email: international.office@okstate.edu
Phone: +1-918-293-5071

UNDOCUMENTED IMMIGRANTS

In accordance with Title 70, O.S., Section 3242 (2007) (also known as HB1804 of the First Regular Session of the 51st Legislature), an individual who cannot present to the institution valid documentation of United States nationality or an immigration status permitting study at a postsecondary institution, but who has

graduated from a public or private high school in Oklahoma, may be eligible for enrollment and resident tuition. The individual must provide the same documentation as a domestic student and is required to file an affidavit of intent with the institution.

To be eligible for enrollment and resident tuition under HB 1804, the undocumented immigrant student must:

A. have graduated from a public or private high school in Oklahoma (Note: GED or homeschool education will not establish eligibility for any student.);

B. have resided in Oklahoma with a parent or legal guardian while attending a public or private high school in Oklahoma for at least two (2) years prior to graduation;

C. satisfy admission standards, as determined by the State Regents, for the institution in which the student intends to enroll;

D. have secured admission and enrolled in an institution within The Oklahoma State System of Higher Education; and

E. do one of the following:

1. Provide to the institution a copy of a true and correct application or petition filed with the United States Citizenship and Immigration Services to legalize the student's immigration status; or

2. File an affidavit with the institution stating that the student will file an application to legalize their immigration status at the earliest opportunity the student is able to do so, but in no case later than :

a) one (1) year after the date on which the student enrolls for study at the institution; or

b) if there is no formal process to permit children of parents without lawful immigration status to apply for lawful status without risk of deportation, one (1) year after the USCIS provides such a formal process.

DEFERRED STUDENT

Students meeting the 2012 Deferred Action criteria will be permitted to apply at OSUIT. Students will need to submit paperwork to the Office of Admissions regarding their status and approval for Deferred Action from U.S. Citizenship and Immigration Services/ Department of Homeland Security.

ASSESSMENT & TESTING

COMPASS ASSESSMENT

COMPASS is a self-paced computerized assessment of Reading, Math, and Writing skills (English). The COMPASS assessment determines one's academic proficiency. The assessment can be taken on campus in the

OSU Institute of Technology Assessment Center, weekdays between 7:30 a.m. and 1:30 p.m. No appointment is required. Please contact the Assessment Center at 1-800-722-4471 ext. 5248 or ext. 5254 for more information.

The following policy applies to all students taking the COMPASS assessment:

1. All examinations will be coordinated through OSUIT Assessment Center and will cover the following areas: Reading, Math, and Writing (English) skills.
2. Students will be allowed to take the exam (or each component) up to three times.
3. Initial testing must be completed prior to enrollment and retesting must be completed within the first week of the semester. Any changes in students schedule due to retesting must be processed during the first week of the semester. No retesting will be allowed after the fifth day of the semester.
4. Retesting will not be allowed in a subject area after a student has enrolled in a course, earned a grade for the course or withdrawn from the course.

CAREER PROFILING

Comprehensive Career Profiling is available as a free service to help students and prospective students make informed career decisions. Skilled professionals guide the individual through activities to determine values, interests, abilities, aptitudes and personality traits.

After these characteristics are aligned with career areas, the salary, current demand, future outlook of specific jobs can be examined. Also, the educational requirements for a specific job and the colleges in Oklahoma and surrounding states that offer those requirements are delineated.

First-time college students, students transferring from another college and persons changing careers will get valuable insights to assist in making career choices. All results are confidential.

ACT RESIDUAL TESTING

Residual Testing at OSU Institute of Technology (OSUIT) is conducted for students who 1) are enrolled, 2) have been admitted, or 3) are applying to OSUIT and cannot take the ACT on a regularly scheduled national test date because the date does not meet OSUIT's deadlines. Students who do not plan to attend OSU System must not take the Residual ACT on the OSUIT campus.

OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION POLICY

Students may only take the ACT Residual test once during the year in which the respective ACT Residual examination is valid (November 1 through September 30) and the test date shall not coincide with a national ACT test date.

Students are encouraged to participate in the national ACT test dates (six are offered per year).

ACT Residual testing on the OSUIT campus is available at various times during the year. Check the Assessment Center web page for schedule of test dates. http://www.osuit.edu/academics/act_dates.html

- Due to limited seating, students should register for the ACT by calling 918-293-5254.
- A picture ID is required for admission to the testing room. Examples of picture ID's are current drivers license, military ID, etc. We cannot accept picture ID faxed from other institutions, etc.
- Students should arrive by 8:00 AM; the test fee is \$40.00 payable at the cashier's window the day of the test.
- The test begins promptly at 8:30 AM. Absolutely no one will be admitted to the testing room after the timed portion of the test has begun.
- ACT permits the use of calculators on the Mathematics Test. Acceptable calculators include: basic four function, scientific, or graphing calculators. Programmable calculators are not permitted. We do not provide calculators.

No books or other materials will be allowed in the testing area. No food or drink allowed.

GED (GENERAL EDUCATION DEVELOPMENT) EXAMS

The GED test provides an opportunity for individuals to earn the High School Equivalency Certificate. Included in the GED battery of tests are Mathematics, Writing, Social Studies, Science and Reading.

For assistance or additional information, please contact the Assessment Center at 918-293-5248.

COMPUTER PROFICIENCY REQUIREMENT

OSU Institute of Technology recognizes that many business, industrial, educational, and personal activities involve the use of computers. Therefore, all OSU Institute of Technology graduates will demonstrate competency in the use of a computer to perform one or more of the following functions:

- Word Processing
- Database Management
- Programming
- Spreadsheet Use
- Multimedia/Graphic Design
- Presentations

A student may satisfy the computer proficiency requirement by completing the course CS 1013 "Computer Literacy and Applications" or any other course designated by the academic division as satisfying this requirement.

The following policy applies to all students interested in seeking Advanced Standing credit for CS 1013 Computer Literacy & Applications:

1. All examinations will take place in the OSU Institute of Technology Assessment Center and will cover the following areas: Windows, Basic Word, Basic Excel, and Power Point. Students may take one or more components per visit to the Assessment Center. However, all components of the exam must be completed within a two-week period.
2. Students will be allowed to take the exam (or each component) once. Note: students who have previously taken Computer Literacy & Applications will not be permitted to seek Advanced Standing in the course.
3. Testing must be completed within the first week of the semester.

For assistance or additional information please contact the Assessment Center at 918-293-5248.

REGISTRAR GENERAL POLICIES

ENROLLMENT

Enrollment times are shown on the official school calendar of operation on page two (2). Additional information can be obtained through the Admissions and Records office. The enrollment process for all new students starts with the Admissions office. The staff provides students with initial career information and academic advisement. Students who are undecided regarding a career choice are referred to the Assessment Center for career exploration services. After enrollment, an advisor works with the student outlining a plan of study and identifying course requirements. Students are urged to review their academic progress each semester with an advisor from their department. Currently enrolled students may pre-enroll for the subsequent semester during the final weeks of each semester.

Courses used to fulfill general education requirements are identified by code letters that appear preceding the course title listed in the back of the Catalog. The code letters designate the general education category for which the course may be used.

- **Analytical and Quantitative Thought (A)**
The study of systems of logic and the mathematical sciences.
- **Humanities (H)**
These courses concentrate on the ideas, beliefs, and arts and literatures that bring cultures to life.
- **Natural Sciences (N)**
A systematic study of natural processes and the mechanisms and consequences of human intervention in those processes.

- **Social and Behavioral Sciences (S)**
Human behavior in relation to the social and physical environment.
- **Diversity (D)**
These courses emphasize socially constructed groups in the United States.
- **International Dimension (I)**
These courses emphasize contemporary cultures outside the United States.
- **Scientific Investigation (L)**
Laboratory experience aimed at interpreting scientific hypotheses.

Some degree plans require specific general education courses. If no specific course is listed, any general education course with that designation may be used.

Occasionally students transfer a course that appears to fulfill the criteria & goals for a general education course but the transcript does not indicate a general education designation. The advisor may submit a "Substitution" form along with a course syllabus or course description to the Division Chair of Arts & Sciences along with a copy to the Registrar's Office.

General education courses are also identified in the Student Information System (SIS).

LATE ENROLLMENT

Initial enrollment for a semester will not be permitted after the first three days of classes of that semester. A late fee will be assessed for those students enrolling during the first three days of class.

RESIDENT CLASSIFICATION

"in-state" status is a classification for a postsecondary student who has lived continuously in Oklahoma for at least 12 months not primarily as a postsecondary student, has established domicile in Oklahoma or meets requirements associated with in-state status including sections 3.17.4, 3.17.7 and 3.17.8. (Excerpts below; see Oklahoma State Regents for Higher Education Policy for full definitions.)

A person's domicile is his or her true, fixed, permanent home or habitation. It is the place where he or she intends to remain and to which he or she expects to return. When these two occur there is domicile. The burden of proof of residence status or domicile shall be upon the applicant. Students filing an appeal for reclassification of their residence status shall do so on forms provided in the Registrar's Office.

- 3.17.4: Dependent and Independent Persons
- The legal residence of a dependent person is the postsecondary student's parents or the residence of the parent who has legal custody or the parent with whom the student habitually resides. If the student is under the care of those other than the parents, the legal residence is that of the student's legal guardian.

A dependent person may establish independent person status through circumstances including, marriage, formal court action, abandonment by parents, etc. In-state/out-of-state classifications of postsecondary students with extenuating circumstances (e.g., divorced parents with joint custody when one parent or legal guardian lives out-of-state and/or claimed as a dependent on a tax return, etc.) may be considered on a case-by-case basis.

3.17.7: Military Personnel - Members of the armed forces who provide evidence that they are full-time active duty in the armed forces stationed in Oklahoma or temporarily present through military orders shall be immediately classified upon admission as in-state status along with their spouse and dependent children. Further, when members of the armed services are transferred out-of-state, the member, their spouse and dependent children shall continue to be classified as in-state as long as they remain continuously enrolled.

3.17.8: Reserve Officer Training Corps - An out-of-state student participating in the Reserve Officer Training Corps shall be eligible for resident tuition under the following conditions:

1. Satisfies admission standards, has secured admission to and enrolled in an institution within the State System; and
2. Presents to the institution valid documentation of receipt of an Air Force Reserve Officers' Training Corps, Army Reserve Officers' Training Corps, Marines Reserve Officers' Training Corps, or Navy Reserve Officers' Training Corps full scholarship.

Students classified upon admission as in-state are eligible to apply for state scholarship and financial aid programs. Students

ADDING OR DROPPING A COURSE

Students may, subject to maximum enrollment limitations, add courses during the first week of the semester with the approval of their advisor or division chair.

Students may drop a course with the approval of their advisor or the division chair. A Change of Enrollment form must be processed through the Office of Admissions or the Registrar's Office prior to the drop/add deadline for the process to be complete.

For typical 15-week courses, any course dropped during the first ten business days of classes will have no transcript record. Any course dropped after the first ten days of classes and prior to the end of the eleventh week will result in a grade of "W" being recorded on the student's transcript. After the beginning of the twelfth week of a 15 week semester, a student may withdraw from a course. A grade of "W" or "F" will be assigned (see definition of grading terms "W"). All deadlines are posted in the Academic Calendar on page 2.

For courses of shorter duration, the above dates may vary. A course may not be dropped or withdrawn after a grade is assigned.

WITHDRAWING FROM COLLEGE

To completely withdraw from OSU Institute of Technology, a student may initiate the process in Admissions, the Registrar's Office, or with their academic division office. However, to complete the withdrawal process, contact must be made with the Bursar's Office, Student Financial Services, Residential Life, Library, and the student's academic division office. Failure to completely withdraw as required under this policy will result in permanent grades being awarded in all classes in which the student has enrolled. This process ensures that the student is making an informed decision. The last dates to withdraw without academic penalties are listed in the catalog calendar for each semester. Students withdrawing from one or all courses are not eligible for any refunds associated with the cost of education.

AUDITING COURSES

Students auditing a class must obtain approval from the division chair and schedule the class as an audit through the Admissions or Registrar's Office. Fees for auditing are the same as fees for credit courses. No credit or letter grade will be given for courses audited.

Procedures for auditing a course are administered by the Office of Admissions or the Registrar's office. No examinations or any other evaluation measures will be required or provided.

Persons auditing courses may not change their enrollment to credit after the add period. Students enrolled in courses for credit may change to audit status only during the period approved for dropping courses.

CLASS ATTENDANCE

A primary part of OSUIT's mission is to prepare graduates to be "competitive members of a world-class workforce". In addition to preparing students to meet this goal, dedication to class attendance also assists in an individual's academic success.

Regular and consistent attendance is a requirement in all OSUIT courses. Students who miss more than 20% of any course, consecutively or cumulatively, may be withdrawn from the course(s) and/or the institution. This policy applies to both face-to-face and online courses.

Students receiving support from government agencies or other sponsors must also adhere to policies stipulated by the specific sponsor.

Students should be aware that being administratively withdrawn from or dropping a course, and their last date of attendance in that course may impact their financial aid. Please see OSUIT Policy 2-021 for complete details.

COURSE LOAD

Students who enroll in 12 or more semester credit hours are considered full-time students. Normally, students may not enroll in more than 19 credit hours in a semester. In special cases, students may be permitted to enroll in a maximum of 22 credit hours. Enrollment in over 19 credit hours must be approved by the Executive Vice President. A typical enrollment at OSU Institute of Technology is between 12 and 18 semester credit hours.

GRADUATION REQUIREMENTS

To be eligible to graduate and receive a degree, a student must submit a graduation application to his or her academic advisor prior to his/her last semester of study or within the first two weeks of the final semester and complete all required courses in their major(s) as listed in the catalog. At least 15 of the final 30 credit hours applied toward the degree must be satisfactorily completed in residence at OSU Institute of Technology, or 50 percent of the major.

The minimum requirements for graduation are as follows:

AAS – 2.0 overall grade point average in all courses listed in the Plan of Study for the major. Some programs may require a higher grade point average.

AS – Overall 2.0 graduation/retention grade point average as shown on the transcript. Some programs may require a higher grade point average.

BT – Overall 2.5 graduation/retention grade point average as shown on the transcript. At least 15 of the final 30 credit hours applied toward the degree must be satisfactorily completed at OSU Institute of Technology. A minimum of 30 hours of resident credit applied toward the bachelor's degree shall be taken at OSU Institute of Technology. A minimum of 60 credit hours, excluding physical education activity courses, at a baccalaureate degree-granting institution, 40 hours of which must be upper-division course work excluding physical education activity courses.

DEGREES AWARDED

OSU Institute of Technology awards the Associate in Science, Associate in Applied Science, and Bachelor of Technology degrees in specific disciplines in recognition of successful completion of programs of study.

TRANSCRIPTS OF CREDIT

The Registrar's Office will provide up to 10 copies of the student's transcript upon the student's request. Transcripts will be withheld if the student has outstanding financial obligations to the institution and/or has not completed Direct Loan Exit Interview (if required).

GRADING SYSTEM

Grades are recorded with the letters A, B, C, D, F, I, AU, W, AW, P-NP, P-F or N. The various letter grades and the method of including them in the calculation of grade point averages is shown below. Grades are reported for each student at the closing of each semester.

| Grade | Grade Note | Comment | Grade Point per Hour |
|----------|------------|---------------|----------------------|
| 90 - 100 | A | Excellent | 4 |
| 80 - 89 | B | Good | 3 |
| 70 - 79 | C | Average | 2 |
| 60 - 69 | D | Below Average | 1 |
| 0 - 59 | F | Failure | 0 |

OTHER SYMBOLS

I - An incomplete grade may be used at the instructor's discretion to indicate that additional work is necessary to complete a course. It is not a substitute for an "F," and no student may be failing a course at the time an "I" grade is awarded. To receive an "I" grade, the student should have satisfactorily completed a substantial portion of the required course work for the semester. When reporting an "I", the instructor will record in detail the conditions for removal of the "I," with time limitations not to exceed two semesters. "I" grades not changed by the instructor to a credit-bearing grade or an "F" within the specified time limit will remain as a permanent "I" and not contribute to the student's GPA.

AU - Audit status is used for the student not interested in obtaining a course grade, but who is enrolled to get course content knowledge. The allowable time to change an enrollment status from audit to credit is the last day of the add period for each semester. Students who change their enrollment status from audit to credit must meet institutional admission/retention standards as set by the State Regents. The allowable time to change an enrollment status from credit to audit is the last day of the drop period for each semester. An AU is GPA neutral.

W - An automatic withdrawal grade of "W" is issued when a student initiates a withdrawal during the allowable withdrawal period. The withdrawal period for an automatic "W" begins the eleventh day of classes (approximately one-eighth of the session) for classes meeting the full length of regular sessions. The withdrawal period for classes of shorter duration begins the day following approximately one-eighth of the length of the class. The last day for an automatic "W" is the last day of the eleventh week (approximately seventy-five percent of the class length) for classes meeting the full length of regular sessions. For classes of shorter duration, the last day for an automatic "W" corresponds to the day that coincides with seventy-five percent of the class. For any drop

or withdrawal accepted after this deadline, a “W” or “F” will be assigned depending upon the student’s standing in the class. If an “F” grade is assigned, it is calculated in the student’s GPA; the “W” grade is GPA neutral.

AW - Administrative withdrawal may be approved by the Vice President of Academic Affairs and assigned by the Registrar to indicate that a student has been “involuntarily” withdrawn by the institution during the designated semester for disciplinary or financial reasons, or for inadequate attendance or otherwise demonstrated lack of appropriate concern for satisfactory academic progress toward program objectives. Such institutional penalties must follow formal institutional procedures. Administrative withdrawals are GPA neutral.

P-NP - An institution may elect to use the grades “P” and “NP” for specified courses or may allow students to elect a “P-NP” option under circumstances specified by the institution. The “P” grade is neutral indicating minimal course requirements have been met and credit has been earned. The “P” grade may also be used to indicate credit earned through advanced standing examinations. The grade of “NP” indicates that a student did not meet minimum requirements in a course designated for “P-NP” grading. While both grades “P” and “NP” are GPA neutral, they are counted in the total number of attempted hours for retention and the total number of attempted and earned hours for graduation.

P-F - An institution may elect to use pass-fail as an option for students in specified courses. The pass grade indicates hours earned but does not contribute to the GPA. The fail grade is an “F” and is calculated into the GPA.

N - An “N” grade indicates that the semester grade was not submitted by the instructor by the appropriate deadline. The “N” grade must be replaced by the appropriate letter grade prior to the end of the subsequent semester. The “N” grade is GPA neutral.

MILITARY LEAVE OF ABSENCE

State System institutions shall grant a leave of absence, which shall not exceed a cumulative five (5) years, to a student who is a member of the active uniformed military services of the United States and called to active duty. The student shall be eligible to:

1. Withdraw from any or all courses for the period of active duty service without penalty to admission status or GPA and without loss of institutional financial aid; or
2. Receive an “I” for any or all courses for the period of active duty status irrespective of the student’s grade at the time the “I” is awarded; provided, however, that the student has completed a minimum of fifty percent (50%) of all coursework prior to being called to active duty and the student completes all

courses upon return from active duty. The student’s admission status and GPA shall not be penalized and the student shall not experience loss of institutional financial aid.

GRADE POINT AVERAGE

Grade point average (GPA) is calculated by dividing the total number of quality points earned by the total number of semester hours attempted. For example, a total of 32 quality points earned in a semester by a student officially enrolled in 16 semester hours of classes gives a grade point average of 2.00 for that semester. Cumulative grade point average is calculated similarly using the sum total from all semesters of all collegiate-level courses attempted at all accredited institutions of higher education. In both cases, the grades “P, W, I, N, AU and AW” will not be used to calculate the grade point average.

GRADE CHANGES

An instructor who reports an incorrect grade to the Registrar may request correction of the error. The request must be in writing on the approved form and must have the approval of the division chair. In no case will the Registrar change a grade after the student has graduated.

GRADUATION WITH DISTINCTION

Students who earn an OSU Institute of Technology degree can also earn a level of distinction based upon the final graduation grade-point average. The level of distinction added to the transcript is:

| Graduation Grade-Point Average | Distinction |
|--------------------------------|-----------------|
| 3.8 or higher | Summa cum laude |
| 3.5 – 3.79 | Magna cum laude |
| 3.0 – 3.49 | Cum laude |

CHANGES IN DEGREE REQUIREMENTS

Changes in degree requirements at any time, unless otherwise specifically provided, are applicable in full to students entering OSU Institute of Technology thereafter, and applicable to a maximum practicable extent to students having entered previously.

As a general rule, a student may “stop out” for one semester without penalty, as long as that program is active. Students who do not return for two or more semesters will be required to re-enter under the new degree plan.

From time to time, degree programs are deleted. When this happens, active students are given a deadline to complete the program. After the final deletion date for the program, the program is no longer viable. Any student (active or inactive) who fails to finish the requirements by the deadline will have to convert to an active degree program.

STUDENT CLASSIFICATION

Undergraduate students* will be classified according to the following number of credit hours earned:

| | |
|---------|-----------|
| 0 – 30 | Freshman |
| 31 – 60 | Sophomore |
| 61 – 90 | Junior |
| 91 – N | Senior |

* Students enrolled in Associate in Applied Science and Associate in Science degrees are limited to Freshman and Sophomore classification.

STUDENT APPEAL OF THE FINAL GRADE

Upon the completion of a course in which a student is officially enrolled and in receipt of the final grade, a student who feels their grade was incorrectly reported may appeal the receipt of said grade.

- The student will first attempt to resolve the difference of opinion relating to the grade with the faculty person.
- If resolution cannot be obtained through the faculty person, the student should then consult the division chair of the department in which the course is being taught.
- If resolution cannot be obtained through the division chair, a formal appeal hearing may be requested through the Vice President for Academic Affairs. A request for an academic appeal hearing must be submitted in writing, documenting previous attempts for resolution and the rationale for the appeal.
- If justifiable rationale exists for the appeal and proper procedures were followed in requesting the appeal, the Vice President for Academic Affairs will then convene an appeal hearing.
- The academic appeal process must be formally initiated within four months after the grade was assigned or six weeks after a student begins a new semester, whichever comes first, or the grade awarded will be assumed to be correct and an appeal will not be granted.

Academic Regulations

RETENTION STANDARDS

The Oklahoma State Regents for Higher Education (OSRHE) have adopted a progressive policy concerning satisfactory academic performance. Students failing to maintain an appropriate grade average will be placed on either academic notice or academic probation as a condition of continued enrollment.

ACADEMIC NOTICE

Students attempting 30 or fewer credit hours and having a cumulative grade point average of 1.7 to less than 2.0 will be placed on academic notice. Academic notice is a warning designed to alert a student to the possibility of future academic progress difficulties. Academic notice does not lead to academic suspension.

ACADEMIC PROBATION

Any student whose cumulative grade point average falls below the designated level for a given semester is on academic probation. Academic probation can lead to academic suspension.

Students will be placed on academic probation if they fail to meet the following requirements:

| Credit Hours Attempted | Cumulative GPA Requirement |
|------------------------|----------------------------|
| 0-30 semester hours | 1.7 |
| 31+ semester hours | 2.0 |

All courses in which a student has a recorded grade will be counted in the calculation of the grade point average for retention purposes. Any student not maintaining satisfactory progress toward his or her academic objective as indicated above will be placed on probation for one semester. At the end of that semester, the student must have a semester GPA of 2.0 in regularly graded course work or meet the minimum cumulative GPA standard required above, in order to continue as a student. Students not meeting either of these criterion will be immediately suspended and may not be reinstated until one regular semester has elapsed.

ACADEMIC SUSPENSION

Any student who was on academic probation the previous semester and who fails to raise his or her GPA to the required cumulative level or to achieve a 2.0 semester GPA will be suspended from the institution.

ACADEMIC SUSPENSION APPEALS

The Oklahoma State Regents for Higher Education policy for academic suspension appeals is as follows: Institutions have the discretion to establish an academic suspension appeals procedure. Such procedures should allow appropriate discretion in deserving cases. Academic suspension appeal procedures require that the suspended student document any extraordinary personal circumstances that contributed to his or her academic deficiencies. Such events must be highly unusual such as the death of an immediate relative; a serious illness; severe financial distress; direct, significant work conflicts; unexpected, substantial family obligations; or personal crisis. All Academic Appeals should be directed to the Vice President of Academic Affairs.

POLICY

Those students who are academically suspended from the institution will be ineligible to enroll for a minimum of one regular semester. However, the human equation involved in such actions dictates that an appeals procedure be afforded suspended students. If students win such an appeal, they will be immediately eligible for readmission. This process is not designed to circumvent Oklahoma State Regents for Higher Education policy on student

retention, but rather to allow appropriate discretion in deserving cases.

PROCEDURE

The procedures for a student to appeal an academic suspension decision are as follows:

The suspended student must complete a form describing the extraordinary personal circumstances that contributed to his or her academic deficiencies. Such events must be highly unusual such as the death of an immediate relative, a serious illness, severe financial distress, or personal crisis. The student must provide appropriate documentation of such circumstances. The appealing student must provide evidence showing how this circumstance was a factor in his or her academic performance.

The student should first gain approval and support for the appeal from the appropriate division chair for the students' major. The Request for Exception should then be submitted to the Office of Vice President, Academic Affairs no later than three working days prior to the beginning of the desired semester of entry. The Vice President of Academic Affairs will make an administrative ruling relative to the request.

The Office of Academic Affairs is the administrative unit responsible for the academic suspension appeals process. This unit is responsible for coordinating the appeals process and forwarding documentation to the Registrar's Office for maintaining the official records and producing annual reports.

READMISSION OF SUSPENDED STUDENTS

Students who are academically suspended by OSU Institute of Technology will not be allowed to reenter the suspending institution for at least one regular semester except as noted above. Suspended students can be readmitted only one time. A student who is readmitted on probationary status must maintain a 2.0 GPA each semester attempted while on probation or raise his or her cumulative GPA to the designated level. Should a reinstated student be suspended a second time from the institution, he or she cannot be readmitted to the institution until such time as he or she has demonstrated by attending another institution, the ability to succeed academically by raising his or her cumulative GPA to the retention standards.

REINSTATEMENT OF SUSPENDED TRANSFER STUDENTS

The intent of OSU Institute of Technology is that opportunities be provided for all individuals with the ability and desire to pursue their educational goals. Research indicates that many times students suspended from one institution may succeed in a new academic environment if given the opportunity. Therefore, students who are suspended from other state

system institutions may be admitted to OSU Institute of Technology by petitioning the Academic Affairs Office and providing rationale and documentation supporting the request to be admitted without a regular semester lapse. Such admission would be probationary and a minimum 2.0 grade point average must be maintained or retention standards met as outlined in the Oklahoma State Regents for Higher Education policy on Admission To, Retention In and Transfer Among Colleges and Universities of the State System, for each semester the student(s) remain on probation. Appropriate academic services, advisement, counseling and tutorial assistance will be available to facilitate student success.

ACADEMIC FORGIVENESS PROVISION

Circumstances may justify a student being able to recover from academic problems in ways that do not forever jeopardize his/her academic standing. The student's academic transcript, however, should be a full and accurate reflection of the facts of the student's academic life. Therefore, in situations which warrant academic forgiveness, the transcript will reflect all courses in which a student was enrolled and in which grades were earned, with the academic forgiveness provisions reflected in such matters as how the retention and graduation grade point average is calculated. Specifically, for those students receiving academic forgiveness by repeating courses or through academic reprieve or renewal, the transcript will reflect the retention/graduation grade point average excluding forgiven course(s)/semester(s). The transcript will also note the cumulative GPA, which includes all attempted regularly, graded course work.

Academic forgiveness may be warranted for the currently enrolled undergraduate students in three specific circumstances:

1. Repeat

A student may repeat courses and have only the second grade earned, even if it is lower than the first grade, count in the calculation of the retention/graduation grade point average. A maximum of four (4) courses, not to exceed 18 hours, may be repeated in the courses in which the original grade earned was a "D" or "F". Both grades shall be recorded on the transcript with the earned grade for each listed in the semester earned. If a student repeats an individual course more than once, all grades earned, with the exception of the first, are used to calculate the retention/graduation GPA. Grades of any courses repeated after the first four, or 18 hours, will be averaged with original grades.

2. Academic Reprieve

Academic reprieve is a provision allowing a student who has experienced extraordinary circumstances to disregard up to two semesters in the calculation of his or her

retention/graduation grade point average. A student may request an academic reprieve from OSU Institute of Technology using the following guidelines:

- a. At least three years must have elapsed between the period in which the grades being requested reprieved were earned and the reprieve request
- b. Prior to requesting the academic reprieve, the student must have earned at least 12 semester credit hours with a GPA of 2.0 or higher with no grade lower than a "C" in all courses
- c. The request may be for one semester or term of enrollment or two consecutive semesters or terms of enrollment. If the reprieve is awarded, all grades and hours during the enrollment period are included. If the student's request is for two consecutive semesters, the institution may choose to reprieve only one semester.
- d. The student must petition for consideration of an academic reprieve according to institutional policy.
- e. All courses remain on the student's transcript, but are not calculated in the student's retention/graduation GPA. Course work with a passing grade included in a reprieved semester may be used to demonstrate competency in the subject matter. However, the course work may not be used to fulfill credit hour requirement.
- f. Students who have been granted academic renewal are not eligible for academic reprieve.

3. Academic Renewal

Academic renewal is a provision allowing a student who has not been academically successful previously and who has been out of higher education for a number of years to reenter college without penalty. Under academic renewal, course work taken prior to a date specified by OSU Institute of Technology is not counted in the student's graduation/retention GPA.

A student may request academic renewal from OSUIT using the following guidelines:

- a. At least five years must have elapsed between the last semester being renewed and the renewal request
- b. Prior to requesting academic renewal, and after the elapsed five years, the student must have earned a GPA of 2.0 or higher with no grade lower than a "C" in all regularly graded course work (totaling a minimum of 12 hours) excluding activity or performance courses
- c. The request will be for all courses completed before the date specified in the request for renewal
- d. The student must complete the Academic Forgiveness form (available in the Office of the Registrar)

e. All courses remain on the student's transcript, but are not calculated in the student's retention/graduation GPA. Neither the content nor credit hours of renewed course work may be used to fulfill any degree or graduation requirement

f. Students who have been granted academic reprieve are not eligible for academic renewal.

FINANCIAL AID & SCHOLARSHIPS GENERAL POLICIES

Student financial aid awards depend upon two major factors: financial need and the availability of funds. To determine need, an evaluation must be made of the financial circumstances of both the applicant and the applicant's family.

HOW TO APPLY

The first step in obtaining financial assistance at OSU Institute of Technology is to file a Free Application for Federal Student Aid (FAFSA). Applications are available on the web at www.fafsa.ed.gov. This should be done before March 1st for best results. All federal and state funded financial aid programs listed in this catalog are available to students enrolled in a degree-seeking program at OSUIT.

By completing the Free Application for Federal Student Aid, a degree seeking student at OSUIT may apply for the Federal Pell Grant, the Federal Supplemental Educational Opportunity Grant, the Federal Work-Study Program, the Federal Perkins Loan, the Federal Direct Loans and the Oklahoma Tuition Aid Grant. The Free Application for Federal Student Aid can be filed electronically over the Internet (www.fafsa.ed.gov).

Students can obtain more information about various financial aid programs and services by contacting Financial Aid & Scholarships at 918-293-4684, 1-800-722-4471, or osuitfinancialaid@okstate.edu

STUDENT ELIGIBILITY

To be eligible for consideration for student financial aid through any program, an applicant must meet the following requirements:

A. The applicant must be enrolled as a regular student in an eligible program of study leading to a degree or certificate.

B. The applicant must meet one of the following criteria:

1. A U.S. Citizen or U.S. National. (This includes citizens of American Samoa, Swains Island and Northern Mariana Islands.)

2. A U.S. Permanent Resident. (Documentation of the Form I-151 or Form I-551 from the U.S. Immigration and Naturalization Services may be requested to prove eligibility for financial assistance.)

3. A citizen of certain Pacific Islands. (Otherwise eligible citizens of the Republic of the Marshall

Islands, the Federated States of Micronesia, or the Republic of Palau may receive assistance through Federal Pell Grants, Federal SEOG and Federal Work-Study.)

4. An Eligible Non-Citizen. (Documentation of eligible non-citizen status from the U.S. Immigration and Naturalization Services will be requested to prove eligibility for financial assistance.)

C. The applicant must maintain satisfactory academic progress in an eligible program of study.

D. The applicant must have a high school diploma, a General Education Development (GED) certificate, *or provide proof of completion of a secondary school education in a home school setting.*

E. Applicant must have a social security number.

F. Applicant must sign a statement of educational purpose/certification statement of refunds and default in order to receive federal student aid. A signature warrants that a refund is not owed on a Federal Pell Grant or Federal Supplemental Educational Opportunity Grant, a Federal Perkins Loan, Federal Stafford Loan and that the amount borrowed under those loan programs does not exceed the allowable limits. The student also agrees to use student aid only for educational related expenses.

G. Applicant must register with the Selective Service. The requirement to register applies to males who were born on or after January 1, 1960, are at least 18 years of age, are citizens or eligible non-citizens and are not currently on active duty in the armed services. (Citizens of the Federated States of Micronesia, the Marshall Islands, or Palau are exempt from registering.)

H. Applicant must demonstrate financial need. Exceptions are eligibility for PLUS and Federal Unsubsidized loans.

FINANCIAL AID ELIGIBILITY

A student may receive financial assistance for an approved degree program for no longer than the maximum of 150% of the required credit hours for completing that program. Should the maximum number of hours allowed for a degree be exceeded, the student will be suspended from financial aid. A student with extenuating circumstances may appeal to the Office of Financial Aid & Scholarships to obtain permission to exceed the maximum hours limit.

FINANCIAL AID PROGRAMS AVAILABLE Federal Pell Grant

Federal Pell Grants are available to help undergraduate students pay for their education after high school. For Federal Pell Grant purposes, an undergraduate is one who has not earned a bachelor's or professional degree. Federal Pell Grants provide a foundation of

financial aid to which aid from other federal and non-federal sources may be added. Federal Pell Grants do not have to be repaid.

Oklahoma Tuition Aid Grant Program

OSU Institute of Technology participates in the Oklahoma Tuition Aid Grant program (OTAG) that is sponsored by the Oklahoma State Regents for Higher Education. Applicants must be residents of the state of Oklahoma. The FAFSA filing deadline for OTAG varies each year, but is normally March 1st.

Federal Iraq & Afghanistan Service Grant

A student who is not eligible for a Pell grant, but whose parent or guardian was a member of the U.S. Armed Forces and died as a result of service performed in Iraq or Afghanistan after September 11, 2001, may receive this grant. Students apply by completing the FAFSA.

Federal Supplemental Educational Opportunity Grant (SEOG)

Federal Supplemental Educational Opportunity Grants are available to undergraduate students with exceptional financial need as determined by the Financial Aid & Scholarships Office. Priority must be given to Federal Pell Grant recipients. Federal SEOG does not have to be repaid. Funds are limited

Federal Work-Study Program

The Federal Work-Study program provides part-time employment for students with financial need who want to earn a part of their educational expenses. As a participant in the Federal Work-Study program, OSU Institute of Technology's Financial Aid & Scholarships Office arranges part-time employment for eligible students on campus.

Federal Perkins Loans

The Federal Perkins Loan Program is available to OSU Institute of Technology students with exceptional need to help meet educational expenses. Federal Perkins Loans must be repaid beginning nine months after graduation, leaving school, or dropping below half-time (six semester credit hours) status. A separate Federal Perkins Loan Application must be completed. Funds are limited.

Federal Direct Loans

Federal Direct Loans are low-interest loans made to students attending OSU Institute of Technology at least halftime. These loans are made by the federal government.

Federal Direct Loans must be repaid beginning six months after graduation, leaving school, or when dropping below half-time (six semester credit hours) status.

The Federal Subsidized Direct Loan is based on financial need. The loan amount will depend on financial need, which the college's financial aid office will determine. Subsidized loans are not accruing interest while the student is attending school, but can only be received for 150% of

the published timeframe of the degree.

The Federal Unsubsidized Loan is a student loan that is not based on financial need. The loan amount will depend on the cost of attendance at OSU Institute of Technology and the amount of other aid the student is receiving. The student is responsible for paying the interest on an Unsubsidized Direct Loan while in school; however the student has the option to defer payment of the interest while they are enrolled at least half time.

A student must complete a master promissory note, as well as entrance counseling before the loan will disburse.

Federal Plus Loans

Federal Plus loans are for parents who want to borrow to help pay for their children's education. These loans provide additional funds for educational expenses and, like Federal Direct Loans, are made by the Federal Government. Parent PLUS loans are credit-based. For further information on Federal Plus loans contact OSU Institute of Technology's Financial Aid & Scholarships Office.

OKLAHOMA'S PROMISE (OHLAP)

We're committed to helping academically-eligible Oklahoma's Promise recipients achieve the dream of a college education at OSUIT. Oklahoma students in grades 8-10 can sign up to participate in the program, previously known as OHLAP and administered by the Oklahoma State Regents for Higher Education (OSRHE). Once you graduate from high school and complete the curricular and conduct requirements for the program, you will receive funding from Oklahoma's Promise to cover the cost of tuition at OSUIT.

All Oklahoma's Promise financial aid recipients will be subject to OSUIT's Satisfactory Academic Progress (SAP) policy. If you are ineligible to receive federal/state financial aid as defined by OSUIT's SAP policy, you will not be eligible to receive Oklahoma's Promise or HELP funding.

College students receiving the Oklahoma's Promise award for the first time in 2012-13 and thereafter, a minimum college GPA of 2.0 will be required for courses taken through the sophomore year and a minimum college GPA of 2.5 will be required for courses taken during the junior year and thereafter. This is a change to state policy and not limited to OSUIT.

HERO'S PROMISE

Oklahoma students, who are not already eligible for Oklahoma's Promise and who lost a military parent in the line of duty since January 1, 2000, may be eligible for a state award with recipient requirements similar to Oklahoma's Promise. Students can sign up for the award up to age 21, regardless of family income. For more information, contact Oklahoma's Promise at 405-225-9131 or e-mail at okpromise@osrhe.edu

UNDOCUMENTED IMMIGRANT STUDENTS

Effective November 1, 2007, HB 1804 provides that an individual who is not lawfully present in the United States shall not be eligible on the basis of residence within Oklahoma for any postsecondary education benefit, including but not limited to, scholarships or financial aid, or for resident tuition, except as provided under new law set forth in other provisions of HB 1804 and under the revised State Regents' policy (3.18.9) which conforms with that new law.

The new legislation identifies two categories of undocumented immigrant students:

Category I

Students enrolled in a degree program during the 2006-07 year or any prior school year who received a resident tuition benefit pursuant to the pre-HB 1804 statute and pre-HB 1804 State Regent's policy. (Students are "grandfathered" and remain eligible for resident tuition and state financial aid under the pre-HB 1804 law and pre-HB 1804 policy).

Category II

Students enrolling in a postsecondary education institution in 2007-08 and thereafter. These students are subject to the new restrictions under HB 1804 and the State Regents' policy that became effective November 1, 2007.

OKLAHOMA'S PROMISE FOR UNDOCUMENTED STUDENTS

While students participating in Oklahoma's Promise also fall into either Category I or Category II, SB 820 provides unique treatment of these students with respect to their eligibility to receive the Oklahoma's Promise award.

Should you have questions regarding your status, please contact OSU Institute of Technology Financial Aid & Scholarships 918-293-4684, 1-800-722-4471, or osuitfinancialaid@okstate.edu.

SCHOLARSHIPS

Various types of scholarships may be offered to graduating high school seniors, transfer and adult students interested in attending OSU Institute of Technology and to current OSU Institute of Technology students. Several on and off-campus organizations and individuals also offer scholarships to OSU Institute of Technology students. For further scholarship information, visit our scholarship website at osuit.edu/scholarships.

OSUIT Foundation scholarships are funded by individuals, agencies, and organizations who set the scholarship awarding requirements. A scholarship application is not required because the scholarships are awarded to enrolled students who meet the eligibility requirements. Students must be enrolled at least 5 weeks prior to the start of the semester.

OTHER FINANCIAL ASSISTANCE

Veterans and students eligible to receive financial benefits under any federal or state rehabilitation programs may receive assistance from the coordinator of agency students.

Oklahoma sponsored rehabilitation students are served through the Financial Aid & Scholarships office. For further information about student financial aid, contact the Financial Aid & Scholarships Office, 918-293-4684, 1-800-722-4471, or osuitfinancialaid@okstate.edu.

SATISFACTORY ACADEMIC PROGRESS

All students attending OSU Institute of Technology are required to maintain satisfactory academic progress toward successful completion of degree requirements. In order to remain eligible for financial assistance, a student must meet the requirements listed below:

1. Not exceed a maximum number of hours to complete the degree program (150% of the total credits required for degree completion) AND
2. Maintain a cumulative Graduation/Retention Grade Point Average as listed below AND
3. Successfully complete at least 75% of the total cumulative hours attempted as listed below. (This includes all courses attempted at any college or university.)

| | | |
|---|--------------------|---------------------------|
| TOTAL Hrs Attempted from All Institutions | 1 -30 Credit Hours | 31 or more Credit Hours |
| Minimum Graduation/Retention GPA | 1.7 | ITD/ETD 2.5 |
| | | All other programs 2.0 |
| Percentage of Total Cumulative Hours Attempted (PACE) | 75% | 75% |

Satisfactory academic progress is monitored at the end of each semester.

Students are responsible for knowing their eligibility status at the end of each semester.

If you have questions regarding your status, contact Financial Aid & Scholarships at 918-293-4684, 1-800-722-4471, or osuitfinancialaid@okstate.edu.

FAILURE TO MAINTAIN SATISFACTORY ACADEMIC PROGRESS

A student who exceeds the maximum number of hours allowed for degree completion will be suspended from future financial aid until the reason for the excessive hours can be adequately documented.

The first time a student who either fails to achieve the required cumulative Graduation/Retention GPA or to complete at least 75% of the total hours attempted (PACE), will be placed on financial aid warning for the following

semester of enrollment at OSUIT. A student may receive financial aid while on warning, but must meet specific minimum requirements at the end of the warning semester to continue to be eligible.

CONTINUED ELIGIBILITY WHILE ON WARNING

To continue to receive aid after being placed on warning, a student must:

1. Not exceed a maximum number of hours to complete the degree program (150% of the total credits required for degree completion) AND
2. Achieve the required cumulative Graduation/Retention GPA AND
3. Successfully complete at least 75% of the total cumulative hours attempted at all institutions.

A student on warning has one semester to reach the standards above. If this is not met, the student will be placed on Financial Aid Suspension. Satisfactory academic progress is monitored at the end of each semester.

Students are responsible for knowing their eligibility status at the end of each semester.

If you have questions regarding your status, contact Financial Aid & Scholarships.

FINANCIAL AID SUSPENSION

A student denied assistance based on the Satisfactory Academic Progress Policy can submit a written appeal to the Student Financial Aid Appeals Committee. An appeal form is available in the Grady Clack Center or online on the Financial Aid & Scholarships website at www.osuit.edu. The appeal should speak in detail to mitigating or extenuating circumstances that affected the student's academic performance, e.g., severe physical injury, mental trauma, etc. The appeal should include information as to why satisfactory academic progress failed to be met and what has changed that will allow satisfactory academic progress to be met if the appeal is approved. A student is highly encouraged to include supporting documentation of any claims.

A student not eligible for financial aid (Financial Aid Suspension) for exceeding the maximum number of hours allowed for a degree completion should also have the academic advisor complete the "Remaining Hours Required for Degree Completion" form if extenuating circumstances require the student to exceed the maximum hours limit. The form is available in the Grady Clack Center and online on the financial aid website.

The decision of the Student Financial Aid Appeals Committee is final and is communicated to the student in writing. Depending on the timeliness of the appeal, it is possible for a student to have an appeal denied and also not be entitled to a refund of charges if the student chooses to withdraw from classes.

A student who enrolls and attends class whose appeal is subsequently denied will be eligible for a refund of charges based solely on the schedule in the Fee/Tuition Refund Policy in the OSUIT catalog.

A student not eligible for financial aid (Financial Aid suspension) for reasons other than exceeding the maximum number of hours for degree completion who does not appeal, or whose appeal is denied, may be reinstated by meeting BOTH of the following criteria:

1. Achieve the required Graduation/Retention GPA or the required Semester GPA AND
2. Successfully complete 75% of the total cumulative hours attempted at all institutions.

These requirements may be met while either attending OSUIT for the semester without financial aid or by transferring work meeting the requirements to OSUIT from an accredited institution. Transfer work must be reflected on the OSUIT Transcript to be considered for purposes of financial aid eligibility.

FINANCIAL AID POLICY ON REPEAT COURSES

OSU Institute of Technology has a Repeat Course Policy that allows a student to repeat a course and have only the second grade earned, even if it is lower than the first grade, count in the calculation of the grade point average. A student may repeat a previously passed course one time and count it in the enrollment status for financial aid. A student may repeat any failed course until it is passed and it be counted toward enrollment status for financial aid.

DURATION OF FINANCIAL AID ELIGIBILITY

A student may receive financial assistance for an approved degree program for no longer than the maximum of 150% of the required credit hours required for completing that program. Should the maximum number of hours allowed for a degree be exceeded, a student with extenuating circumstances may appeal to the Office of Student Financial Services to obtain permission to exceed the maximum hours limit.

Students are eligible to obtain two degrees at the Associate level and one degree at the Bachelor's level at OSU Institute of Technology with financial aid eligibility. *A student's financial aid eligibility will terminate after two Associate degrees and one Bachelor's degree is received.*

TRANSFER STUDENTS AND MAXIMUM HOURS

Students who transfer hours and are close to exceeding this limit, should complete the Request to Exceed Maximum Hours form to determine financial aid eligibility.

FINANCIAL AID ELIGIBILITY FOR STUDENTS WITH A PREVIOUS DEGREE

Students who have received an associate's degree or higher from any institution, may complete a Request to Receive Financial Aid with a Previous Degree form to determine financial aid eligibility.

UNDECLARED, DEGREE SEEKING STUDENTS

In order to allow students to explore their options and still receive a degree within the maximum time frame of 150% of the credit hours required to obtain a degree, a student who enters with less than 24 hours, may enter as an undeclared-degree seeking student for financial aid. The student must follow the guidelines for students with an undeclared program and choose a major by the second semester. Students with more than 24 hours may submit an appeal to the Financial Aid Office to enter as an undeclared major for one semester.

IMPORTANT DATES

Many financial aid programs have limited funding and funds are awarded to the earliest applicants. The ideal time for students to apply for financial aid is as soon as possible after January 1 and before March 1 each year. Applications received after March 1 are subject to the availability of funds.

ATTENDANCE IN CLASS AND FINANCIAL AID ELIGIBILITY

Financial aid is awarded based on enrollment status. Failure to attend course(s) could result in a recalculation and return of your financial aid.

HOW WITHDRAWING (OFFICIALLY AND/OR UNOFFICIALLY) EFFECTS YOUR FINANCIAL AID

In accordance with 34CFR Sec.668.22, any student at OSU Institute of Technology who completely withdraws from all classes or fails all classes will be subject to the Return of Title IV funds policy.

A student earns financial aid based solely on the length of time he or she has attended the University. Until a student has passed the 60% point of the current semester, only a portion of the student's disbursable aid has been earned. The amount of earned aid has no relationship to institutional charges or other incurred costs of attendance. A student who officially withdraws before the 60% point of the enrollment period may be required to repay funds. This could leave the student with an unpaid balance.

A student who leaves school and does not notify the school of his or her withdrawal is considered to be "unofficially withdrawn." As OSUIT is required to take attendance, the withdrawal date will be calculated on the last day of class attendance, as applicable, or the last date of an academically related activity in which the student participated.

A payment owed but not paid by the student to the financial aid program may result in the inability to receive a transcript or reenroll in classes until the debt is satisfactorily repaid. Examples are available in the Financial Aid & Scholarships Office.

Students are encouraged to visit with a financial aid counselor prior to withdrawing to see how the withdrawal will affect their aid. If

the student received less Federal Student Aid than the amount earned, the school must offer a disbursement of the earned aid that was not received. This is called a post-withdrawal disbursement. If the student received more Federal Student Aid than the amount earned, the school, the student, or both, must return the unearned funds in a specified order listed below

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Federal Perkins Loan
4. Federal PLUS Loan
5. Federal Pell Grant
6. Federal SEOG Grant
7. Other Institutional or Private Aid Programs
8. The Student

BURSAR

GENERAL POLICIES

PAYMENT OF ACCOUNT

To maintain good financial standings with Oklahoma State University Institute of Technology and thereby continue to participate in its educational programs, services, and benefits, a student must meet all financial obligations incurred at the institution on or before the start of the semester. Students must select a payment option prior to the start of a given semester. Failure to do so will result in cancellation of a student's scheduled classes.

Monthly billings statements are sent via the student's OKEY email address. A 1% monthly service charge will be assessed to any unpaid balance beginning the 15th of the second month of each semester. Accounts must be paid in full to enroll in subsequent semesters.

Payments via check or money order may be mailed to OSU Institute of Technology-Bursar's Office, Grady W Clack Student Center, 1801 E. 4th Street, Okmulgee, OK 74447. Mailed payments should include the student's ID number. Visa, Mastercard, American Express, and Discover payments may be made online at <http://osuit.edu/web4students/>

Payments by check that are returned as insufficient will be charged back to the student account. A \$20 insufficient check fee will be assessed on all returned checks.

PAYMENT OPTIONS

Payment in Full - Students may pay their account balance in full online on Web4Students or in person at the Bursar's Office. There is no additional fee if the student is paying in full.

Payment Plan - As a service to our students, OSUIT offers the ability to pay your account in monthly payments each semester. Students will need to apply for this service each semester online at <http://osuit.edu/web4students/>. Students must enroll in the payment plan

program each semester. A \$20 Payment Plan Fee will be assessed each semester for enrolling in the payment plan. Veterans with certified enrollment from Veterans Services will have the \$20 Payment Plan Fee waived. Failure to pay an installment within 10 days of the due date may result in termination of the program and assessment of additional fees. Payment amounts are based on the balance due after financial aid is deducted. Additional financial aid will reduce the amount of the following payments, but may not be substituted for a payment.

Federal Financial Aid - Students who have met financial aid deadlines by turning in all requested documents and are qualified to receive financial aid will not have their enrollments dropped for non-payment

Third Party Sponsor/Scholarship - Students can use third party method of payment under the conditions that the Bursar's Office can verify the payment source or that the student can provide acceptable documentation of the payment source. Students with agency sponsorships must provide the Bursar's Office with the proper documentation/forms each semester of enrollment to ensure proper credit to the student's account. This is the responsibility of the student, not the Bursar Office nor the agency. If the agency does not pay the charges that were billed to them, the charges will be transferred back to the student. The student will then be responsible to pay the balance.

Failure to meet the terms of a payment option once a semester has started may entitle OSUIT to declare the full balance plus collection costs immediately due and payable by law, refuse subsequent registration for any classes, and/or drop current classes, deny future enrollment in any payment plan, and withhold grades, diplomas, or transcripts from being released until the unpaid balance, as well as all attorney fees, legal expenses, and other collection costs (up to 22% of the original debt) are paid in full. The university will also exercise the right to request an Oklahoma State Tax refund hold to offset the outstanding debt.

SERVICES

Work study pay checks are available at the Bursar Office every other Friday. Refund checks resulting from financial aid disbursements are mailed out every Wednesday. A valid OSUIT ID is required to pick up work study checks.

All students are encouraged to enroll in direct deposit. Students may enroll for work study direct deposit through Human Resources located across from the Bursar Office. Students may enroll for financial aid refund direct deposit online at <http://osuit.edu/web4students/>

PARKING PERMIT

Each student and employee vehicle that is parked on campus is required to display a valid parking decal. These decals may be obtained

at the Bursar's Office. Decals are valid from September to August. The first decal is issued at no charge. Replacement decals are \$15.

Cost of Attendance

The required fees and nonresident tuition for OSU Institute of Technology are established by the Oklahoma State Regents for Higher Education. Fees do not include the costs of individual text-books, tool kits, uniforms, or other materials which vary according to the student's program of study. Students who enroll in programs of study that require individual tool kits, uniforms, or other materials will obtain these items as specified by the department. In most cases these items can be purchased through the institution. The costs will vary from program to program and are subject to change without notice.

Incidental and personal expenses for items such as clothing and entertainment will vary with the individual student.

OKLAHOMA RESIDENT

| | |
|--|----------|
| TOTAL Per Semester Credit Hour | \$153.50 |
| All technical courses in Information Technologies, Engineering Technologies, Nursing, Culinary, & Watchmaking (BT, AAS, or AS degrees) per semester credit hour. | \$162.00 |

NON-RESIDENT**

| | |
|--|----------|
| TOTAL Per Semester Credit Hour | \$340.50 |
| All technical courses in Information Technologies, Engineering Technologies, Nursing, Culinary, & Watchmaking (BT, AAS, or AS degrees) per semester credit hour. | \$349.00 |

**Non-resident tuition is calculated by adding the Non-Resident tuition of \$187 to the Oklahoma general enrollment tuition and fees of \$153.50. Non-Resident fee waivers are applied only to the Non-Resident portion of a student's tuition charges.

ADDITIONAL FEES (PER CREDIT HOUR)

| | |
|--|---------|
| Remedial Supplementary Fee | \$18.50 |
| Advanced Standing Examination Fee | \$5.00 |
| Late Enrollment Fee | \$10.00 |
| Off-Campus Electronic Media Fee | \$25.00 |
| Blended Courses | \$12.50 |
| Particular GRD, MMT, PHO & VIS Courses | \$25.00 |

Please note: Additional lab fees may apply to specific programs. Tuition and fees will vary based on program and are subject to change without notice.

All charges are due by the first day of class each semester. A finance charge of 1% per month will be assessed on delinquent accounts.

FEE/TUITION REFUND POLICY

Fee/tuition refunds are made to those students who withdraw completely from OSU Institute of Technology in accordance with Oklahoma State Regent's policy.

TOTAL FEES/TUITION will be reduced by: 100% if PROPER WITHDRAWAL is made during the first (ten) 10 business days; NO REDUCTION after the 10th business day of the semester.

Fee/Tuition refunds also may be made for individual courses dropped within the first (ten) 10 business days of the semester for full semester courses. The above refund schedules apply to 15-week courses. For courses of shorter duration, check with Admissions for refund schedule.

Students who enroll in a course(s) and do not attend/participate by the conclusion of the refund period for that course will be billed for the course. Students must drop within the first ten (10) business days of the semester in order to receive a refund and not be charged for the course.

NONCREDIT COURSES dropped prior to the first class meeting will be fully refunded. No refund will be given after the first class meeting.

Students with courses scheduled to meet less than the full fifteen-week semester will have adjusted refund periods based on the beginning date and length of the individual course(s).

The Bursar office hours are Monday through Friday, 7:30 AM to 4:30 PM. The Bursar staff may be reached by telephone at 918-293-4681.

Information regarding tuition and fee costs may be found online at http://www.osuit.edu/admissions/tuition_and_fees.php. Room and board costs are online at http://www.osuit.edu/campus_community/residential_life/costs.php.

ACADEMIC SERVICES

GENERAL POLICIES

STUDENT PRIVACY RIGHTS

As required by the Family Educational Rights and Privacy Act of 1974, OSU Institute of Technology advises students of their privacy rights. OSU Institute of Technology may disclose information to parents of students in two ways:

1. By obtaining the student's written consent, if the student is independent.
2. By having the parents sign an affidavit establishing the student's dependency as defined by Internal Revenue Code of 1954. This form is available in the Registrar's Office upon request.

Students of OSU Institute of Technology have the right to:

1. inspect and review information contained in their educational records,
2. challenge the contents of their educational records,
- 3 hold a hearing if the outcome of their challenge is not satisfactory,
4. submit an explanatory statement for inclusion in their educational record if the outcome of their hearing is unsatisfactory,
5. prevent disclosure, with certain exceptions, of personal information from their educational record,
6. secure a copy of the institutional policy, which includes the location of all educational records.

OSU Institute of Technology has declared the following to be open directory information:

1. student's name, local and permanent address or hometown,
2. student's telephone number and electronic (e-mail) address assigned/provided by the institution or provided to the University by the student,
3. student's year of birth,
4. program(s) of study engaged,
5. dates of attendance at OSU Institute of Technology,
6. degrees, honors, and awards granted or received and dates granted or received,
7. academic classification such as 1st year, 2nd year, etc.,
8. Status (full-time/part-time).
9. most recent educational institution previously attended,
10. advisor,
11. participation in official organizations and activities,
12. parents' names and addresses (city, state and zip only)

STUDENT RIGHTS AND RESPONSIBILITIES

By enrolling at OSUIT, students become members of an academic community in which self-discipline and respect for the rights and privileges of others is essential to the educational process. Therefore, students take on the responsibility to observe and help maintain standards of personal behavior that are a positive contribution to the academic community. OSUIT expects students to accept responsibility for compliance with all University policies and contracts (including financial obligations to the University), to show respect for lawful authority, to represent themselves truthfully and accurately at all times, and take responsibility for their actions, and actions of

their guests. Students may be held accountable for the violations of local, state, and federal laws on campus and for law violations that occur off campus that affect the campus community or the University's mission.

The purpose of the document, Student Rights and Responsibilities Governing Student Behavior, is to inform the student body of the standards of behavior expected of students in the OSUIT community, the processes in place for enforcing the rules, and the University's response to violations. The University makes this document available on the website at http://www.osuit.edu/academics/forms/student_rights_responsibility.pdf. Additionally, printed copies are available in the following offices: the Academic Affairs Office, Residential Life, Student Conduct, and the Residential Life Office in each Residence Hall.

ACADEMIC ADVISORS

Each student with a declared major is assigned an advisor who can help make decisions concerning course load and course selection. The advisor also helps with plans of study, career goals and transfer options. The advisor must sign enrollment forms, drop-and-adds and withdrawals. Students are urged to meet with their advisor each semester. Advisors are assigned by academic division chairs. Students with undecided majors will continue to enroll in classes through the Admissions Office.

COUNSELING SERVICES

At times, students may experience emotional issues that interfere with their educational and personal goals. For students who need help dealing with these issues, counseling offers a safe way to begin addressing their concerns. A Master's level counselor is available to help students explore what is bothering them and to assist in finding solutions to problems. Through listening and exploration, counselors can support students while they meet challenges, develop new skills, understand their feelings and improve their ability to function productively.

Some people benefit from one counseling session, while others may attend regular sessions for a brief period of time. Our time limited services are not appropriate for serious mental health needs which require longer-term therapy. In such cases, we will help locate more suitable services in the community.

Counseling services are free to all current OSU Institute of Technology students. Sessions are confidential with a few exceptions which would include a court order, health and safety emergencies, imminent threats of danger to oneself or to others, and in cases of child or elder abuse.

Faculty and staff may refer students to Counseling Services by calling 918-293-4988. More information can be found on the counseling website at <http://www.osuit.edu/counseling>.

SERVICE LEARNING

Service learning is a special form of community service designed to promote student learning and development. Optional service learning opportunities stimulate academic performance, increase students' understanding of the responsibilities of living in a democratic society and encourage students to become involved in the social problems facing their communities. Whether students "learn to serve" or "serve to learn", the service learning component is a valuable tool for academic growth and success.

SERVICES TO STUDENTS WITH ACADEMIC/PHYSICAL ACCOMMODATION

Director for College Readiness and Academic Accommodations 918-293-4622 LASSO Center, Noble Center, Room 308

OSU Institute of Technology is committed to providing equal access to otherwise qualified students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Equal access is most commonly provided through reasonable academic accommodations/adjustments in the classroom or physical modifications to make classrooms and other learning environments accessible.

Definition

A student may be eligible to receive reasonable accommodations if they have a disability and are otherwise qualified to enroll or participate in an OSUIT course or program. Current disability legislation defines an individual with a disability as someone who:

- Has a physical or mental impairment which substantially limits one or more major life activities,
- Has a record of such impairment, or
- Is regarded as having such impairment.

Additionally, students may be considered "otherwise qualified" and covered under current disability legislation if, with or without reasonable accommodations, they meet the same academic, professional, technical and behavioral standards as those without disabilities.

Policies and Procedures

It is the responsibility of each student who desires reasonable accommodation at OSUIT to identify themselves as an individual with a disability and to make a request for accommodation through the Director for College Readiness and Academic Accommodations. The Director will then meet with the student to discuss the requirements of a student's selected course or degree program and appropriate accommodations. Students must also provide documentation of their disability before accommodations are approved. (Documentations must originate from a medical or licensed professional and issued within the last three (3) years.)

Once accommodations are approved, the Director will work with the student to develop an accommodation plan, a document certifying (but not specifically disclosing) the student's disability and the reasonable accommodations to be provided for each course. It should be noted that students remain responsible for fulfilling all other university academic conduct requirements despite receiving accommodations, and students must visit with the Director to develop new Access plans for *each semester* they would like accommodations.

While there are many options for reasonably accommodating a student, OSUIT strives to preserve essential course/degree requirements and to maintain a safe learning environment for the benefit of all students. As such, reasonable accommodations are considered those that provide equal access to disabled students without:

- Making a substantial change to essential course/degree requirements
- Posting a direct threat to the health or safety of others
- Posing an undue financial or administrative burden on the University

It is the student's responsibility to inform each of their instructors that they have an accommodation letter on file. Accommodation letters are contained in a secure folder on the "I" Drive. The file contains accommodations only and is limited to instructor access. No confidential information is contained within the file. Students must report to the Accommodations Office each semester to sign paperwork.

Student Disability Policies and Information can be accessed at: http://sds.okstate.edu/index.php?option=com_content&view=article&id=390&Itemid=6

LASSO CENTER

The Learning and Student Success Opportunity (LASSO) Center provides students special tutoring assistance for most OSUIT courses, Compass and ACT preparation and test proctoring. Contained within the LASSO Center, is the Office for Academic Accommodations (Student Disability Services). The Lasso Center is an integral part to the success of those students enrolled in college preparatory classes (developmental classes), and staff works closely with instructors and students to ensure student success. The Lasso Center also provides Summer Success Camps for Compass test preparation in an effort to eliminate a student's need to enroll in college preparatory classes. In conjunction with the college preparatory instructors, LASSO staff use a hands-on, applied approach to instruction and tutoring. Instruction includes hands-on materials, large and small group

activities, and continuous discussion of topics and how they relate to the student's primary field of study. Every effort is made to present each skill using the three learning styles: visual, auditory and kinesthetic.

LIBRARY

The Library offers both a virtual and physical place for students to locate information by providing access to a collection of electronic and print materials. Students may find information from books, periodicals, electronic resources, videos and the Internet. Students may use the Library as a place to study, read, locate information, receive instruction and complete class assignments.

Reference service is provided both online and physically to assist students with locating information.

Interlibrary Loan is offered as a service by the Library to obtain materials not readily available on campus. Other services available include photocopy, fax, scanning, lamination, wireless access, and a color printer.

DISTANCE LEARNING

OSU Institute of Technology is a hub site on OneNet, the statewide fiber optics backbone administered by the Oklahoma State Regents for Higher Education. This advanced broadband infrastructure allows the institution to send and receive courses through ITV format as well as provide courses in an internet-based format.

OKEY ACCOUNT INFORMATION

The OKEY system is the key to all the various OSU online student services. It gives students the login information they need to access OSU's online systems, including email, the Desire2Learn Online Classroom, Web for Students, and the free Microsoft Software website. To set up an OKEY account, visit <http://okey.okstate.edu>.

STUDENT EMAIL

All currently enrolled OSU Institute of Technology students are given an OSU email address. To select an email address, students should first set up their OKEY account at <http://okey.okstate.edu>. To check email, go to <http://orangemail.okstate.edu>.

WEB FOR STUDENTS

Web 4 Students is the OSU Institute of Technology online student information system. The system allows students to access their grades, enroll for classes, view transcript information, print class schedules, pay tuition online, view and update personal information, view financial aid information, and much more. The system is available at <http://prodokm.okstate.edu>.

MICROSOFT CAMPUS AGREEMENT

OSU has an agreement with Microsoft that allows currently enrolled OSUIT students to

receive free software upgrades ranging from the latest version of Microsoft Office to the Windows operating system. To log into the free software website, students should first set up their OKEY account at <http://okey.okstate.edu> and then log in with their OKEY email address and password. To access the free software website, go to <http://it.okstate.edu/mca>.

DESIRE2LEARN ONLINE CLASSROOM

The Desire2Learn Online Classroom is OSU Institute of Technology's online course management system. Many instructors will use the Desire2Learn Online Classroom to post assignments, conduct group discussions, administer tests, and post grades. To log into Desire2Learn, students must first set up their OKEY account at <http://okey.okstate.edu> and then they will be able to log in with their OKEY email address and password. The Desire2Learn Online Classroom is accessible at <http://oc.okstate.edu>.

ONLINE COURSES

OSU Institute of Technology offers full degree programs as well as a large array of individual courses through the online classroom management system, Desire2Learn. Online courses are offered in three formats: Online, hybrid, and blended. Online courses are conducted fully online with no on-campus participation required. Hybrid courses are conducted primarily online with a maximum of three required on-campus visits. Blended courses meet one or two days a week on campus with the remainder of the coursework taking place online. A \$25 per credit hour Electronic Media Fee will be assessed students enrolled in any online or hybrid course. A \$12.50 per credit hour fee will be assessed students enrolled in any blended course. To learn more about online courses, including enrollment, instructions for access, and a current list of courses, visit <http://www.osuit.edu/academics/online>.

COMPUTER LABORATORIES

OSU Institute of Technology has a variety of computer labs available across campus. The Library has an open access computer lab for all students. Both PC and Mac platforms are available with a variety of software including specific program-related applications. Hours may vary according to semester. Call 918-293-5384 or 918-293-5080 for more information.

Additional computer labs are located in the Wilson Commons, Donald W. Reynolds Technology Center, and Noble Center for Advancing Technology, as well as in most of the academic instructional areas. Hours of availability may vary due to scheduled classes. Contact the appropriate academic division office or an instructor for more information regarding use of these facilities.

Veteran/Military Services

Our veterans had their mission—to protect our freedoms. And OSUIT has its mission—to provide the training, education, and resources to deploy a workforce-ready, highly marketable veteran with the skills and credentials valued by employers, in the shortest possible time span, by evaluating the military training and experience for college credit, and creating a direct pathway to the veteran's desired college degree.

We have a dedicated Veterans Coordinator responsible for helping veterans and family members, with benefits and eligibility requirements. OSUIT also offers a Veterans Lounge, located in the Student Union, that is available to our Veteran students to study, eat lunch, or visit with other veteran students. The Student Veterans Association, a student life club on campus, meets regularly in the Veterans Lounge to plan and provide support and camaraderie among Veteran students and their families. For more information, call 918-293-4972.

YELLOW RIBBON

OSUIT has partnered with the Department of Veterans Affairs as a member of the Yellow Ribbon Program. This program provides additional assistance to Veterans or their designated transferees that are considered non-resident students at OSUIT. Participants must be eligible to receive the maximum benefit rate (based on service requirements). For more information and to apply please visit the Veteran Service page at http://www.osuit.edu/admissions/veterans_affairs.html.

MYCAA

The Military Spouse Career Advancement Accounts (MYCAA) program provides up to \$4000 (over 2 years) of Financial Assistance for Military spouses who are pursuing degree programs, licenses or credentials leading to employment in portable career fields. For more information, visit the veterans services page at http://www.osuit.edu/admissions/veterans_affairs.html.

SERVICE MEMBERS OPPORTUNITY COLLEGES

The SOC is a consortium of over 1900 institutions pledged to working with service members and veterans earning degrees while pursuing demanding, transient careers. As a member, OSU Institute of Technology is committed to easing the transfer of relevant course credits, providing flexible academic residency requirements and crediting learning from appropriate military training and work experiences. SOC is sponsored by fifteen national higher education associations. The military services, the National Guard Bureau and the Office of the Secretary of Defense serve as cooperative agencies.

Student Organizations

More than twenty organizations on campus give students the opportunity to develop leadership skills. Club memberships are open to all students. For a complete listing of OSU Institute of Technology's clubs and organizations, go to: http://www.osuit.edu/campus_community/student_life/clubs.php.

PHI THETA KAPPA

Phi Theta Kappa has recognized academic excellence in the two-year college since 1918 and has become the largest and the most prestigious honor society serving two-year colleges around the world. Membership is based primarily upon academic achievement. Invitation to membership may be extended by OSU Institute of Technology's President after one has completed 12 hours and earned a GPA of 3.5 or greater. Membership in Phi Theta Kappa Honor Society will open new doors for one's academic journey. The organization offers a myriad of opportunities such as \$35 Million in Transfer Scholarships, intellectual enrichment and personal development through programs based on Phi Theta Kappa's three hallmarks of Scholarship, Leadership, and Service.

STUDENT SENATE

The Student Senate is made up of representatives from each academic department, selected residence hall groups and commuter students. Membership in the Senate is open to any full-time student enrolled at OSU Institute of Technology subject to the requirements indicated in the constitution. Senate leadership consists of a president, vice-president, secretary and treasurer. The Student Senate promotes activities and programs, which contribute to the betterment of the student body.

BREATHE EASY

OSU Institute of Technology is a Tobacco-Free campus (effective July 1, 2010). The health and safety of faculty, staff, students and visitors is a top priority for OSUIT. The Surgeon General of the United States has determined that tobacco use is the nation's leading preventable cause of premature death and disability, and as such, OSUIT made the decision to become a Tobacco-Free campus on July 1, 2010.

Oklahoma Tobacco Helpline is a free service available by phone or online for all Oklahomans with a desire to stop smoking or using other tobacco products. Contact the helpline by calling 1-800-QUIT-NOW (1-800-784-8669) or online at OkHelpline.com.

CAMPUS FACILITIES

STUDENT UNION

Located in the center of campus, the Student Union houses a Cafeteria, Bookstore, Post Office, Copy Center, and Campus Health

Services. In addition, the Student Union has three lounges available for use. The PSO Lounge has an attached solarium and both indoor and outdoor seating. Students use the PSO Lounge as a meeting place in between classes or as an alternative eating location. The Viersen and ONG Lounges, more removed from activity, is quiet and perfect for studying or quiet conversation.

THE CAMPUS BOOKSTORE

The Bookstore maintains a stock of OSU and OSUIT Spirit items, small gift items and OSU clothing in addition to tools and supplies needed for classes. The Bookstore is open Monday through Friday, 7:30 a.m. to 4:30 p.m., with extended hours at the beginning of each semester.

THE ONLINE BOOKSTORE

Students can order or rent books, supplies, and many other items online and have them delivered at home, or pick them up from the OSU Institute of Technology bookstore. The online bookstore is accessible at <http://www.osuit.edu/bookstore>.

CAMPUS FOOD SERVICES

The Student Union Cafeteria includes a soup and salad bar, hot entrees, fresh vegetables and accompaniments, desserts, a grill for cooked-to-order hamburgers, a sub style sandwich bar, convenience foods and a wide variety of beverages.

UNIVERSITY MARKET CONVENIENCE STORE

The University Market Convenience Store is located in the commons area of the campus residence halls. Freshly made sub style sandwiches and wraps, freshly cooked pizza, and freshly made pastries are only a few of the choices available to students and guest. In addition, laundry supplies and toiletries are available through the University Market Convenience Store. The declining balance accounts and cash are accepted for food items and toiletries; cash only for nonfood purchases. The University Market Convenience Store hours are the following:

Monday – Friday 7:00 am – 10:00 pm

Saturday – Sunday 2:30 pm – 10:00 pm

STATE ROOM & TECH ROOM DINING

The State Room restaurant and The Tech Room dining room, located in the Culinary Arts building north of the Student Union, offer a unique dining experience. Cuisine is prepared by Culinary Arts Students. Please call the message line, 293-5010 and someone will call back regarding reservations. Individuals may also email okm-dining@okstate.edu.

CAMPUS HEALTH SERVICES

Students may obtain medical advice from the college physician or nurse practitioner. Students who need hospitalization, x-rays or lab work are referred to the Okmulgee Memorial Hospital and must pay for the cost of the

services received. The college physician and nurse practitioner can write a prescription to the pharmacy of the student's choice but the student is responsible for payment. The OSU Institute of Technology Infirmary, located in the Student Union, is open Monday through Friday when school is in session, from 11:30 a.m. until the doctor has seen all patients who are waiting.

Students are advised to carry health insurance while in school. Several national insurance companies offer low-cost group medical insurance coverage for college students. More information concerning student health insurance plans is available through the Campus Health Services.

COPY CENTER

The Copy Center, located in the Student Union, offers duplicating, collating and binding services to the campus. A black and white copier or a color copier is available for your copy needs. The Center has a wide selection of paper from which to choose for projects ranging from resumes and reports to formal presentations. All services must be paid for when orders are placed. Phone: 918-293-4619.

MAIL SERVICE

OSU Institute of Technology operates a contract postal station located on the southwest end of the Student Union next to the Student Union Bookstore. Window service hours are Monday through Friday from 9:30 a.m. to 4:15 p.m. and Saturday from 9:00 a.m. to 10:00 a.m. except on University or U.S. holidays. The lobby remains open during building hours. Normal post office services are available except for C.O.D. and money orders. Students receive mail on campus either through a campus post office box, general delivery or a residence hall box. Boxes can be rented for a small charge per semester with the charge being based on box size. Box assignments and rental payments are made at the Campus Post Office. General Delivery mail must be picked up at the post office window. Students living in the residence halls receive their mail in their residence hall. Students living in England and Hannigan Hall are encouraged to obtain a post office box. Questions concerning campus postal services should be directed to the Campus Post Office at 918-293-4980.

STUDENT ID CARDS

As part of the enrollment process, each new student is issued a photo identification card. This card is used to establish the student's identity at OSU Institute of Technology and authorizes access to certain campus facilities and services. The card should be carried by the student at all times for identification. There is no charge for the first card. A fee of \$15 is charged for replacement cards.

RECREATION/ATHLETIC FACILITIES

Covelle Hall houses a gymnasium with a regulation size basketball court, volleyball court, two racquetball/handball courts, a weight room, an aerobic/cardio workout room, auditorium, men's and women's locker rooms and a coed sauna. Students with a current student ID and their spouse and/or children (under the age of 21) are eligible to use the facilities and to check out the equipment. Children under the age of 16 must be accompanied and supervised by a parent. Outdoor facilities include a softball field, a flag football field, three basketball courts, and the Recreational Trails System which includes a 1.5 mile exercise trail and a 1/4-mile observation garden trail.

CHILD CARE CENTER

The OSU Institute of Technology Child Care Center is located on the Southwest corner of campus and open Monday through Friday from 6:30 a.m. to 5:30 p.m. Students may enroll their children (ages 6 weeks to 13 years) in the campus Child Care Center. The OSU Institute of Technology Child Care Center is in compliance with fire, health and licensing standards required by the Oklahoma State Department of Human Services, and participates in the Oklahoma State Department of Education Child Nutrition Program.

Before and after school care is available for up to 1-1/2 hours before school and up to 1-1/2 hours after school.

Drop in Child Care is offered, if space is available, on an occasional basis.

Please contact the OSUIT Child Care Center for current fee rate information @ 918-293-4934.

If you have any questions concerning the OSU Institute of Technology Child Care Center, please contact the center manager at 918-293-4934.

WEEKLY FEE RATES

Before and after school care is available for up to 1-1/2 hours before school and up to 1-1/2 hours after school at a rate of \$40.00per week.

Drop in Child Care is offered,if space isavailable, on an occasional basis at the following rate:

If you have any questions concerning the OSU Institute of Technology Child Care Center, please contact the center manager at 918-293-4934.

CAMPUS LAUNDRY

Credit and coin-operated laundry facilities are located in the small building between the Student Union and Hannigan Hall, and on the first floor of the campus residence halls (Miller-Kamm North and Miller-Kamm South). Campus laundry facilities are open 24 hours a day, 7 days a week.

RESIDENTIAL LIFE AND FOOD SERVICES

Full time (minimum 12 hours) freshmen students are required to live on campus for two semesters unless they have dependents, are

21 years of age or over, married, or live within a 50- mile commuting radius. Residing on campus is considered a fundamental part of a student's educational experience. On-campus single student housing and apartments are safe, convenient and affordable. OSU Institute of Technology offers students a living-learning environment that complements each student's academic goals.

Students making application for campus housing are encouraged to apply early. To reserve space in campus housing students must make a deposit of \$150 (\$500 for family apartments). The housing contract is for two semesters. All of the housing facilities are complete with free Internet access, cable access, and local phone service. Students living on campus participate in one of four on campus meal plans, depending on individual needs. Students select a 10-meal, 15-meal, 20-meal or a declining balance meal plan for use at campus food services, which include the Student Union cafeteria and the University Market convenience store. These meal plans may be used at the State Room and Tech Room in Culinary Arts.

For complete information concerning living on campus and to receive a contract or arrange a tour, contact the Residential Life Office at 918-293-5280 or 918-293-4928 and via email at missy.morland@okstate.edu or devin.debock@okstate.edu.

STUDENT LIFE

The Student Life Department plans, promotes and implements quality programs and activities that serve student's interests. The Department provides a wide range of social, recreational, cultural and civic activities to students at no cost. Student Life also works closely with student organizations and serves as advisor to these organizations by providing information concerning their constitution and by-laws, membership and issues concerning college policy.

OSU Institute of Technology students may request an official OSU Institute of Technology Activities Transcript their last semester through the Student Life office. The Activities Transcript is an official record of the out-of-class, extracurricular activities and accomplishments of students. Student Life, "Friends, Fitness and Fun!"

PETS

For reasons of health and safety, pets are not permitted on the OSU Institute of Technology campus, in residence halls or motor vehicles.

BICYCLES/RECREATIONAL ITEMS

Bicycles, skateboards, Frisbees, roller skates, etc., may not be used in any building on campus including residence halls and hallways. Also, in accordance with the fire code, bicycles and motorcycles may not be stored in hallways, lounges, stairwells, or doorways.

REGENTS' RESOLUTION ON DISRUPTIVE CONDUCT

Be it resolved by the Board of Regents of the Oklahoma State University that this statement known as "Emergency Disciplinary Procedure in Cases of Disruption to the University's Educational Process" containing the following provisions be enacted.

A. DEFINITION OF DISRUPTIVE

Conduct Oklahoma State University Institute of Technology has long honored the right of the individual to free discussion and expression, peaceful demonstration and petition and peaceful assembly. That these rights are a part of the fabric of this institution and of the nation as stated in the Bill of Rights is not questioned. They must remain secure. It is equally clear, however, that in a community of learning willful disruption of the educational process, destruction of property and interference with the rights of other members of the community cannot be tolerated.

B. RESPONSIBILITY OF THE STUDENT

Any student, who willfully by use of violence, force, coercion, threat, intimidation or fear, obstructs, disrupts or attempts to obstruct or disrupt, the normal operations or functions of the University or who orally or in writing advises, procures or incites others to do so shall be subject to dismissal from the University.

The following, while not intended to be exclusive, illustrates the offenses encompassed herein: occupation of any university building or part thereof with intent to deprive of its use; blocking the entrance or exit of any university building or corridor or room therein; setting fire to or by any other means substantially damaging any university building or property, or display of or attempt or threat to use, or use of firearms, explosives, other weapons or destructive means or devices, except as necessary for law enforcement, in any university building or on the university campus; prevention of convening, continuation or orderly conduct of any university class or activity or of any lawful meeting or assembly in any university building or on the university campus; inciting or organizing attempts to prevent student attendance of classes; and, interfering with or blocking normal pedestrian or vehicular traffic on the university campus.

C. RESPONSIBILITY OF THE PRESIDENT

When it appears that there is a violation of Section A or B, it shall be the duty of the President, (and he is fully authorized to act) to take all steps which he deems advisable to protect the assumed and designated interests of the Oklahoma State University and to see that its Rules, Regulations and Policies are enforced. He shall insure that any person or persons found guilty after proper hearing shall be disciplined in accordance with the existing Oklahoma State University Student Disciplinary Regulations.

In carrying out these duties, the President may call upon any member of the University Administration, or any member of the Faculty, and he may call upon any agency of the University created to deal with cases arising under Section A. Action by any state or Federal Court shall not preclude the University from exercising its disciplinary authority.

D. RESPONSIBILITY OF THE BOARD OF REGENTS

1. The Board of Regents recognizes that by the Constitution and Statutes it has the power to make such rules and regulations for the management of the University as it may deem necessary and expedient, not inconsistent with the constitution and laws of the state. While the Regents fully appreciate their obligation in this respect, they further recognize that in dealing with those offenses against the University defined in Section A, hereof, they must impose the duty and authority of enforcing the policies set forth herein in the principal Executive Officer of the University, the President. It will be the responsibility of the Regents to furnish all possible assistance to the President when requested by him.

2. Subject to the provisions of Sections A through D, it shall be the duty of the President to exercise full authority in the regulation of student conduct and in matters of student discipline. In the discharge of this duty, delegation of such authority may be made by the President to Administrative or other officers of the institution, in such manner and to such extents as may by the President be deemed necessary and expedient; provided, that on the discharge of his duty it shall be the duty of the President to secure to every student the right of due process.

3. The text of this resolution shall be printed in the Student Regulations sections of the Student Handbook of the University and in the Institutional Catalog. The Student Handbook may be accessed at http://www.osu.edu/academics/forms/student_rights_responsibility.pdf.

TRAFFIC & PARKING VIOLATIONS

A \$25 fine is charged for each traffic or parking violation. This includes but is not limited to the following:

- Parking without a permit. Parking permits are available at the Bursar's office.
- Parking in restricted or prohibited areas.
- Failure to park in a marked parking area. All parking areas are marked with white or yellow stripes. If not marked as a space, it is not a legal parking space.
- Failure to stop for stop sign or pedestrian in crosswalk.
- Exceeding speed limit.
- Careless driving.

- Repairing vehicle or changing oil.
- Any other traffic and parking violations.

Campus Police are authorized to issue county citations as well for traffic violations.

A \$50 fine is assessed for parking in handicapped zones; however, drivers could be charged as much as the mandated state law fine of \$500.

OPERATING VEHICLES ON CAMPUS

The following regulations are applicable to all students and employees operating vehicles on campus:

- All vehicles used by students and employees must have a current OSU Institute of Technology parking permit.
- Parking permits are available at the Bursar's Office.
- Campus parking permits are to be visible at all times.
- Transfer of parking permits from one vehicle to another is allowed provided both vehicles are registered to that single permit (limit two vehicles per permit). The fixed permit on the window may not be transferred, and must be visible at all times.
- Washing of vehicles on campus is prohibited.
- Abandoning and/or junking vehicles on the OSU Institute of Technology campus is prohibited. Any vehicle determined to be abandoned or junked will be towed and stored at the owner's expense after a reasonable effort has been made to contact the owner.
- Speed limit on campus streets is 20 miles per hour unless otherwise posted.
- Parking lot speed limit is 10 miles per hour.
- Double parking is prohibited.
- Parking in spaces reserved for visitors is prohibited.
- Parking in spaces reserved for persons with disabilities requires an appropriate permit.
- Motorists must stop for pedestrian(s) in crosswalk.
- Bicycles ridden at night must be equipped with lights or have reflectors front, rear, and sides.
- Skateboards, inline skates, roller skates, bicycles, scooters, and any other personal transportation device, excluding documented ambulatory aids as prescribed by a medical doctor, are prohibited on all campus sidewalks.
- Parking and/or driving on the lawn or sidewalks is prohibited.
- Parking in service vehicle parking spaces is prohibited.

- All parking spaces are marked with white or yellow lines. If not marked as a space, it is not a legal parking space.

- Students and employees are required to comply with all other traffic laws.

- Wheel locks will be applied to vehicles which have been ticketed for repeated parking violations and/or failure to display a parking permit. Damage to wheel locks is charged to the students account.

- Parking vehicles facing into normal flow of traffic is prohibited.

- Any individual who violates any of the above regulations will be fined accordingly.

2013 CRIME STATISTICS

| Offense | 2011 | 2012 | 2013 |
|-----------------------------|-------------|-------------|-------------|
| Homicide | 0 | 0 | 0 |
| Manslaughter | 0 | 0 | 0 |
| Sex Offenses (Forcible) | 0 | 1 | 1 |
| Sex Offenses (Non-Forcible) | 0 | 0 | 0 |
| Robbery | 0 | 0 | 0 |
| Assaults (Simple) | 5 | 2 | 1 |
| Assaults (Aggravated) | 0 | 0 | 0 |
| Burglary | 5 | 3 | 3 |
| Larceny | 26 | 12 | 9 |
| Motor Vehicle Theft | 0 | 0 | 0 |
| Arson | 0 | 0 | 0 |
| Hate Crimes | 0 | 0 | 0 |
| Stalking | 0 | 0 | 1 |
| Criminal Incidents | 55 | 45 | 27 |
| Non-Criminal Incidents | 180 | 88 | 26 |
| Total Reports | 235 | 133 | 53 |
| Arrests | 2011 | 2012 | 2013 |
| Alcohol | 17 | 10 | 13 |
| Drugs | 11 | 2 | 2 |
| Weapons | 6 | 1 | 0 |
| Traffic | 7 | 8 | 0 |
| All Others | 12 | 7 | 1 |
| Total Arrests | 47 | 28 | 16 |
| Disciplinary | 2011 | 2012 | 2013 |
| Alcohol | 13 | 16 | 20 |
| Drugs | 24 | 7 | 0 |
| Weapons | 0 | 2 | 2 |
| Total Disciplinary | 37 | 25 | 22 |

Disciplinary referrals for incidents involving alcohol and weapons that do not include an arrest indicate the circumstances did not actually constitute a crime but rather a violation of institutional policies. Likewise, referrals for incidents involving drugs that do not include an arrest indicate that there was evidence of drugs present, but insufficient evidence to

support criminal charges. The number of total reports includes reports other than those listed. They include reports of other crimes and non-criminal incidents

OSUIT AT THE MIDAMERICA INDUSTRIAL PARK

OSU Institute of Technology developed a unique partnership with the MidAmerica Industrial Park in Pryor, Oklahoma in 1998 and has been offering a multitude of services and programs since.

The MidAmerica Industrial Park is one of the largest rural industrial parks in the country with over 9,000 acres and is home to over 75 manufacturing and processing companies. The park is operated and administered by the Oklahoma Ordinance Works Authority (OWA) who extended an invitation to offer course work and has supported OSUIT's endeavors at the park constructing a 25,000 sq ft facility for OSUIT.

The center offers an Associate in Applied Science degree in Engineering Technologies as well as training certificate programs in subject areas that cater to the prevailing technical skills required by the companies within the park and surrounding communities.

OSUIT/MAIP is the perfect place for the local student who is looking to increase skill sets and earning potential. The university maintains close relationships with the employers within the park and is the go to place when searching for high skilled technical employees.

For additional information contact the OSUIT/MAIP offices at 918-825-4678, scott.fry@okstate.edu, or <http://maip.osuit.edu>

A.A.S. Degree Offerings

ENGINEERING TECHNOLOGIES:

Electrical/Electronic Technology
Design/Drafting Technologies

CERTIFICATE OPTIONS

Industrial Maintenance Technology
Design & Drafting Technologies
Machining Technologies

YOUTH PROGRAMMING

Introduction to Engineering & Technology

COLLEGE OF THE MUSCOGEE NATION

The College of the Muscogee Nation was created by an act of the Muscogee (Creek) Nation National Council and signed into law by Principal Chief A.D. Ellis on September 1, 2004. Its Mission is as follows:

The College of the Muscogee Nation is the institution of higher education for the Muscogee (Creek) Nation emphasizing native culture, values, language and self determination. The college will provide a positive learning environment for tribal and non-tribal students as citizens of a tribal and global society supported by teaching excellence and will offer exemplary academic programs that meet student, tribal and societal needs. Through instructional quality and visionary leadership, the College of the Muscogee Nation will encourage lifelong learners for personal growth, professional development and intellectual advancement.

The College of the Muscogee Nation (CMN) is preparing to become an accredited freestanding institution offering Associate Degrees. However, until accreditation is received, CMN has collaborated with the Oklahoma State University System in offering a variety of general education and tribal specific courses at OSU Institute of Technology. Through student dual enrollment at the CMN and OSU Institute of Technology, coursework is accepted and recorded by OSU Institute of Technology. In addition CMN students are eligible for the same services from OSU Institute of Technology that all students receive.

Board of Regents for the CMN:

- *Ramona Mason*, Chair
- *C. Blue Clark*, Vice Chair
- *Sharon Mouss*, Secretary
- *Pandee Ramirez*, Member
- *Mike Flud*, Member

Administration

Robert Bible

President, College of the Muscogee Nation
B.A., Northeastern State University
M.Ed., Northeastern State University

Lacey Azbell

Research Specialist
B.A., University of Oklahoma

Angela Bunner

Dean of Academic Affairs
B.S., Oklahoma State University
M.S., University of Kansas

Jan Hart

Director of Business Affairs
B.S., Northeastern State University

James King

Regents' Director of Institutional Effectiveness
B.S., East Central State University M.A.,
University of Minnesota Ed.D., Oklahoma State
University

Kathy McCormack

Admissions Officer
B.S., Southern Nazarene University

Monte Randell

Dean of Student Affairs
B.S., Haskell Indian Nations University
M.A., University of Oklahoma

Mekko Tyner

Registrar
B.S., Haskell Indian Nations University J.D.,
University of Kansas

Faculty

Allan Colbert

Tribal Services
B.S., Northeastern State University
M.S., Northeastern State University

Rita Courtwright

Academic/Core Instructor
B.S., M.A., Northeastern State University

Karen Haught

Librarian
B.A., Northeastern State University
M.L.I.S., University of Oklahoma

Norma Marshall

Native American Studies
B.S., East Central University
M.S., Oklahoma State University

Kasey McKenzie

Police Science
B.A., University of Oklahoma
J.D., University of Tulsa

Cynthia Sanders

Science Instructor
B.S., Northeastern State University

Ronnie Sands

General Education
B.S., East Central University

Programs of Study



ARTS & SCIENCES DIVISION

General Studies

(Degree Seeking: Undeclared Majors)

Allied Health Science

Business

Enterprise Development

(Business Administration)

Enterprise Development (General Studies)

Office Information Systems Technology*

Pre-Education (Elementary)

Pre-Education (Secondary)

AUTOMOTIVE TECHNOLOGIES DIVISION

Automotive Collision Repair Technology

Automotive Service Technology

Ford ASSET

GM ASEP

MOPAR CAP

PRO-TECH

Toyota T-TEN

CONSTRUCTION TECHNOLOGIES DIVISION

Air Conditioning & Refrigeration Technology

Construction Technology

Construction Management

Electrical

High Voltage Lineman

Welding*

SCHOOL OF CULINARY ARTS

Culinary Arts

ENGINEERING TECHNOLOGIES DIVISION

Engineering Technologies

Electrical/Electronics Specialization

Instrumentation Specialization

Engineering Graphic & Design/Drafting

Manufacturing Technology

Civil Engineering/Surveying Technology

Pipeline Integrity Technology

Power Plant Technology

Civil Engineering Technology

Instrumentation Engineering Technologies

HEVi TECHNOLOGIES DIVISION

Aggreko SelectTech Accelerated

Career Program

CAT® Dealer Prep

Natural Gas Compression Program

Komatsu Advanced Career Training Program

Southwestern Assoc. Industrial & Farm Equip.

INFORMATION TECHNOLOGIES DIVISION

Information Technologies

NURSING & HEALTH SCIENCES

Nursing

Nursing LPN to RN Transition

Orthotics & Prosthetics

VISUAL COMMUNICATIONS TECHNOLOGIES DIVISION

Graphic Design Technology

3D Modeling & Animation

Photography Technology

SCHOOL OF WATCHMAKING

Watchmaking

*These programs are offered through an Alliance Agreement with several Oklahoma Career Technology Centers.

PROGRAMS OF STUDY

All programs listed here are planned for the 2014-2015 academic year. Although every effort is made to present accurate offerings, a listing in this catalog is not a guarantee of availability. Degree requirements may be revised from time to time, and the official document will be the electronic catalog posted on the campus website. All programs of study, offered by OSU Institute of Technology, are offered with the approval of the Oklahoma State Regents for Higher Education.

College graduates at all levels, but especially those earning associate degrees in advanced technological education, must possess capacities for connecting their education experiences with an exploding information-based work place. Some have said, "To do this best, a major ought to have a beginning, middle, and an end." It is this clear progress of learning that prompts the Cornerstone to Capstone experience.

THE CORNERSTONE TO CAPSTONE EXPERIENCE

OSU Institute of Technology is committed to the success of its students academically and professionally. For this reason the campus has instituted a unique, full-spectrum process called the Cornerstone to Capstone Experience designed to enable students to see from their very first semester the "light at the end of the tunnel."

This approach encourages students to explore career options, to integrate technology into learning and to synthesize theory and practice.

COLLEGE CORNERSTONE

Step one in the process is College Cornerstone. In this course students learn to use the leading edge technology available on campus, to become savvy, self-motivated learners and to assess their strengths as learners and technical high performers.

Using a number of nationally normed assessment tools, the guidance of Cornerstone facilitators and their technical advisors, students evaluate where they are, where employers expect them to be upon graduation and how they can begin the journey to reaching their goals.

CAREER CORNERSTONE

Like College Cornerstone, Career Cornerstone continues building on students' awareness and strengths, emphasizing current trends and expected competencies in their field of study.

Designed as an integrated, competency-based approach to learning, Career Cornerstone is woven into core courses within each program of study. Students become familiar with real-world expectations as they build competencies in communications, teamwork and career options.

OSU Institute of Technology's close alliance with industry leaders through the advisory board process informs students of the expectations of today's and tomorrow's employers.

INTERNSHIPS

Employer-based internship experiences at OSU Institute of Technology formally integrate academic study with authentic work experience. Internships are sponsored by a large number of Oklahoma employers as well as employers throughout the region.

During the internship period, the student is visited periodically by OSU Institute of Technology faculty. In addition, the employer provides the student with a mentor who will be available for advice and support throughout the internship experience.

Students earn college credit during the internship period and nearly all student interns are paid. Internship sites are pre-approved by OSU Institute of Technology in order to assure a quality educational experience. The number and structure of those internships varies with each program of study. Students must contact the appropriate departmental office for details on program-specific internships.

CAPSTONE

The Capstone Experience is the culmination of student success at OSU Institute of Technology. Here is where students apply the knowledge from their internships, classes, labs and life experiences to real-world problems and concerns. Students work in teams on projects designed to integrate all they have learned and who they have become during their education.

Through the Cornerstone to Capstone Experience, OSU Institute of Technology students build layer upon layer of knowledge, skill and technology awareness. They become the self-directed and self-motivated learners and workers that employers hire and keep.

The following pages list the Programs of Study in alphabetical order by division name



Arts & Sciences Division

ARTS & SCIENCES – TRANSFER INTERESTS

The following pages list suggested curriculum for Pre-Professional Majors seeking advanced Degrees. While these suggested curricula are a good starting point for degree planning, students who intend to transfer to a 4-year institution should check with the transfer college/university for requirements specific to that institution and degree. Transfer requirements will vary and it is the student's responsibility to research those requirements.

Students wishing to transfer to another university to pursue an advanced degree, who are not pursuing an OSUIT A.S. Degree in Allied Health Sciences, Business, Pre-Education Elementary, or Pre-Education Secondary, should choose the A.S. in Enterprise Development- General Studies. Students must be undeclared for 18 credit hours, then declare this degree as their major. Please speak with an advisor for additional information. Graduating with an Associate in Science degree helps ensure that you will not have to take additional freshman or sophomore level courses at a public, Oklahoma 4-year college. Private and out-of-state schools may have additional requirements.

These are only suggested courses and courses may vary depending upon students COMPASS and ACT scores.

For more detailed information, please contact Arts & Sciences at 918-293-4768.

AGRICULTURE MAJORS (63 HOURS)

FIRST SEMESTER

| | |
|-----------|---|
| ENGL 1113 | Composition I |
| HIST 1493 | US History Since 1865 (or History To 1865) |
| PSYC 1113 | Intro to Psychology |
| ORIE 1011 | College Strategies |
| CS 1013 | Computer Literacy |

SECOND SEMESTER

| | |
|-----------|--|
| ENGL 1213 | Composition II |
| POLS 1113 | US Government |
| MATH 1513 | College Algebra |
| PHIL 1213 | Ethics (or other Humanities elective) |
| ECON 2203 | Macroeconomics |

THIRD SEMESTER

| | |
|-----------|--|
| SPCH 1113 | Intro to Speech |
| BIOL 1114 | General Biology |
| SOC 1113 | Intro to Sociology |
| NSCI 1113 | Intro to Nutrition (or Personal Health) |
| CHEM 1314 | General Chemistry I |

FOURTH SEMESTER

| | |
|-----------|--------------------------|
| BIOL 1404 | General Botany |
| PSYC 2583 | Developmental Psychology |
| HUM 2453 | Intro to Film |
| STAT 2013 | Elementary Statistics |
| CHEM 1515 | General Chemistry II |

FISHERIES & WILDLIFE MAJORS (63 HOURS)

FIRST SEMESTER

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
| ENGL 1113 | Composition I |
| CS 1013 | Computer Literacy |
| BIOL 1114 | General Biology |
| MATH 1513 | College Algebra |

SECOND SEMESTER

| | |
|-----------|---|
| ENGL 1213 | Composition II |
| HIST 1493 | US History Since 1865 (or History To 1865) |
| BIOL 1604 | Zoology |
| BIOL 2114 | Human Physiology |
| PSYC 1113 | Intro to Psychology |

THIRD SEMESTER

| | |
|-----------|---|
| SPCH 1113 | Intro to Speech |
| CHEM 1314 | General Chemistry I |
| POLS 1113 | US Government |
| PHIL 1213 | Ethics (or other Humanities elective) |
| GEOG 2243 | Fundamentals of Geography (or other Humanities elective) |

FOURTH SEMESTER

| | |
|-----------|---|
| HUM 2453 | Intro to Film (or other Humanities elective) |
| BIOL 2124 | General Microbiology |
| SOC 1113 | Intro to Sociology |
| HHP 1113 | Personal Health |
| ECON 2203 | Macro Economics |

CRIMINAL JUSTICE MAJORS (60 HOURS)

FIRST SEMESTER

| | |
|-----------|---|
| ENGL 1113 | Composition I |
| HIST 1493 | US History Since 1865 (or History To 1865) |
| PSYC 1113 | Intro to Psychology |
| ORIE 1011 | College Strategies |
| CS 1013 | Computer Literacy |

SECOND SEMESTER

| | |
|-----------|--|
| ENGL 1213 | Composition II |
| POLS 1113 | US Government |
| MATH 1513 | College Algebra |
| PHIL 1213 | Ethics (or other Humanities elective) |
| STAT 2013 | Elementary Statistics |

THIRD SEMESTER

| | |
|-----------|--|
| SPCH 1113 | Intro to Speech |
| BIOL 1114 | General Biology |
| SOC 1113 | Intro to Sociology |
| NSCI 1113 | Intro to Nutrition (or Personal Health) |
| STAT 2013 | Elementary Statistics |

FOURTH SEMESTER

| | |
|-----------|---------------------------------|
| CHEM 1314 | General Chemistry I |
| ENGL 2773 | Survey of American Literature I |
| PSYC 2583 | Developmental Psychology |
| HUM 2453 | Intro to Film |
| ECON 2203 | Macro Economics |

HEALTH CAREER MAJORS (65 HOURS)

FIRST SEMESTER

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
| ENGL 1113 | Composition I |
| CS 1013 | Computer Literacy |
| POLS 1113 | US Government |
| MATH 1513 | College Algebra |

SECOND SEMESTER

| | |
|-----------|---|
| ENGL 1213 | Composition II |
| HIST 1493 | US History Since 1865 (or History To 1865) |
| BIOL 1604 | Zoology |
| PSYC 1113 | Introductory Psychology |
| BIOL 1114 | General Biology |

THIRD SEMESTER

| | |
|-----------|--|
| SPCH 1113 | Intro to Speech |
| CHEM 1314 | General Chemistry I |
| MATH 1613 | Trigonometry |
| PHIL 1213 | Ethics (or other Humanities elective) |
| BIOL 2114 | Human Physiology |

FOURTH SEMESTER

| | |
|-----------|---------------------------|
| HUM 2243 | Fundamentals of Geography |
| BIOL 2124 | General Microbiology |
| STAT 2013 | Elementary Statistics |
| CHEM 1515 | General Chemistry I |
| HHP 1113 | Personal Health |

**HOTEL & RESTAURANT MGMT. MAJORS
(61HOURS)****FIRST SEMESTER**

ORIE 1011 College Strategies
 ENGL 1113 Composition I
 POLS 1113 US Government
 CS 1013 Computer Literacy
 MATH 1513 College Algebra

SECOND SEMESTER

ENGL 1213 Composition II
 HIST 1493 US History Since 1865
 (or History To 1865)
 BIOL 1114 General Biology
 STAT 2013 Elementary Statistic
 PHIL 1213 Ethics
 (or other Humanities elective)

THIRD SEMESTER

SPCH 1113 Intro to Speech
 ACCT 2103 Financial Accounting
 MGMT 2313 Principles of Management
 PHYS 1204 General Physical Science
 ECON 2203 Macro Economics

FOURTH SEMESTER

HUM 2243 Fundamentals of Geography
 ACCT 2203 Managerial Accounting
 MKTG 2153 Marketing Principles
 NSCI 1113 Intro to Nutrition
 (or Personal Health)
 ECON 2103 Micro Economics

MARKETING MAJORS (60 HOURS)**FIRST SEMESTER**

ORIE 1011 College Strategies
 ENGL 1113 Composition I
 HIST 1493 US History Since 1865
 (or History To 1865)
 CS 1013 Computer Literacy
 MATH 1513 College Algebra

SECOND SEMESTER

ENGL 1213 Composition II
 POLS 1113 US Government
 BIOL 1114 General Biology
 STAT 2013 Elementary Statistics
 PHIL 1213 Ethics
 (or other Humanities elective)

THIRD SEMESTER

SPCH 1113 Intro to Speech
 ACCT 2103 Financial Accounting
 PHYS 1204 General Physical Science
 MKTG 2153 Marketing Principles
 ECON 2203 Macro Economics

FOURTH SEMESTER

HUM 2243 Fundamentals of Geography
 ACCT 2203 Managerial Accounting
 MGMT 2313 Principles of Management
 HHP 1113 Personal Health
 (or Intro to Nutrition)
 ECON 2103 Micro Economics

LAB TECHNICIAN MAJORS (60 HOURS)**FIRST SEMESTER**

ORIE 1011 College Strategies
 ENGL 1113 Composition I
 CS 1013 Computer Literacy
 BIOL 1114 General Biology
 MATH 1513 College Algebra

SECOND SEMESTER

ENGL 1213 Composition II
 HIST 1493 US History Since 1865
 (or History To 1865)
 CHEM 1314 General Chemistry I
 NSCI 1113 Intro to Nutrition
 HUM 1113 Music Appreciation
 (or other Humanities elective)

THIRD SEMESTER

SPCH 1113 Intro to Speech
 POLS 1113 US Government
 PHIL 1213 Ethics
 HUM 2113 Humanities II
 (or other Humanities elective)
 BIOL 2124 General Microbiology

FOURTH SEMESTER

PSYC 1113 Intro to Psychology
 BIOL 2114 Human Physiology
 STAT 2103 Elementary Statistics
 PHYS 1204 General Physical Science

MORTUARY SCIENCE MAJORS (62 HOURS)**FIRST SEMESTER**

ORIE 1011 College Strategies
 ENGL 1113 Composition I
 POLS 1113 US Government
 CS 1013 Computer Literacy
 BADM 1113 Introduction to Business
 MATH 1513 College Algebra

SECOND SEMESTER

ENGL 1213 Composition II
 BIOL 1114 General Biology
 PHIL 1213 Ethics
 (or other Humanities elective)
 HIST 1493 US History Since 1865
 (or History To 1865)
 ECON 2103 Micro Economics

THIRD SEMESTER

SPCH 1113 Intro. to Speech
 CHEM 1314 General Chemistry I
 SOC 1113 Intro to Sociology
 BIOL 2104 Human Anatomy

FOURTH SEMESTER

HHP 1113 Personal Health
 (or Intro to Nutrition)
 HUM 2563 Comparative Cultures
 (or other Humanities)
 ECON 2203 Macro Economics
 BIOL 2114 Human Physiology
 MGMT 2243 Small Business Management

MANAGEMENT MAJORS (61 HOURS)**FIRST SEMESTER**

ORIE 1011 College Strategies
 ENGL 1113 Composition I
 POLS 1113 US Government
 CS 1013 Computer Literacy
 MATH 1513 College Algebra

SECOND SEMESTER

ENGL 1213 Composition II
 HIST 1493 US History Since 1865
 (or History To 1865)
 BIOL 1114 General Biology
 STAT 2013 Elementary Statistics
 PHIL 1213 Ethics
 (or other Humanities elective)

THIRD SEMESTER

SPCH 1113 Intro. to Speech
 ACCT 2103 Financial Accounting
 MGMT 2313 Principles of Management
 PHYS 1204 General Physical Science
 ECON 2203 Macro Economics

FOURTH SEMESTER

HUM 2243 Fundamentals of Geography
 ACCT 2203 Managerial Accounting
 MKTG 2153 Marketing Principles
 NSCI 1113 Intro to Nutrition
 (or Personal Health)
 ECON 2103 Micro Economics

PSYCHOLOGY MAJORS (61 HOURS)**FIRST SEMESTER**

ENGL 1113 Composition I
 HIST 1493 US History Since 1865
 (or History to 1865)
 PSYC 1113 Intro to Psychology
 ORIE 1011 College Strategies
 CS 1013 Computer Literacy

SECOND SEMESTER

ENGL 1213 Composition II
 POLS 1113 US Government
 PSYC 1113 Developmental Psychology
 MATH 1513 College Algebra
 PHIL 1213 Ethics
 (or other Humanities elective)

THIRD SEMESTER

SPCH 1113 Intro to Speech
 BIOL 1114 General Biology
 PSYC 2313 Psychology of Personal Adjustment
 NSCI 1113 Intro to Nutrition
 (or Personal Health)
 HUM 2563 Comparative Cultures

FOURTH SEMESTER

PHYS 1204 General Physical Science
 HIST 1613 Western Civilization to 1500
 (or other Humanities elective)
 SOC 1113 Intro Sociology
 STAT 2013 Elementary Statistics
 CHEM 1314 General Chemistry I

ARTS & SCIENCES – GENERAL EDUCATION COURSE OFFERINGS

Each technical program of study at OSU Institute of Technology requires General Education courses. These courses include English, math, science, history and social science. Students who are undecided about which program of study can take General Education courses first and select a major later. The institution offers day, evening, weekend, and online courses to allow students flexibility in planning for their educational needs.

Arts and Sciences offers a full 15-week summer semester, half-semester courses, and 8-week courses during the months of June and July. These courses are especially appealing to high school students completing their junior year, recent high school graduates, college students that are home for the summer, and anyone who has mornings or afternoons free.

OSU Institute of Technology general education courses often transfer to all state colleges. For verification of transferability, reference the Oklahoma State Regents Transfer matrix.

For more detailed information, please contact Arts & Sciences at 918-293-4768.

COMPUTER LITERACY

| | | |
|-----|------|---|
| CIS | 2103 | Computer Concepts & Applications for Business |
| CS | 1013 | Computer Literacy & Applications |

COMMUNICATION ARTS

| | | |
|------|------|----------------------------------|
| ENGL | 0143 | English Fundamentals |
| ENGL | 1033 | Technical Writing I |
| ENGL | 1113 | Freshman Composition I |
| ENGL | 1213 | Freshman Composition II |
| ENGL | 2033 | Technical Writing II |
| ENGL | 2113 | Creative Writing |
| ENGL | 2413 | Introduction to Literature |
| ENGL | 2773 | Survey of American Literature I |
| ENGL | 2883 | Survey of American Literature II |
| ENGL | 3323 | Technical Writing III |
| READ | 0143 | Reading Fundamentals |

GENERAL BUSINESS

| | | |
|------|------|--------------------------|
| BADM | 1113 | Introduction to Business |
| ECON | 2103 | Micro Economics |
| ECON | 2203 | Macro Economics |

SOCIAL & BEHAVIORAL SCIENCES

| | | |
|------|------|-----------------------------------|
| GEOG | 2243 | Fundamentals of Geography |
| HIST | 1613 | Western Civilization to 1500 |
| HIST | 1623 | Western Civilization after 1500 |
| HIST | 2323 | Oklahoma History |
| PSYC | 1113 | Introductory Psychology |
| PSYC | 2313 | Psychology of Personal Adjustment |
| PSYC | 2583 | Developmental Psychology |
| SOC | 1113 | Introductory Sociology |

HEALTH & PHYSICAL EDUCATION

| | | |
|------|------|--------------------|
| HHP | 1113 | Personal Health |
| NSCI | 1113 | Intro to Nutrition |

HUMANITIES

| | | |
|------|------|---------------------------------------|
| HUM | 1013 | Humanities I |
| HUM | 1033 | Humanities II |
| HUM | 1113 | Music Appreciation |
| HUM | 2243 | Native Peoples of North America |
| HUM | 2453 | Introduction to Film |
| HUM | 2563 | Comparative Cultures |
| PHIL | 1013 | Ethics of Leadership |
| PHIL | 1213 | Ethics |
| PHIL | 1313 | Introduction to Logic |
| ENGL | 2773 | Survey of American Literature I |
| ENGL | 2883 | Survey of American Literature II |
| GEOG | 2243 | Fundamentals of Geography |
| HIST | 1613 | Western Civilization to 1500 |
| HIST | 1623 | Western Civilization after 1500 |
| HUM | 2663 | Stdy/Trav/Wrk across Cultural Borders |

MATHEMATICS

| | | |
|------|------|----------------------------|
| MATH | 0143 | Math Fundamentals |
| MATH | 0153 | Algebra Fundamentals |
| MATH | 0163 | Intermediate Algebra |
| MATH | 1493 | Math for Critical Thinking |
| MATH | 1513 | College Algebra |
| MATH | 1613 | Trigonometry |
| MATH | 2003 | Business Mathematics |
| MATH | 2144 | Calculus I |
| MATH | 2153 | Calculus II |
| MATH | 2713 | Elementary Calculus |
| MATH | 3103 | Discrete Mathematics |
| STAT | 2013 | Elementary Statistics |
| STAT | 2023 | Business Statistics |

ORIENTATION

| | | |
|------|------|--------------------|
| ORIE | 1011 | College Strategies |
|------|------|--------------------|

SCIENCE

Biological Sciences (3-4 Credit Hours)

| | | |
|------|------|------------------------------|
| BIOL | 1014 | General Biology (Non-Majors) |
| BIOL | 1114 | General Biology |
| BIOL | 1404 | General Botany |
| BIOL | 1604 | Zoology |
| BIOL | 2104 | Human Anatomy |
| BIOL | 2114 | Human Physiology |
| BIOL | 2124 | General Microbiology |

Physical Sciences (3-5 Credit Hours)

| | | |
|------|------|--------------------------|
| CHEM | 1314 | General Chemistry I |
| CHEM | 1515 | General Chemistry II |
| GEOG | 1014 | Earth Science |
| PHYS | 0123 | Science |
| PHYS | 1114 | General Physics I |
| PHYS | 1204 | General Physical Science |
| PHYS | 1214 | General Physics II |

ORAL COMMUNICATIONS

| | | |
|------|------|---------------------------------|
| SPCH | 1113 | Intro to Speech Communications* |
| SPCH | 2313 | Small Group Communications |

*Recommended for transfer students

FOREIGN LANGUAGE

| | | |
|------|------|---------------------------|
| ASL | 1363 | American Sign Language I |
| ASL | 1373 | American Sign Language II |
| SPAN | 1115 | Elementary Spanish I |
| SPAN | 1225 | Elementary Spanish II |

U.S. HISTORY & U.S. GOVERNMENT

| | | |
|------|------|-------------------------|
| HIST | 1483 | U.S. History to 1865 |
| HIST | 1493 | U.S. History since 1865 |
| POLS | 1113 | U.S. Government |

ARTS & SCIENCES – GENERAL EDUCATION CORE REQUIREMENTS FOR ASSOCIATE IN SCIENCE DEGREES

1. English Composition (6 hours)

(ENGL 1113, ENGL 1213)

2. U.S. History and U.S. Government (6 hours)

(HIST 1483 or HIST 1493 and POLS 1113)

3. Science (6 hours)

(One course must be a laboratory science)

4. Humanities (6 hours)

(Chosen from nonperformance courses defined as humanities by the institution granting the associate degree)

5. Mathematics (3 hours)

6. At least one course from the following areas: Psychology, social sciences, foreign languages, fine arts (art, music, drama) (3 hours)

7. Additional liberal arts and sciences courses as needed to meet the minimum total of 60 credit hours required to complete an Associate in Science transfer degree. Courses used to fulfill general education requirements are identified by code letters that appear preceding the course title listed in the back of the Catalog. The code letters designate the general education category for which the course may be used.

- **Analytical and Quantitative Thought (A)**

The study of systems of logic and the mathematical sciences.

- **Humanities (H)**

These courses concentrate on the ideas, beliefs, and arts and literatures that bring cultures to life.

- **Natural Sciences (N)**

A systematic study of natural processes and the mechanisms and consequences of human intervention in those processes.

- **Social and Behavioral Sciences (S)**

Human behavior in relation to the social and physical environment.

- **Diversity (D)**

These courses emphasize socially constructed groups in the United States.

- **International Dimension (I)**

These courses emphasize contemporary cultures outside the United States.

- **Scientific Investigation (L)**

Laboratory experience aimed at interpreting scientific hypotheses.

Some degree plans require specific general education courses. If no specific course is listed, any general education course with that designation may be used.

Occasionally students transfer a course that appears to fulfill the **criteria & goals** for a general education course but the transcript does not indicate a general education designation. The advisor may submit a "Substitution" form along with a course syllabus or course description to the Division Chair of Arts & Sciences along with a copy to the Registrar's Office.

General education courses are also identified in the Student Information System (SIS).



ARTS & SCIENCES – ALLIED HEALTH SCIENCES

ASSOCIATE IN SCIENCE (61 CREDIT HOURS)

The Allied Health Sciences AS degree program was developed in response to statistics showing that Allied Health professionals and technicians are in high demand in Oklahoma, especially rural Oklahoma, and across the Nation. In fact, in 2012 Oklahoma experienced a shortage of more than 11,000 health care personnel in selected professions.

The term **Allied Health** is used to identify a cluster of health professions encompassing as many as 200 health careers. There are 5 million allied health care providers in the U.S. who work in more than 80 different professions and represent approximately 60% of all health care providers – but this is just a drop in the bucket in terms of how many allied health care workers are needed to meet current and future healthcare needs in America.

The field of healthcare is rapidly growing and constantly in need of skilled healthcare professionals. For those considering a career in healthcare, this degree is designed to expose students to a broad education in general studies combined with an emphasis on life science subjects such as anatomy and physiology, chemistry, and nutrition. According to Yahoo's Education page, "graduates with recession-proof degrees in health care find great success."

OSUIT's AS degree in Allied Health Sciences is the perfect launch for any individual wishing to pursue a bachelor's degree in any health care field, as this degree provides a seamless foundation.

Students must complete all program requirement courses with a "C" or better and maintain a 2.50 overall GPA.

PROGRAM REQUIREMENTS: 25 CREDIT HOURS

The Associate in Science in Allied Health Sciences is a transfer degree. Choose one of the following concentrations or provide a degree plan from the senior institution to which you wish to transfer. Deviations must be approved by the Faculty Advisor or Division Chair.

PRE-NUTRITIONAL SCIENCES (25 CREDIT HOURS)

| | |
|-----------|-------------------------|
| CHEM 1515 | General Chemistry II |
| BIOL 2114 | Human Physiology |
| BIOL 2124 | General Microbiology |
| NSCI 1113 | Intro to Nutrition |
| PSYC 1113 | Introductory Psychology |
| SOC 1113 | Introductory Sociology |
| NURS 2303 | Medical Terminology |

PRE-NUCLEAR MEDICINE, RADIATION THERAPY, RADIOGRAPHY & SONOGRAPHY (25 CREDIT HOURS)

| | |
|-----------|-------------------------|
| BIOL 2104 | Human Anatomy |
| BIOL 2114 | Human Physiology |
| PHYS 1114 | General Physics I |
| PSYC 1113 | Introductory Psychology |
| SOC 1113 | Introductory Sociology |
| NURS 2303 | Medical Terminology |
| ENGL 1013 | Technical Writing I |
| | 1 Hour Elective |

PRE-PHYSICAL & OCCUPATIONAL THERAPY (25 CREDIT HOURS)

| | |
|-----------|--------------------------|
| BIOL 2104 | Human Anatomy |
| BIOL 2114 | Human Physiology |
| PHYS 1114 | General Physics I |
| PHYS 1214 | General Physics II |
| PSYC 1113 | Introductory Psychology |
| PSYC 2583 | Developmental Psychology |
| STAT 2013 | Elementary Statistics |

PRE-COMMUNICATION SCIENCES & DISORDERS (25 CREDIT HOURS)

| | |
|-----------|-------------------------|
| BIOL 2104 | Human Anatomy |
| BIOL 2114 | Human Physiology |
| BIOL 2124 | General Microbiology |
| PHYS 1114 | General Physics I |
| PSYC 1113 | Introductory Psychology |
| SOC 1113 | Introductory Sociology |
| NURS 2303 | Medical Terminology |

GENERAL EDUCATION REQUIREMENTS: 36 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HUMANITIES (6 CREDIT HOURS)

*Choose two courses from selection designated with an "H", "I", "D." *Designates required course.*

| | |
|-----------|---------------------------------------|
| *HUM 2243 | Native Peoples of North America |
| ENGL 2413 | Introduction to Literature |
| ENGL 2773 | Survey of American Literature I |
| ENGL 2883 | Survey of American Literature II |
| GEOG 2243 | Fundamentals of Geography |
| HIST 1613 | Western Civilization to 1500 |
| HIST 1623 | Western Civilization After 1500 |
| HUM 1013 | Humanities I |
| HUM 1033 | Humanities II |
| HUM 1113 | Music Appreciation |
| HUM 2453 | Introduction to Film |
| HUM 2563 | Comparative Cultures |
| HUM 2663 | Stdy/Trav/Wrk across Cultural Borders |
| PHIL 1213 | Ethics |

MATHEMATICS (3 CREDIT HOURS)

Select from courses designated with an "A".

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

ORIENTATION (1 CREDIT HOUR)

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
|-----------|--------------------|

COMPUTER LITERACY (3 CREDIT HOURS)

| | |
|---------|-------------------|
| CS 1013 | Computer Literacy |
|---------|-------------------|

SCIENCE (8 CREDIT HOURS)

(Must select one (1) course from each area)

Biological Sciences (4 Credit Hours)

| | |
|-----------|-----------------|
| BIOL 1114 | General Biology |
| BIOL 1604 | Zoology |

PHYSICAL SCIENCES (4 CREDIT HOURS)

| | |
|-----------|---------------------|
| CHEM 1314 | General Chemistry I |
|-----------|---------------------|

U.S. HISTORY & U.S. GOVERNMENT (6 CREDIT HOURS)

**One of these two history courses is required:*

| | |
|-----------|----------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |
| POLS 1113 | U.S. Government (required) |

APPROVED ELECTIVES (3 CREDIT HOURS) DIVISION APPROVAL

ARTS & SCIENCES – BUSINESS*

ASSOCIATE IN SCIENCE (60 CREDIT HOURS)

This degree option allows students to earn the first two years of a bachelor's degree in business at OSUIT with assurances that all courses will transfer to another Oklahoma college offering a bachelor's degree in business.

The strength of this associate degree is that it saves the student considerable time, travel and money by allowing one to remain closer to home for the first two years of study.

OSU Institute of Technology's business degree program has been carefully coordinated with other colleges to make the transfer of the 60 semester credit hours earned at this campus a simple and seamless process.

Whether one's goal is to explore careers in accounting, sales, marketing or finance, the solid core of business courses offered by OSU Institute of Technology is a great first step.

For more detailed information, please contact Arts & Sciences at 918-293-4768.

**This program is available 100% online.*

PROGRAM REQUIREMENTS: 15 CREDIT HOURS

ACCOUNTING (6 CREDIT HOURS)

ACCT 2103 Financial Accounting
ACCT 2203 Managerial Accounting

ECONOMICS (6 CREDIT HOURS)

ECON 2103 Microeconomics
ECON 2203 Macroeconomics (NOTE: this course is a prerequisite for ECON 2103-Microeconomics.)

STATISTICS (3 CREDIT HOURS)

STAT 2013 Elementary Statistics

GENERAL EDUCATION REQUIREMENTS: 42 CREDIT HOURS

COMPUTER LITERACY (3 CREDIT HOURS)

CIS 2103 Computer Concepts & Applications for Business

COMMUNICATION ARTS (6 CREDIT HOURS)

ENGL 1113 Freshman Composition I
ENGL 1213 Freshman Composition II

HUMANITIES (6 CREDIT HOURS)

Choose two courses from selection designated with an "H", "P", "D".

ENGL 2413 Introduction to Literature
ENGL 2773 Survey of American Literature I
ENGL 2883 Survey of American Literature II
GEOG 2243 Fundamentals of Geography
HIST 1613 Western Civilization to 1500
HIST 1623 Western Civilization After 1500
HUM 1013 Humanities I
HUM 1033 Humanities II
HUM 1113 Music Appreciation
HUM 2243 Native Peoples of North America
HUM 2453 Introduction to Film
HUM 2563 Comparative Cultures
PHIL 1213 Ethics

SOCIAL & BEHAVIORAL SCIENCES (3 CREDIT HOURS)

PSYC 1113 Introductory Psychology
SOC 1113 Introductory Sociology
SPAN 1115 Elementary Spanish I

MATHEMATICS (3 CREDIT HOURS)

Select from courses designated with an "A."

MATH 1513 College Algebra
MATH 1613 Trigonometry
MATH 2713 Introductory Calculus

ORIENTATION (1 CREDIT HOUR)

ORIE 1011 College Strategies

SCIENCE REQUIREMENTS (8-9 CREDIT HOURS)

(One course selected must be a lab course)

BIOLOGICAL SCIENCES (4 CREDIT HOURS)

BIOL 1014 General Biology (Non-Majors)
BIOL 1114 General Biology
BIOL 1604 Zoology
BIOL 2104 Human Anatomy
BIOL 2114 Human Physiology
BIOL 2124 General Microbiology

PHYSICAL SCIENCES (4-5 CREDIT HOURS)

CHEM 1314 General Chemistry I
CHEM 1515 General Chemistry II
GEOL 1014 Earth Science
PHYS 1114 General Physics I
PHYS 1204 General Physical Science

HEALTH & PHYSICAL EDUCATION (3 CREDIT HOURS)

NSCI 1113 Introduction to Nutrition
HHP 1113 Personal Health

U.S. HISTORY & U.S. GOVERNMENT (6 CREDIT HOURS)

One of these two History courses required:

HIST 1483 U.S. History to 1865 or
HIST 1493 U.S. History Since 1865 and
POLS 1113 U.S. Government (required)

ORAL COMMUNICATIONS (3 CREDIT HOURS)

SPCH 1113 Intro to Speech Communication

ELECTIVES (3 CREDIT HOURS)

Business Program Electives require Division Chair approval if not on this list.

BADM 2063 Business Law I
BADM 2373 Business Communications
MATH 2144 Calculus I
MGMT 2313 Principles of Management
MGMT 2603 Human Resource Management
MGMT 2913 Leadership & Organizational Mgmt.

ARTS & SCIENCES – ENTERPRISE DEVELOPMENT - BUSINESS ADMINISTRATION

ASSOCIATE IN SCIENCE (60 CREDIT HOURS)

As part of Oklahoma's Reach Higher program, OSUIT offers an Associate in Science degree in Enterprise Development with a concentration in business administration or general studies. The program is designed for working adults or those who are time- or place-bound and unable to pursue education through traditional means. The curriculum is approved by the Oklahoma State Regents for Higher Education and OSUIT accepts transfer credits from any of the 14 two-year institutions in Oklahoma.

This degree can transfer seamlessly into a bachelor's degree!

Minimum requirements:

- 18 hours of earned college credit
- 2.0 GPA cumulative college GPA
- Remedial work completed

Program features:

- Personalized schedules and courses of study that meet career goals
- Flexible enrollment periods year-round

If you have any questions about the Enterprise Development Adult Degree Completion Program, contact the Reach Higher Advisor directly at 918-293-4768.

PROGRAM REQUIREMENTS: 23 CREDIT HOURS

INTERNSHIP (3 CREDIT HOURS)

CAPSTONE (2 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| BADM 2232 | Capstone Business Seminar |
| BADM 2903 | Business/Occupational Internship |

ACCOUNTING (6 CREDIT HOURS)

| | |
|-----------|-----------------------|
| ACCT 2103 | Financial Accounting |
| ACCT 2203 | Managerial Accounting |

ECONOMICS (6 CREDIT HOURS)

| | |
|-----------|----------------|
| ECON 2103 | Microeconomics |
| ECON 2203 | Macroeconomics |

(NOTE: this course is a prerequisite for ECON 2103-Microeconomics.)

MARKETING (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| BADM 2153 | Marketing Principles |
|-----------|----------------------|

STATISTICS (3 CREDIT HOURS)

| | |
|-----------|---------------------|
| STAT 2023 | Business Statistics |
|-----------|---------------------|

GENERAL EDUCATION REQUIREMENTS: 37 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HUMANITIES (6 CREDIT HOURS)

Choose two courses from selection designated with an "H", "I", "D".

| | |
|-----------|---------------------------------------|
| ENGL 2413 | Introduction to Literature |
| ENGL 2773 | Survey of American Literature I |
| ENGL 2883 | Survey of American Literature II |
| HIST 1613 | Western Civilization to 1500 |
| HIST 1623 | Western Civilization After 1500 |
| HUM 1013 | Humanities I |
| HUM 1033 | Humanities II |
| HUM 1113 | Music Appreciation |
| HUM 2243 | Native Peoples of North America |
| HUM 2453 | Introduction to Film |
| HUM 2563 | Comparative Cultures |
| HUM 2663 | Stdy/Trav/Wrk across Cultural Borders |
| PHIL 1213 | Ethics |

MATHEMATICS (3 CREDIT HOURS)

Select from courses designated with an "A."

| | |
|-----------|----------------------------|
| MATH 1493 | Math for Critical Thinking |
| MATH 1513 | College Algebra |
| STAT 2013 | Elementary Statistics |

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
|-----------|--------------------------------|

SCIENCE (8 CREDIT HOURS)

(Must select one (1) course from each area)

Biological Sciences (4 Credit Hours)

| | |
|-----------|------------------------------|
| BIOL 1014 | General Biology (Non-Majors) |
| BIOL 1114 | General Biology |
| BIOL 1404 | General Botany |
| BIOL 2104 | Human Anatomy |
| BIOL 2114 | Human Physiology |
| BIOL 2124 | General Microbiology |
| BIOL 1604 | Zoology |

PHYSICAL SCIENCES (4-5 CREDIT HOURS)

| | |
|-----------|--------------------------|
| CHEM 1314 | General Chemistry I |
| GEOL 1014 | Earth Science |
| PHYS 1114 | General Physics I |
| PHYS 1204 | General Physical Science |
| CHEM 1515 | General Chemistry II |

U.S. HISTORY & U.S. GOVERNMENT (6 CREDIT HOURS)

**One of these two history courses is required:*

| | |
|-----------|----------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |
| POLS 1113 | U.S. Government (required) |

SOCIAL SCIENCE, TECHNOLOGY & LANGUAGE (6 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| CS 1013 | Computer Literacy & Applications |
| GEOG 2243 | Fundamentals of Geography |
| PSYC 1113 | Introductory Psychology |
| PSYC 2313 | Psychology of Personal Adjustment |
| PSYC 2583 | Developmental Psychology |
| SOC 1113 | Introductory Sociology |
| SPAN 1115 | Elementary Spanish I |
| SPAN 1215 | Elementary Spanish II |

Students should consult with their advisor, for major area of interest.

ARTS & SCIENCES – ENTERPRISE DEVELOPMENT - GENERAL STUDIES

ASSOCIATE IN SCIENCE (60 CREDIT HOURS)

As part of Oklahoma's Reach Higher program, OSUIT offers an Associate in Science degree in Enterprise Development with a concentration in business administration or general studies. The program is designed for working adults or those who are time- or place-bound and unable to pursue education through traditional means. The curriculum is approved by the Oklahoma State Regents for Higher Education and you can take and transfer back to OSUIT credits from any of the 14 two-year institutions in Oklahoma.

This degree can transfer seamlessly into a bachelor's degree!

Minimum requirements:

- 18 hours of earned college credit
- 2.0 GPA cumulative college GPA
- Remedial work completed

Program features:

- Substitutions allowed for course work taken at equal or higher level
- Personalized schedules and courses of study that meet career goals
- Flexible enrollment periods year-round

If you have any questions about the Enterprise Development Adult Degree Completion Program, contact the Reach Higher Advisor directly at 918-293-4768.

PROGRAM REQUIREMENTS:

GENERAL STUDIES: 23 CREDIT HOURS

College level hours selected from the student's field of interest.

GENERAL EDUCATION REQUIREMENTS: 38 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

ENGL 1113 Freshman Composition I
ENGL 1213 Freshman Composition II

ORAL COMMUNICATIONS (3 CREDIT HOURS)

SPCH 1113 Intro to Speech Communications

HUMANITIES (6 CREDIT HOURS)

Choose two courses from selection designated with an "H", "P", "D".

ENGL 2413 Introduction to Literature
ENGL 2773 Survey of American Literature I
ENGL 2883 Survey of American Literature II
HIST 1613 Western Civilization to 1500
HIST 1623 Western Civilization After 1500
HUM 1013 Humanities I
HUM 1033 Humanities II
HUM 1113 Music Appreciation
HUM 2243 Native Peoples of North America
HUM 2453 Introduction to Film
HUM 2563 Comparative Cultures
HUM 2663 Stdy/Trav/Wrk across Cultural Borders
PHIL 1213 Ethics

MATHEMATICS (3 CREDIT HOURS)

Select from courses designated with an "A".

MATH 1493 Math for Critical Thinking
MATH 1513 College Algebra
STAT 2013 Elementary Statistics

NATURAL SCIENCE (7 CREDIT HOURS)

(Must take one (1) laboratory science course)

BIOL 1014 General Biology (Non-Majors)
BIOL 1114 General Biology
BIOL 1404 General Botany
BIOL 1604 Zoology
BIOL 2104 Human Anatomy
BIOL 2114 Human Physiology
BIOL 2124 General Microbiology
CHEM 1314 General Chemistry I
CHEM 1515 General Chemistry II
GEOL 1014 Earth Science
PHYS 1114 General Physics I
PHYS 1204 General Physical Science

U.S. HISTORY & U.S. GOVERNMENT (6 CREDIT HOURS)

**One of these two history courses is required:*

HIST 1483 U.S. History to 1865 or
HIST 1493 U.S. History Since 1865
POLS 1113 U.S. Government (required)

SOCIAL SCIENCE, TECHNOLOGY & LANGUAGE (6 CREDIT HOURS)

CS 1013 Computer Literacy & Applications
GEOG 2243 Fundamentals of Geography
PSYC 1113 Introductory Psychology
PSYC 2313 Psychology of Personal Adjustment
PSYC 2583 Developmental Psychology
SOC 1113 Introductory Sociology
SPAN 1115 Elementary Spanish I
SPAN 1215 Elementary Spanish II

Students should consult with their advisor, for major area of interest

ARTS & SCIENCES – OFFICE INFORMATION SYSTEMS TECHNOLOGY#

ASSOCIATE IN APPLIED SCIENCE (60 CREDIT HOURS)

The Office Information Systems program is a cooperative alliance program conducted jointly between OSU Institute of Technology and several of Oklahoma's technology centers. Office Information Systems (OIS) courses are offered at the technology centers' campuses. Required general education and support courses are offered at OSU Institute of Technology.

The Office Information Systems Technology program prepares administrative information professionals to perform and coordinate administrative activities; integrate computer applications; use and support word processing, spreadsheet, database, and presentation software applications; secure, store, retrieve and archive information; plan, implement and manage projects; generate documentation; and conduct research. Administrative information specialists work with other professionals in education, health services, law, governmental agencies, and many other organizational environments.

For more detailed information, please contact Arts & Sciences at 918-293-4768.

PROGRAM REQUIREMENTS: 42 CREDIT HOURS

A combination of the following courses and/or other approved courses* to total 42 credit hours.

| | |
|-----------|---------------------------------------|
| ACCT 2043 | Cost Accounting |
| ACCT 2103 | Financial Accounting |
| ACCT 2203 | Managerial Accounting |
| ACCT 2303 | Intermediate Accounting I |
| BADM 1113 | Introduction to Business |
| BADM 2153 | Marketing Principles |
| BADM 2063 | Business Law I |
| BADM 2323 | Microcomputer Accounting Applications |
| BADM 2513 | Principles of Finance |
| GTIT 1133 | Computer Literacy and Applications |
| MGMT 2243 | Small Business Management |
| MGMT 2313 | Principles of Management |
| OIS 1013 | Office Procedures |
| OIS 1113 | Legal Terminology I |
| OIS 1143 | Desktop Publishing |
| OIS 1153 | Medical Terminology I |
| OIS 1173 | Medical Terminology II |
| OIS 1282 | Records Management |
| OIS 1323 | Keyboarding |
| OIS 1333 | Document Production |
| OIS 1343 | Advanced Document Production |
| OIS 1373 | Business Communications |
| OIS 1383 | Customer Service (Capstone) |
| OIS 1413 | Business Computer Applications |
| OIS 1423 | Integrated Applications |
| OIS 2101 | Employment Orientation |
| OIS 2503 | Database Application |
| OIS 2526 | Medical Transcription I |
| OIS 2573 | ICD-9-CM Coding |
| OIS 2583 | Electronic Medical Office Procedures |
| OIS 2593 | Medical Office Procedures |
| OIS 2683 | Project Management |
| OIS 2853 | Legal Terminology II |
| OIS 2863 | Legal Terminology III |

GENERAL EDUCATION REQUIREMENTS: 18 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| ENGL 2033 | Technical Writing II |

HISTORY (3 CREDIT HOURS)

One of these two History courses required:

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

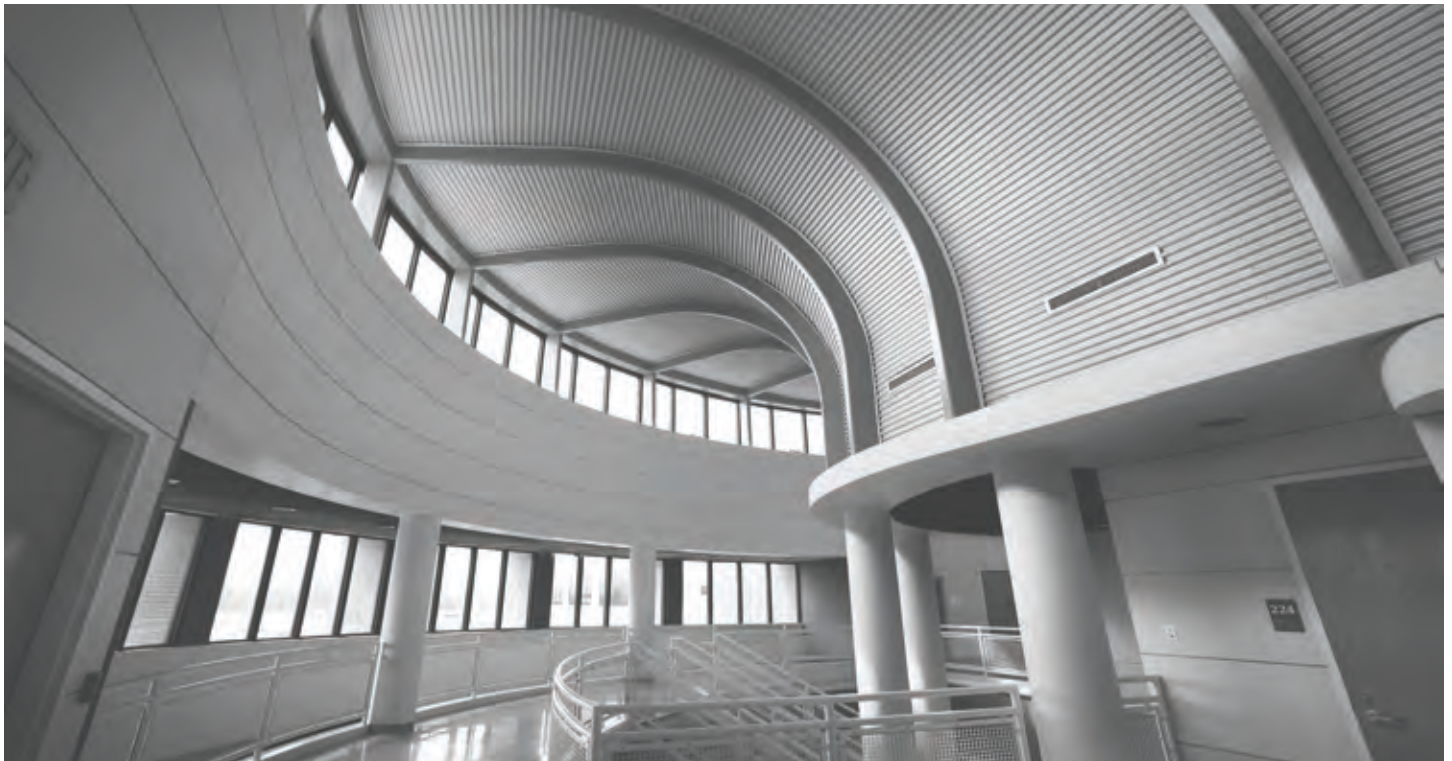
| | |
|-----------|------------------------------------|
| SPCH 1113 | Intro to Speech Communications* or |
| SPCH 2313 | Small Group Communications |

*Recommended for transfer students.

APPROVED GENERAL EDUCATION ELECTIVE (3 CREDIT HOURS)

This program is part of a cooperative alliance agreement and major courses are available at select career technology centers.

*Other courses may be accepted at the discretion of the Arts & Sciences Division.



ARTS & SCIENCES – PRE-EDUCATION – ELEMENTARY, EARLY CHILDHOOD OR SPECIAL EDUCATION*

ASSOCIATE IN SCIENCE (60 CREDIT HOURS)

OSU Institute of Technology offers an associate in science degree in pre-education where students earn the first two years of a bachelor's degree in education at this campus with assurance that all courses will transfer to another Oklahoma college offering a bachelor's degree in education.

This pre-education degree from OSU Institute of Technology saves the student considerable time, travel and money by allowing one to remain closer to home for the first two years of study.

OSU Institute of Technology's pre-education degree has been carefully coordinated with other colleges to make the transfer of the 60 semester credit hours earned at this campus a simple and seamless process.

The OSU Institute of Technology pre-education program offers a wide range of course choices for education majors, but is vigilant in its offerings to ensure the student will meet necessary state requirements in math, English, science, social sciences and foreign language at four-year institutions.

Whether one's goal is to explore a career as an elementary, secondary or college educator, the solid core of education and general studies courses offered by OSU Institute of Technology is a great first step.

For more detailed information, please contact Arts & Sciences at 918-293-4768.

*This program is available 100% online with the exception of one required lab science course. Guidance for students desiring to obtain this degree primarily online. To meet the six (6) hour math requirement: MATH 1513 College Algebra and STAT 2013 Statistics are both available online. To meet eight (8) of the 12 hour science requirements: BIOL 1014 General Biology (Non-Majors) and PHYS 1204 General Physical Science are both available online. The remaining required lab science course can be taken face-to-face at OSUIT or transferred in from another institution.

Those students majoring in Elementary Education, Early Childhood Education, or Special Education who seek certification in Oklahoma must take 12 credit hours in each of the four areas: English, math, science, and social studies. Students majoring in Elementary Education, Early Childhood Education, or Special Education must also demonstrate listening and speaking skills in a foreign language at the novice-high level. Successful completion of SPAN 1115 or SPAN 1225 would satisfy this requirement.

PROGRAM REQUIREMENTS: 55 CREDIT HOURS

Courses taken in communications, mathematics, science and social science must be completed with a grade of "C" or higher for the course to satisfy degree requirements.

COMMUNICATION ARTS (9 CREDIT HOURS) (6 CREDIT HOURS)

ENGL 1113 Freshman Composition I (required)
ENGL 1213 Freshman Composition II (required)

(3 CREDIT HOURS)

ENGL 2113 Creative Writing
ENGL 2413 Introduction to Literature
ENGL 2773 Survey of American Literature I
ENGL 2883 Survey of American Literature II

COMPUTER LITERACY

(3 CREDIT HOURS)

CS 1013 Computer Literacy & Applications

HEALTH & PHYSICAL EDUCATION

(3 CREDIT HOURS)

HHP 1113 Personal Health or
NSCI 1113 Introduction to Nutrition

MATHEMATICS (6 CREDIT HOURS)

Select from courses designated with an "A".

MATH 1493 Math for Critical Thinking
MATH 1513 College Algebra
MATH 1613 Trigonometry
MATH 2713 Introductory Calculus
MATH 2144 Calculus I

HUMANITIES (6 CREDIT HOURS)

Choose two courses from selection designated with an "H", "I", "D".

ENGL 2413 Introduction to Literature I
ENGL 2543 Survey of English Literature I
ENGL 2653 Survey of English Literature II
ENGL 2773 Survey of American Literature I
ENGL 2883 Survey of American Literature II
HIST 1613 Western Civilization to 1500
HIST 1623 Western Civilization After 1500
HUM 1013 Humanities I
HUM 1033 Humanities II
HUM 1113 Music Appreciation
HUM 2243 Native Peoples of North America
HUM 2453 Introduction to Film
HUM 2563 Comparative Cultures
HUM 2663 Study/Trav/Wrk across Cultural Borders
PHIL 1213 Ethics

ORIENTATION (1 CREDIT HOUR)

ORIE 1011 College Strategies

SCIENCE (12 CREDIT HOURS)

(Must select one (1) course from each area)

Biological Sciences

BIOL 1014 General Biology (Non-Majors)
BIOL 1114 General Biology
BIOL 1404 General Botany
BIOL 1604 Zoology
BIOL 2104 Human Anatomy
BIOL 2114 Human Physiology
BIOL 2124 General Microbiology

Physical Sciences

CHEM 1314 General Chemistry I
CHEM 1515 General Chemistry II
GEOL 1014 Earth Science
PHYS 1114 General Physics I
PHYS 1204 General Physical Science

U.S. HISTORY & U.S. GOVERNMENT

(6 CREDIT HOURS)

*One of these two history courses is required:

HIST 1483 U.S. History to 1865 or
HIST 1493 U.S. History Since 1865
POLS 1113 U.S. Government (required)

SOCIAL & BEHAVIORAL SCIENCES

Additional credit hours can be selected from courses designated with an "S".

GEOG 2243 Fundamentals of Geography
PSYC 1113 Introductory Psychology
PSYC 2583 Developmental Psychology
SOC 1113 Introductory Sociology

ORAL COMMUNICATIONS

(3 CREDIT HOURS)

SPCH 1113 Intro to Speech Communications

ELECTIVES (5-8 CREDIT HOURS)

Students need to select courses which will satisfy the transfer requirements for the baccalaureate degree at the institution to which they will transfer. Students should choose courses that were NOT used to satisfy the general education requirements.
HIST 2323 Oklahoma History*

(Note: This course satisfies the Oklahoma State Department of Education requirement for teacher certification.)

ASL 1363 American Sign Language*
PSYC 2313 Psychology of Personal Adjustment
PSYC 2583 Developmental Psychology
SOC 1113 Introductory Sociology
SPAN 1115 Elementary Spanish I*
SPAN 1225 Elementary Spanish II

*Recommended for transfer students.

ARTS & SCIENCES – PRE-EDUCATION – SECONDARY EDUCATION*

ASSOCIATE IN SCIENCE (60 CREDIT HOURS)

OSU Institute of Technology offers an associate in science degree in pre-education where students earn the first two years of a bachelor's degree in education at this campus with assurance that all courses will transfer to another Oklahoma college offering a bachelor's degree in education.

This pre-education degree from OSU Institute of Technology saves the student considerable time, travel and money by allowing one to remain closer to home for the first two years of study.

OSU Institute of Technology's pre-education degree has been carefully coordinated with other colleges to make the transfer of the 60 semester credit hours earned at this campus a simple and seamless process.

The OSU Institute of Technology pre-education program offers a wide range of course choices for education majors, but is vigilant in its offerings to ensure the student will meet necessary state requirements in math, English, science, social sciences and foreign language at four-year institutions.

Whether one's goal is to explore a career as an elementary, secondary or college educator, the solid core of education and general studies courses offered by OSU Institute of Technology is a great first step.

For more detailed information, please contact Arts & Sciences at 918-293-4768.

**This program is available 100% online.*

PROGRAM REQUIREMENTS: 45 CREDIT HOURS

Courses taken in communications, mathematics, science and social science must be completed with a grade of "C" or higher for the course to satisfy degree requirements.

COMMUNICATION ARTS (6 CREDIT HOURS)

ENGL 1113 Freshman Composition I
ENGL 1213 Freshman Composition II

COMPUTER LITERACY (3 CREDIT HOURS)

CS 1013 Computer Literacy & Applications

HEALTH & PHYSICAL EDUCATION (3 CREDIT HOURS)

HHP 1113 Personal Health or
NSCI 1113 Introduction to Nutrition

HUMANITIES (6 CREDIT HOURS)

Choose two courses from selection designated with an "H", "I", "D."

ENGL 2413 Introduction to Literature I
ENGL 2773 Survey of American Literature I
ENGL 2883 Survey of American Literature II
HIST 1613 Western Civilization to 1500
HIST 1623 Western Civilization After 1500
HUM 1013 Humanities I
HUM 1033 Humanities II
HUM 1113 Music Appreciation
HUM 2243 Native Peoples of North America
HUM 2453 Introduction to Film
HUM 2563 Comparative Cultures
HUM 2663 Study/Trav/Wrk across Cultural Borders
PHIL 1213 Ethics

MATHEMATICS (3 CREDIT HOURS)

MATH 1513 College Algebra
MATH 1613 Trigonometry
MATH 2713 Introductory Calculus

ORAL COMMUNICATIONS (3 CREDIT HOURS)

SPCH 1113 Intro to Speech Communications

ORIENTATION (1 CREDIT HOUR)

ORIE 1011 College Strategies

SCIENCE (8-9 CREDIT HOURS)

(Must select one (1) course from each area)

Biological Sciences (4 Credit Hours)

BIOL 1014 General Biology (Non-Majors)
BIOL 1114 General Biology
BIOL 1404 General Botany
BIOL 1604 Zoology
BIOL 2104 Human Anatomy
BIOL 2114 Human Physiology
BIOL 2124 General Microbiology

Physical Sciences (4-5 Credit Hours)

CHEM 1314 General Chemistry I
CHEM 1515 General Chemistry II
GEOL 1014 Earth Science
PHYS 1114 General Physics I
PHYS 1204 General Physical Science

U.S. HISTORY & U.S. GOVERNMENT (6 CREDIT HOURS)

*One of these two history courses is required:

HIST 1483 U.S. History to 1865 or
HIST 1493 U.S. History Since 1865
POLS 1113 U.S. Government (required)

SOCIAL & BEHAVIORAL SCIENCES (6 CREDIT HOURS)

Additional credit hours can be selected from courses designated with an "S".

GEOG 2243 Fundamentals of Geography
PSYC 1113 Introductory Psychology
PSYC 2583 Developmental Psychology
SOC 1113 Introductory Sociology

SUPPORT AND RELATED REQUIREMENTS: 15 CREDIT HOURS

ELECTIVES (15 CREDIT HOURS)

(Note: This course satisfies the Oklahoma State Department of Education requirement for teacher certification.)

Students should select courses in this area which will satisfy the transfer requirements for the baccalaureate degree at the institution to which they will transfer. Students should choose from the courses above that were NOT used to satisfy the general education requirements. Student advisement is critical to ensure the courses selected will satisfy the baccalaureate degree.

Students should consult with their advisor, for major area of interest.

And/Or Other Departmental Approved Electives

Automotive Technologies Division

AUTOMOTIVE COLLISION REPAIR TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (81 CREDIT HOURS)

Automotive Collision Repair Technicians repair and refinish vehicles that have been involved in accidents. Students in this program will learn how to repair the vehicles to pre-accident condition. When vehicles are damaged this requires repair, replacement and refinishing of exterior and interior vehicle body components.

Graduates of the program are employed as collision technicians and refinish specialists. With experience, graduates qualify for positions as body shop managers, paint specialists, material and equipment representatives, insurance adjusters, shop owners, and refinish equipment specialists.

Students may not have more than two academic deficiencies at the time of enrollment into Collision Repair Technology.

Enrollment accepted fall and spring only.

For more detailed information, please contact the Automotive Technologies Division office at 918-293-5390.



Automotive Collision
REPAIR TECHNOLOGY
OSU INSTITUTE OF TECHNOLOGY

DEPARTMENTAL REQUIREMENTS: 53 CREDIT HOURS

AUTO COLLISION REPAIR TECHNOLOGY (53 CREDIT HOURS)

| | |
|----------|--|
| AUC 1031 | Collision Computer Based Training |
| AUC 1032 | Sectioning Welded Panels |
| AUC 1062 | Refinishing Procedures & Detailing |
| AUC 1101 | Collision Career Cornerstone |
| AUC 1102 | Chassis Analysis |
| AUC 1111 | Vehicle Design & Energy Management |
| AUC 1112 | Panel Straightening & Filler Application |
| AUC 1121 | Collision Estimating |
| AUC 1131 | Mechanical & Electrical Procedures |
| AUC 1212 | Refinishing Equipment & Processes |
| AUC 1222 | Color Analysis |
| AUC 1232 | Gas Metal Arc Welding |
| AUC 1252 | Panel Replacement & Alignment |
| AUC 1262 | Advanced Metal Repair |
| AUC 1302 | Suspension Alignment & Fundamentals |
| AUC 2101 | Structural Alignment Procedures |
| AUC 2131 | Non-Structural Recycled Panels |
| AUC 2156 | Internship I* |
| AUC 2161 | Advanced Refinishing Processes I |
| AUC 2201 | Structural Replacement Procedures |
| AUC 2211 | Collision Industry Updates & Trends |
| AUC 2231 | Plastic Repair & Panel Bond |
| AUC 2256 | Internship II* |
| AUC 2261 | Advanced Refinishing Processes II |
| AUC 2356 | Internship III* |
| AUC 2411 | Refinishing Capstone |
| AUC 2521 | Non-Structural Capstone |
| AUC 2631 | Structural Capstone |

* Students who have earned college credit in Collision Repair through the Cooperative Alliance while attending an approved Oklahoma Career Tech center may enroll in the following alternate internship courses:

AUC 2156 Internship I may be replaced by:
AUC 2401 Beginning Internship I AND
AUC 2415 Advanced Internship I

AUC 2256 Internship II may be replaced by:
AUC 2531 Beginning Internship II AND
AUC 2535 Advanced Internship II

AUC 2356 Internship III may be replaced by:
AUC 2641 Beginning Internship III AND
AUC 2645 Advanced Internship III

Course available at participating Career Tech centers.

Course available on the OSUIT campus.

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (3 CREDIT HOURS)

| | |
|-----------|------------------------|
| ENGL 1033 | Technical Writing I or |
| ENGL 1113 | Freshman Composition I |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| BADM 1113 | Introduction to Business |
| ECON 2103 | Micro Economics |
| ECON 2203 | Macro Economics |
| MGMT 2243 | Small Business Management |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communication |

INTERDEPARTMENTAL REQUIREMENTS: 4 CREDIT HOURS

GENERAL TECHNOLOGIES (4 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| GTGE 1111 | College Cornerstone |
| CS 1013 | Computer Literacy & Applications |



AUTOMOTIVE SERVICE TECHNOLOGY – FORD ASSET

ASSOCIATE IN APPLIED SCIENCE (89 CREDIT HOURS)

The ASSET program is an automotive service technician program sponsored by Ford Motor Company. The student spends six semesters alternating study and practice on campus and at a dealership. This unique design allows each potential technician to immediately apply automotive service principles and techniques to the real world of work.

Students spend seven and one half weeks of each semester on campus and seven and one half weeks as a paid intern at a Ford Motor Company dealership.

When successfully completed, students earn an Associate in Applied Science degree and become technicians for a Ford Motor Company dealership, usually at the same location as the internship.

Enrollment accepted fall only.

PROGRAM ENTRY REQUIREMENTS:

1. Meet institutional requirements and
2. Obtain an approved dealer sponsor.

For more detailed information, please contact the Automotive Technologies Division office at 918-293-5390.



DEPARTMENTAL REQUIREMENTS: 61 CREDIT HOURS

FORD ASSET (61 CREDIT HOURS)

| | |
|-----------|--|
| AUMF 1011 | Career Cornerstone: Intro to Automotive Service |
| AUMF 1033 | Ford Basic Electrical |
| AUMF 1103 | Internship |
| AUMF 1111 | Ford Computer Based Training |
| AUMF 1113 | Ford Engine Repair |
| AUMF 1203 | Internship |
| AUMF 1211 | Ford Computer Based Training |
| AUMF 1233 | Ford Base & Electrical Suspension & Steering |
| AUMF 1243 | Ford Electronic System Diagnosis |
| AUMF 1303 | Internship |
| AUMF 1311 | Ford Computer Based Training |
| AUMF 1353 | Ford Engine Performance Theory & Operation |
| AUMF 1363 | Ford Manual Trans/Transaxle & Driveline Repair |
| AUMF 2103 | Internship |
| AUMF 2203 | Internship |
| AUMF 2411 | Ford Computer Based Training |
| AUMF 2453 | Ford Engine Performance Diagnosis & Testing |
| AUMF 2473 | Ford Brake Systems & Advanced Brake Diagnosis |
| AUMF 2511 | Ford Computer Based Training |
| AUMF 2533 | Ford Diesel Engine Performance Diagnosis |
| AUMF 2573 | Ford Transfer Case/4WD Diagnosis & System Repair |
| AUMF 2611 | Ford Computer Based Training |
| AUMF 2613 | Ford Automatic Transmission Repair & Electrical |
| AUMF 2683 | Ford Capstone |
| AUMF 2693 | Ford Climate Control |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| SPCH 1113 | Intro to Speech Communications or |
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| SPCH 1113 | Intro to Speech Communications |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| BADM 1113 | Introduction to Business |
| ECON 2103 | Microeconomics |
| ECON 2203 | Macroeconomics |
| MGMT 2243 | Small Business Management |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

INTERDEPARTMENTAL REQUIREMENTS: 4 CREDIT HOURS

GENERAL TECHNOLOGIES (4 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| GTGE 1111 | College Cornerstone |
| CS 1013 | Computer Literacy & Applications |



AUTOMOTIVE SERVICE TECHNOLOGY – GM ASEP

ASSOCIATE IN APPLIED SCIENCE (89 CREDIT HOURS)

The General Motors sponsored GM-ASEP program prepares students to become automotive service technicians in high tech General Motors dealerships located throughout the country.

Alternating sessions of on-campus study and paid internships for six semesters leads to the Associate in Applied Science degree. This method of alternating study with the internship is a highly successful method of quickly preparing new technicians for this rapidly growing field.

Most graduates start work as GM technicians at the dealership where they interned.

Enrollment accepted fall only.

PROGRAM ENTRY REQUIREMENTS:

1. Meet institutional requirements and
2. Obtain an approved dealer sponsor.

For more detailed information, please contact the Automotive Technologies Division office at 918-293-5390.



DEPARTMENTAL REQUIREMENTS: 62 CREDIT HOURS

GENERAL MOTORS (62 CREDIT HOURS)

| | |
|-----------|--|
| AUMG 1062 | College & Career Cornerstone: Intro to GM Automotive Service |
| AUMG 1122 | GM Automotive Engines I |
| AUMG 1132 | GM Automotive Engines II |
| AUMG 1142 | GM Automotive Brake Systems I |
| AUMG 1152 | GM Automotive Brake Systems II |
| AUMG 1162 | GM Specialized Electronics Training I |
| AUMG 1172 | GM Specialized Electronics Training II |
| AUMG 1214 | Internship |
| AUMG 1272 | GM Manual Drivetrain I |
| AUMG 1292 | GM Steering & Suspension I |
| AUMG 1302 | GM Automotive Electrical Systems I |
| AUMG 1312 | GM Manual Drivetrain II |
| AUMG 1314 | Internship |
| AUMG 1322 | GM Steering & Suspension II |
| AUMG 1342 | GM Automotive Electrical Systems II |
| AUMG 2522 | GM Automatic Transmissions & Transaxles I |
| AUMG 2532 | GM Automotive Heating & Air Conditioning I |
| AUMG 2544 | Internship |
| AUMG 2582 | GM Automotive Engine Performance |
| AUMG 2632 | GM Automatic Transmissions & Transaxles II |
| AUMG 2672 | GM Automotive Heating & Air Conditioning II |
| AUMG 2682 | GM Capstone |
| AUMG 2812 | Internship (12 credit hours) |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (3 CREDIT HOURS)

| | |
|-----------|------------------------|
| ENGL 1033 | Technical Writing I or |
| ENGL 1113 | Freshman Composition I |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| BADM 1113 | Introduction to Business |
| ECON 2103 | Microeconomics |
| ECON 2203 | Macroeconomics |
| MGMT 2243 | Small Business Management |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS OR COMMUNICATION ARTS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| ENGL 2033 | Technical Writing II |

INTERDEPARTMENTAL REQUIREMENTS: 3 CREDIT HOURS

GENERAL TECHNOLOGIES (3 CREDIT HOURS)

| | |
|---------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
|---------|----------------------------------|



AUTOMOTIVE SERVICE TECHNOLOGY – MOPAR CAP

ASSOCIATE IN APPLIED SCIENCE (89 CREDIT HOURS)

The College Automotive Program (CAP) is a six semester Associate in Applied Science degree program designed to prepare graduates to work as a Chrysler, Jeep or Dodge Service Technician.

The unique aspect of this program is its alternating internships. A student intensively studies and applies service techniques in OSU Institute of Technology's outstanding automotive service technology facilities for half of each semester. The other half of each semester is spent in a paid internship at a dealer in the hometown area of the student, where the student is able to immediately apply what was learned.

This rotation is repeated for six semesters with the level of competency development increasing until graduation when the student internship is typically converted to full time employment.

Enrollment accepted fall only.

PROGRAM ENTRY REQUIREMENTS:

1. Meet institutional requirements and
2. Obtain an approved dealer sponsor.

For more detailed information, please contact the Automotive Technologies Division office at 918-293-5390.



DEPARTMENTAL REQUIREMENTS: 61 CREDIT HOURS

MOPAR (61 CREDIT HOURS)

| | |
|-----------|--|
| AUMC 1101 | Technology Fundamentals |
| AUMC 1102 | Steering & Suspension II |
| AUMC 1141 | Intro to Electrical Systems |
| AUMC 1151 | Body Mechanical Diagnosis & Adjustments |
| AUMC 1161 | Steering & Suspension I |
| AUMC 1201 | Brake System II |
| AUMC 1215 | Internship I |
| AUMC 1221 | Brake Systems II |
| AUMC 1241 | Electronic Control Systems |
| AUMC 1251 | Vehicle Communications |
| AUMC 1261 | Body Electrical Systems |
| AUMC 1271 | Body System Diagnosis and Adjustments |
| AUMC 1301 | Manual Transmissions I |
| AUMC 1305 | Internship II |
| AUMC 1321 | Automatic Transmissions I |
| AUMC 1402 | Manual Transmissions II |
| AUMC 1412 | Automatic Transmissions II |
| AUMC 2401 | Heating & Air Conditioning I |
| AUMC 2403 | Advanced Drivelines |
| AUMC 2405 | Internship III |
| AUMC 2412 | Heating & Air Conditioning II |
| AUMC 2501 | Engine Performance |
| AUMC 2505 | Internship IV |
| AUMC 2521 | Engine Fuel Systems |
| AUMC 2542 | Engines I |
| AUMC 2602 | Diesel Mechanical & Fuel Injection Systems |
| AUMC 2605 | Internship V |
| AUMC 2614 | Capstone |
| AUMC 2662 | Engines II |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (3 CREDIT HOURS)

| | |
|-----------|------------------------|
| ENGL 1113 | Freshman Composition I |
|-----------|------------------------|

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| BADM 1113 | Introduction to Business |
| ECON 2103 | Micro Economics |
| ECON 2203 | Macro Economics |
| MGMT 2243 | Small Business Management |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
|-----------|--------------------------------|

INTERDEPARTMENTAL REQUIREMENTS: 4 CREDIT HOURS

GENERAL TECHNOLOGIES (4 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| GTGE 1111 | College Cornerstone |
| CS 1013 | Computer Literacy & Applications |



AUTOMOTIVE SERVICE TECHNOLOGY – PRO-TECH

ASSOCIATE IN APPLIED SCIENCE (89 CREDIT HOURS)

The Pro-Tech Automotive Service Technology Program is a cooperative two-year college level student technician-training program, which leads to an Associate in Applied Science degree with a major in Automotive Technology.

The Automotive Technology Department administers the Program's activities working in close relationship with automotive service industry associations, suppliers and distributors.

The program is by and for professional automotive independent service centers. The student spends six semesters alternating study and practice on campus and at an independent service center. This unique design allows each potential technician to immediately apply automotive service principles and techniques to the real world of work.

The plan calls for seven and one half weeks of each semester on campus and seven and one half weeks as a paid intern at an independent service center.

Enrollment accepted fall only.

For more detailed information, please contact the Automotive Technologies Division office at 918-293-5390.



DEPARTMENTAL REQUIREMENTS: 59 CREDIT HOURS

AUTOMOTIVE TECHNOLOGY (59 CREDIT HOURS)

| | |
|-----------|--|
| AUMP 1031 | Career & College Cornerstone |
| AUMP 1051 | Automotive Engines I |
| AUMP 1052 | Automotive Engines II |
| AUMP 1055 | Internship I or |
| AUMP 1901 | Internship I # and |
| AUMP 1904 | Electrical/Electronic Skills * |
| AUMP 1072 | Electrical/Electronics Training I |
| AUMP 1082 | Electrical/Electronics Training II |
| AUMP 1202 | Electrical Diagnosis |
| AUMP 1231 | Automotive Brake Systems I |
| AUMP 1242 | Automotive Brake Systems II |
| AUMP 1281 | Automotive Suspension & Steering I |
| AUMP 1282 | Automotive Suspension & Steering II |
| AUMP 1285 | Internship II or |
| AUMP 1912 | Brake Skills I * and |
| AUMP 1913 | Internship II # |
| AUMP 1371 | Automotive Manual Drivetrain I |
| AUMP 1372 | Automotive Manual Drivetrain II |
| AUMP 1391 | Automotive Automatic Transmissions/ Transaxles I |
| AUMP 1392 | Automotive Automatic Transmissions/ Transaxles II |
| AUMP 1395 | Internship III or |
| AUMP 1931 | Internship III # and |
| AUMP 1934 | Suspension & Steering Skills * |
| AUMP 2471 | Automotive Engine Performance I |
| AUMP 2472 | Automotive Engine Performance II |
| AUMP 2475 | Internship IV or |
| AUMP 1922 | Brake Skills II * and |
| AUMP 1923 | Internship IV # |
| AUMP 2591 | Automotive Heating & AC I |
| AUMP 2592 | Automotive Heating & AC II |
| AUMP 2595 | Internship V or |
| AUMP 1941 | Internship V # and |
| AUMP 1944 | Engine Performance Skills * |
| AUMP 2694 | Automotive Capstone |
| AUMP 2782 | Advanced Automotive Diagnostics |

* These courses can be taken at participating Alliance Technology Centers

Internship courses for career technology center graduates who have earned credit while attending an approved Alliance Technology Center

GENERAL EDUCATION REQUIREMENTS: 27 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|---|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------|
| ENGL 1033 | Technical Writing I |
| ENGL 2033 | Technical Writing II |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| BADM 1113 | Introduction to Business |
| ECON 2103 | Microeconomics |
| ECON 2203 | Macroeconomics |
| MGMT 2243 | Small Business Management |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 3 CREDIT HOURS

GENERAL TECHNOLOGIES (3 CREDIT HOURS)

| | |
|---------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
|---------|----------------------------------|



AUTOMOTIVE SERVICE TECHNOLOGY – TOYOTA T-TEN

ASSOCIATE IN APPLIED SCIENCE (84 CREDIT HOURS)

The student who enrolls in and successfully completes the Toyota T-TEN (Technician Training and Education Network) program can expect to graduate in two years with an Associate in Applied Science degree.

This program is unique because it allows a student to alternate on-campus learning experience seven and one-half weeks with paid dealership internship experiences seven and one-half weeks.

This perfect combination of study and application for six semesters leads to a job as a highly qualified Toyota or Lexus technician.

Enrollment accepted fall only.

PROGRAM ENTRY REQUIREMENTS:

1. Meet institutional requirements and
2. Obtain an approved dealer sponsor.

For more detailed information, please contact the Automotive Technologies Division office at 918-293-5390.



Toyota • Scion • Lexus
TECHNICIAN DEVELOPMENT

DEPARTMENTAL REQUIREMENTS: 59 CREDIT HOURS

AUTOMOTIVE TECHNOLOGY (59 CREDIT HOURS)

| | |
|-----------|--|
| TTEN 1631 | Brake Fundamentals |
| TTEN 1641 | Suspension Fundamentals |
| TTEN 1651 | Electrical Fundamentals |
| TTEN 1661 | Measurement Fundamentals |
| TTEN 1671 | Engine Fundamentals |
| TTEN 1702 | Dealer Service Information/ Professional Technician Portfolio |
| TTEN 1704 | Toyota Electrical Systems |
| TTEN 1723 | Toyota Minor Service |
| TTEN 1812 | Toyota Body Electrical |
| TTEN 1823 | Toyota Brake Systems |
| TTEN 1824 | Internship |
| TTEN 1913 | Toyota Engine Repair |
| TTEN 1923 | Toyota Climate Control System |
| TTEN 1943 | Internship |
| TTEN 2114 | Toyota EFI and Computer Control Systems |
| TTEN 2133 | Toyota Engine Control Diagnosis |
| TTEN 2134 | Internship |
| TTEN 2233 | Toyota Manual Drivetrains |
| TTEN 2234 | Toyota Automatic Transmissions |
| TTEN 2253 | Internship |
| TTEN 2343 | Toyota Suspensions/NVH |
| TTEN 2353 | Toyota Capstone |

GENERAL EDUCATION REQUIREMENTS: 18 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| SPCH 1113 | Intro to Speech Communications or |
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| SPCH 1113 | Intro to Speech Communications |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

INTERDEPARTMENTAL REQUIREMENTS: 7 CREDIT HOURS

BUSINESS ADMINISTRATION OR PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|-------------------|
| BADM 2063 | Business Law I or |
| PHIL 1213 | Ethics |

GENERAL TECHNOLOGIES (4 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| GTGE 1111 | College Cornerstone |
| CS 1013 | Computer Literacy & Applications |



Construction Technologies Division

AIR CONDITIONING & REFRIGERATION TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (90 CREDIT HOURS)

Reap the career rewards of job security and variety and make great money with an Associate in Applied Science Degree in Air Conditioning and Refrigeration Technology from OSU Institute of Technology at Okmulgee.

Graduates are sought after in this field because the construction industry nationwide needs at least 210,000 new technicians each year for the next ten years to meet its demands.

The national average pay is \$35,000 to \$45,000, and some make \$75,000 or more. Recent graduates averaged about \$38,000 to \$50,000 a year.

Businesses in this field also provide insurance and benefits and many pay bonuses.

With an ACR Technology Degree, graduates may work for a small company with one or two technicians or a Fortune 500 firm. This career option allows the graduate the flexibility to work on ice-making machines down the street or an oil platform in the Gulf of Mexico.

An ACR Technology degree will prepare you to work in nine specialty areas that include more than 25 different positions.

OSU Institute of Technology has produced quality technicians for more than 60 years. Remarkably, the program has placed 90 percent of graduates for the last 20 years.

One hundred percent of our recent graduates who wanted a job, got one, and many had multiple job offers. OSU Institute of Technology's four classrooms and eight working labs set us apart from other programs.

Some of these are:

- Electrical controls with many, many trainers
- Unitary refrigeration with 20 ice machines
- Systems controls (teaching DDC and Energy Management Systems)
- Commercial refrigeration and its equipment

The program includes classroom work and ample hands-on lab work. You will have two eight-week paid company-sponsored internships where you will make \$10 to \$15 per hour. While this will help you pay for your education, other financial help is available.

With an ACR Technology Degree from OSU Institute of Technology, you can have the great career you want.

Enrollment in Internships requires department approval and Institution 2.5 GPA.

Contact the Air Conditioning & Refrigeration Technology Program office today for more detailed information, at 918-293-5304.

DEPARTMENTAL REQUIREMENTS: 63 CREDIT HOURS

AIR CONDITIONING & REFRIGERATION TECHNOLOGY (63 CREDIT HOURS)

| | |
|----------|---|
| ACR 1111 | EPA Certification Information |
| ACR 1121 | Introduction to Air Conditioning & Refrigeration Technology |
| ACR 1126 | ACR System Application |
| ACR 1203 | Electrical Controls |
| ACR 1206 | Electrical Control Applications |
| ACR 1336 | Residential Air Conditioning & Heating Systems |
| ACR 1343 | Electronic Control Applications |
| ACR 1344 | Unitary Refrigeration |
| ACR 2406 | Commercial Refrigeration Applications |
| ACR 2443 | Systems Controls |
| ACR 2513 | Air Systems Design |
| ACR 2603 | Commercial Air Conditioning |
| ACR 2616 | Air Conditioning & Refrigeration Technology Capstone |
| ACR 2806 | Internship I and |
| ACR 2906 | Internship II or |
| ACR 2912 | Internship (Fall Semester) |

DEPARTMENTAL ELECTIVES: 3 CREDIT HOURS

GENERAL EDUCATION REQUIREMENTS: 21 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

HUMANITIES (3 CREDIT HOURS)

| | |
|-----------|---------------------------------|
| HUM 1013 | Humanities I |
| HUM 1033 | Humanities II |
| HUM 2243 | Native Peoples of North America |
| PHIL 1213 | Ethics |
| PHIL 1313 | Introduction to Logic |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

INTERDEPARTMENTAL REQUIREMENTS: 3 CREDIT HOURS

GENERAL TECHNOLOGIES (3 CREDIT HOURS)

| | |
|---------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
|---------|----------------------------------|



CONSTRUCTION TECHNOLOGY – CONSTRUCTION MANAGEMENT

ASSOCIATE IN APPLIED SCIENCE
(90 CREDIT HOURS)

Employment of construction managers is projected to grow 16 percent from 2012 to 2022, faster than the average for all occupations. Construction managers will be needed as overall construction activity increases over the coming decade, according to the Bureau of Labor Statistics forecasts. Continued strong growth in the commercial and retail construction industry, coupled with an aging skilled construction force means there is a severe shortage of skilled workers.

“The entry level salary range for OSUIT grads is in the 40s; some start out as high as \$52,000 a year,” says an instructor in the program and a former project engineer with Flintco Construction Company. “It also is common to get a signing bonus, moving allowance and benefits.”

Current students and alums agree on the quality of the program.

“It’s a good school,” Ronald Hoggard, a student from Nashville, Tenn., says. “I like it here. Instructors are really willing to help you.”

Terrell Hoagland, alumnus and a project engineer for Flintco Construction Company, says, “The quality of the faculty is excellent. The instructors make the program.”

The ideal recruit has a good work ethic, is a hands-on learner, a problem solver, and has good people skills. A construction background and a minority or female status are plusses.

Graduates from the Construction Management Option begin careers in the industry as entry level managers and can expect opportunities with general contractors, subcontractors, material suppliers or other industry-related businesses. The degree program emphasizes supervisory, administrative, and management responsibilities coupled with technical hands-on knowledge.

Graduates can qualify for positions such as office engineer, field engineer, safety engineer, superintendent, project engineer, foreman, estimator, scheduler, expeditor, quality control engineer, inspector, or independent contractor.

- Future employment of construction managers is expected to remain strong
- 2012 Median Pay was \$82,790 per year, or \$39.80 per hour. Great hands on labs & real life situations in each course.
- Two paid internships in which students get real world experiences and make an average of \$10,080.00

Enrollment in Internships requires department approval and 2.5 GPA.

For more detailed information, please contact the Construction Technologies office at 918-293-4742.

DEPARTMENTAL REQUIREMENTS: 63 CREDIT HOURS

CONSTRUCTION TECHNOLOGY (38 CREDIT HOURS)

| | |
|----------|--|
| CNS 1111 | Introduction to Construction |
| CNS 1113 | Construction Materials & Procedures |
| CNS 1123 | Field Engineering I |
| CNS 1223 | Field Engineering II |
| CNS 1333 | Field Engineering III |
| CNS 1202 | Construction Blueprints and Specifications |
| CNS 1213 | Construction Safety OSHA 30 hour |
| CNS 1303 | Estimating I |
| CNS 2403 | Project Scheduling |
| CNS 2413 | Mechanical Systems |
| CNS 2432 | Construction Documents and Shop Drawing Review |
| CNS 2543 | Concrete Construction |
| CNS 2683 | CM Capstone Experience |
| CNS 2693 | Principles of Construction Management |

BUILDING CONSTRUCTION (19 CREDIT HOURS)

| | |
|----------|---------------------------------|
| BLD 2303 | Estimating II |
| BLD 2503 | Wall & Roof Systems |
| BLD 2513 | Interior Finishes & Specialties |
| BLD 2805 | Construction Internship |
| BLD 2905 | Construction Internship |

REQUIRED ELECTIVE (3 CREDIT HOURS)

| | |
|----------|------------------------------------|
| CNS 2093 | Special Project: Property of Soils |
|----------|------------------------------------|

APPROVED ELECTIVE (3 CREDIT HOURS)

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 |
| HIST 1493 | U.S. History Since 1865 |

HUMANITIES (3 CREDIT HOURS)

| | |
|-----------|-----------------------|
| HUM 1013 | Humanities I |
| HUM 1033 | Humanities II |
| PHIL 1213 | Ethics |
| PHIL 1313 | Introduction to Logic |

MATHEMATICS (6 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|------------------|
| POLS 1113 | U. S. Government |
|-----------|------------------|

INTERDEPARTMENTAL REQUIREMENTS: 3 CREDIT HOURS

GENERAL TECHNOLOGIES (3 CREDIT HOURS)

| | |
|---------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
|---------|----------------------------------|



CONSTRUCTION TECHNOLOGY – ELECTRICAL

ASSOCIATE IN APPLIED SCIENCE (90 CREDIT HOURS)

The skills and education needed to make a great salary, work anywhere in the world, or start a business are as close as an Associate in Applied Science Degree in Electrical Construction from OSU Institute of Technology.

Electrical construction technicians are in great demand all across the country, so let this degree put you in high demand.

The current aging electrician workforce is reaching retirement age. The number retiring is exceeding the number of new electricians entering the trade. This in conjunction with the growing demand for more licensed electricians creates a golden opportunity for someone wanting to make a good living as an electrician.

Oklahoma currently employs 6,300 electricians, so the chances of getting a job with an Electrical Construction Degree are almost guaranteed. Many jobs are available in the nation and in the world.

In the last several years, graduates who desired to work have been placed in well paying positions. The pay is excellent with an average starting salary of \$30,000 to \$50,000 a year.

The degree prepares the graduate to work in all areas of the electrical industry—residential, commercial, industrial, field engineer, national electrical code inspector, estimating and design, and the instruction is top notch.

Occupational variety is another reason to consider entering this field. Graduates work in many individual areas of specialty. Electives shape the specific path — engineering, construction or business.

Graduates may work as:

- An electrical apprentice for an electrical contractor
- A design and engineering assistant for an engineering firm
- A maintenance electrician for a manufacturing plant

Those advancing to journeyman and then electrical contractor can earn a higher salary at each level.

During the program, students experience two eight-week internships at a company and make approximately \$14 an hour. This is a great way to help pay for tuition. Other financial help is also available.

Enrollment in Internships requires department approval and 2.5 GPA.

If you're ready to let this degree put you in high demand, contact the Electrical Construction Program today at 918-293-4742.

DEPARTMENTAL REQUIREMENTS: 58 CREDIT HOURS

CONSTRUCTION TECHNOLOGY (11 CREDIT HOURS)

| | |
|----------|--|
| CNS 1113 | Construction Materials & Procedures |
| CNS 1202 | Construction Blueprints & Specifications |
| CNS 1213 | Construction Safety OSHA 30 hour |
| CNS 2413 | Mechanical Systems |

ELECTRICAL CONSTRUCTION TECHNOLOGY (41 CREDIT HOURS)

| | |
|-----------|--|
| ECNT 1102 | Introduction to the Electrical Trades |
| ECNT 1103 | DC & AC Circuit Analysis |
| ECNT 1233 | Electric Motors & Controls |
| ECNT 1253 | Electrical Wiring Methods I – Residential |
| ECNT 1313 | National Electrical Codes |
| ECNT 2473 | Electrical Wiring Methods II – Commercial |
| ECNT 2533 | Electrical Wiring Methods III – Industrial |
| ECNT 2613 | PLC for Electricians |
| ECNT 2616 | HV Electrical Capstone Experience |
| ECNT 2806 | Internship |
| ECNT 2906 | Internship |

APPROVED ELECTIVES (6 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| ACR 1126 | ACR System Applications |
| BADM 1113 | Intro to Business |
| BADM 2373 | Business Communications |
| BLD 1503 | Trade Skills Education I |
| BLD 1603 | Trade Skills Education II |
| BLD 2090 | Special Projects |
| BLD 2303 | Estimating II |
| CNS 1303 | Estimating I |
| CNS 2403 | Project Scheduling |
| ETDE 1243 | DC Electronics & Metrology |
| ETDE 1263 | AC Electronics & Photonics |
| ETDE 2113 | Introduction to PLCS |
| ETDE 2123 | PLC Applications |
| ETDG 1143 | Intro to Design/Drafting |
| ETDG 2143 | Architectural Modeling |
| MGMT 2243 | Small Business Management |
| MGMT 2313 | Principles of Management |
| PSYC 1113 | Introductory Psychology |
| PSYC 2313 | Psychology of Personal Adjustment |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 |
| HIST 1493 | U.S. History Since 1865 |

HUMANITIES (3 CREDIT HOURS)

| | |
|-----------|-----------------------|
| HUM 1013 | Humanities I |
| HUM 1033 | Humanities II |
| PHIL 1213 | Ethics |
| PHIL 1313 | Introduction to Logic |

MATHEMATICS (6 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

INTERDEPARTMENTAL REQUIREMENTS: 8 CREDIT HOURS

GENERAL TECHNOLOGIES (8 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
| GTCT 1183 | Welding |
| PLBG 1322 | Building Systems Layout |



CONSTRUCTION TECHNOLOGY – HIGH VOLTAGE LINEMAN

ASSOCIATE IN APPLIED SCIENCE
(90 CREDIT HOURS)

A better life is in reach with an Associate in Applied Science degree, specializing in the High Voltage Lineman Program from OSU Institute of Technology. Job opportunities and the demand for qualified individuals in this field are tremendous, and even more so, considering that 50% of the linemen currently in the trade will be eligible for retirement within the next five to ten years.

High voltage lineman jobs, on average, begin at \$45,000 a year. Many recent graduates have reported an annual salary that averages \$57,400, including overtime pay.

With the industry expecting 220,000 vacancies in the next five years, it critically needs employees. The most reliable businesses in the country—public service companies, utility construction companies, and power generating plants—want graduates from OSU Institute of Technology.

Earning this degree from OSU Institute of Technology can place graduates in an exciting, well-paying career with immediate advancement potential.

The High Voltage Program is two years in length and features hands-on instruction with equipment used in the industry. Along with classroom and lab work, students gain experience in the field through company-sponsored paid internships.

The program includes internships and most high voltage students are able to pay for their education with the five paid internships.

On average, students make \$14.00 per hour and work an average of 1,800 hours during the five semesters, totaling \$25,200. With overtime it is possible to make even more.

In keeping with our mission statement, OSUIT is committed to ensuring that our students are able to have personalized faculty and peer interaction. To this end, the high voltage program limits the number of students accepted in any term to 25 students. Students are admitted on a first-come, first-served basis, and must meet additional requirements beyond those for admission to the university.

Enrollment in Internships requires department approval and 2.5 GPA.

For more detailed information, please contact the Construction Technologies office at 918-293-4742.

**DEPARTMENTAL REQUIREMENTS:
63 CREDIT HOURS**

**HIGH VOLTAGE LINEMAN PROGRAM
(63 CREDIT HOURS)**

| | |
|-----------|---|
| HVLP 1121 | Intro to High Voltage Lineman Program |
| HVLP 1132 | High Voltage Lineman Safety |
| HVLP 1216 | Internship I |
| HVLP 1243 | High Voltage Pole Climbing Techniques |
| HVLP 1316 | Internship II |
| HVLP 1353 | DC/AC HV Circuit Analysis |
| HVLP 2416 | Internship III |
| HVLP 2483 | Principles of Operations of High Voltage Distribution Systems |
| HVLP 2516 | Internship IV |
| HVLP 2553 | Underground Distribution Systems |
| HVLP 2563 | Overhead Distribution Systems |
| HVLP 2643 | Advanced Distribution Systems |
| HVLP 2663 | Heavy Construction Equipment & Operation |
| HVLP 2673 | Transmission Principles |
| HVLP 2716 | Internship V |
| HVLP 2726 | High Voltage Lineman Capstone Experience |

**GENERAL EDUCATION REQUIREMENTS:
24 CREDIT HOURS**

**BEHAVIORAL SCIENCES
(3 CREDIT HOURS)**

| | |
|-----------|-----------------------------------|
| PSYC 1113 | Introductory Psychology |
| PSYC 2313 | Psychology of Personal Adjustment |
| SOC 1113 | Introductory Sociology |

**COMMUNICATION ARTS
(6 CREDIT HOURS)**

| | |
|-----------|----------------------------|
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 |
| HIST 1493 | U.S. History Since 1865 |

HUMANITIES (3 CREDIT HOURS)

| | |
|-----------|-----------------------|
| HUM 1013 | Humanities I |
| HUM 1033 | Humanities II |
| PHIL 1213 | Ethics |
| PHIL 1313 | Introduction to Logic |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 2003 | Business Math |

**ORAL COMMUNICATIONS
(3 CREDIT HOURS)**

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

**INTERDEPARTMENTAL REQUIREMENTS:
3 CREDIT HOURS**

**GENERAL TECHNOLOGIES
(3 CREDIT HOURS)**

| | |
|---------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
|---------|----------------------------------|



CONSTRUCTION TECHNOLOGY – WELDING#

ASSOCIATE IN APPLIED SCIENCE (90 CREDIT HOURS)

The Welding program is a cooperative alliance program conducted jointly between OSU Institute of Technology and several of Oklahoma's career technology centers. Welding courses are offered exclusively at the technology centers' campuses. Required general education and construction courses are offered at OSU Institute of Technology.

The Welding and Metal Fabrications industry offers vast opportunities with great pay for an individual who has developed skills that are needed in the Construction Industry. With the nation's Manufacturing industry, Pipeline industry and Construction industry in good upward economical cycle, the demand for skilled welders and fitters are in extremely high demand. There are about 400,000 welders in the United States today. According to the Bureau of Labor Statistics the number of manual welders, especially those with a wide variety of skills, will increasingly be needed for sophisticated fabrication tasks and repair work that do not lend themselves to automation. Many of the job openings for welders will result from the need to replace experienced workers who are retiring. Please go to the American Welding Society web site for more information about careers in Welding: www.aws.org/education/career.html

In the Welding and Metal Fabrications program students will develop skills in welding, fit-up, fabrication and will possess the skills and knowledge to work at an entry level in the field of structural welding.

Enrollment in Internships requires department approval and 2.5 GPA.

For more detailed information, please contact: Construction Technologies, 918-293-4742 or OSU Institute of Technology Cooperative Alliance Coordinator 918-293-4913.

DEPARTMENTAL REQUIREMENTS: 66 CREDIT HOURS

BUILDING CONSTRUCTION: (3 CREDIT HOURS)

BLD 2303 Estimating II

CONSTRUCTION TECHNOLOGY (25 CREDIT HOURS)

CNS 1113 Construction Materials & Procedures
CNS 1123 Field Engineering I
CNS 1202 Construction Blueprints & Specifications
CNS 1223 Field Engineering II
CNS 1303 Estimating I
CNS 2403 Project Scheduling
CNS 2413 Mechanical Systems
CNS 2432 Construction Documents & Shop Drawings Review
CNS 2543 Concrete Construction

WELDING (32 CREDIT HOURS)

(Offered at approved career technology centers)

WELD 1103 Reading Welding Blueprints
WELD 1113 Oxy-Fuel Welding & PlasmaCutting
WELD 1123 Intro to Shielded Metal Arc Welding
WELD 1203 Non-Destructive Testing
WELD 1213 Intro to Gas Tungsten Arc Welding
WELD 1302 Physical Characteristics & Mechanical Properties of Metals
WELD 2313 Intro to Flux Cored Arc Welding
WELD 2322 Joint Fit-Up and Alignment of Structural Steel
WELD 2323 Electrode Selection & Weld Quality
WELD 2405 Shielded Metal Arc Welding
WELD 2412 Joint Fit-up & Alignment of Pipe

APPROVED ELECTIVES (6 CREDIT HOURS)

CNS 2090 Special Projects
CNS 1333 Field Engineering III
CS 1013 Computer Literacy & Applications
MGMT 2243 Small Business Management
MATH 2003 Business Mathematics
WELD 2402 Welding Design

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

PSYC 1113 Introductory Psychology
PSYC 2313 Psychology of Personal Adjustment
SOC 1113 Introductory Sociology

COMMUNICATION ARTS (6 CREDIT HOURS)

ENGL 1113 Freshman Composition I and
ENGL 1213 Freshman Composition II or
ENGL 1033 Technical Writing I and
ENGL 2033 Technical Writing II

HISTORY (3 CREDIT HOURS)

HIST 1483 U.S. History to 1865
HIST 1493 U.S. History Since 1865

HUMANITIES (3 CREDIT HOURS)

HUM 1013 Humanities I
HUM 1033 Humanities II
PHIL 1213 Ethics
PHIL 1313 Introduction to Logic

MATHEMATICS (3 CREDIT HOURS)

MATH 1513 College Algebra
MATH 2003 Business Math

ORAL COMMUNICATIONS (3 CREDIT HOURS)

SPCH 1113 Intro to Speech Communications
SPCH 2313 Small Group Communications

POLITICAL SCIENCE (3 CREDIT HOURS)

POLS 1113 U.S. Government

This program is part of a cooperative alliance agreement and welding courses are available only at select career technology centers.



School of Culinary Arts



CULINARY ARTS

ASSOCIATE IN APPLIED SCIENCE (90 CREDIT HOURS)

This program provides skills and knowledge for the food service industry. Graduates are qualified for food production and supervisory employment. Culinary Arts students learn through hands-on experience in the institution's food service facilities under the direction of a faculty of experienced chefs. Our facilities include The State Room featuring gourmet buffet experience, and The Tech Room featuring a gourmet ala carte menu. Both serve weekday luncheons. Students demonstrate their creative culinary skills to several hundred diners each week.

Our Graduates are actively recruited by restaurants, country clubs, hotels, schools, and quick serve restaurants. Typical opportunities for recent graduates have included cooks, sous chefs and food production supervisors.

Students cannot have more than one (1) deficiency at the time of enrollment into the Culinary Arts program. Enrollment is accepted for Fall, Spring and Summer terms and is limited to 50 new students each term. Enrollment into the program is on a first-come, first-served basis.

Degree seeking students must have first priority at enrolling in Culinary Arts coursework. Non-degree seeking students may enroll the day prior to classes beginning.

For more detailed information, please contact the Culinary Arts office at 918-293-5030.

DEPARTMENTAL REQUIREMENTS: 62 CREDIT HOURS

CULINARY ARTS (52 CREDIT HOURS)

| | |
|----------|---------------------------|
| CUA 1102 | Culinary Theory |
| CUA 1135 | Skill Development I |
| CUA 1145 | Skill Development II |
| CUA 1151 | Food Safety |
| CUA 1162 | Food Service Management |
| CUA 1415 | Dining Room Operations |
| CUA 1294 | Breakfast Cookery |
| CUA 1311 | Meat Fabrication |
| CUA 1375 | Bread & Pastry Production |
| CUA 2415 | Garde Manger |
| CUA 2473 | American Cuisine |
| CUA 2552 | Purchasing |
| CUA 2623 | Culinary Arts Capstone |
| CUA 2809 | Culinary Internship |

ADDITIONAL PROGRAM REQUIREMENTS: 10 CREDIT HOURS

(Select two)

| | |
|----------|--------------------------|
| CUA 2315 | Buffet Cookery or |
| CUA 2575 | International Cookery or |
| CUA 2595 | Culinary Soft Skills* |

*Division Chair approval only

ENRICHMENT COURSES (SEMESTERS OFFERED VARIES)

| | |
|----------|-------------------------------------|
| CUA 1101 | Vegetable/Plant Based Cuisine |
| CUA 2101 | Exploring Wines |
| CUA 2123 | Advanced Baking |
| CUA 2183 | Showpiece |
| CUA 2213 | Contemporary American Restaurant |
| CUA 2285 | Modern Cuisine Experimental Kitchen |
| CUA 2415 | Vegetable Carving |

GENERAL EDUCATION REQUIREMENTS: 18 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II or |
| SPCH 1113 | Intro to Speech Communications or |
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

INTERDEPARTMENTAL REQUIREMENTS: 4 CREDIT HOURS

GENERAL TECHNOLOGIES (4 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| GTGE 1111 | College Cornerstone or |
| ORIE 1011 | College Strategies |
| CS 1013 | Computer Literacy & Applications |

DEPARTMENTAL APPROVED ELECTIVES (6 CREDIT HOURS)

From Culinary Arts, Health, Social Science, Philosophy, Business, or other approved elective.

Engineering Technologies Division

ENGINEERING TECHNOLOGIES – CIVIL ENGINEERING/ SURVEYING TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (75 CREDIT HOURS)

Civil Engineering Technicians are the backbone of their industry. Construction, manufacturing, petrochemical and many other industries depend on engineering technicians to oversee construction of their facilities and infrastructures. The specific academic areas included in the Civil/Survey Technology Option include design/drafting, surveying and civil engineering technology. Courses in these areas are taught by faculty with years of industry experience and solid academic credentials. Technicians are charged with implementing the design strategies of engineers and therefore must learn the application portion of the engineering discipline. OSUIT students learn to apply engineering technology in state-of-the-art laboratories using the latest equipment.

Students completing the Civil/Surveying Technology specialty have the option of articulating into the Bachelor of Technology in Civil Engineering Technology degree. A specific sequence of courses is required to insure seamless transition from the AAS to BT degree. Graduates from other associate degrees may be required to take bridge courses prior to entering the bachelor degree program.

The surveying curriculum within the CET degree teaches students advanced problem solving and technical skills as well, but in a constantly changing environment that ranges from indoor office work to outdoor field work while using the latest technology in surveying tools, including GPS, GIS, and total stations. The program prepares students to utilize this technology in a variety of surveying tasks which include property line location, topographic surveys, and construction applications.

Students must complete all technical courses with a "C" or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies – Civil Engineering/ Surveying Technology AAS degree may be found on page 65.

TECHNICAL COURSE REQUIREMENTS: 17 CREDIT HOURS

| | |
|-----------|--------------------------|
| ETDG 1143 | Intro to Design/Drafting |
| ETDG 1192 | Applied AutoCAD |
| ETDG 2663 | Civil Applications |
| ETDG 2674 | Civil Drafting |
| CET 2805 | Internship |

SURVEY EMPHASIS REQUIREMENTS: 10 CREDIT HOURS

| | |
|-----------|--------------------|
| SURV 1011 | Intro to Surveying |
| SURV 2303 | Surveying I |
| SURV 1223 | Land Law I |
| SURV 2223 | Land Law II |

CIVIL EMPHASIS REQUIREMENTS: 8 CREDIT HOURS

| | |
|----------|---------------------|
| CET 2123 | Properties of Soils |
| CET 2212 | Transportation |
| CET 2323 | Statics |

GENERAL EDUCATION REQUIREMENTS 40 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

MATHEMATICS (13 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |
| MATH 2144 | Calculus I |
| MATH 2153 | Calculus II |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |
| POLS 1113 | U.S. Government |

ORAL COMMUNICATIONS

(3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

SCIENCE (8 CREDIT HOURS)

| | |
|-----------|-------------------|
| PHYS 1114 | General Physics I |
| CHEM 1314 | Chemistry I |

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
|-----------|--------------------|



ENGINEERING TECHNOLOGIES – CIVIL ENGINEERING TECHNOLOGY

BACHELOR OF TECHNOLOGY (126 CREDIT HOURS)

ABET accreditation, which is voluntary and achieved through a peer review process, provides assurance that a college or university program meets the quality standards established by the profession for which the program prepares its students.

The Bachelor of Technology degree in Civil Engineering Technology teaches students problem solving and technical skills in an application-focused, team-based environment using real world projects. The degree plan prepares graduates for high performance jobs using technologically advanced civil engineering design tools. Graduates from the program will be highly effective engineering technologists with experience in both the theoretical and the application of theory to the solution of civil engineering problems.

Individuals interested in Civil Engineering Technology can expect the career opportunities to remain stable. Additionally, due to the growing number of retiring engineers, the number of position vacancies will be greater than the number of qualified baccalaureate degree graduates.

This technology-intensive, application-focused baccalaureate degree is offered through OSU Institute of Technology's Engineering Technologies Division, which has a tradition for excellence in preparing individuals for exciting and successful careers. Working closely with industry leaders to incorporate the latest business practices and emerging technologies into the program, OSU Institute of Technology's experienced, expert instructors provide students one-on-one attention, hands-on technical skills, and general education classes so graduates are positioned to quickly move to the top of their fields. Engineering Technologies utilizes an innovative approach to education that prepares high-performance workers for world-class businesses and industries.

For more information or to schedule a tour of our campus and division contact our office at 918-293-5150.

Students must complete all technical courses with a "C" or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies BT degree may be found on page 65.

DEPARTMENTAL REQUIREMENTS: 77 CREDIT HOURS

TECHNICAL CORE REQUIREMENTS: 77 CREDIT HOURS

| | |
|-----------|--|
| CET 2103 | Construction Mgmt & Economics |
| CET 2123 | Properties of Soils |
| CET 2212 | Transportation |
| CET 2323 | Statics |
| CET 3114 | Strengths of Materials & Structural Analysis |
| CET 3123 | Dynamics |
| CET 3213 | Steel Structures |
| CET 3313 | Fluid Mechanics/Hydraulics |
| CET 3533 | Engineering Mathematics |
| CET 3543 | F.E. Exam Review |
| CET 4213 | Reinforced Concrete Design |
| CET 4224 | Hydrology |
| CET 4233 | Water/Waste Water Management |
| CET 4413 | Capstone |
| CET 4812 | BT Internship |
| ETDG 1143 | Introduction to Design/Drafting |
| ETDG 1192 | Applied AutoCAD |
| ETDG 2663 | Civil Technology Applications |
| ETDG 2674 | Civil Drafting |
| SURV 1011 | Introduction to Surveying |
| SURV 1223 | Land Law I |
| SURV 2223 | Land Law II |
| SURV 2303 | Surveying I |

GENERAL EDUCATION REQUIREMENTS: 48 CREDIT HOURS

ORAL COMMUNICATIONS (6 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| ENGL 3323 | Technical Writing III |
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

MATHEMATICS (13 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |
| MATH 2144 | Calculus I |
| MATH 2153 | Calculus II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 OR |
| HIST 1493 | U.S. History Since 1865 |

HUMANITIES (3 CREDIT HOURS):

Humanities Elective – 3 Credit Hours

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

SCIENCE (8 CREDIT HOURS)

| | |
|-----------|---------------------|
| CHEM 1314 | General Chemistry I |
| PHYS 1114 | General Physics I |

SOCIAL SCIENCE (3 CREDIT HOURS)

Social Science Elective – 3 hours

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
|-----------|--------------------|



ENGINEERING TECHNOLOGIES – CIVIL ENGINEERING TECHNOLOGY

CET Program Educational Objectives:

As an ABET certified baccalaureate program, the program has identified the following objectives and outcomes.

- Graduates will be able to function effectively as civil engineering technologists, and in related fields, regionally and nationally.
- Graduates will be capable of career advancement, professional development, and understanding the importance of life-long learning.
- Graduates will be able to communicate effectively in oral and written forms at both technical and interpersonal levels and can work in a team as required by the corporate community.
- Graduates will meet industry expectations in managing ethical, societal, and environmental issues in the practice of civil engineering technology.

CET Student Outcomes:

For baccalaureate degree programs, these student outcomes must include, but are not limited to, the following learned capabilities:

- an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
- an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
- an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;
- an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
- an ability to function effectively as a member or leader on a technical team;
- an ability to identify, analyze, and solve broadly-defined engineering technology problems;
- an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- an understanding of the need for and an ability to engage in self-directed continuing professional development;
- an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;

- a knowledge of the impact of engineering technology solutions in a societal and global context; and
- a commitment to quality, timeliness, and continuous improvement;

CET Program Outcomes:

Graduates of associate degree programs will, to the extent required to support program educational objectives:

- utilize principles, hardware, and software that are appropriate to produce drawings, reports, quantity estimates, and other documents related to civil engineering;
- conduct standardized field and laboratory tests related to civil engineering;
- utilize surveying methods appropriate for land measurement and/or construction layout;
- apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to civil engineering.

In addition, graduates of baccalaureate degree programs will, to the extent required to support program educational objectives.

- plan and prepare documents appropriate for design and construction;
- perform economic analyses and cost estimates related to design, construction, operations and maintenance of systems associated with civil engineering;
- select appropriate engineering materials and practices, and;
- perform standard analysis and design in at least three sub-disciplines related to civil engineering.

ENGINEERING TECHNOLOGIES – ELECTRICAL/ELECTRONICS & INSTRUMENTATION

ASSOCIATE IN APPLIED SCIENCE
(75 CREDIT HOURS)

Two concentrations are available under this specialization:

- Electrical/Electronics
- Instrumentation

Students should select one concentration based on career objectives.

Degree requirements for each concentration are found on the following page.

For more information or to schedule a tour of our campus and division contact our office at 918-293-5150.

Students must complete all technical courses with a “C” or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies AAS degree may be found on page 65.

ELECTRICAL/ELECTRONICS SPECIALIZATION

Graduates who enter the Oil and Gas industries may work in production and/or transportation areas, where they maintain, calibrate and install equipment and instrumentation related to finding and getting oil and gas out of the field and to the refineries and processing facilities. Additionally, there are a wide range of companies providing equipment and technology for field operations that demand high performance technicians. Graduates that find careers in the refining and processing of oil and gas will do similar activities such as calibrating, trouble shooting, and installing instrumentation and control systems.

The power generation sector uses graduates from this program to monitor and maintain the highly complex systems that supply the electrical power that supports our technologically intensive lifestyles. Graduates have employment opportunities in all areas of power generation, including power plants that are powered using coal, natural gas and nuclear energy as well as hydro-electric plants.

The program integrates engineering technology competency areas and employability skills. Instead of lecturing, faculty members facilitate learning using a hands-on approach where students learn by doing. Students work as individuals and in teams in realistic laboratory environments, to solve challenging “real world” problems. Students experience a multi-disciplinary program that allows them to become a highly productive team member in industry; often bridging the gap between the engineer and the layperson that is charged with implementing the design.

Through real world projects and the use of state of the art equipment, students explore the design, implementation and diagnosis of industrial and process automation and instrumentation. Industry support of the program allows for current industry standard equipment in the classroom, which allows graduates to enter the work place prepared to be successful.

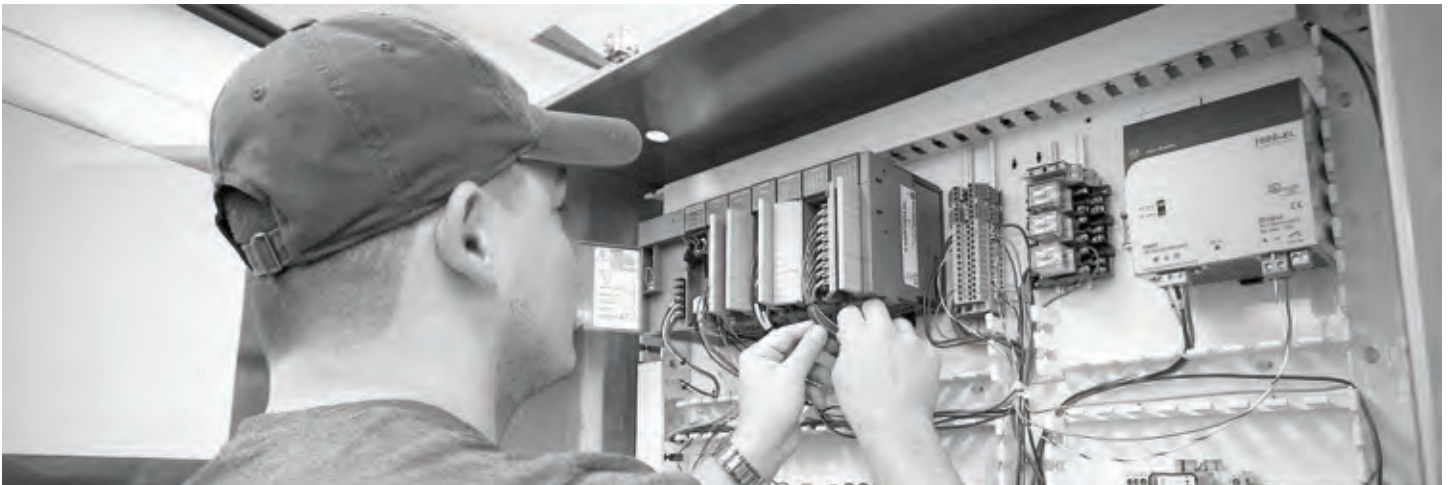
INSTRUMENTATION SPECIALIZATION

The program teaches students problem solving and technical skills in an application focused, team based environment using industry approved curriculum and laboratories. Although the program was specifically developed as a seamless path to the Instrumentation Technology-Bachelor of Technology degree, graduates of the program can find entry level employment in industries such as food processing, oil and gas, chemical processing, and manufacturing.

These industries require technologists that possess knowledge of automation and control as they strive to maintain their production facilities and processes in a productive and efficient manner. Automation Control Technologists install, operate, repair, and maintain the equipment and processes that industry uses to produce products. These technologists are called upon to work on a variety of systems including measurement instruments, programmable controls, hydraulic systems, pneumatic systems, robotics, and similar technology

The International Society of Automation notes positions in automation and control offer above average pay and benefits because of the level and skill and responsibility involved.

Working closely with industry leaders to incorporate the latest business practices and emerging technologies into the program, OSUIT’s experienced instructors provide students one-on-one attention, theory, hands-on technical skills, and general education classes so graduates are positioned to quickly move to the top of their field



ELECTRICAL/ELECTRONICS SPECIALIZATION

ASSOCIATE IN APPLIED SCIENCE
(75 CREDIT HOURS)

TECHNICAL COURSE REQUIREMENTS:
44 CREDIT HOURS

ELECTRICAL / ELECTRONICS
(44 CREDIT HOURS)

| | |
|-----------|------------------------------------|
| ETDE 1243 | DC Electronics & Metrology |
| ETDE 1263 | AC Electronic & Photonics |
| ETD 1102 | Basic Mechanics |
| ETDE 1343 | Electrical Motors & Controls |
| ETDE 1363 | Electronic Devices & Standards |
| ETDE 1373 | Digital Systems & Microcontrollers |
| ETDE 2113 | Introduction to PLCs |
| ETDE 2223 | Electrical Power Distribution |
| ETDE 2253 | Hydraulics & Pneumatics |
| ETDG 1143 | Introduction to Design/Drafting |
| ETDE 2273 | Electronic Control Devices |
| ETDE 2812 | Internship (12 credit hours) |

GENERAL EDUCATION REQUIREMENTS:
21 CREDIT HOURS

COMMUNICATION ARTS
(6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

MATHEMATICS (6 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |
| POLS 1113 | U.S. Government |

ADDITIONAL PROGRAM REQUIREMENTS:
7 CREDIT HOURS

ORAL COMMUNICATIONS
(3 CREDIT HOURS)

| | |
|-----------|----------------------------|
| SPCH 2313 | Small Group Communications |
|-----------|----------------------------|

SCIENCE (4 CREDIT HOURS)

| | |
|-----------|-------------------|
| PHYS 1114 | General Physics I |
|-----------|-------------------|

INTERDEPARTMENTAL REQUIREMENTS:
3 CREDIT HOURS

| | |
|-----------|------------------------|
| ORIE 1011 | College Strategies |
| ETD 2411 | Employment Exploration |
| ETD 1101 | Safety Applications |

INSTRUMENTATION SPECIALIZATION

ASSOCIATE IN APPLIED SCIENCE
(75 CREDIT HOURS)

TECHNICAL COURSE REQUIREMENTS:
35 CREDIT HOURS

ELECTRICAL / ELECTRONICS
(35 CREDIT HOURS)

| | |
|-----------|------------------------------------|
| ETDE 1243 | DC Electronics & Metrology |
| ETDE 1263 | AC Electronic & Photonics |
| ETD 1102 | Basic Mechanics |
| ETDE 1343 | Electrical Motors & Controls |
| ETDE 1363 | Electronic Devices & Standards |
| ETDE 1373 | Digital Systems & Microcontrollers |
| ETDE 2113 | Introduction to PLCs |
| ETDE 2223 | Electrical Power Distribution |
| ETDE 2253 | Hydraulics & Pneumatics |
| ETDG 1143 | Introduction to Design/Drafting |
| ETDE 2273 | Electronic Control Devices |
| ETDE 2123 | PLC Applications |

GENERAL EDUCATION REQUIREMENTS:
28 CREDIT HOURS

COMMUNICATION ARTS
(6 CREDIT HOURS.)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

MATHEMATICS (13 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |
| MATH 2144 | Calculus I |
| MATH 2153 | Calculus II |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |
| POLS 1113 | U.S. Government |

ADDITIONAL PROGRAM REQUIREMENTS:
11 CREDIT HOURS

ORAL COMMUNICATIONS
(3 CREDIT HOURS)

| | |
|-----------|----------------------------|
| SPCH 2313 | Small Group Communications |
|-----------|----------------------------|

SCIENCE (8 CREDIT HOURS)

| | |
|-----------|--------------------|
| PHYS 1114 | General Physics I |
| PHYS 1214 | General Physics II |

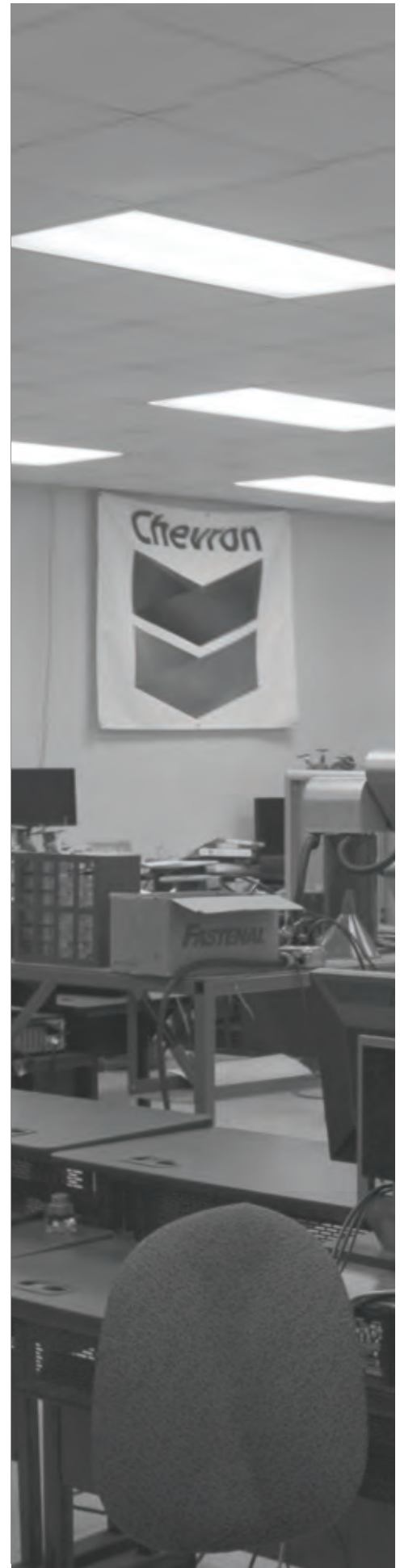
INTERDEPARTMENTAL REQUIREMENTS:
1 CREDIT HOUR

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
|-----------|--------------------|

COURSE SUBSTITUTION OPTIONS

The following courses are offered at OSUIT's learning site in the Mid-America Industrial Park located in Pryor, Oklahoma and can be used as substitution courses for either concentration with Division Chair approval.

| | |
|-----------|----------------------------------|
| ETD 2090 | Special Projects |
| ETDE 1333 | Industrial Electrical Systems |
| ETDE 2102 | Maintenance Theory & Application |
| ETDE 2112 | Mechanical Systems & Equipment |
| ETDE 2173 | Introduction to DCS Systems |
| ETDE 2343 | Motors and Controls II |
| ETDM 1153 | Introduction to Manufacturing |



ENGINEERING TECHNOLOGIES – ENGINEERING GRAPHICS & DESIGN/DRAFTING SPECIALIZATION

ASSOCIATE IN APPLIED SCIENCE (75 CREDIT HOURS)

21st century employees must work together to master new technologies and continually make their organizations more effective and more profitable. They must acquire and process essential information, analyze and troubleshoot systems, think creatively and critically, and communicate and work well with others across the organization. The ability to learn and change is critical.

Nearly all high-performance employers report a significant shortage of skilled workers to fill these critical jobs in their organizations and the shortage of skilled workers will continue to grow for many years. Recent studies indicate that the need for highly skilled technicians will be greater than the number of qualified workers. This presents very good career opportunities for graduates from the Engineering Graphics and Design/Drafting specialty. Graduates from this program are prepared to enter careers in the Architectural, Mechanical or Civil Design/Drafting fields. The program is designed such that students can complete the core course work for at least two of the specializations. The career opportunities in each of these areas are strong and are projected to continue seeing strong growth and demand.

The construction industry continues to be a strong part of Oklahoma's economy. As such, industry needs Design/Drafters that are able to provide high quality drawings and documentation in an efficient manner. While graduates from this program are not architects or engineers, they will work side by side with them converting their concepts and calculations into documents that will be used in the field to bring those ideas to reality.

Utilizing industry standard software (AutoCAD, SolidWorks, etc.) students experience a realistic multi-disciplinary learning environment that involves the manufacturing process, construction and surveying techniques.

The need for design/drafters that understand how to make the design less complex and more profitable is very strong.

The program integrates engineering technology competency areas and employability skills. Instead of lecturing, faculty members facilitate learning using a contextual approach where students learn by doing. Students work as individuals and in teams in realistic laboratory environments, to solve challenging "real world" problems. Students experience a multi-disciplinary program that allows them to become a highly productive team member in industry; often bridging the gap between the

engineer and the layperson that is charged with implementing the design. Students can expect to become more than just experts in CAD software.

Students must complete all technical courses with a "C" or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies AAS degree may be found on page 65.

TECHNICAL COURSE REQUIREMENTS: 48 CREDIT HOURS

ENGINEERING GRAPHICS TECHNOLOGY (48 CREDIT HOURS)

| | |
|-----------|---------------------------------|
| ETDG 1143 | Introduction to Design/Drafting |
| ETDG 1192 | Applied AutoCAD |
| ETDG 1253 | Technical Drawing |
| ETDG 1523 | Architectural Design |
| ETDG 2143 | Architectural Modeling |
| ETDG 2223 | Pipe Drafting |
| ETDG 2293 | Mechanical Design |
| ETDG 2423 | SolidWorks |
| ETDG 2523 | Design Drafting Capstone |
| ETDG 2623 | Building Structures |
| ETDG 2674 | Civil Drafting |
| ETDG 2812 | Design Drafting Internship |
| CET 2323 | Statics |

GENERAL EDUCATION REQUIREMENTS: 15 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|-----------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History since 1865 and |
| POLS 1113 | U.S. Government |

ADDITIONAL PROGRAM REQUIREMENTS: 10 CREDIT HOURS

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|----------------------------|
| SPCH 2313 | Small Group Communications |
|-----------|----------------------------|

MATHEMATICS (3 CREDIT HOURS)

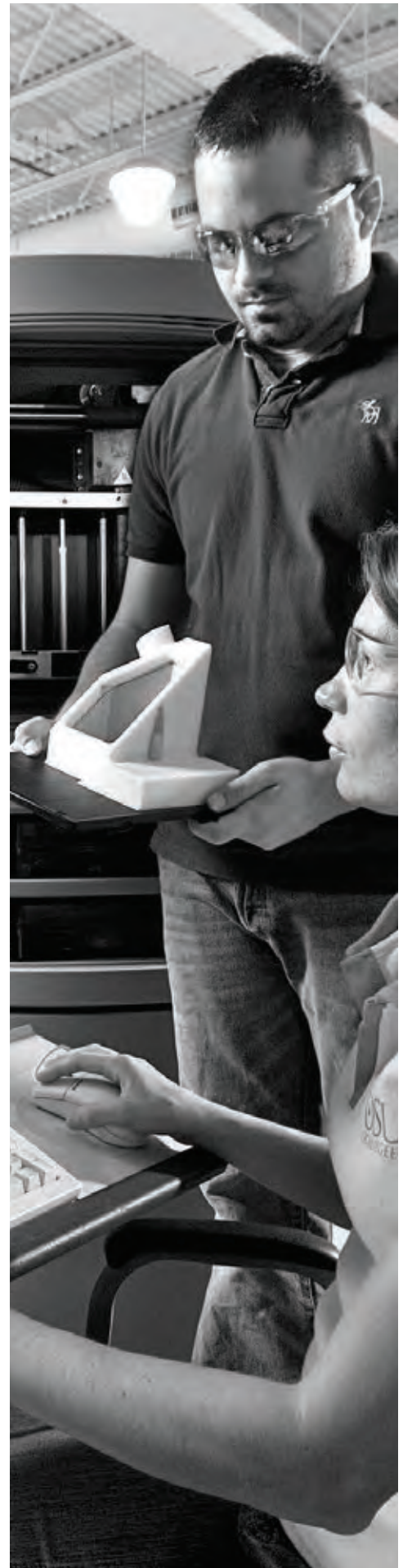
| | |
|-----------|--------------|
| MATH 1613 | Trigonometry |
|-----------|--------------|

SCIENCE (4 CREDIT HOURS)

| | |
|-----------|-------------------|
| PHYS 1114 | General Physics I |
|-----------|-------------------|

INTERDEPARTMENTAL REQUIREMENTS: 2 CREDIT HOURS

| | |
|-----------|------------------------|
| ORIE 1011 | College Strategies |
| ETD 2411 | Employment Exploration |



ENGINEERING TECHNOLOGIES – INSTRUMENTATION ENGINEERING TECHNOLOGY

BACHELOR OF TECHNOLOGY (128 CREDIT HOURS)

This program teaches students problem solving and technical skills in an application-focused, team-based environment using industry approved realistic laboratories. Program graduates are prepared for high performance jobs in the areas of instrumentation, control systems, process automation, and measurement. On the job, graduates will design, install, operate, maintain, and repair instrumentation and control systems in the areas of chemical processing, food processing, oil and gas production, manufacturing, energy production and other highly technical fields. Industry needs professionals competent in high-tech automation solutions to increase the consistency, quantity and quality of goods produced in Oklahoma to compete in global markets. The Bureau of Labor Statistics predicts the job market for instrumentation technologists will continue to grow.

The International Society of Automation notes positions in automation and control offer above-average pay and benefits because of the level of skill and responsibility involved. Because of their broad understanding of production processes, business acumen and problem solving skills, Bachelor of Technology graduates have excellent opportunities for advancement into management positions as companies continue to install and upgrade high-tech production systems. To meet stringent environmental requirements, companies are adding highly sophisticated instrumentation and control systems to extend the life of existing oil and gas refineries, food and chemical processing plants, and power generation facilities.

Working closely with industry leaders to incorporate the latest business practices and emerging technologies into the program, OSU Institute of Technology's experienced instructors provide students one-on-one attention, theory, hands-on technical skills, and general education classes so graduates are positioned to quickly move to the top of their fields.

For more information or to schedule a tour of our campus and division contact our office at 918-293-5150.

Students must complete all technical courses with a "C" or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies BT degree may be found on page 65.

TECHNICAL COURSE REQUIREMENTS: 74 CREDIT HOURS

INSTRUMENTATION ENGINEERING REQUIREMENTS: 74 CREDIT HOURS

| | | |
|------|------|------------------------------------|
| ETD | 1102 | Basic Mechanics |
| ETDE | 1243 | DC Electronics & Metrology |
| ETDE | 1263 | AC Electronic & Photonics |
| ETDE | 1343 | Electrical Motors & Controls |
| ETDE | 1363 | Electronic Devices & Standards |
| ETDE | 1373 | Digital Systems & Microcontrollers |
| ETDE | 2113 | Introduction to PLCs |
| ETDE | 3123 | Instrumentation |
| ETDE | 2123 | PLC Applications |
| ETDE | 2223 | Electrical Power Distribution |
| ETDE | 2253 | Hydraulics & Pneumatics |
| ETDE | 2273 | Electronic Control Devices |
| ETDE | 3133 | Process Measurement & Control |
| ETDE | 3213 | Project Mgmt and Engineering Econ |
| ETDE | 3223 | Industrial Networks |
| ETDE | 3313 | Heat Transfer and Fluid Mechanics |
| ETDE | 3513 | Programming for Instrumentation |
| ETDE | 3112 | Internship |
| ETDE | 4233 | Liquid & Gas Flow Measurement |
| ETDE | 4313 | Distributed Control Systems |
| ETDE | 4813 | Capstone |
| ETDG | 1143 | Introduction to Design/Drafting |

GENERAL EDUCATION REQUIREMENTS: 29 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | | |
|------|------|-------------------------|
| ENGL | 1113 | Freshman Composition I |
| ENGL | 1213 | Freshman Composition II |

MATHEMATICS (3 CREDIT HOURS)

| | | |
|------|------|-----------------|
| MATH | 1513 | College Algebra |
|------|------|-----------------|

HUMANITIES (6 CREDIT HOURS)

| | | |
|------|------|--------------|
| PHIL | 1213 | Ethics |
| HUM | 1013 | Humanities I |

SOCIAL SCIENCE (6 CREDIT HOURS)

| | | |
|------|------|-----------------------------|
| HIST | 1483 | U.S. History to 1865 or |
| HIST | 1493 | U.S. History since 1865 and |
| POLS | 1113 | U.S. Government |

SCIENCE (8 CREDIT HOURS)

| | | |
|------|------|---------------------|
| CHEM | 1314 | General Chemistry I |
| PHYS | 1114 | General Physics I |

ADDITIONAL PROGRAM REQUIREMENTS: 23 CREDIT HOURS

ORAL COMMUNICATIONS (6 CREDIT HOURS)

| | | |
|------|------|---------------------------|
| ENGL | 3323 | Technical Writing III |
| SPCH | 2313 | Small Group Communication |

MATHEMATICS (10 CREDIT HOURS)

| | | |
|------|------|--------------|
| MATH | 1613 | Trigonometry |
| MATH | 2144 | Calculus I |
| MATH | 2153 | Calculus II |

SCIENCE (4 CREDIT HOURS)

| | | |
|------|------|--------------------|
| PHYS | 1214 | General Physics II |
|------|------|--------------------|

SOCIAL SCIENCE (3 CREDIT HOURS)

| | | |
|------|------|-------------------------|
| PSYC | 1113 | Introductory Psychology |
|------|------|-------------------------|

INTERDEPARTMENTAL REQUIREMENTS: 2 CREDIT HOURS

| | | |
|------|------|------------------------|
| ORIE | 1011 | College Strategies |
| ETD | 2411 | Employment Exploration |



ENGINEERING TECHNOLOGIES – MANUFACTURING TECHNOLOGY SPECIALIZATION

ASSOCIATE IN APPLIED SCIENCE (75 CREDIT HOURS)

21st century employees must work together to master new technologies and continually make their organizations more effective and more profitable. They must acquire and process essential information, analyze and troubleshoot systems, think creatively and critically, and communicate and work well with others across the organization. The ability to learn and change is critical.

Nearly all high-performance employers report a significant shortage of skilled workers to fill these critical jobs in their organizations and the shortage of skilled workers will continue to grow for many years. Department of Labor data indicates that the shortage of skilled workers will exceed 10 million by the year 2020. Because of the changing nature of work and jobs, manufacturing technicians will need a higher level of education than previously required.

There is a common misconception that manufacturing jobs are not important and the US economy is less dependent on these jobs than before. However, the manufacturing sector currently contributes to over 25% of the gross domestic product. It was the largest contributor to economic growth in the 1990's. The average wages are 18% higher than the average of all other sectors. Additionally, 84% of manufacturing workers receive direct health benefits. This sector will continue to be a vital part of the US economy. Careers in this field will support a family and a good quality of life.

Graduates from the program are prepared to be more than just machine operators and programmers. The program teaches problem solving and process improvement skills. These skills are highly desired by industry. Students experience the complete manufacturing cycle of design, prototype, production and verification. This experience prepares graduates for a variety of career paths in the manufacturing sector. Additionally the program integrates the technology competencies with employability skills. In addition to lecturing, faculty members facilitate learning using a contextual approach. Students work as individuals and in teams in realistic laboratory environments, to solve challenging “real world” problems. Students learn in a \$1.3 million state of the art manufacturing lab. The equipment and software in these labs are identical to what graduates may use in their careers. This contextual approach allows students to become highly productive team members in industry. Graduates often bridge the gap between the engineer and the layperson that is charged with implementing the design.

Students must complete all technical courses with a “C” or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies AAS degree may be found on page 65.

TECHNICAL COURSE REQUIREMENTS: 46 CREDIT HOURS

MANUFACTURING TECHNOLOGY (46 CREDIT HOURS)

| | |
|-----------|--|
| ETD 1101 | Safety Applications |
| ETDG 1143 | Introduction to Design/Drafting |
| ETDG 2423 | SolidWorks |
| ETDM 1153 | Introduction to Manufacturing |
| ETDM 1333 | CNC Manufacturing Processes & Fixtures |
| ETDM 1343 | CNC Machine Programming |
| ETDM 1353 | CNC Machine Operation |
| ETDM 1413 | Conventional Manufacturing Processes & Tooling |
| ETDM 2203 | Automated Mfg Techniques |
| ETDM 2123 | Applied Manufacturing Processes |
| ETDM 2423 | Quality Systems & Practices |
| ETDM 2463 | CAM Applications |
| ETDM 2112 | Manufacturing Internship |

GENERAL EDUCATION REQUIREMENTS: 18 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|-----------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History since 1865 and |
| POLS 1113 | U.S. Government |

ADDITIONAL PROGRAM REQUIREMENTS: 10 CREDIT HOURS

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|--------------|
| MATH 1613 | Trigonometry |
|-----------|--------------|

SCIENCE (4 CREDIT HOURS)

| | |
|-----------|-------------------|
| PHYS 1114 | General Physics I |
|-----------|-------------------|

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
|-----------|--------------------|



ENGINEERING TECHNOLOGIES – PIPELINE INTEGRITY TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (75 CREDIT HOURS)

The world is dependent on oil and gas for a majority of its energy source. The movement of these products in an efficient manner is critical to the global economy. Using over two million miles of pipeline and associated equipment to transport hydrocarbon products, the pipeline industry is a large sector of the energy business. To place some perspective, imagine transporting one million barrels of oil per day at 100 dollars per barrel representing 36.5 billion dollars of product per year.

The large majority of the world's pipeline infrastructure is approaching 40 years of age. These pipelines will be called upon to continue to operate for many more decades as demand increases and new sources of these products are discovered. It is imperative that the integrity and security of these aging structures be well maintained and managed.

The need for skilled engineering technologists that install, operate, maintain, repair, and manage the integrity and security of pipelines is on the increase as a large portion of the current workforce in this arena approaches retirement age.

The Pipeline Integrity Technology Program enables students to develop the skills and knowledge required to be successful in the pipeline industry. Major topics include assessing pipeline damage and risk, corrosion control, regulations, safety, design, and integrity management.

The program integrates engineering technology competency areas and employability skills. Instead of lecturing, faculty members facilitate learning using a hands-on approach where students learn by doing. Students work individually as well as in teams using realistic laboratory environments, to solve challenging "real world" problems. Students experience a multi-disciplinary program that allows them to become a highly productive team member in industry, often bridging the gap between the engineer and the layperson that is charged with implementing the design.

Students must complete all technical courses with a "C" or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies AAS degree may be found on page 65.

TECHNICAL COURSE REQUIREMENTS: 50 CREDIT HOURS

PIPELINE INTEGRITY TECHNOLOGY (50 CREDIT HOURS)

| | | |
|------|------|--|
| CET | 2103 | Project Management |
| CNS | 1213 | Construction Safety |
| ETDE | 1133 | Introduction to Electrical/Electronics |
| PIT | 1113 | Introduction to Pipelines and Facilities |
| PIT | 1143 | Pipeline Materials and Components |
| PIT | 1283 | Processing and Product Handling |
| PIT | 1293 | Introduction to Corrosions Control |
| PIT | 2212 | Internship |
| PIT | 2183 | Regulations and Compliance |
| PIT | 2203 | Integrity Management Concepts I |
| PIT | 2243 | Pipeline Maintenance & Repair |
| PIT | 2263 | Integrity Management Concepts II |
| PIT | 2232 | NACE CP1 Prep |
| PIT | 2283 | Capstone |

GENERAL EDUCATION REQUIREMENTS: 18 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | | |
|------|------|----------------------------|
| ENGL | 1113 | Freshman Composition I or |
| ENGL | 1033 | Technical Writing I and |
| ENGL | 1213 | Freshman Composition II or |
| ENGL | 2033 | Technical Writing II |

MATHEMATICS (3 CREDIT HOURS)

| | | |
|------|------|-----------------|
| MATH | 1513 | College Algebra |
|------|------|-----------------|

PHILOSOPHY (3 CREDIT HOURS)

| | | |
|------|------|--------|
| PHIL | 1213 | Ethics |
|------|------|--------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | | |
|------|------|-----------------------------|
| HIST | 1483 | U.S. History to 1865 or |
| HIST | 1493 | U.S. History since 1865 and |
| POLS | 1113 | U.S. Government |

ADDITIONAL PROGRAM REQUIREMENTS: 3 CREDIT HOURS

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | | |
|------|------|-----------------------------------|
| SPCH | 1113 | Intro to Speech Communications or |
| SPCH | 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 4 CREDIT HOUR

| | | |
|------|------|----------------------------------|
| CS | 1013 | Computer Literacy & Applications |
| GTGE | 1111 | College Cornerstone |



ENGINEERING TECHNOLOGIES – POWER PLANT TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (90 CREDIT HOURS)

Electricity plays a vital role in modern American life, and the demand for this valuable resource continues to grow throughout Oklahoma and the United States. In recent years, power generation organizations have become dependent on increasingly complex information technologies, confronted new governmental regulations, and, like many workforce sectors, faced retirements among large numbers of their current workers. Not surprisingly, each of these changes has significantly impacted the availability of a sufficient number of well-prepared power production technical professionals.

Job prospects are expected to be good as many workers retire and new plants are built. According to the December 2013 Pricewaterhouse report, retirement in this field is predicted to be around 40% within the next five years.

Graduates of OSU Institute of Technology's Power Plant Technology program are the workforce of the future operating, maintaining and expanding the power generation capacity of this state and country. Students in the Power Plant Technology program utilize and train on cutting-edge technology and equipment for hands-on training on the same systems and machinery they will encounter in their career as a skilled plant operator. Paid internships, a requirement for those in the program, ensures students learn and gain real-world experience before they graduate.

In the two-year program, students explore all aspects of plant operations from water chemistry to electrical distribution. Students develop a broad understanding of plant instrumentation, mechanical and electrical systems. With 10 power plants within a one-hour drive of the OSUIT campus, site visits are part of the curriculum. Students have a chance to tour multiple plants, speak with operators, as well as invite guest speakers to the OSUIT campus.

Students must complete all technical courses with a "C" or better and maintain a 2.50 overall GPA. Admissions requirements for the Engineering Technologies AAS degree may be found on page 65.

TECHNICAL COURSE REQUIREMENTS: 50 CREDIT HOURS

POWER PLANT TECHNOLOGY (50 CREDIT HOURS)

| | |
|-----------|--|
| ETDE 1133 | Introduction to Electrical/Electronics |
| ETDP 1113 | Introduction to Power Plants |
| ETDE 1343 | Electrical Motors and Controls |
| ETDP 2112 | Piping & Instrument Diagrams |
| ETDP 2123 | Boilers |
| ETDP 2133 | Mechanical Systems |
| ETDP 2143 | Compliance Regulations |
| ETDP 2153 | Combustion Systems and processes |
| ETDP 2173 | Water Systems and Processes |
| ETDP 2216 | Capstone |
| ETDP 2223 | Prime Movers |
| ETDP 2313 | Thermal Efficiency |
| ETDP 2612 | Internship |

GENERAL EDUCATION REQUIREMENTS: 32 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-----------------|
| ENGL 1033 | Tech Writing I |
| ENGL 2033 | Tech Writing II |

MATHEMATICS (6 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

PHYSICAL SCIENCE (4 CREDIT HOURS)

| | |
|-----------|-------------------|
| PHYS 1114 | General Physics I |
|-----------|-------------------|

CHEMISTRY (4 CREDIT HOURS)

| | |
|-----------|---------------------|
| CHEM 1314 | General Chemistry I |
|-----------|---------------------|

MANAGEMENT (3 CREDIT HOURS)

| | |
|-----------|--------------------------|
| MGMT 2313 | Principles of Management |
|-----------|--------------------------|

SOCIAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|-----------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 and |
| POLS 1113 | U.S. Government |

ADDITIONAL PROGRAM REQUIREMENTS: 8 CREDIT HOURS

COMPUTER LITERACY (3 CREDIT HOURS)

| | |
|-----------|------------------------------------|
| GTIT 1133 | Computer Literacy and Applications |
|-----------|------------------------------------|

ELECTRICAL/ELECTRONICS TECHNOLOGY (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| ETDE 2253 | Hydraulics and Pneumatics |
|-----------|---------------------------|

INTERDEPARTMENTAL REQUIREMENTS: (2 CREDIT HOURS)

| | |
|-----------|------------------------|
| GTGE 1111 | College Cornerstone |
| ORIE 1011 | College Strategies |
| ETD 2411 | Employment Exploration |



ADMISSION REQUIREMENTS AND PROCESS FOR ENGINEERING TECHNOLOGIES

ASSOCIATE IN APPLIED SCIENCE DEGREE

The goal of OSU Institute of Technology is to provide students the opportunity to succeed and to ensure each is prepared academically at each step in their education. The Engineering Technologies Division programs of study are academically rigorous; however student success can be maximized with proper advisement and remediation when appropriate. The faculty of the division makes every effort to ensure each student is equipped with the necessary pre-requisite academic and technical skills to enter the program and to move to the next sequence of courses. To best accomplish this mission, while OSU Institute of Technology is an open-door institution, to be admitted to the Engineering Technologies Division to pursue an Associate in Applied Science in Engineering Technologies degree, the following steps are to be completed by the student:

1. Complete the OSU Institute of Technology admission process (i.e., application for admission, housing).
2. Demonstrate appropriate academic preparedness level by one of the following methods:
 - a. Score 19 or better on all ACT sub-scores, or
 - b. Achieve the following minimum scores on the COMPASS exam (administered by OSU Institute of Technology or approved off-campus site):
 - Reading Comprehension – 81
 - Writing Skills – 74
 - Pre-Algebra – 46
 - d. or successfully completed any required developmental course work.

Students that do not have the appropriate ACT or COMPASS scores may be provisionally admitted to the division pending successful completion of fundamental coursework and must meet with a divisional advisor to determine an enrollment plan. Students that do not meet the entry level computer literacy requirements are required to take Computer Literacy and Applications, CS 1013.

Students that meet the entrance requirements are expected to meet with an academic advisor prior to enrolling. Due to the math and science rigor associated with the Engineering Technologies programs, students that are admitted to the division under provision 2.a are required to meet with the academic advisors of the Engineering Technologies Division. During this advisement session, issues such as intervening time span between the last college math/science class and previous academic program of study can be evaluated to determine the most advantageous plan of study for the student.

For more information or to schedule a tour of our campus and division contact our office at 918-293-5150.

ADMISSION REQUIREMENTS AND PROCESS FOR ENGINEERING TECHNOLOGIES

BACHELOR OF TECHNOLOGY DEGREE

The goal of OSU Institute of Technology is to provide students the opportunity to succeed and to ensure each one is prepared academically at each step in their education. While OSU Institute of Technology is an open-door institution, to be admitted to the Engineering Technologies Division to pursue a Bachelor of Technology, the prospective student must:

1. Hold an Associate degree or higher that meets one of the following criteria:
 - a. Graduates with the AAS in Engineering Technologies from OSU Institute of Technology have the option of articulating into the Bachelor of Technology degree. A specific sequence of courses is required to insure seamless transition from the AAS to BT degree, OR
 - b. Graduates from other associate degrees may be required to take bridge courses prior to entering the bachelor degree program.
2. Complete the OSU Institute of Technology admission process (i.e. application for general admission and admission to the BT program, housing).

Students that meet the entrance requirements are expected to meet with an academic advisor prior to enrolling. Due to the math and science rigor associated with the Engineering Technologies programs, students that are admitted to the division under provision 1.b are required to meet with the academic advisors of the Engineering Technologies Division. During this advisement session, issues such as intervening time span between the last college math/science class and previous academic program of study can be evaluated to determine the most advantageous plan of study for the student.

HEVi Technologies Division

DIESEL & HEAVY EQUIPMENT TECHNOLOGY – AGGREKO SELECTECH ACCELERATED CAREER PROGRAM

ASSOCIATE IN APPLIED SCIENCE (88 CREDIT HOURS)

Aggreko has the world's largest fleet of rental generators, rental chillers, cooling towers, heaters, dehumidifiers and air handlers backed by the support of over 2,500 people in 29 countries from 118 locations. Aggreko generators range in size from 10 KW to 2 MW, and can be used for applications ranging from simple standalone power packages up to 100 MW power stations for grids. Aggreko supplies load banks and a complete range of accessories.

Industries which frequently use Aggreko solutions include: manufacturing, shipping and ship-building, utilities, events, entertainment and movies, petro-chemical, oil & gas exploration and mining, military, disaster relief and service industries, construction, and telecommunications.

Technical training on Aggreko serviced equipment and components include the latest developments in: Preventive and Predictive Maintenance; Diesel Engine Systems; Engine Electronic Systems; Power Generation Systems; York and Trane Chillers; Electric Motors and Motor Controls, Electrical Distribution, Synchronization and Load Sharing, and Diagnostic Procedures.

The two-year, six semester program incorporates approximately one-half of the time designated for technical / academic education. The remaining time is allocated for internships at Aggreko Service Centers. Each block of technical education and general education course work is followed by an internship experience that reinforces the technical education. Students can expect nearly 100% job placement, low faculty/student ratio, and paid internships.

PROGRAM ENTRY REQUIREMENTS:

1. Complete the OSU Institute of Technology admission process (i.e., application for admission, housing).

2. Demonstrate appropriate academic preparedness level by one of the following methods:

- a. Score 19 or better on all ACT sub-scores, or
- b. Achieve the following minimum scores on the COMPASS exam (administered by OSU Institute of Technology or approved off-campus site):
 - Reading Comprehension – 81
 - Writing Skills – 74
 - Pre-Algebra – 46
- d. or successfully completed any required developmental course work.

For more detailed information, please contact the Heavy Equipment & Vehicle Institute office at 918-293-4710.

DEPARTMENTAL REQUIREMENTS: 60 CREDIT HOURS

AGGREKO TECHNICIAN TRAINING PROGRAM (60 CREDIT HOURS)

| | |
|-----------|---|
| DHEA 1113 | Maintenance Fundamentals |
| DHEA 1123 | Diesel Engine I – Diesel Fundamentals and Maintenance |
| DHEA 1133 | Internship I |
| DHEA 1213 | DC/AC Electrical Fundamentals |
| DHEA 1233 | Internship II or |
| DHE 2033 | Diesel Skills I* |
| DHEA 1313 | Generator Systems I – Theory & Operation |
| DHEA 1323 | Aggreko Basic Refrigeration |
| DHEA 1343 | SEA Units and New Generation II Air Conditioners |
| DHEA 2412 | Internship III |
| DHEA 2413 | Aggreko Motor Starting and Motor Controls |
| DHEA 2423 | Electrical Distribution |
| DHEA 2433 | Internship IV or |
| DHE 2043 | Diesel Skills II* |
| DHEA 2523 | Diesel Engine II – Troubleshooting & Repair/Replacement |
| DHEA 2533 | Internship V or |
| DHE 2053 | Diesel Skills III* |
| DHEA 2543 | Oil Free Air Compressors – Theory & Operation |
| DHEA 2613 | Generator Systems II – Advanced Generator Controls |
| DHEA 2623 | Aggreko Capstone |

* Option available for career technology center students in approved cooperative alliance programs.

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| ENGL 1113 | Freshman Comp I and |
| ENGL 1213 | Freshman Comp II or |
| ENGL 1113 | Freshman Comp I and |
| ENGL 2033 | Technical Writing II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| BADM 1113 | Introduction to Business or |
| MGMT 2243 | Small Business Management or |
| MGMT 2913 | Leadership & Organizational Behavior |
| MGMT 2413 | Supervisory Management |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 4 CREDIT HOURS

GENERAL TECHNOLOGIES (4 CREDIT HOURS)

| | |
|-----------|------------------------------------|
| CS 1013 | Computer Literacy and Applications |
| GTGE 1111 | College Cornerstone |



DIESEL & HEAVY EQUIPMENT TECHNOLOGY – CAT® DEALER PREP

ASSOCIATE IN APPLIED SCIENCE (87 CREDIT HOURS)

CAT Dealer Prep is a Caterpillar dealer sponsored heavy equipment technician program. An important feature of the program is that each semester a student alternates seven and one-half weeks on campus and seven and one-half weeks at the dealership. This intensive method of study and practice prepares a high performance technician that the participating Caterpillar dealers demand. After six semesters of on-campus classes and paid internships, graduates typically stay with the dealership as a full time employee.

Technicians diagnose problems, disassemble and examine for defects and excessive wear, recondition or replace parts. They test and adjust components and systems to insure proper operation and to prevent failures. They use sophisticated diagnostic equipment. Personal computers are used for diagnostics, record keeping and communications within the shops, offices and with customers.

Individuals completing this program will find many opportunities with Caterpillar dealerships. Some of the areas within a dealership include, truck engines, industrial engines, heavy equipment, agricultural equipment and component specialist. A student can expect nearly 100% job placement rate, low faculty/student ratio and paid student internships.

PROGRAM ENTRY REQUIREMENTS:

1. Complete the OSU Institute of Technology admission process (i.e., application for admission, housing).
2. Demonstrate appropriate academic preparedness level by one of the following methods:
 - a. Score 19 or better on all ACT sub-scores, or
 - b. Achieve the following minimum scores on the COMPASS exam (administered by OSU Institute of Technology or approved off-campus site):
 - Reading Comprehension – 81
 - Writing Skills – 74
 - Pre-Algebra – 46
 - d. or successfully completed any required developmental course work.

For more detailed information, please contact the Heavy Equipment & Vehicle Institute office at 918-293-4710.

DEPARTMENTAL REQUIREMENTS: 56 CREDIT HOURS

CAT DEALER PREP (56 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| DHEC 1113 | Internship I |
| DHEC 1124 | Introduction to Caterpillar |
| DHEC 1134 | CAT Electrical Fundamentals |
| DHEC 1213 | CAT Hydraulic Fundamentals |
| DHEC 1223 | CAT Fuel Systems |
| DHEC 1233 | Internship II |
| DHEC 1313 | Internship III or |
| DHE 2033 | Diesel Skills I * |
| DHEC 1323 | CAT Engine Fundamentals |
| DHEC 1333 | CAT Machine Hydraulic Systems |
| DHEC 2413 | CAT Engine Diagnostics and Repair |
| DHEC 2423 | CAT Machine Electronic Systems |
| DHEC 2433 | Internship IV or |
| DHE 2043 | Diesel Skills II * |
| DHEC 2513 | Internship V or |
| DHE 2053 | Diesel Skills III * |
| DHEC 2524 | CAT Power Train I |
| DHEC 2532 | CAT Mobile Air Conditioning |
| DHEC 2603 | CAT Power Train II |
| DHEC 2636 | CAT Capstone |

* Option available for career technology center students in approved cooperative alliance programs.

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

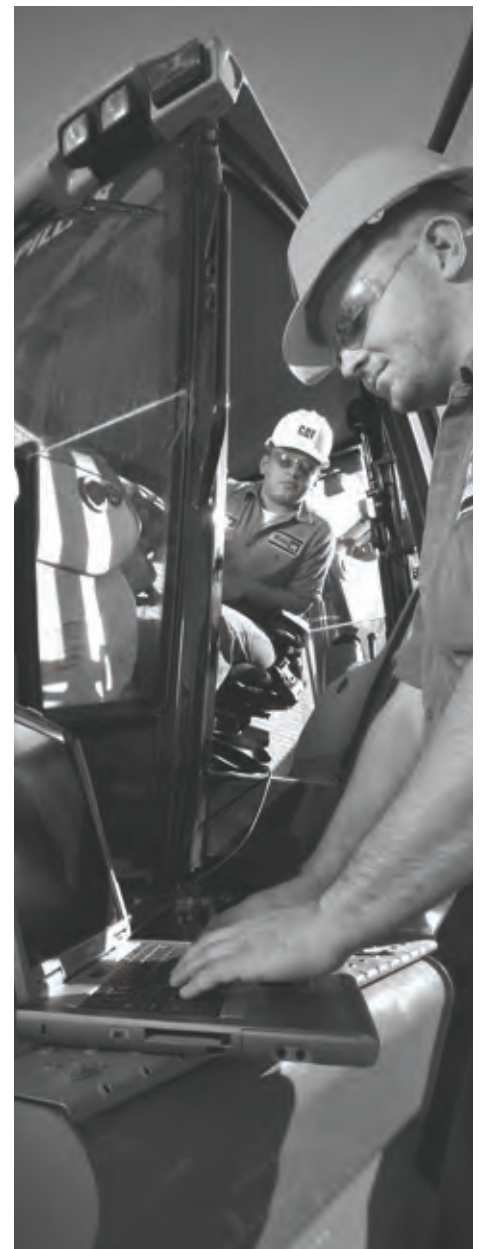
ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 7 CREDIT HOURS

GENERAL TECHNOLOGIES (7 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
| GTGE 1111 | College Cornerstone |
| GTCT 1183 | Welding |



DIESEL & HEAVY EQUIPMENT TECHNOLOGY – NATURAL GAS COMPRESSION

ASSOCIATE IN APPLIED SCIENCE
(88 CREDIT HOURS)

The two-year, six-semester program incorporates two semesters of mechanical systems training followed by a full semester paid internship. Students return the second year for two semesters of electrical, electronics and instrumentation training followed by another full summer semester paid internship. Each two-semester block of technical education and general education course work is followed by a full semester work experience time period, which reinforces the technical education. It is essential for the success of the program that the student's education at OSU Institute of Technology and work experiences at GPA/GPSA member facilities be closely aligned for maximum student learning and retention.

Since considerable time is spent at the GPA/GPSA member facility, it is a requirement of the program that a student have a sponsoring GPA/GPSA member prior to the summer internship. Students who are not sponsored when they enter the program will participate in a career fair held prior to spring break to assist in attaining a summer internship sponsor. The primary responsibility for the GPA/GPSA member is to provide training-related employment for the students during their learning/work experience, internship.

The internship allows students to apply, in a real world setting, what they have learned during the previous classroom/lab sessions. In addition, students become familiar with the GPA/GPSA member company environment, its organizational structure and the competencies that are expected of a professional service technician.

PROGRAM ENTRY REQUIREMENTS:

1. Complete the OSU Institute of Technology admission process (i.e., application for admission, housing).
2. Demonstrate appropriate academic preparedness level by one of the following methods:
 - a. Score 19 or better on all ACT sub-scores, or
 - b. Achieve the following minimum scores on the COMPASS exam (administered by OSU Institute of Technology or approved off-campus site):
 - Reading Comprehension – 81
 - Writing Skills – 74
 - Pre-Algebra – 46
 - d. or successfully completed any required developmental course work.

For more detailed information, please contact the Heavy Equipment & Vehicle Institute office at 918-293-4710.

DEPARTMENT REQUIREMENTS:
60 CREDIT HOURS

NATURAL GAS COMPRESSION
(60 CREDIT HOURS)

| | |
|-----------|---|
| DHEG 1144 | Gas Compressors |
| DHEG 1153 | Fundamentals of Maintenance |
| DHEG 1213 | Gas Compression Capstone I |
| DHEG 1243 | Engine Principles |
| DHEG 1253 | Advanced Engine Technology |
| DHEG 1312 | Internship I or |
| DHEG 1363 | CNG Codes & Regulations and |
| DHEG 1373 | CNG Refueling Systems Oper and |
| DHEG 1306 | Internship |
| DHEG 1313 | Engine Air, Fuel and Starting Systems |
| DHEG 1323 | DC/AC Circuit Analysis |
| DHEG 2413 | Engine Electrical |
| DHEG 2423 | Electrical Motors, Generators and Alternators |
| DHEG 2513 | Electrical Devices and Controls |
| DHEG 2523 | Programmable Logic Controllers (PLC) |
| DHEG 2609 | Internship II or |
| DHE 2033 | Diesel Skills I * and |
| DHE 2043 | Diesel Skills II * and |
| DHE 2053 | Diesel Skills III * |
| DHEG 2623 | Instrumentation & Controls |
| DHEG 2633 | Gas Compression Capstone II |

* Option available for career technology center students in approved cooperative alliance programs.

GENERAL EDUCATION REQUIREMENTS:
24 CREDIT HOURS

COMMUNICATION ARTS
(6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|--------------------------|
| BADM 1113 | Introduction to Business |
|-----------|--------------------------|

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

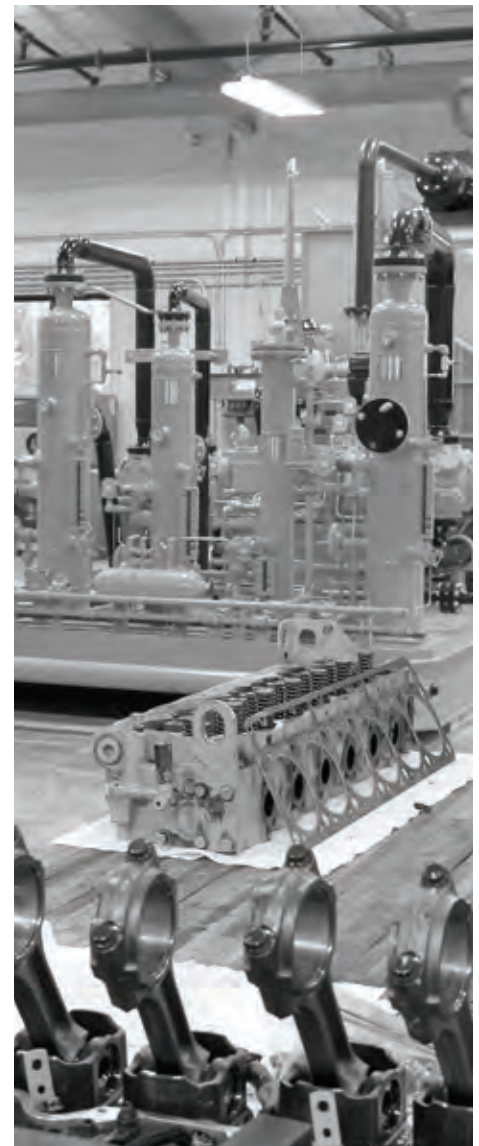
ORAL COMMUNICATIONS
(3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS:
4 CREDIT HOURS

GENERAL TECHNOLOGIES
(4 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| GTGE 1111 | College Cornerstone |
| CS 1013 | Computer Literacy & Applications |



DIESEL & HEAVY EQUIPMENT TECHNOLOGY – KOMATSU ACT (ADVANCED CAREER TRAINING)

ASSOCIATE IN APPLIED SCIENCE (87 CREDIT HOURS)

KOMATSU ACT is a Komatsu America International Company and Komatsu distributor sponsored heavy equipment technician program. An important feature of the program is that each semester a student alternates seven and one-half weeks on campus and seven and one-half weeks at the sponsoring distributor. The intensive method of study and practice prepares a high performance technician that the participating Komatsu distributors demand. After six semesters of on-campus classes and paid internships, graduates typically stay with the Komatsu distributor as a full time employee.

Komatsu technicians maintain, service, diagnose and repair machines and equipment used in all forms of construction, mining, materials handling and other industrial activities. Technicians diagnose problems, disassemble and examine for defects and excessive wear, recondition or replace parts. They test and adjust components and systems to insure proper operation and to prevent failures. They use sophisticated diagnostic equipment. Personal computers are used for diagnostics, record keeping and communication within the shops, offices and with customers.

Typical progression within a company includes journeyman technician, field technician, specialist/master technician. Potential management advances include foreman/supervisor, service manager, parts manager, product support manager, trainer and various executive-level positions. A student can expect nearly 100% job placement rate, low faculty/student ratio and paid student internships.

PROGRAM ENTRY REQUIREMENTS:

1. Complete the OSU Institute of Technology admission process (i.e., application for admission, housing).
2. Demonstrate appropriate academic preparedness level by one of the following methods:
 - a. Score 19 or better on all ACT sub-scores, or
 - b. Achieve the following minimum scores on the COMPASS exam (administered by OSU Institute of Technology or approved off-campus site):
 - Reading Comprehension – 81
 - Writing Skills – 74
 - Pre-Algebra – 46, or
 - d. or successfully completed any required developmental course work.

For more detailed information, please contact the Heavy Equipment & Vehicle Institute office at 918-293-4710.

DEPARTMENTAL REQUIREMENTS: 56 CREDIT HOURS

KOMATSU (56 CREDIT HOURS)

| | |
|-----------|--|
| DHEK 1104 | Komatsu General Basics |
| DHEK 1124 | Komatsu Parts and Service Publications |
| DHEK 1143 | Komatsu Internship I |
| DHEK 1216 | Komatsu Engines and Fuel Systems |
| DHEK 1243 | Komatsu Internship II |
| DHEK 1323 | Komatsu Basic Hydraulics |
| DHEK 1333 | Komatsu Basic Electrical Systems |
| DHEK 1343 | Komatsu Internship III or |
| DHE 2033 | Diesel Skills I * |
| DHEK 2416 | Komatsu Wheel Loaders |
| DHEK 2443 | Komatsu Internship IV or |
| DHE 2043 | Diesel Skills II * |
| DHEK 2516 | Komatsu Hydraulic Excavators |
| DHEK 2543 | Komatsu Internship V or |
| DHE 2053 | Diesel Skills III * |
| DHEK 2626 | Komatsu Capstone |
| DHEK 2653 | Vehicle Air Conditioning Systems |

* Option available for career technology center students in approved cooperative alliance programs.

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 7 CREDIT HOURS

GENERAL TECHNOLOGIES (7 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
| GTGE 1111 | College Cornerstone |
| GTCT 1183 | Welding |

KOMATSU®



DIESEL & HEAVY EQUIPMENT TECHNOLOGY – SOUTHWESTERN ASSOCIATION INDUSTRIAL & FARM EQUIPMENT

ASSOCIATE IN APPLIED SCIENCE (88 CREDIT HOURS)

Founded in 1889, the SouthWestern Association was established by a progressive group of independent hardware and farm implement/mercantile dealers to help increase their profitability and solve common problems. While the Association's scope of interest has evolved over time, the basic concept of working together for the common good remains the same.

Ask any group of farm and industrial equipment dealers about the biggest challenges they face, and the lack of qualified service technicians is a frequent answer. Each year, as equipment becomes more technologically advanced, the need for skilled technicians grows. SouthWestern Association is addressing this problem with the new Industrial and Farm Equipment Technician Program at OSU Institute of Technology.

An important feature of the program is that each semester a student alternates seven and one-half weeks on campus and seven and one-half weeks at the sponsoring SWA distributor. The intensive method of study and practice prepares a high performance technician that the participating SWA distributors demand. After six semesters of on-campus classes and five paid internships, graduates typically stay with the SWA distributor as a full time employee. Technicians maintain, service, diagnose and repair machines and equipment used in all forms of agricultural and industrial activities. A student can expect nearly 100% job placement rate, low faculty/student ratio and paid internships.

PROGRAM ENTRY REQUIREMENTS:

- Complete the OSU Institute of Technology admission process (i.e., application for admission, housing).
- Demonstrate appropriate academic preparedness level by one of the following methods:
 - Score 19 or better on all ACT sub-scores, or
 - Achieve the following minimum scores on the COMPASS exam (administered by OSU Institute of Technology or approved off-campus site):
 - Reading Comprehension – 81
 - Writing Skills – 74
 - Pre-Algebra – 46, or
 - or successfully completed any required developmental course work.

For more detailed information, please contact the Heavy Equipment & Vehicle Institute office at 918-293-4710.

DEPARTMENTAL REQUIREMENTS: 54 CREDIT HOURS

SOUTHWESTERN ASSOCIATION INDUSTRIAL & FARM EQUIPMENT (54 CREDIT HOURS)

| | |
|-----------|---|
| DHES 1113 | Internship I |
| DHES 1123 | Fundamentals of Maintenance |
| DHES 1133 | Pre Delivery & Preventive Maintenance |
| DHES 1143 | Principles of GPS Applications |
| DHES 1213 | Internship II |
| DHES 1223 | Wiring Circuits, Charging & Starting Systems |
| DHES 1233 | Hydraulic Principles |
| DHES 1313 | Internship III or |
| DHE 2033 | Diesel Skills I * |
| DHES 1323 | Electronic Systems or |
| DCNH 1323 | Electronic Systems (CNH)** |
| DHES 1333 | Hydraulic Systems or |
| DCNH 1333 | Hydraulic Systems (CNH)** |
| DHES 2413 | Internship IV or |
| DHE 2043 | Diesel Skills II * |
| DHES 2416 | Engines & Fuel Systems or |
| DCNH 2416 | Engines & Fuel Systems (CNH)** |
| DHES 2512 | Mobile Air Conditioning |
| DHES 2513 | Internship V or |
| DHE 2053 | Diesel Skills III * |
| DHES 2514 | Power Train or |
| DCNH 2514 | Power Train (CNH)** |
| DCNH 2603 | Yield Monitoring, Variable Rate, and Auto Steer Diagnostics |
| DHES 2633 | Capstone |

GENERAL EDUCATION REQUIREMENTS: 27 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| PSYC 1113 | Introductory Psychology |
| PSYC 2313 | Psychology of Personal Adjustment |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|----------------------------|
| ENGL 1033 | Technical Writing I and |
| ENGL 2033 | Technical Writing II or |
| ENGL 1113 | Freshman Composition I and |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|--------------------------|
| BADM 1113 | Introduction to Business |
|-----------|--------------------------|

INTERDEPARTMENTAL REQUIREMENTS: 7 CREDIT HOURS

GENERAL TECHNOLOGIES (7 CREDIT HOURS)

| | |
|-----------|----------------------------------|
| CS 1013 | Computer Literacy & Applications |
| GTGE 1111 | College Cornerstone |
| GTCT 1183 | Welding |

* Option available for career technology center students in approved cooperative alliance programs.

** Students interested in receiving a certification from Case New Holland will need to enroll in these courses.



Information Technologies Division

INFORMATION TECHNOLOGIES*

ASSOCIATE IN APPLIED SCIENCE (61 CREDIT HOURS)

Virtually every industry today depends on computers. Consequently, few other career pursuits empower individuals to work in such a wide array of industries and environments.

The Information Technologies program works closely with industry partners to incorporate the latest business practices, emerging technologies and professional certifications into authentic learning environments. The Associate in Applied Science in Information Technologies is designed for individuals who want to take advantage of the program's unique, hands-on, project-based and customer-focused approach to preparing individuals for exciting and successful careers, and fall into one or more of the following categories:

1. Wish to launch a career in IT as soon as possible.
2. Intend to pursue the Bachelor of Technology in Information Technologies at OSU Institute of Technology.
3. Want to build on considerable work experience and complete a degree to further career.
4. Complete one or more professional industry certifications.

Individuals who wish to undertake 2000- level information security coursework are required to obtain clear background reviews.

The minimum GPA required for graduation is 2.50.

For the latest program information, please contact the Information Technologies office at 918-293-5440 or infotech@okstate.edu.

**This program is available 100% online with the exception of ITD 1213 Hardware Systems Support. Guidance for students desiring to obtain this degree primarily online.*

DEPARTMENTAL COURSES: 30 CREDIT HOURS

INFORMATION TECHNOLOGIES CORE REQUIREMENTS (24 CREDIT HOURS)

| | |
|----------|--------------------------------------|
| ITD 1213 | Hardware Systems Support |
| ITD 1223 | Network Systems |
| ITD 1243 | Principles of Information Security |
| ITD 1253 | Object-Oriented Programming using C# |
| ITD 1353 | Web Programming & Development |
| ITD 2203 | Database Systems |
| ITD 2223 | Operating Systems |
| ITD 2313 | Script Programming |

APPROVED ELECTIVES (6 CREDIT HOURS)

GENERAL EDUCATION REQUIREMENTS: 30 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

PHILOSOPHY (6 CREDIT HOURS)

| | |
|-----------|-----------------------|
| PHIL 1213 | Ethics |
| PHIL 1313 | Introduction to Logic |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| BADM 1113 | Introduction to Business or |
| MGMT 2243 | Small Business Management or |
| MGMT 2913 | Leadership & Organizational Behavior |

ORAL COMMUNICATIONS

(3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

APPROVED ELECTIVE (3 CREDIT HOURS)

From Social Sciences, Foreign Language or Fine Arts

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

GENERAL TECHNOLOGIES (1 CREDIT HOUR)

| | |
|-----------|---------------------|
| GTGE 1111 | College Cornerstone |
|-----------|---------------------|



INFORMATION TECHNOLOGIES*

ASSOCIATE IN SCIENCE (63 CREDIT HOURS)

Well-trained individuals with high-level information technology skills will always be in demand, especially as computers and the Internet play increasingly important roles in contemporary society. In fact, considerable expertise in and experience with information technologies are becoming indispensable to most professionals.

The Associate in Science in Information Technologies is designed primarily for individuals who want to take advantage of the program's unique, hands-on approach to computer education, and fall into one or more of the following categories:

1. Intend to pursue a bachelor's degree at another college or university
2. Want to build on considerable work experience and complete a degree to further career.
3. Complete one or more professional industry certifications.

As with any Associate in Science degree, students are encouraged to check the specific requirements of the college or university to which they plan to transfer.

Individuals who wish to undertake 2000- level information security coursework are required to obtain clear background reviews

The minimum overall GPA required for graduation is 2.50.

For the latest program information, please contact the Information Technologies office at 918-293-5440 or infotech@okstate.edu.

**This program is available 100% online with the exception of ITD 1213 Hardware Systems Support. Guidance for students desiring to obtain this degree primarily online.*

DEPARTMENTAL COURSES: 24 CREDIT HOURS

INFORMATION TECHNOLOGIES CORE REQUIREMENTS (18 CREDIT HOURS)

| | |
|----------|--------------------------------------|
| ITD 1213 | Hardware Systems Support |
| ITD 1223 | Network Systems |
| ITD 1243 | Principles of Information Security |
| ITD 1253 | Object-Oriented Programming using C# |
| ITD 1353 | Web Programming & Development |
| ITD 2223 | Operating Systems |

ELECTIVE COURSEWORK (6 CREDIT HOURS)

GENERAL EDUCATION REQUIREMENTS: 38 CREDIT HOURS

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

PHILOSOPHY (6 CREDIT HOURS)

| | |
|-----------|-----------------------|
| PHIL 1213 | Ethics |
| PHIL 1313 | Introduction to Logic |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

GENERAL BUSINESS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| BADM 1113 | Introduction to Business or |
| MGMT 2243 | Small Business Management or |
| MGMT 2913 | Leadership & Organizational Behavior |

APPROVED ELECTIVE (3 CREDIT HOURS)

From Social Sciences, Foreign Language or Fine Arts

SCIENCE (8 CREDIT HOURS)

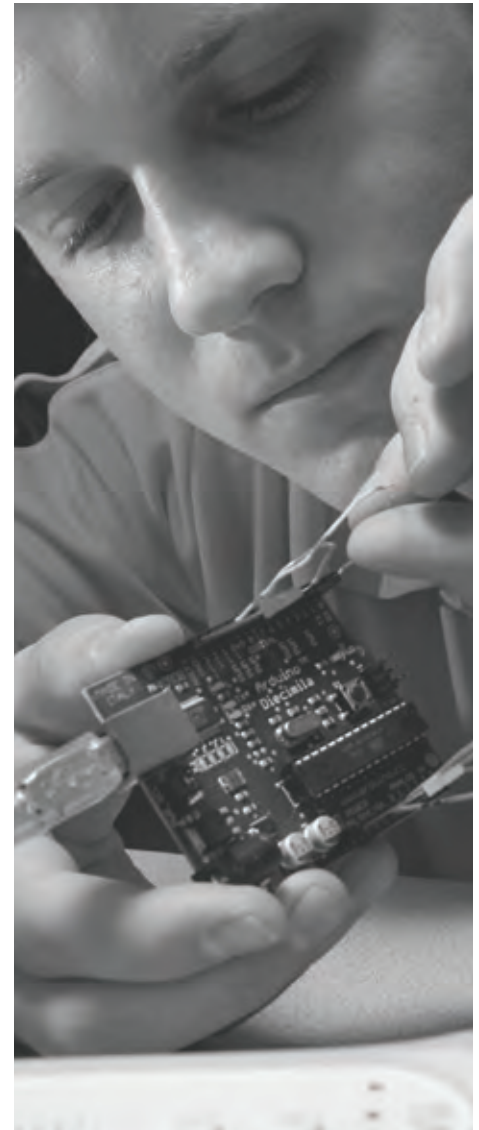
(one course must be a lab science course)

| | |
|-----------|------------------------------|
| BIOL 1014 | General Biology (non-majors) |
| BIOL 1114 | General Biology |
| BIOL 1404 | General Botany |
| BIOL 1604 | Zoology |
| BIOL 2104 | Human Anatomy |
| CHEM 1314 | General Chemistry I |
| GEOL 1014 | Earth Science |
| PHYS 1204 | General Physical Science |

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

GENERAL TECHNOLOGIES (1 CREDIT HOUR)

| | |
|-----------|---------------------|
| GTGE 1111 | College Cornerstone |
|-----------|---------------------|



INFORMATION TECHNOLOGIES*

BACHELOR OF TECHNOLOGY (121 CREDIT HOURS)

Information technology systems are becoming more complex. As organizations expand their uses of networks and the Internet to improve their competitiveness, efficiency, and quality of service, their needs for individuals with the right skills, knowledge, and credentials also increase. This degree prepares individuals for a range of professional opportunities within the information technology field, and offers program options in:

Information Assurance and Forensics

This option prepares individuals to assess computer and network security, implement appropriate measures for those vulnerabilities, and investigate cyber criminal activities. Topics include: network intrusion detection systems, biometrics, malware, HIPAA, mobile and network forensics, Forensics Tool Kit and EnCase, social engineering, cyber law, cryptography, and control systems security.

Sample positions include: Systems Assurance Auditor, Information Security Office, IT Security Analyst, Network Security Architect, and Computer Forensics Analyst.

Note: OSUIT'S information assurance and forensics curriculum has been certified by the National Security Agency's Committee on National Security Systems (CNSS). Students satisfactorily completing the appropriate security coursework may receive the corresponding CNSS certificate(s).

Network Infrastructure

This option prepares individuals to design, implement, and manage network infrastructure, operations and services. Topics include Cisco, LINUX, open source technologies, virtualization, TCP/IP, voice over IP, Active Directory, network administration, virtual private networks, and wireless technologies.

Sample positions include: Network Architect, Infrastructure Analyst, Network Administrator, Infrastructure Engineer, and Network Operations Analyst.

Software Development

This option prepares individuals to design, develop, document, test, implement and maintain mobile, computer, database, and web applications. Topics include C#, .NET, SQL, scripting languages, mobile development, dynamic web programming, client-server application development, and software development project management.

Sample positions include: Programmer/Analyst, Applications Developer, Software Tester, Systems Analyst, Database Analyst, Webmaster,

and Web Administrator.

IT Enterprise Management

This option prepares individuals to lead information technology organizations. Topics include IT leadership, business intelligence, sustainability, compliance, quality assurance, strategic planning, vendor relations, budget and contract administration, project management, and enterprise management systems.

Sample positions include: IT Manager, Director of Information System, Chief Information Officer, and Chief Technology Officer.

Students who wish to undertake a Bachelor of Technology degree are required to meet or exceed the following admissions standards:

ACT score of 19 or higher in all subcomponents, or Compass scores of 81 in Reading, 74 in English, 45 in College Algebra and a combined Reading and College Algebra score of 123, or have removed any identified deficiencies through appropriate remediation.

Students will be admitted to the Bachelor of Technology program contingent on completion of an Associate in Applied Science degree or higher, and submission of both an OSUIT and a Bachelor of Technology application.

A background review is required before 2000, 3000, or 4000-level information security coursework may be undertaken.

The minimum overall GPA required for graduation is 2.50.

For the latest program-specific information, please contact the Information Technologies office at 918-293-5440 or infotech@okstate.edu.

**This program is available 100% online with the exception of ITD 1213 Hardware Systems Support and ITD 3543 Enterprise Networking. Guidance for students desiring to obtain this degree primarily online.*

DEPARTMENTAL REQUIREMENTS: 67 CREDIT HOURS

LOWER-DIVISION IT CORE REQUIREMENTS (24 CREDIT HOURS)

| | | |
|-----|------|--------------------------------------|
| ITD | 1213 | Hardware Systems Support |
| ITD | 1223 | Network Systems |
| ITD | 1243 | Principles of Information Security |
| ITD | 1253 | Object-Oriented Programming using C# |
| ITD | 1353 | Web Programming & Development |
| ITD | 2203 | Database Systems |
| ITD | 2223 | Operating Systems |
| ITD | 2313 | Script Programming |

LOWER-DIVISION OPTION ELECTIVE (3 CREDIT HOURS)

| | | |
|-----|------|---|
| ITD | 2153 | LAN/WAN Implementation & Support ¹ |
| ITD | 2263 | GUI Development ² |
| ITD | 2413 | Enterprise Security Management ^{3,4} |

1. For the BT Network Infrastructure option
2. For the BT Software Development option
3. For the BT Info Assurance and Forensics option
4. For the BT IT Enterprise Management option

LOWER-DIVISION APPROVED ELECTIVE (3 CREDIT HOURS)

UPPER-DIVISION OPTION COURSE WORK (9 CREDIT HOURS PER OPTION)

INFORMATION ASSURANCE AND FORENSICS OPTION

| | | |
|-----|------|-------------------|
| ITD | 3433 | Digital Forensics |
| ITD | 3443 | Network Security |
| ITD | 3523 | Computer Security |

NETWORK INFRASTRUCTURE OPTION

| | | |
|-----|------|------------------------|
| ITD | 3253 | Network Administration |
| ITD | 3443 | Network Security |
| ITD | 3543 | Enterprise Networking |

SOFTWARE DEVELOPMENT OPTION

| | | |
|-----|------|-------------------------------------|
| ITD | 3323 | Enterprise Framework Programming |
| ITD | 3333 | Distributed Application Development |
| ITD | 3713 | Software Development Management |

IT ENTERPRISE MANAGEMENT OPTION

| | | |
|-----|------|--------------------------------------|
| ITD | 3163 | IT Enterprise Operations |
| ITD | 3613 | Emerging and Converging Technologies |
| ITD | 3673 | IT Enterprise Management |

UPPER-DIVISION APPROVED ELECTIVES (9 CREDIT HOURS)

UPPER-DIVISION IT CORE REQUIREMENTS (19 CREDIT HOURS)

| | | |
|-----|------|---|
| ITD | 3201 | Employment Orientation |
| ITD | 4800 | Internship (12 Credit Hours) or Internship (6 Credit Hours) and Approved Electives (6 Credit Hours) |
| ITD | 4113 | IT Project Management |
| ITD | 4123 | Applied Research and Development |

**GENERAL EDUCATION REQUIREMENTS:
53 CREDIT HOURS**

**GENERAL EDUCATION CORE
REQUIREMENTS (24 CREDIT HOURS)**

**COMMUNICATION ARTS
(6 CREDIT HOURS)**

ENGL 1113 Freshman Composition I
ENGL 1213 Freshman Composition II

HISTORY (3 CREDIT HOURS)

HIST 1483 U.S. History to 1865 or
HIST 1493 U.S. History Since 1865

MATHEMATICS (3 CREDIT HOURS)

MATH 1513 College Algebra

PHILOSOPHY (6 CREDIT HOURS)

PHIL 1213 Ethics
PHIL 1313 Introduction to Logic

POLITICAL SCIENCE (3 CREDIT HOURS)

POLS 1113 U.S. Government

APPROVED ELECTIVE (3 CREDIT HOURS)

From Social Sciences, Foreign Language or
Fine Arts

**GENERAL EDUCATION PROGRAM
REQUIREMENTS (21 CREDIT HOURS)**

ORAL COMMUNICATIONS (3 CREDIT HOURS)

SPCH 1113 Introduction to Speech or
SPCH 2313 Small Group Communications

GENERAL BUSINESS (3 CREDIT HOURS)

BADM 1113 Introduction to Business
MGMT 2243 Small Business Management
MGMT 2913 Leadership & Organizational Behavior

MATHEMATICS

(6 CREDIT HOURS)

MATH 3103 Discrete Mathematics
STAT 2013 Elementary Statistics

APPROVED ELECTIVES

(9 CREDIT HOURS)

**GENERAL EDUCATION SCIENCE
REQUIREMENTS (8 CREDIT HOURS)**

(One course must be a lab course.)

BIOL 1014 General Biology (non-majors)
BIOL 1114 General Biology
BIOL 1404 General Botany
BIOL 1604 Zoology
BIOL 2104 Human Anatomy
CHEM 1314 General Chemistry I
GEOL 1014 Earth Science
PHYS 1204 General Physical Science

**INTERDEPARTMENTAL REQUIREMENTS:
1 CREDIT HOUR**

GTGE 1111 College Cornerstone



Nursing & Health Sciences

NURSING & HEALTH SCIENCES – NURSING, TRADITIONAL

ASSOCIATE IN APPLIED SCIENCE (72 CREDIT HOURS)

The OSUIT Associate Degree Nursing (ADN) program is approved by the Oklahoma Board of Nursing to provide an educational program for individuals interested in a career as a Registered Nurse (RN). Upon successfully completing program requirements, the graduate is qualified to make application to write for permission to take the National Council Licensure Exam for Registered Nurses (NCLEX-RN). The OSUIT Associate Degree Nursing program is also accredited by Accreditation Commission for Education in Nursing (ACEN).

The traditional nursing program offered by OSUIT is a two year course of study. Classes are offered in a traditional classroom setting, during the day. Jobs in the nursing field are projected to be in continued high demand as advances in technology are made and U.S. population ages.

PROGRAM ADMISSION REQUIREMENTS

Advisement: All students declaring a nursing major are assigned to the Department of Nursing for advisement.

Application to the Program: Students wishing to be considered for the nursing program must apply for admission to OSUIT and have the following data in their file by the final closing date of the application period: 1.) Nursing Application signed and dated; 2.) Student score at or above the 50 percentile (50%) ranking on the Kaplan Admission Test for Reading and Math; 3.) All official college transcripts must be on file at the OSU Institute of Technology Registrar's Office and a copy in the Nursing Department (It is the responsibility of the student to ensure that all transcripts, from any college attended are on file); 4.) Students applying to the OSU Institute of Technology Nursing Program are selected on the basis of a point system. Students once selected, are made a conditional offer of acceptance provided further guidelines are met once accepted.

It is strongly recommended that all science courses be completed prior to the beginning of the nursing program. To be considered for admission to the program, students must have and maintain a minimum grade point average of 2.0 in required general education and nursing support courses. Successful completion of the nursing program requires a "C" in all courses related to the Associate in Applied Science in Nursing Degree. A student cannot be admitted to the program with a "D" in any required course.

The following identifies minimal physical and mental qualifications necessary to be considered for admission into and progression through the OSU Institute of Technology Nursing Program. They include, but are not limited to:

1. The ability to lift weights of up to 35% of recommended body weight independently.
2. The ability to facilitate movement in client's room and work areas.
3. Visual acuity sufficient to observe and assess client behavior, prepares and administers medications, and accurately read monitors and utilizes equipment.
4. Auditory acuity sufficient to hear instructions, requests, monitoring alarms, and to auscultate heart tones, breathe sounds, and bowel sounds.
5. The motor ability necessary to manipulate equipment and supplies to utilize palpation and percussion in client assessment.
6. The ability to proficiently speak, write, and comprehend the English language.
7. The ability to communicate in a professional manner, establish rapport with clients and colleagues, use problem solving skills, and function effectively under stress.
8. A negative criminal history background check and a negative drug screen are required upon acceptance into the nursing program.

For more detailed information, please contact the Nursing office at 918-293-5337.

DEPARTMENTAL COURSES: 39 CREDIT HOURS

Must pass courses with a grade "C" or higher.

| | |
|-----------|----------------------------|
| NURS 1128 | Foundations of Nursing |
| NURS 1229 | Nursing Care of Families |
| NURS 1322 | Nursing Dosage Calculation |
| NURS 2129 | Nursing Care of Adults I |
| NURS 2229 | Nursing Care of Adults II |
| NURS 2222 | Nursing Capstone Seminar |

GENERAL EDUCATION REQUIREMENTS: 33 CREDIT HOURS

Must pass courses with a grade "C" or higher.

BEHAVIORAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|--------------------------|
| PSYC 1113 | Introductory Psychology |
| PSYC 2583 | Developmental Psychology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|--------------------------|
| HIST 1483 | U. S. History to 1865 or |
| HIST 1493 | U. S. History Since 1865 |

NUTRITIONAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| NSCI 1113 | Introduction to Nutrition |
|-----------|---------------------------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|------------------|
| POLS 1113 | U. S. Government |
|-----------|------------------|

SCIENCE (12 CREDIT HOURS)

| | |
|-----------|----------------------|
| BIOL 2104 | Human Anatomy |
| BIOL 2114 | Human Physiology |
| BIOL 2124 | General Microbiology |

GRADING SCALE

| | |
|----------|---|
| 92 - 100 | A |
| 84 - 91 | B |
| 75 - 83 | C |
| 66 - 74 | D |
| 0 - 65 | F |



NURSING & HEALTH SCIENCES – NURSING, LPN TO RN TRANSITION

ASSOCIATE IN APPLIED SCIENCE (72 CREDIT HOURS)

The OSUIT Associate Degree Nursing (ADN) program is approved by the Oklahoma Board of Nursing to provide an educational program for individuals interested in a career as a Registered Nurse (RN). Upon successfully completing program requirements, the graduate is qualified to make application to write for permission to take the National Council Licensure Exam for Registered Nurses (NCLEX-RN). The OSUIT Associate Degree Nursing program is also accredited by Accreditation Commission for Education in Nursing (ACEN).

The LPN to RN Transition Track is a one year course of study beginning each summer semester. Classes are offered in a traditional classroom setting, during the day. Jobs in the nursing field are projected to be in continued high demand as advances in technology are made and U.S. population ages.

PROGRAM ADMISSION REQUIREMENTS

Advisement: All students declaring a nursing major are assigned to the Department of Nursing for advisement.

Application to the Program: Only LPN's with an unencumbered nursing license, as verified via the Board of Nursing website, will be considered for acceptance into the nursing program. LPN's must maintain an unencumbered nursing license throughout the duration of the nursing program. LPN students wishing to be considered for the nursing program must apply for admission to OSUIT and have the following data in their file by the final closing date of the application period: 1.) Nursing Application signed and dated; 2.) Students score at or above the 50 percentile (50%) ranking on the Kaplan Admission Test for Reading and Math; 3.) All official college transcripts must be on file at the OSU Institute of Technology Registrar's Office and a copy in the Nursing Department. (It is the responsibility of the student to ensure that all transcripts, from any college attended are on file); 4.) Score 55th percentile ranking at or above on Kaplan Fundamentals Examination, (this exam has a processing fee of \$25.00), students are allowed to take this exam one time only. Students applying to the OSU Institute of Technology Nursing Program are selected on the basis of a point system. Students once selected, are made a conditional offer of acceptance provided further guidelines are met once accepted.

It is strongly recommended that all science courses be completed prior to the beginning of the nursing program. To be considered for admission to the program, students must have and maintain a minimum grade point average of 2.0 in required general education and nursing support courses. Successful completion of the nursing program requires a "C" in all courses related to the Associate in Applied Science in Nursing Degree. A student cannot be admitted to the program with a "D" in any required course

The following identifies minimal physical and mental qualifications are necessary to be considered for admission into and progression through the OSU Institute of Technology Nursing Program. They include but are not limited to:

1. The ability to lift weights of up to 35% of recommended body weight independently.
2. The ability to facilitate movement in client's room and work areas.
3. Visual acuity sufficient to observe and assess client behavior, prepares and administers medications, and accurately read monitors and utilizes equipment
4. Auditory acuity sufficient to hear instructions, requests, monitoring alarms, and to auscultate heart tones, breathe sounds, and bowel sounds.
5. The motor ability necessary to manipulate equipment and supplies to utilize palpation and percussion in client assessment.
6. The ability to proficiently speak, write, and comprehend the English language.
7. The ability to communicate in a professional manner, establish rapport with clients and colleagues, use problem solving skills, and function effectively under stress.
8. A negative criminal history background check, negative drug screen, and clinical requirements are required upon acceptance into the nursing program.

For more detailed information, please contact the Nursing office at 918-293-5337.

LPN's receive advanced standing credit for NURS 1128 Foundations of Nursing and NURS 1322 Nursing Dosage Calculation as an LPN.

LPN's are required to take the equivalency exams for NURS 1229 Nursing Care of Families while enrolled in NURS 1133. The equivalency exams are Kaplan Nationally Standardized exams for OB, Pediatrics, and Psychosocial Nursing. Students are expected to score at the 55th percentile ranking.

DEPARTMENTAL COURSES: 39 CREDIT HOURS

Must pass courses with a grade "C" or higher.

| | |
|-----------|---------------------------------|
| NURS 1133 | LPN to RN Transition (LPN only) |
| NURS 2129 | Nursing Care of Adults I |
| NURS 2229 | Nursing Care of Adults II |
| NURS 2222 | Nursing Capstone Seminar |

GENERAL EDUCATION REQUIREMENTS: 33 CREDIT HOURS

Must pass courses with a grade "C" or higher.

BEHAVIORAL SCIENCE (6 CREDIT HOURS)

| | |
|-----------|--------------------------|
| PSYC 1113 | Introductory Psychology |
| PSYC 2583 | Developmental Psychology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|--------------------------|
| HIST 1483 | U. S. History to 1865 or |
| HIST 1493 | U. S. History Since 1865 |

NUTRITIONAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|---------------------------|
| NSCI 1113 | Introduction to Nutrition |
|-----------|---------------------------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|------------------|
| POLS 1113 | U. S. Government |
|-----------|------------------|

SCIENCE (12 CREDIT HOURS)

| | |
|-----------|----------------------|
| BIOL 2104 | Human Anatomy |
| BIOL 2114 | Human Physiology |
| BIOL 2124 | General Microbiology |

GRADING SCALE

| | |
|----------|---|
| 92 - 100 | A |
| 84 - 91 | B |
| 75 - 83 | C |
| 66 - 74 | D |
| 0 - 65 | F |

NURSING & HEALTH SCIENCES – ORTHOTIC & PROSTHETIC TECHNOLOGIES

ASSOCIATE IN APPLIED SCIENCE (73 CREDIT HOURS)

Orthotics and Prosthetics are applied physical disciplines that address neuromuscular and skeletal problems in the human body. The goals of orthotic and prosthetic management are to achieve optimum function, prevent further disability and provide improved appearance through the provision of bracing and artificial limbs.

An ideal candidate for the Orthotic and Prosthetic profession should possess very strong interpersonal skills, excellent manual dexterity and an eye for detail. O&P is a “hands on” profession where knowledge, commitment and dedication translate into better lives for each patient.

There is a growing need for O&P professionals. While only 16 institutions nationwide currently offer O&P education, the demand for provider services is expected to continue to increase through 2020. A shortage of certified orthotists and prosthetists is anticipated due to projected healthcare needs, population trends, the limited number of current certified orthotic and prosthetic professionals and the limited educational training programs available for new orthotists and prosthetists in the U.S. Preparing a sufficient number of orthotists and prosthetists to meet increasing demand will be a challenge. (The Orthotic and Prosthetic Profession: A Workforce Demand Study. Prepared for the National Commission on Orthotic and Prosthetic Education and the American Orthotic and Prosthetic Association, December 2006)

Graduates of the Orthotic and Prosthetic Technologies Program earn an Associate in Applied Science degree and may work in two job categories: technician and fitter. Certification for these disciplines is provided through the American Board for Certification in Orthotics and Prosthetics (ABC) and the Board of Certification, International (BOC).

Lab fees are required for each course under the O&P Degree Plan at an average charge of \$300.00 per course. Additional costs that are connected to the program include textbooks, tool kits, and uniforms (these items can be purchased in the Bookstore). These costs may vary from semester to semester and are subject to change without notice.

DEPARTMENTAL REQUIREMENTS: 40 CREDIT HOURS

A minimum program grade average of 2.0 is required, with a minimum grade of ‘C’ in each course of Departmental Requirements.

ORTHOTIC AND PROSTHETIC TECHNOLOGIES: (40 CREDIT HOURS)

| | |
|----------|-------------------------------|
| OPT 1204 | Upper Extremity Prosthetics |
| OPT 1214 | Spinal Orthotics |
| OPT 1304 | Transfemoral Prosthetics |
| OPT 2314 | Prefab & Pedorthic Techniques |
| OPT 2324 | Lower Extremity Orthotics |
| OPT 2404 | Trans-Femoral Prosthetics |
| OPT 2414 | Upper Extremity Orthotics |
| OPT 2812 | Internship |

DEPARTMENTAL ELECTIVES: 1 CREDIT HOUR

| | |
|----------|---------------------------|
| OPT 2101 | Orientation to Internship |
|----------|---------------------------|

GENERAL EDUCATION REQUIREMENTS: 32 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| PSYC 1113 | Introductory Psychology |
|-----------|-------------------------|

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|------------------|
| POLS 1113 | U. S. Government |
|-----------|------------------|

SCIENCE (8 CREDIT HOURS)

| | |
|-----------|-----------------|
| BIOL 1114 | General Biology |
| BIOL 2104 | Human Anatomy |

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
|-----------|--------------------------------|

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

GENERAL EDUCATION (1 CREDIT HOUR)

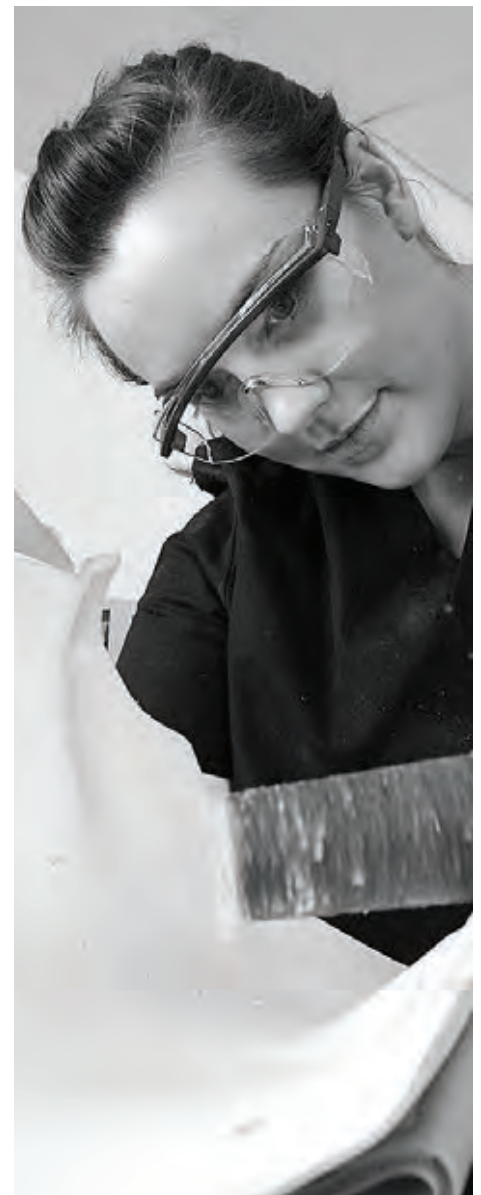
| | |
|-----------|--------------------|
| ORIE 1011 | College Strategies |
|-----------|--------------------|

All OPT courses carry a lab and material fee cost of \$300.00 per course, with the exception of OPT 2314 that has a fee of \$250.00. These fees do not include materials such as textbooks, tool kits, and uniforms that can be purchased in the bookstore.

PROGRAM ADMISSION REQUIREMENTS:

1. Must complete an application for admission to OSU Institute of Technology
2. Meet the following additional requirements.
 - a. Prospective Student Eligibility Requirements:
 - High School Diploma or GED
 - Removal of Remedial Coursework
 - Lift up to 35% of body weight
 - Visual acuity sufficient to observe and assess patients
 - Auditory acuity sufficient to hear instructions and requests
 - Motor ability necessary to manipulate hand and power tools
 - Speak, write and comprehend English
 - Communicate in a professional manner

For more detailed information, please contact the Orthotic and Prosthetic Office at 918-293-5324.



Visual Communications Technologies Division



VISUAL COMMUNICATIONS – GRAPHIC DESIGN TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE
(91 CREDIT HOURS)

The complexity of today's technology requires precise communications. The function of the graphic designer is to apply creative skill and technical knowledge to attract and influence the consumer through visual stimulation. These responsibilities require a thorough knowledge of both conventional and electronic applications for design, layout and production. The ability to be a creative problem solver is extremely important for today's graphic designer.

Visual media communicators form the nucleus of the broadest field of applied arts, whether it is called graphic design, commercial art or visual communications. To be a graphic designer requires knowledge and skills in drawing, design, typography, computer, and mechanical production.

Recent graduates have attained recognition as layout artists, designers, illustrators and art directors with leading advertising agencies, industrial graphic departments and publishers. Graduates with experience can establish successful and satisfying careers as graphic designers, art directors and creative directors for advertising agencies and design studios or as freelance designers.

For more information please contact the Visual Communications Division office at 918-293-5050.

DEPARTMENTAL COURSES: 69 CREDIT HOURS

A minimum program GPA of 2.0, with a minimum grade of 'C' in each departmental course is required for graduation.

** Courses marked with an asterisk have an additional \$25 per credit hour fee*

*GRAPHIC DESIGN (39 CREDIT HOURS)

| | |
|----------|--------------------------------|
| GRD 1133 | Basic Drawing* |
| GRD 1143 | Basic Design* |
| GRD 1213 | Advertising Design I* |
| GRD 1333 | Design Production* |
| GRD 1363 | Survey of 20th Century Design* |
| GRD 2413 | Advertising Design II* |
| GRD 2423 | Advanced Design Production* |
| GRD 2523 | Branding/Identity Design |
| GRD 2543 | Practicum Production* |
| GRD 2623 | Consumer Design* |
| GRD 2696 | Graphic Design Capstone* |
| GRD 2803 | Graphic Design Internship |

*MULTIMEDIA TECHNOLOGY (9 CREDIT HOURS)

| | |
|----------|---|
| MMT 1113 | Introduction to 3D* (or) |
| MMT 1153 | Introduction to Video Editing* |
| MMT 2423 | Introduction to Web Site Design |
| MMT 2453 | Interface Design (layout/architecture for web)* |

*VISUAL COMMUNICATIONS (18 CREDIT HOURS)

| | |
|----------|-----------------------------|
| VIS 1123 | InDesign Publishing I* |
| VIS 1143 | Intro to Motion Graphics* |
| VIS 1203 | Introduction to Typography* |
| VIS 1223 | InDesign Publishing II* |
| VIS 1343 | Digital Illustration* |
| VIS 1373 | Digital Imaging* |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

GENERAL TECHNOLOGIES (1 CREDIT HOUR)

| | |
|-----------|---------------------|
| GTGE 1111 | College Cornerstone |
|-----------|---------------------|

VISUAL COMMUNICATIONS – 3D MODELING & ANIMATION

ASSOCIATE IN APPLIED SCIENCE (91 CREDIT HOURS)

Looking for a career in games, films, architecture, product modeling, special effects, pre-visualization, environmental design, and/or illustration?

Get your foot in the door by completing OSUIT's revised and expanded 3D Modeling and Animation curriculum. You receive a more comprehensive immersion into 3D modeling and animation as you earn this Associate in Applied Science degree.

We offer an industry focused education, where your potential employers guided our curriculum. Low student-to-faculty ratios make for more personalized instructor interaction. An internship, working in the industry under the guidance of a professional modeler or animator, is required to graduate.

PROGRAM ENTRY REQUIREMENTS:

Applicants must meet the following requirements in order to be considered for entrance into the 3D Modeling and Animation Program:

1. Submit a multimedia program questionnaire.
2. Submit two letters of recommendation from professionals not related to them (teacher, multi-media professional, employer, counselor, etc.).
3. Meet minimum requirements for Math, English and Reading as determined by OSU Institute of Technology assessment.
4. Provide copies of transcripts from all previous colleges attended.
5. A personal interview will be scheduled following the completion of the first four requirements.

For more detailed information please contact the Visual Communications Division office at 918-293-5050.

DEPARTMENTAL REQUIREMENTS: 66 CREDIT HOURS

A minimum program GPA of 2.0, with a minimum grade of 'C' in each departmental course is required for graduation.

** Courses marked with an asterisk have an additional \$25 per credit hour fee*

*GRAPHIC DESIGN (9 CREDIT HOURS)

| | |
|----------|-------------------|
| GRD 1133 | Basic Drawing* |
| GRD 1143 | Basic Design* |
| GRD 1243 | Advanced Drawing* |

*MULTIMEDIA TECHNOLOGY 3D (48 CREDIT HOURS)

| | |
|----------|---------------------------------------|
| MMT 1113 | Introduction to 3D* |
| MMT 1153 | Intro to Video Editing* |
| MMT 1201 | Acting & Improvisation |
| MMT 1202 | Creative Problem Solving |
| MMT 1223 | 3D Modeling I* |
| MMT 1323 | 3D Modeling II* |
| MMT 1433 | 2D Animation* |
| MMT 1453 | Storyboarding* |
| MMT 1463 | Beginning ZBrush* |
| MMT 2113 | Game Design Fundamentals* |
| MMT 2143 | 3D Motion Graphics & Special Effects* |
| MMT 2433 | 3D Animation I* |
| MMT 2533 | 3D Animation II* |
| MMT 2716 | Multimedia Capstone |
| MMT 2806 | Multimedia Internship |

*VISUAL COMMUNICATIONS (9 CREDIT HOURS)

| | |
|----------|---------------------------|
| VIS 1373 | Digital Imaging* |
| VIS 2433 | Multimedia Practicum* |
| VIS 2533 | Advanced Digital Imaging* |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
|-----------|-----------------|

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

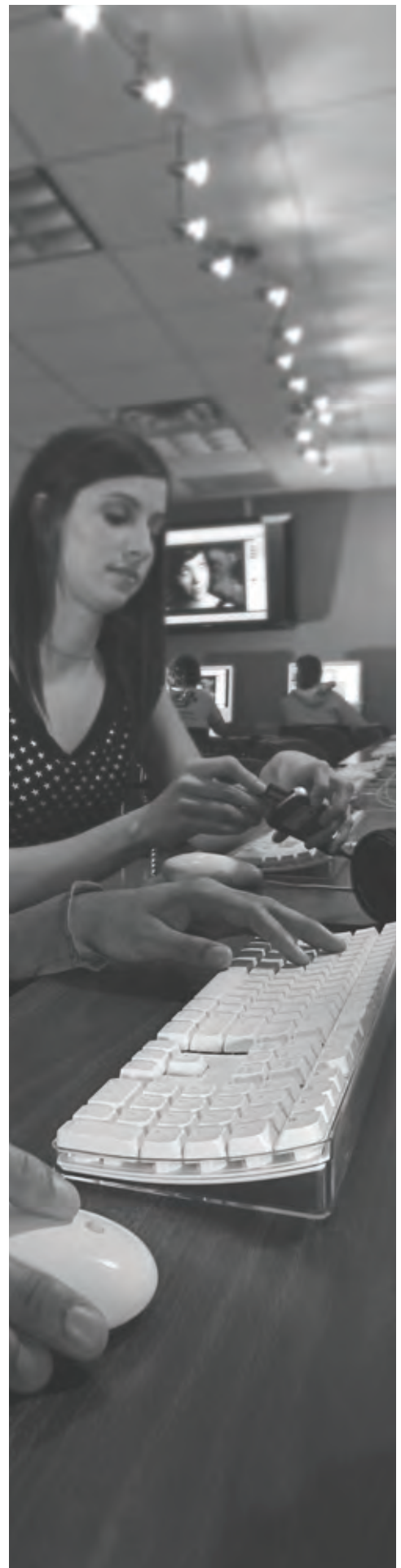
ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

GENERAL TECHNOLOGIES (1 CREDIT HOUR)

| | |
|-----------|---------------------|
| GTGE 1111 | College Cornerstone |
|-----------|---------------------|



VISUAL COMMUNICATIONS – PHOTOGRAPHY TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (88 CREDIT HOURS)

Photography has quite accurately been described as the universal language, needing no interpretation. The visual images created by skilled artisans portray our feelings, our moods, our history and they mirror our imagination.

Photography bridges many barriers and, combined with the skills of artists and printers, provides our world with endless educational and recreational materials.

The ability to continually produce high quality images requires mastering precise skills and following basic practices such as correct exposure, proper camera handling techniques and the understanding of aperture and shutter speed manipulations to control the impact of the finished image.

Today's photographer must also be skilled in the use of new technologies that have been introduced to the photographic industry. Digital imaging, digital enhancement and filmless digital cameras are accepted tools for accomplishing photographic tasks in today's ever-changing photographic industry.

Graduates may explore employment in advertising, commercial and portrait studios, newspapers and magazines, photographic laboratories and even self-employment in one or more of the many specialty areas.

PROGRAM ENTRY REQUIREMENTS:

Applicants must meet the following requirements in order to be considered for acceptance into the Photography program:

1. Submit a Photography program questionnaire.
2. Submit two letters of recommendation from professionals not related to them (teacher, professional, employer, counselor, etc.).
3. Meet minimum requirements for Math, English, and Reading as determined by OSU Institute of Technology assessment.
4. Provide copies of transcripts from all previous colleges attended.
5. Submit a photography portfolio or demo reel.
6. A personal interview will be scheduled following completion of the first five requirements.

For more detailed information please contact the Visual Communications Division office at 918-293-5050.

DEPARTMENTAL REQUIREMENTS: 63 CREDIT HOURS

A minimum program grade average of 2.0 is required, with a minimum grade of 'C' in each course of Departmental Requirements.

** Courses marked with an asterisk have an additional \$25 per credit hour fee*

*PHOTOGRAPHY (63 CREDIT HOURS)

| | |
|----------|-----------------------------------|
| PHO 1113 | Fundamentals of Photography* |
| PHO 1123 | Digital Darkroom* |
| PHO 1133 | Digital Photography* |
| PHO 1243 | Photographic think Tank* |
| PHO 1313 | Studio I* |
| PHO 1353 | Photojournalism* |
| PHO 2413 | Studio II* |
| PHO 2423 | Portrait Photography* |
| PHO 2453 | Advanced Digital Photography* |
| PHO 2483 | Color and Digital Concepts |
| PHO 2503 | Introduction to Video Production* |
| PHO 2513 | Editorial Portraiture* |
| PHO 2523 | Photographic Design* |
| PHO 2543 | Photography Practicum |
| PHO 2696 | Photography Capstone* |
| PHO 2703 | Advertising Photography* |
| PHO 2713 | Advanced Portrait Photography* |
| PHO 2723 | Documentary Photography* |
| PHO 2773 | Visual Validation* |
| PHO 2803 | Photography Internship |

GENERAL EDUCATION REQUIREMENTS: 24 CREDIT HOURS

BEHAVIORAL SCIENCES (3 CREDIT HOURS)

| | |
|-----------|--------------------------------------|
| PSYC 1113 | Introductory Psychology or |
| PSYC 2313 | Psychology of Personal Adjustment or |
| SOC 1113 | Introductory Sociology |

COMMUNICATION ARTS (6 CREDIT HOURS)

| | |
|-----------|-------------------------|
| ENGL 1113 | Freshman Composition I |
| ENGL 1213 | Freshman Composition II |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 or |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| MATH 1513 | College Algebra or |
| MATH 2003 | Business Mathematics |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|--------|
| PHIL 1213 | Ethics |
|-----------|--------|

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|-----------------------------------|
| SPCH 1113 | Intro to Speech Communications or |
| SPCH 2313 | Small Group Communications |

INTERDEPARTMENTAL REQUIREMENTS: 1 CREDIT HOUR

GENERAL TECHNOLOGIES (1 CREDIT HOUR)

| | |
|-----------|---------------------|
| GTGE 1111 | College Cornerstone |
|-----------|---------------------|



School of Watchmaking

SCHOOL OF WATCHMAKING – WATCHMAKING & MICROTECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (94 CREDIT HOURS)

OSU Institute of Technology's Watchmaking program offers intense, thorough training in this challenging and exacting art. Students develop the hand skills necessary for making and maintaining tools, servicing and repairing fine timepieces, and manufacturing watch parts. Critical thinking and problem solving abilities are strengthened so the mind becomes as much of a part of the solution as the tools in the watchmaker's hand. These traditional skills, coupled with equipment utilizing the latest technology, allow our graduates to work to a higher technological standard than ever before.

OSUIT is a SAWTA (Swiss American Watchmaker Training Alliance) certified school which works in conjunction with AWCI (American Watch and Clock Institute) and their CW21 examination. Through our partnerships we offer the opportunity to obtain certification through both SAWTA and AWCI. These exams are designed specifically to develop the type of skilled craftsman needed to service high-grade watches.

Our industry-driven integrated associate degree program ensures that our graduates are well-rounded, professional watchmakers. The School of Watchmaking faculty have earned reputations for excellence in this worldwide industry. The labs are housed in a state of the art, modern facility, and the equipment is, in many cases, the same as that used in official service centers. This helps ensure that the experience gained in the program will transfer easily to the real world. Career opportunities are numerous, both in the United States and abroad, with employment available in watch brand service centers, independent service centers, and jewelry stores being just a few of the many available options.

For more information, please contact the Watchmaking Program by calling 918-293-5342 or by email at watch@okstate.edu.

DEPARTMENTAL COURSES: 72 CREDIT HOURS

| | |
|----------|--|
| WMT 1116 | Career Cornerstone/Basic Microtechnology |
| WMT 1126 | Advanced Microtechnology I |
| WMT 1216 | Advanced Microtechnology II |
| WMT 1226 | External Watch |
| WMT 1316 | Quartz Watch Repair |
| WMT 1326 | Mechanical Watch Repair |
| WMT 2416 | Escapement/Oscillator |
| WMT 2426 | Precision Timing/Automatic Watches |
| WMT 2516 | Chronograph Watches |
| WMT 2526 | Shop Management/Workflow Studies |
| WMT 2616 | Estimating/Quality Control |
| WMT 2626 | Advanced Watch Repair/Capstone |

GENERAL EDUCATION REQUIREMENTS: 22 CREDIT HOURS

COMMUNICATION ARTS (3 CREDIT HOURS)

| | |
|-----------|------------------------|
| ENGL 1033 | Technical Writing I |
| ENGL 1113 | Freshman Composition I |

HISTORY (3 CREDIT HOURS)

| | |
|-----------|-------------------------|
| HIST 1483 | U.S. History to 1865 |
| HIST 1493 | U.S. History Since 1865 |

MATHEMATICS (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| MATH 1513 | College Algebra |
| MATH 1613 | Trigonometry |

PHILOSOPHY (3 CREDIT HOURS)

| | |
|-----------|----------------------|
| PHIL 1013 | Ethics of Leadership |
| PHIL 1213 | Ethics |

POLITICAL SCIENCE (3 CREDIT HOURS)

| | |
|-----------|-----------------|
| POLS 1113 | U.S. Government |
|-----------|-----------------|

SCIENCE (4 CREDIT HOURS)

| | |
|-----------|-------------------|
| PHYS 1114 | General Physics I |
|-----------|-------------------|

ORAL COMMUNICATIONS (3 CREDIT HOURS)

| | |
|-----------|--------------------------------|
| SPCH 1113 | Intro to Speech Communications |
| SPCH 2313 | Small Group Communications |

ADMISSIONS REQUIREMENTS AND PROCESS

The number of students allowed to enroll in the program is limited. Therefore, students must successfully complete the admission requirements and process before being considered for enrollment into the program. In order to make an appropriate enrollment decision, consideration for acceptance into the program will be based upon the results of a thorough screening and interview process involving the following requirements and activities as listed:

1. Complete the college admissions process through OSU Institute of Technology which includes providing: an application for admission, official high school and college transcripts, ACT scores, academic assessment as needed, and appropriate paperwork for international students.
 2. Demonstrate the ability to succeed in the program by:
 - a) Taking a nationally-normed academic computerized placement test (Compass) available from the OSU Institute of Technology Assessment Center in person or via the web and either making the following minimum scores: Reading comprehension 81, writing skills 74, college algebra 45 or scoring a 19 or better on all ACT sub-tests.
 - b) Passing a mechanical aptitude assessment.
 - c) Passing a manual dexterity assessment.
 3. Receive positive recommendations from participation in interview sessions with representatives of the program faculty and the program supervisor.
 4. Read and acknowledge the estimated cost expenditures sheet.
 5. Share information about your history, interests, plans and career goals by providing the following:
 - a) A resume that describes your present skills and abilities and your volunteer and paid work experiences;
 - b) An essay of 200-300 words that tells why you think this program is right for you. The essay should describe your goals and interests, what you hope to get out of the program and what you have done so far to prepare.
 6. Provide a letter of recommendation from someone other than a family member.
 7. Successful completion and submission of a background check. Information on which can be found here: http://www.osuit.edu/academics/watchmaking/background_check.pdf
- Applicants will be notified of their acceptance or denial into the program following completion and evaluation of the admission process.

Course Descriptions

ARRANGEMENT:

The course descriptions are grouped in alphabetical order (example: Accounting (ACCT) and in numerical order within the prefix).

COURSE NUMBERS:

Each course consists of a three to four-letter prefix (discipline) plus a four-digit number following the prefix. The first digit following the prefix designates the general course level: 1-freshman, 2-sophomore, 3-junior, 4-senior, and 0-designates a nontransferable course that does not apply to program requirements.

The fourth digit at right designates the number of credit hours. A course number ending in '0' designates a course with a variable credit of 1-9 credit hours.

PREREQUISITE(S):

Some courses have requirements that must be met prior to enrollment in that course. These are listed as course prerequisites at the end of the course description. Courses listed as 'co-requisite' are to be taken in the same semester as the course listed. Although not stated for every course, the Division Chair's approval to enroll may be obtained in lieu of the prerequisite course where students have satisfied the requirement by other means.

SCHEDULING:

Some courses are not offered every semester. Therefore, students are encouraged to follow the plan of study and to work closely with a Faculty Advisor.

CODE LETTERS

The letters next to the General Education course names are code letters that designate the general education category for which the course may be used:

- Analytical and Quantitative Thought (A)
- Humanities (H)
- Natural Sciences (N)
- Social and Behavioral Sciences (S)
- Diversity (D)
- International Dimension (I)
- Scientific Investigation (L)

COURSE PREFIX KEY

| | |
|------|--|
| ACCT | Accounting |
| ACR | Air Conditioning & Refrigeration |
| ASL | American Sign Language |
| AUC | Automotive Collision Repair |
| AUMC | MOPAR CAP, Automotive Service |
| AUMF | Ford ASSET, Automotive Service |
| AUMG | GM ASEP, Automotive Service |
| AUMP | PRO-TECH, Automotive Service |
| BADM | Business Administration |
| BIOL | Biology Science |
| BLD | Building Construction |
| CET | Civil Engineering Technology |
| CHEM | Chemistry |
| CNS | Construction Technology |
| CS | Computer Science |
| CUA | Culinary Arts |
| DCNH | Diesel Case New Holland |
| DHE | Diesel & Heavy Equipment |
| DHEA | Aggreko Technician Training Program |
| DHEC | CAT Dealer Prep |
| DHEG | Gas Processors Association |
| DHEK | Komatsu ACT |
| DHEM | MHC Kenworth Truck Technology |
| DHES | SouthWestern Association Industrial & Farm Equipment |
| ECON | Economics |
| ECNT | Electrical Construction |
| ENGL | English |
| ETD | Electrical Engineering |
| ETDE | Electrical & Electronics |
| ETDG | Engineering Graphics |
| ETDM | Manufacturing Technology |
| ETDP | Power Plant Technology |
| GEN | General Studies |
| GEOG | Geography |
| GEOL | Geology |
| GRD | Graphic Design |
| GTAC | General Technology, ACR |
| GTAU | General Technology, Automotive |
| GTCT | General Technology, Construction |
| GTET | General Technology, Engineering |
| GTGE | General Technology |
| GTHE | General Technology, Heavy Equipment |
| GTIT | General Technology, Information Technology |
| HHP | Health & Human Performance |
| HIST | History |
| HUM | Humanities |
| HVLP | High Voltage |
| ITD | Information Technology |
| MATH | Mathematics |
| MGMT | Management |

| | |
|------|---------------------------------------|
| MKTG | Marketing |
| MMT | Multimedia |
| MVSK | Mvskoke Language |
| NSCI | Nutrition |
| NURS | Nursing |
| OIS | Office Information Systems Technology |
| OPT | Orthotic & Prosthetic Technologies |
| ORIE | College Strategies |
| PHIL | Philosophy |
| PHO | Photography |
| PHYS | Physical Science |
| PIT | Pipeline Integrity |
| PLBG | Plumbing, Construction |
| PLNT | Plant Science |
| POLS | Political Science |
| PSYC | Psychology |
| READ | Reading Fundamentals |
| RESC | Residential Construction |
| SOC | Sociology |
| SOIL | Soil Science |
| SPAN | Spanish |
| SPCH | Speech Communications |
| STAT | Statistics |
| SURV | Surveying |
| TTEN | Toyota T-TEN, Automotive Service |
| VIS | Visual Communications |
| WMT | Watchmaking |

Courses marked with  are available online

ACCOUNTING (ACCT)

ACCT 2043

COST ACCOUNTING

Topics included are cost accounting cycle, job-order and process cost techniques, joint costs, variance analysis, material and labor costing, EOQ, and factory overhead. Theory. Prerequisite: ACCT 2203.

ACCT 2090 (1-9 CREDIT HOURS)

SPECIAL PROJECTS

Special Projects are conducted as individual study under the supervision of an instructor. Projects may be undertaken in any area of accounting with credit hours assigned based on level and amount of effort involved. Theory/Lab. Prerequisite: Division Chair approval.

ACCT 2103

FINANCIAL ACCOUNTING

The theory and practice of measuring and recording financial data for an economic unit; journalizing transactions; adjusting entries for revenue and expense items, inventories, depreciation, internal control with an emphasis on cash, current and long-term liabilities and accounting for corporation stock transactions. Emphasis is on the preparation and use of the income statement, balance sheet and statement of cash flows. Theory.

ACCT 2203

MANAGERIAL ACCOUNTING

A study of the theory and practice of managerial accounting including analysis of cost behavior with an emphasis on the accumulation of product costs and budgeting for planning and performance evaluation. Other topics covered include job order costing, process costing, cost-volume analysis, capital budgeting, standard costs and departmentalization. Theory. Prerequisite: ACCT 2103.

ACCT 2303

INTERMEDIATE ACCOUNTING I

Topics include the theoretical framework of accounting, review of the accounting cycle, present value analysis, current assets, inventory valuation and acquisition, and disposal of fixed assets. Theory. Prerequisite: ACCT 2203.

ACCT 2333

INCOME TAX ACCOUNTING

A study of the current provisions of the tax structure, Internal Revenue Service Code, and regulations to prepare students to perform tax analysis and problem solving techniques and prepare tax returns. Theory.

AIR CONDITIONING & REFRIGERATION (ACR)

ACR 1111

EPA CERTIFICATION INFORMATION

Instruction concerning EPA rules and regulations is given to provide the student an opportunity to take and pass the EPA Certification test. Current

rules and regulations concerning ozone depletion, CAA, and Montreal Protocol are taught. Theory. Offered in the fall and spring semesters.

ACR 1121

INTRODUCTION TO AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

An orientation into the world of Air Conditioning and Refrigeration technology, including career opportunity exploration, licensing requirements, safety, tools and your college strategies. Theory. Offered in the fall and spring semesters.

ACR 1126

ACR SYSTEM APPLICATION

Career Cornerstone covers the use of hand tools and industry specific tools, as well as copper tube flaring, swaging, cutting and brazing. It includes the theory of the compression refrigeration cycle to include components which make up a refrigeration system, and the operation and analysis of basic refrigeration systems including evacuation, charging, recovery, control adjustments and efficiency checks. Also emphasizes career opportunities in the air conditioning and refrigeration fields and continues the student's work on the Career Passport. Theory/Lab. Offered in the fall and spring semesters.

ACR 1203

ELECTRICAL CONTROLS

A study of basic electrical properties and their behavior in series, parallel, and combination circuits. Theories of operation of electrical components common to air conditioning and refrigeration systems such as switches, relays, contactors, starter boxes, transformers, time delay relays, defrost timers, motors of various types, capacitors and motor starting relays are also examined. Theory/Lab. Offered in the fall and spring semesters.

ACR 1206

ELECTRICAL CONTROL APPLICATIONS

Electrical components and circuits and how they relate to air conditioning and refrigeration systems form the basis of instruction. Emphasis is on actual wiring and troubleshooting of basic circuits, with techniques for troubleshooting 'live' circuits with volt meters and amp meters practiced. Students also gain experience designing and wiring circuits using common electrical components studied in ACR 1203. Theory/Lab. Prerequisite/Co-requisite: ACR 1203. Offered in the fall and spring semesters

ACR 1336

RESIDENTIAL AIR CONDITIONING AND HEATING SYSTEMS

Individual projects examining residential air conditioning and heating systems with respect to: installation, operation, and servicing of split system equipment, package equipment, unitary equipment, gas heating electric heating, hydronic heating, and oil heating are discussed and/or reviewed in the lab. Topics including R-22 and R-410A Systems are discussed and analyzed.

A strong emphasis is put on wiring diagrams, control circuits and troubleshooting. Theory/Lab. Prerequisite: ACR 1203, ACR 1206, ACR 1126. Offered in the summer semester.

ACR 1343

ELECTRONIC CONTROL APPLICATIONS

Solid state electronic controls, bridge-circuits and direct digital controls as applied to air conditioning and refrigeration. Emphasis is devoted to wiring and testing system components and control circuits. Theory/Lab. Prerequisites: ACR 1203, ACR 1206. Offered in the summer semester.

ACR 1344

UNITARY REFRIGERATION

Operation, diagnosis and service of unitary systems. Emphasis is devoted to ice makers, slush machines, ice cream units and their related controls. Theory/Lab. Prerequisites: ACR 1126, ACR 1203, ACR 1206. Offered in the fall semester.

ACR 2090 (1-9 CREDIT HOURS)

SPECIAL PROJECTS

Individual study may be arranged under the supervision of an instructor with credit hours to be designated. Projects may be undertaken in any area of air conditioning. Theory/Lab. Prerequisite: Division Chair approval.

ACR 2406

COMMERCIAL REFRIGERATION APPLICATIONS

Applies to the selection, calibration, servicing, installation, application and operation of commercial refrigeration systems and display cases. Also, included: adjustment of temperature, pressure, defrost controls, load calculations, pipe sizing and bidding procedures. Diagnosis and troubleshooting electrical and pressure operated devices are included. Theory/Lab. Prerequisites: ACR 1126, ACR 1343, ACR 1344. Offered in the spring semester.

ACR 2443

SYSTEMS CONTROLS

Topics include the operation, calibration, and servicing of equipment with direct digital control systems. Systems with both dedicated and programmable controls are covered. Special emphasis is placed on checking inputs and outputs to individual control systems. Theory/Lab. Prerequisite: ACR 1343. Offered in the fall semester.

ACR 2513

AIR SYSTEMS DESIGN

Heat load calculations using ASHRAE data from Manual J for residential homes and duct layout and design using Manual D form the basis of instruction on air systems design. Heat loads are calculated by use of forms and the computer. Theory/Lab. Offered in the fall and spring semester.

ACR 2603**COMMERCIAL AIR CONDITIONING**

Covers the operation, service and maintenance of commercial reciprocating, centrifugal and absorption chilled water systems. Also taught are commercial controls, starting systems and energy management. Theory/Lab. Prerequisites: ACR 1343, ACR 2806. Offered in the fall semester.

ACR 2616**AIR CONDITIONING AND REFRIGERATION CAPSTONE**

Involves team projects to examine the installation, operation and service of home air conditioning units, heat pumps and control systems. Also covers psychometrics, fans, air ducts, control wiring, circuit tracing and system diagnosis and laboratory experiences in servicing air conditioning and heating equipment. Includes compilation of the Career Passport, exit assessments and other graduation requirements. Theory/Lab. Prerequisites: ACR 2603, ACR 2806. Offered in the spring and summer semester.

ACR 2806**ACR INTERNSHIP I**

A supervised cooperative industry experience, which allows students the opportunity to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines. Theory/Lab. Prerequisites: Student must be in good academic standing having a minimum of a 2.0 G.P.A. and have completed: ACR 1126, ACR 1203, ACR 1206, ACR 1336.

ACR 2906**ACR INTERNSHIP II**

A supervised cooperative industry experience, which allows students the opportunity to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines. Theory/Lab. Prerequisites: Student must be in good academic standing having a minimum of a 2.0 G.P.A. and have completed: ACR 1336, ACR 2806.

ACR 2912**INTERNSHIP (FALL SEMESTER)**

A supervised cooperative industry experience, which allows students the opportunity to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines. Theory/Lab. Prerequisites: Student must be in good academic standing having a minimum of a 2.0 G.P.A. and have completed: ACR 1126, ACR 1203, ACR 1206, ACR 1336.

AMERICAN SIGN LANGUAGE (ASL)**ASL 1363****AMERICAN SIGN LANGUAGE I**

An introduction to ASL (American Sign Language) which emphasizes basic signs, alphabet, numbers, and culture of the d/Deaf (deaf and hard of hearing) as well as facial and body expressions. Theory.

ASL 1373**AMERICAN SIGN LANGUAGE II**

A continuation of ASL (American Sign Language) which continues to emphasize basic signs, alphabet, numbers, and culture of the d/Deaf (deaf and hard of hearing) as well as facial and body expressions. Theory. Prerequisite: ASL 1363 or approval of instructor.

AUTOMOTIVE COLLISION REPAIR (AUC)

Courses in each semester of the Collision Repair program are prerequisites for courses in the following semester according to the Collision Repair Plan of Study. Students should check with their Collision Repair faculty advisor for clarification on prerequisites.

AUC 1031**COLLISION COMPUTER BASED TRAINING**

The theory/application of the proper use of computerized collision estimating, non-structural, structural, and refinishing systems. Theory/Lab.

AUC 1032**SECTIONING WELDED PANELS**

The theory/application of the replacement of weld-on outer body panels. Emphasis is given to using proper removal, sectioning and welding procedures according to manufacturer and industry recommendations. Safety is stressed. Theory/Lab.

AUC 1062**REFINISHING PROCEDURES AND DETAILING**

The theory/application of the proper use of masking materials for priming, blending and overall refinishing and the proper detailing procedures and techniques used following the refinishing process. Safety is stressed. Theory/Lab.

AUC 1101**COLLISION CAREER CORNERSTONE**

Through a theory/application approach, the Career Cornerstone experience emphasizes the variety of career opportunities available in the collision repair industry with a focus on career networking by communicating with industry professionals. Materials and activities designed to aid students in completing their Career Passport are included. Students are also exposed to various styles of vehicle construction, common equipment used in the industry and sound safety practices. Theory/Lab.

AUC 1102**CHASSIS ANALYSIS**

The theory/application of the proper procedures used for measuring and analyzing unibody and frame structural damage is taught in this course. Emphasis is on the use of the manufacturer's recommendations for correct anchoring techniques utilizing several types of anchoring attachments and a variety of pulling equipment, as well as the professional use of dimension books and computer measuring systems. Safety is stressed. Theory/Lab.

AUC 1111**VEHICLE DESIGN & ENERGY MANAGEMENT**

The theory/application of vehicle design and construction is taught with an emphasis on unitized, full frame and space frame construction. The physics of structural deformation are featured including lateral and vertical deflection as it pertains to the three-section principle, emphasized by the collision repair industry. Safety is stressed. Theory/Lab.

AUC 1112**PANEL STRAIGHTENING & FILLER APPLICATION**

The theory/application of the use of common collision repair materials and processes related to panel straightening and filler application is taught. Emphasis is on metal, plastic and fiberglass repairs following correct procedures established by the collision repair industry. Safety is stressed. Theory/Lab.

AUC 1121**COLLISION ESTIMATING**

The theory/application of vehicle damage appraisals used in the collision industry. Collision estimating involves the student technician in the areas of customer relations, listing replacement parts, and determining the cost of repairs for damaged components. Collision repair manuals and computerized estimating systems are used according to industry standards. Theory/Lab.

AUC 1131**MECHANICAL & ELECTRICAL SERVICE & REPLACEMENT PROCEDURES**

The theory/application of electrical/electronic principles and concepts relating to collision repair, including the diagnosis and servicing of components and systems. Additionally, the inspection, diagnosis and servicing of mechanical components and systems are emphasized. Safety is stressed. Theory/Lab.

AUC 1212**REFINISHING EQUIPMENT & PROCESSES**

The theory/application of the proper use of collision repair refinishing equipment and processes is taught. Emphasis is on specific applications, and the equipment and processes they require. Safety is stressed. Theory/Lab.

AUC 1222**COLOR ANALYSIS**

The theory/application of collision repair refinishing problem-solving techniques is taught. Emphasis is on solving refinishing problems as they affect the quality of the repair and shop production. Manufacturer and industry recommendations are followed. Safety is stressed. Theory/Lab.

AUC 1232**GAS METAL ARC WELDING**

The theory/application of automotive welding techniques used in the collision repair industry is taught. Emphasis is on proper welding operations using MIG and resistance spot welding according to industry recommendations. Safety is stressed. Theory/Lab.

AUC 1252**PANEL REPLACEMENT & ALIGNMENT**

The theory/application of procedures used to replace and align body panels is taught. Emphasis is on the correct processes used in the removal and replacement of bolt-on body panels following industry recommendations. The proper alignment of panels, as well as moveable glass, hardware, and locking mechanisms are included. Safety is stressed. Theory/Lab.

AUC 1262**ADVANCED METAL REPAIR**

The theory/applications of procedures used to repair body lines, reverse curves, and combinations crown panels is taught. Emphasis is given to the complex shaping and leveling of various filler materials according to industry standards. Safety is stressed. Theory/Lab.

AUC 1302**SUSPENSION & ALIGNMENT FUNDAMENTALS**

The theory/application of proper procedures used in measuring and analyzing unibody and frame damage. Emphasis is on the initial repair and correction procedures which affect wheel alignment as well as overall structural alignment using specialized shop tools, stationary systems and above-floor systems, according to manufacturer and industry recommendations. Safety is stressed. Theory/Lab.

AUC 2101**STRUCTURAL ALIGNMENT PROCEDURES**

The theory/application of the analysis and repair procedures used to properly repair minor collision damage such as kick-up, sway, twist, short rail and diamond damage utilizing electronic measuring systems and above-floor repair systems according to manufacturer and industry recommendations. Safety is stressed. Theory/Lab.

AUC 2131**NON-STRUCTURAL RECYCLED PANELS**

The theory/application of the proper use of recycled panels. Emphasis is on the proper removal and re-use of weld-on outer body panels according to industry recommendations. Safety is stressed. Theory/Lab.

AUC 2156**INTERNSHIP I**

A cooperative agreement between industry and education, which allows student technicians to utilize and refine skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2161**ADVANCED REFINISHING PROCESSES I**

The theory/application of the proper production refinishing procedures used in single stage, base coat, clear coat, and tri-coat refinishing. Safety is stressed. Theory/Lab.

AUC 2201**STRUCTURAL REPLACEMENT PROCEDURES**

The theory/application of the analysis and replacement procedures used to replace front, center and rear structural components utilizing electronic and on-electric measuring systems according to manufacturer and industry recommendations. Safety is stressed. Theory Lab.

AUC 2211**COLLISION INDUSTRY UPDATES AND TRENDS**

The theory/application of updated vehicle technologies as they relate to collision repair, as well as trends developing in the industry. Emphasis is placed on Hybrid and alternative fuel vehicles, safety devices and systems, high strength steels and composites and other emerging technologies. Theory/Lab.

AUC 2231**PLASTIC REPAIR & PANEL BOND**

The theory/application of the proper procedures used to repair plastic bumper covers. Various manufacturers' procedures are covered. Panel bonding of outer body panels is demonstrated and discussed. Safety is stressed. Theory/Lab.

AUC 2256**INTERNSHIP I**

A cooperative agreement between industry and education allows student technicians to utilize and refine skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2261**ADVANCED REFINISHING PROCESSES II**

The theory/application of the proper production refinishing procedures used on flexible parts. Additionally, instruction includes proper application techniques used with water-borne products. Safety is stressed. Theory/Lab.

AUC 2356**INTERNSHIP III**

A cooperative agreement between industry and education allows student technicians to utilize and refine skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2401**BEGINNING INTERNSHIP I**

A cooperative agreement between industry and education, which allows the students to earn credit for the technology center Collision Repair program to count toward the Automotive

Collision Repair Technology AAS degree program.

All work is performed in accordance with the industry standards and supervised by technology center faculty. Theory/Lab.

AUC 2411**REFINISHING CAPSTONE**

The theory/application of refinishing repair and problem-solving techniques is taught. Emphasis is on the student technician's performance in the areas of color matching, applications of primers, sealers, topcoats, surface preparation of bare metal and painted surfaces. Student technicians are provided the opportunity to update their skills in refinishing by attending update seminars and new information updates by manufactures, when available. Capstone represents a culmination of the program of study. Safety is stressed. Theory/Lab. Prerequisite: AUC 2403.

AUC 2415**ADVANCED INTERNSHIP I**

A cooperative agreement between industry and education allows student technicians to utilize and refine refinishing skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2521**NON-STRUCTURAL CAPSTONE**

The theory/application of non-structural collision repair problem-solving techniques is taught. Emphasis is on the student technician's performance of removal and replacement of outer body panels, panel sectioning, welding, and correct filler repair techniques following manufacturer's and industry recommendations. Student technicians are provided the opportunity to update their skills in non-structural repair by attending update seminars and new information updates by manufacturers, when available. The Capstone course represents a culmination of the program of study. Safety is stressed. Theory/Lab. Prerequisite: AUC 2513.

AUC 2531**BEGINNING INTERNSHIP II**

A cooperative agreement between industry and education allows student technicians to utilize and refine non-structural repair skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2535**ADVANCED INTERNSHIP II**

A cooperative agreement between industry and education allows student technician to utilize and refine skills previously learned in their educational processes. All work is performed

in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2631

STRUCTURAL CAPSTONE

The theory/application of structural collision repair problem-solving techniques is taught. Emphasis is on the student technician's performance of correct measuring and gauging procedures, completing a detail repair plan, implementing the steps in anchoring, structural welding, and correcting structural damage as it relates to vehicle manufacturers recommendations and industry standards. Student technicians are provided the opportunity to update their skill information in non-structural repair by attending update seminars and new information updates by manufacturers, when available. The Capstone course represents a culmination of the program of study. Safety is stressed. Theory/Lab. Prerequisite: AUC 2623.

AUC 2641

BEGINNING INTERNSHIP III

A cooperative agreement between industry and education allows student technicians to utilize and refine skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and is supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUC 2645

ADVANCED INTERNSHIP III

A cooperative agreement between industry and education allows student technicians to utilize and refine skills previously learned in their educational processes. All work is performed in accordance with industry standards and guidelines, and supervised by industry and college representatives. Safety is stressed. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUTOMOTIVE - MOPAR CAP (CHRYSLER) (AUMC)

AUMC 1101

TECHNOLOGY FUNDAMENTALS

A theoretical discussion and demonstration of vehicle components, systems operation, and proper usage of hand and power tool, precision measuring, service information systems, and specialized equipment applications. A continual reinforcement of safe shop practices and safe tool usage is emphasized on a daily basis. Theory/Lab.

AUMC 1102

STEERING & SUSPENSION II

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, align, remove and repair components of the steering and suspension systems found on Chrysler built vehicles. This effort includes a focus on how to use a systematic approach to diagnose and repair the root cause of vehicle noise, vibration and harshness (NVH) concerns. Provides specific diagnostic methods used to troubleshoot steering and suspension systems including NVH concerns and isolate problems related to certain steering and suspension component groups. Theory/Lab.

AUMC 1141

INTRODUCTION TO ELECTRICAL SYSTEMS

Prepares the MOPAR CAP student with the skills needed to perform basic electrical measurements, diagnose electrical circuit faults and efficiently navigate wiring diagrams. The student also demonstrates the proper application of the Chrysler six-step electrical diagnostic process. In addition, each student completes an extensive series of vehicle battery diagnostic testing procedures. Theory/Lab.

AUMC 1151

BODY MECHANICAL DIAGNOSIS & ADJUSTMENTS

Prepares the MOPAR CAP student with the skills to perform procedures to remove, repair, and attach both exterior and interior plastic panels and components. The student demonstrates the ability to identify the correct body panels and acceptable component fit and gap correction. The student also focuses on developing the ability to diagnose, locate, and repair the cause of water leak and/or wind noise complaints. Theory/Lab.

AUMC 1161

STEERING & SUSPENSION I

Prepares the MOPAR CAP student with an understanding of basic steering and suspension geometry and principles. Students identify components of different steering and suspension systems and describe how they are related to the vehicle platforms. In addition, students use service information, special tools and service equipment to diagnose and repair wheel and tire wear concerns. Theory/Lab.

AUMC 1201

BRAKE SYSTEMS I

Prepares the MOPAR CAP student with the understanding of base brake systems theory and operation principles. The student is required to identify components of different brake systems, describe how they are related to different vehicle platforms and is also required to demonstrate repair procedures using service information, special tools and brake service equipment. The primary emphasis is on assisting the student in the development of skills needed to diagnose brake system malfunctions and perform service work on brake systems. Theory/Lab.

AUMC 1215

INTERNSHIP I

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses. Lab.

AUMC 1221

BRAKE SYSTEMS II

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, remove and repair components of the brake systems found on Chrysler built vehicles. The student's focus is on demonstrating how to use a systematic approach to diagnose and repair the root cause of vehicle base brake hardware, brake hydraulics, electronic anti-lock brake systems, traction control systems, and vehicle stabilization control systems. Theory/Lab.

AUMC 1241

ELECTRONIC CONTROL SYSTEMS

Prepares the MOPAR CAP student with the skills necessary to perform diagnostics on complex electronic control systems. Students focus on vehicle control modules, electronic control system components and related switches and sensors. The student demonstrates the use of service information procedures and special tools required for electronic control system diagnosis. Theory/Lab.

AUMC 1251

VEHICLE COMMUNICATION

Designed to introduce the MOPAR CAP student to the basic concepts of vehicle communication networks as well as provide an understanding of the networks currently in use in Chrysler vehicles. The student demonstrates the proper diagnosis and repair of a vehicle communication network fault, and provides the student with an understanding of the vehicle communication system and describes the proper use of diagnostic tools necessary for accurate and timely repairs. Theory/Lab.

AUMC 1261

BODY ELECTRICAL SYSTEMS

Provides the MOPAR CAP student with the knowledge and skills necessary to diagnose and service the electrical systems used on current Chrysler vehicles. A significant portion of course is dedicated to controller area network (CAN) bus vehicles. The proper use of service information and special tools is emphasized to aid in electronic CAN bus system diagnosis and repairs. The primary focus is dealing with vehicle communications, bus architecture, power/ground distribution and electrical/electronic sub-systems. Theory/Lab.

AUMC 1271**BODY SYSTEMS DIAGNOSIS AND ADJUSTMENTS**

Provides the MOPAR CAP student with the skills needed to provide diagnosis, repair and maintenance on vehicle power accessory systems. These skills include the ability to identify the different systems, describe the proper function and operation of the system and the ability to repair the power accessory system. The systems focused on include the service of power sliding doors, lift gates, power windows, door locking assemblies, cruise control, interior/exterior lighting and related power accessories. The starting and charging system is covered in detail. Chrysler service information and proper special tool usage is emphasized to aid in electrical system diagnosis. Theory/Lab.

AUMC 1301**MANUAL TRANSMISSIONS I**

Prepares the MOPAR CAP student with the understanding of the theory and operation of a manual transmission/transaxle assembly. The student identifies the components of the manual transmission/transaxle, and explains how each component works and relates to other components to assist with the function of the complete assembly. A focus on using service information, special tools and manual transmission/transaxle service equipment assists the student to diagnose manual transmission malfunctions and perform service work on manual transmission/transaxle assemblies. Theory/Lab.

AUMC 1305**INTERNSHIP II**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses. Lab.

AUMC 1321**AUTOMATIC TRANSMISSIONS I**

Prepares the MOPAR CAP student with an understanding of automatic transmission/transaxle theory and operation. The student is able to identify components of the automatic transmission/transaxle and explain how the components are related to each other and the proper operation of the vehicle transmission assembly. The student demonstrates proper use of service information and automatic transmission/transaxle service tools/equipment. Theory/Lab.

AUMC 1402**MANUAL TRANSMISSIONS II**

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, remove and repair

components of a manual transmission/transaxle, transfer case and front/rear axle assembly found in Chrysler built vehicles. The student focuses on how to use a systematic approach to diagnose and repair the root cause of manual transmission/transaxle failures. The Chrysler service information procedures and the use of special tools are emphasized to assist in the diagnosis and repair of Chrysler manual transmission/transaxle assemblies. Theory/Lab.

AUMC 1411**ENGINE OPERATION**

A theoretical demonstration and application of the principles of engine operation, including the identification of engine parts and component functions of the cooling, lubrication, fuel, ignition, emission, mechanical, electrical and electronic systems. Emphasis is given to diagnosis, failure analysis and service according to manufacturer's specifications. Theory/Lab.

AUMC 1412**AUTOMATIC TRANSMISSIONS II**

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, remove and repair components of an automatic transmission or transaxle assembly found in Chrysler built vehicles. Using the Chrysler scan tool and associated electronic test equipment, the student demonstrates how to use a systematic approach to diagnose and repair the root cause of automatic transmission failures. The use of service information procedures and the proper use of special tools are emphasized to help in diagnosis and repair of Chrysler automatic transmissions/transaxles. Theory/Lab.

AUMC 1421**CAREER CORNERSTONE: INTRODUCTION TO CHRYSLER OPERATIONS**

A theoretical discussion of the evolution of the Chrysler Corporation which involves an examination of the relationship between Chrysler and its dealers and includes an examination of the dealership's service and parts departments, including expectations of department personnel. The emphasis is on career networking focusing on the variety of career opportunities within the automotive service industry. Included are materials and activities designed to aid the student in the completion of his/her Career Passport, including exposure to experts in the automotive service industry. Also covers the introduction to and proper use of Chrysler service manuals, warranty repairs and customer pay tickets. Master Tech Training and Right-to-Know are also discussed. Theory.

AUMC 1422**ENGINE REPAIR**

A theoretical demonstration and application of engine repair procedures according to manufacturer's specifications, including disassembly, cleaning, inspection, measurement, service and reassemble and R&R is taught. Emphasis is given to system diagnosis and

failure analysis and includes the proper use of hand tools, precision measurement devices and other specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 1431**ELECTRICAL PRINCIPLES I**

A theoretical demonstration and application of the operation and service of electrical systems leading to the introduction of electronic systems, including OHM's Law, circuit construction and component testing. Emphasis is given to proper equipment usage and safety. Theory/Lab.

AUMC 1515**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and is supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUMC 1522**CHRYSLER ELECTRICAL SYSTEMS**

A theoretical demonstration and application of electrical and electronic principles regarding Chrysler battery, starting, charging and ignition systems is taught with emphasis given to system diagnosis, failure analysis and service according to manufacturer's specifications. Safety is stressed. Theory/Lab.

AUMC 1531**ELECTRICAL PRINCIPLES II**

A theoretical demonstration and application of advanced electronic systems. The focus is on the understanding of sensors and controllers that control electronic systems, including diagnosis of electrical systems using the Diagnostic Readout Box, circuit construction and component testing. Emphasis is given to proper equipment usage and safety. Theory/Lab. Prerequisite: AUMC 1431.

AUMC 1541**CHRYSLER BODY ELECTRICAL SYSTEMS I**

A theoretical demonstration and application of the operation, diagnosis and service of computer controlled electronic vehicle communications. Focuses on the understanding, diagnosis, and repair of CCD, PCI, ISO-K, SWS, and CAN Bus systems, including the use of special electronic diagnostic equipment. Emphasis is given to proper usage and safety. Theory/Lab. Prerequisites: AUMC 1431, AUMC 1531.

AUMC 1611**BRAKE SYSTEMS FUNDAMENTALS**

A theoretical demonstration and application of component and system operation, function, adjustment, diagnosis and service, including principles of hydraulics and friction. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMC 1612**CHRYSLER BRAKE SYSTEMS SERVICE**

A theoretical demonstration and application of Chrysler brake system operation, diagnosis and service, including all electrical and electronic principles needed for diagnosis and service of anti-lock systems. Emphasis is given to system diagnosis and failure analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 1615**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed previous required core courses.

AUMC 1621**STEERING AND SUSPENSION SYSTEMS FUNDAMENTALS**

A theoretical demonstration and application of component and system function, operation, adjustment, diagnosis and service, and includes principles of suspension geometry and alignment angles, as well as the electrical and electronic principles needed for diagnosis and service of these systems. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMC 1622**CHRYSLER STEERING AND SUSPENSION SYSTEMS SERVICE**

A theoretical demonstration and application of Chrysler steering and suspension system operation, diagnosis and service, including electronic steering and suspension, CV joints, wheels and axles as related to noise, vibration and harshness. Also involved are the use of specialized tools and equipment. Proper vehicle lifting and supporting procedures and safety are stressed. Theory/Lab.

AUMC 1642**CHRYSLER BODY ELECTRICAL SYSTEMS II**

A theoretical demonstration and application of electrical and electronic principles on Chrysler chassis and body accessories. Including power assisted systems, windshield wipers, cruise control, lighting, warning devices, security controls, air bags, instruments and related components. Emphasis is given to system diagnosis and service as well as equipment usage according to manufacturer's specifications. Theory/Lab. Prerequisites: AUMC 1431, AUMC 1531.

AUMC 2115**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous core courses.

AUMC 2121**AUTOMATIC TRANSMISSION FUNDAMENTALS**

A theoretical demonstration and application of component and system operation, function, adjustment, diagnosis and service, including principles of hydraulics and friction. Also included are testing, minor service and rebuild with emphasis given to preventative maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMC 2122**CHRYSLER AUTOMATIC TRANSMISSIONS**

A theoretical demonstration and application of Chrysler automatic transmission/transaxle operation, diagnosis and service, and also includes all electrical and electronic principles needed for diagnosis of electronically shifted transmissions/transaxles. Emphasis is given to system diagnosis and failure analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 2131**MANUAL TRANSMISSION FUNDAMENTALS**

A theoretical demonstration and application of component and system operation, function, adjustment, diagnosis and service is presented and includes related driveline components. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMC 2132**CHRYSLER MANUAL TRANSMISSIONS**

A theoretical demonstration and application of Chrysler manual transmission/transaxle operation, diagnosis and service is contained within this course and includes related driveline components and systems. Emphasis is given to preventive maintenance, system diagnosis and failure analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 2211**CHRYSLER EMISSION SYSTEMS SERVICE**

A theoretical demonstration and application of Chrysler emission systems operation, diagnosis and service, with emphasis given to preventive maintenance, system diagnosis and failure analysis. Also involves the use of specialized tools and equipment and safety is stressed. Theory/Lab.

AUMC 2215**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and is supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed previous required core courses.

AUMC 2221**CLIMATE CONTROL FUNDAMENTALS**

A theoretical demonstration and application of component and system operation, adjustment, diagnosis and service, and includes common HVAC principles. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMC 2231**CHRYSLER FUEL SYSTEMS SERVICE**

A theoretical demonstration and application of Chrysler fuel systems operation, diagnosis and service, with emphasis given to preventive maintenance, system diagnosis and failure analysis. Involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 2232**CHRYSLER CLIMATE CONTROL**

A theoretical demonstration and application of Chrysler climate control systems operation, diagnosis and service, and includes automatic temperature controls. Emphasis is given to preventive maintenance, system diagnosis and failure analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 2315**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and is supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed previous core courses.

AUMC 2321**CHRYSLER ENGINE PERFORMANCE**

A theoretical demonstration and application of Chrysler engine performance systems operation, diagnosis and service, with emphasis given to preventive maintenance, system diagnosis and failure analysis. Involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMC 2344**MOPAR CORNERSTONE**

Designed to allow students to utilize and refine skills previously learned in the educational process. Included is a theoretical demonstration

and application of Chrysler diagnosis and service procedures on systems affecting drivability, including ignition system diagnosis and service and Chrysler's second generation on-board diagnostics (OBDI) with special emphasis given to understanding and following guidelines set by the Federal Clean Air Act and C.A.R.B. Regulations. Students complete the Career Passport and exit assessment instruments. Also involves the use of special service tools and information. Theory/Lab.

AUMC 2392

DIESEL FUEL INJECTION SYSTEMS SERVICE

A theoretical demonstration and application of Chrysler diesel fuel injection systems operation, diagnosis and service, as well as the use of special tools, equipment and service information. Safety is stressed. Theory/Lab.

AUMC 2401

HEATING AND AIR CONDITIONING I

Prepares the MOPAR CAP student with an understanding of basic heating, ventilation and air conditioning theory and operation. The student identifies components of the climate control systems and is able to describe how they are related to the different vehicle platforms. The student demonstrates the ability to use service information, special tools and HVAC service equipment. The development of these skills aids the student in the diagnosis and repair of malfunctioning HVAC climate control systems. Theory/Lab.

AUMC 2403

ADVANCED DRIVELINES

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, remove and repair components of advanced or updated drivelines found in Chrysler built vehicles. The components included are the automatic transmission/transaxle, manual transmission/transaxle, AWD and four wheel drive components with a special focus on use of a systematic approach to determine the root cause of driveline failures. Chrysler service information procedures and the use of special tools are emphasized to aid in diagnosis and repair of advanced Chrysler drivelines. Theory/Lab.

AUMC 2405

INTERNSHIP III

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses. Theory/Lab.

AUMC 2412

HEATING AND AIR CONDITIONING II

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, remove, and repair components of the climate control systems

found in Chrysler built vehicles. The student focuses on how to use a systematic approach to diagnose and repair the root cause of climate control failures. The development of skills using service information procedures and special tools/equipment are emphasized to assist in diagnosis and repair of Chrysler heating, ventilation, and air conditioning systems. Theory/Lab.

AUMC 2501

ENGINE PERFORMANCE

Provides the MOPAR CAP student with the knowledge and skills necessary to diagnose and service various components and sub-systems regarding drivability concerns on current Chrysler vehicles. The primary focus is diagnosing mechanical failures that result in drivability concerns. The student demonstrates proper diagnosis of failed components in the areas of internal engine, intake and exhaust systems, valve train and cylinder head. The student uses service information and a variety of special tools to aid in diagnosis and repair procedures. Theory/Lab.

AUMC 2505

INTERNSHIP IV

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses. Theory/Lab.

AUMC 2521

ENGINE FUEL SYSTEMS

Provides the MOPAR CAP student with the knowledge and skills necessary to diagnose and service component failures that may cause drivability concerns on current Chrysler vehicles. The primary focus is diagnosing fuel delivery and emission control systems that result in drivability concerns. The student demonstrates proper diagnosis of components found on different fuel systems related to fuel delivery, fuel injection, emission control, control engine and vehicle exhaust gas monitoring. The proper use of service information and special tools is emphasized to aid in diagnosis and repair procedures. Theory/Lab.

AUMC 2542

ENGINES I

Prepares the MOPAR CAP student with the understanding of the theory and operation of the internal combustion engine. The student identifies engine components and describes the operation of integral subsystems of the automotive internal combustion engine including the cooling system, lubrication system, crankcase ventilation, air induction system, etc. In addition, the student demonstrates how to properly use service information, special tools and equipment necessary to perform service repairs. Theory/Lab.

AUMC 2602

DIESEL MECHANICAL & FUEL INJECTION SYSTEM

Provides the MOPAR CAP student with the knowledge and skills necessary to diagnose and service diesel mechanical and fuel related drivability concerns on current Chrysler vehicles. The primary focus for is diagnosing diesel mechanical engines, cylinder head failures, and diesel fuel delivery systems, including fuel injectors, fuel pumps, pump timing, computer and related electrical/electronic systems that result in drivability concerns. The student demonstrates proper use of service information and special tools to aid in diagnosis and repair. Theory/Lab.

AUMC 2605

INTERNSHIP V

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses. Theory/Lab.

AUMC 2614

CAPSTONE

Provides the MOPAR CAP student with the knowledge and skills necessary to diagnose and service components and sub-systems on current production Chrysler vehicles, and is used to reinforce the ASE vehicle service areas in engines, engine performance, steering, suspension, brakes, electrical, automatic transmissions and manual transmissions, including drive train systems. An emphasis is placed on proper use of service information and special tools used in the diagnosis and repair procedures. Theory/Lab.

AUMC 2662

ENGINES II

Prepares the MOPAR CAP student with the skills needed to diagnose, adjust, remove and repair components of an engine assembly found in Chrysler built vehicles. The student focuses on how to use a systematic approach to diagnose and repair the root cause of engine failures based on the analysis of available data. An emphasis is placed on proper use of service information and special tools/equipment to aid in diagnosis and repair of Chrysler engines and related sub-systems. Theory/Lab.

AUTOMOTIVE – FORD ASSET (AUMF)

AUMF 1011

CAREER CORNERSTONE: INTRODUCTION TO AUTOMOTIVE SERVICE

An overview of the automotive field with detailed specifics focused on Ford Motor Company, and includes historical information, understanding how the dealership functions, efficiency,

productivity, time and labor guide usage, VIN codes, service manual usage, introduction to scan tool devices, pre-delivery inspection, precision measurement usage and safety. Its emphasis is on career networking focusing on the variety of related career opportunities within the automotive service industry. Theory.

**AUMF 1033
FORD BASIC ELECTRICAL**

The theory and application of electrical principles and concepts. Subjects covered include proper use of digital multimeters, OHM's Law, series circuits, parallel circuits and series parallel circuits. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive applications. Theory/Lab.

**AUMF 1103
INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed required AUMF core courses. Lab.

**AUMF 1111
FORD COMPUTER BASED TRAINING**

Designed to be a self-paced, self-study opportunity for the student to complete Ford Multimedia Training (FMT) units as required by Ford Motor Company for Ford Service Department Certification. The FMT units completed by the student matches the Ford coursework being taught in the same semester. Lab.

**AUMF 1113
FORD ENGINE REPAIR**

Theory, demonstration and lab work covering the operation and principles of two and four stroke engines, and engine systems, including the identification of engine parts, diagnosis and service of the cooling, fuel (gas and diesel), lubrication, ignition, diesel fuel injection and valve-train systems, with special emphasis on cylinder head service. The operation and service of turbo-chargers and super-chargers are also covered as they pertain to Ford vehicles, as well as the diagnosis of common engine noises. Theory/Lab.

**AUMF 1203
INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have completed required AUMF core courses. Lab.

**AUMF 1211
FORD COMPUTER BASED TRAINING**

Designed to be a self-paced, self-study opportunity for the student to complete Ford Multimedia Training (FMT) units as required by Ford Motor Company for Ford Service Department Certification. The FMT units completed by the student matches the Ford coursework being taught in the same semester. Lab.

**AUMF 1233
FORD BASE AND ELECTRICAL SUSPENSION AND STEERING**

The theory and application of component and system, function, operation, adjustment, diagnosis and repair of suspension and steering systems used on current Ford cars and light trucks, and includes principles of suspension, geometry, alignment angles, electronic suspension and steering, CV joints, and wheel and axle bearings. Emphasis is on preventive maintenance, system diagnosis and failure analysis and also includes electrical and electronic principles needed for diagnosis and repair of these systems. It involves operation of wheel balancers and alignment machines, as well as other special shop tools, equipment and Ford diagnostic testers. Proper automobile lifting and support procedures and shop safety are stressed. Theory/Lab.

**AUMF 1243
FORD ELECTRONIC SYSTEM DIAGNOSIS**

The theory and application of semiconductor devices, batteries, starting systems and service manual usage. Subjects covered include diode, transistors, micro-processor and basic automotive systems. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive applications. Theory/Lab.

**AUMF 1303
INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have completed required AUMF core courses. Lab.

**AUMF 1311
FORD COMPUTER BASED TRAINING**

Designed to be a self-paced, self-study opportunity for the student to complete Ford Multimedia Training (FMT) units as required by Ford Motor Company for Ford Service Department Certification. The FMT units completed by the student matches the Ford coursework being taught in the same semester. Lab.

**AUMF 1353
FORD ENGINE PERFORMANCE THEORY & OPERATION**

The theory and application of Ford electronic and computer control of engine, body and chassis system. Detailed examinations of various sensing and controlling devices used in Ford electronic systems are included, particularly as they relate to overall engine performance. Theory/Lab.

**AUMF 1363
FORD MANUAL TRANS/TRANSAXLE & DRIVELINE REPAIR**

A theoretical demonstration and application of Ford manual transmissions/transaxles and other drive train components. Also included are component and system operation, as well as overhaul and service procedures on clutches, manual transmissions/transaxles, differentials and NVH diagnosis and repair. Electronic testing of electrical/electronic shifting controls is included. Theory/Lab.

**AUMF 2103
INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have completed required AUMF core courses.

**AUMF 2203
INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have completed required AUMF core courses.

**AUMF 2411
FORD COMPUTER BASED TRAINING**

Designed to be a self-paced, self-study opportunity for the student to complete Ford Multimedia Training (FMT) units as required by Ford Motor Company for Ford Service Department Certification. The FMT units completed by the student matches the Ford coursework being taught in the same semester. Lab.

**AUMF 2453
FORD ENGINE PERFORMANCE DIAGNOSIS & TESTING**

The theory and application of Ford electronic and computer control, and includes the study of multiplexing with further diagnosis and testing using Ford's Integrated Diagnostic System (IDS) in relationship to improved engine performance. Theory/Lab.

AUMF 2473**FORD BRAKE SYSTEMS & ADVANCED BRAKE DIAGNOSIS**

A theoretical demonstration and application of Ford brake system operation, diagnosis and service, including principles of hydraulics. Service and repair of Ford ABS including electrical and electronic principles needed for diagnosis and repair of anti-lock brake and traction control systems are also taught. General shop safety is stressed. Theory/Lab.

AUMF 2511**FORD COMPUTER BASED TRAINING**

Designed to be a self-paced, self-study opportunity for the student to complete Ford Multimedia Training (FMT) units as required by Ford Motor Company for Ford Service Department Certification. The FMT units completed by the student matches the Ford coursework being taught in the same semester. Lab.

AUMF 2533**FORD DIESEL ENGINE PERFORMANCE DIAGNOSIS**

A theoretical demonstration and application of Ford diesel engine terminology, operating principles and maintenance. Ford direct injection fuel system diagnostics, repair, and maintenance procedures are taught. Students use performance flow charts and specific diagnostic procedures to evaluate engine condition and performance. Use of electronic service publications is emphasized. General shop safety is stressed. Theory/Lab.

AUMF 2573**FORD TRANSFER CASE/4WD DIAGNOSIS & SYSTEM REPAIR**

The theory and application of Ford drivetrain components, including system operation and overhaul/service procedures on transfer cases and 4WD front hubs. Also included are testing of electronic shifting controls and NVH diagnosis and repair. Safety is stressed. Theory/Lab.

AUMF 2611**FORD COMPUTER BASED TRAINING**

Designed to be a self-paced, self-study opportunity for the student to complete Ford Multimedia Training (FMT) units as required by Ford Motor Company for Ford Service Department Certification. The FMT units completed by the student matches the Ford coursework being taught in the same semester. Lab.

AUMF 2613**FORD AUTOMATIC TRANSMISSION REPAIR & ELECTRICAL**

The theory and application of Ford automatic transmissions and transaxles, which includes the principles of planetary gearsets and ALT power flow hydraulics. The diagnosis, testing and total overhaul of all current Ford car and light truck automatic transmissions and transaxles are covered, including the service of electrical/electronic 'E' class transmissions and transaxles. Safety is stressed. Theory/Lab.

AUMF 2683**FORD CAPSTONE**

Designed to allow students to utilize and refine skills previously learned in their educational process. Students complete the Career Passport and exit assessment instruments. Theory/Lab.

AUMF 2693**FORD CLIMATE CONTROL**

The theory and application of heating/air conditioning systems found on Ford automobiles and light trucks. Principles of refrigeration, air flow, heating and various climate control components operations are also covered. The inspection, testing, servicing and diagnosis of climate control system components, as well as automatic temperature control systems are emphasized. Safety is stressed. Theory/Lab.

AUTOMOTIVE - GENERAL MOTORS ASEP (AUMG)**AUMG 1062****COLLEGE & CAREER CORNERSTONE: INTRODUCTION TO GM AUTOMOTIVE SERVICE**

The foundation for students to build upon during their time at OSU Institute of Technology, an introduction to basic dealership operations, service literature/information, parts supply procedures, shop safety, hand and power tool usage, automotive measuring devices and systems including precision instruments, metric and decimal systems and program orientation. Additionally, in order to support successful departmental learning activities, students must document, defend, and demonstrate the ability to perform tasks required to meet the objectives of units including email proficiency, library research, resource tools, learning styles and study strategies, and time and money management. Theory/Lab.

AUMG 1122**GM AUTOMOTIVE ENGINES I**

The theory, demonstration and application of engine repair procedures according to manufacturer's specification, which includes disassembly, cleaning, inspection, measurement, service and reassembly and R&R. Emphasis is given to system diagnosis and failure analysis and includes the proper use of hand tools, precision measurement devices and other specialized equipment. Safety is stressed. GM course #16009-19 4.3L Central Port Fuel Injection is included. Theory/Lab.

AUMG 1132**GM AUTOMOTIVE ENGINES II**

The theory, demonstration and application of the principles of engine operation, which includes the identification of engine parts and component functions of the cooling, lubrication, fuel, ignition, emission, mechanical, electrical and electronic systems. Emphasis is given to diagnosis, failure analysis and service according to manufacturer's specifications. Theory/Lab.

AUMG 1142**GM AUTOMOTIVE BRAKE SYSTEMS I**

An introduction into the theory and application of conventional automotive brake systems, as well as an introduction to anti-lock systems. It includes an overview, discussion and hands-on activities with the various components and vehicles that make up the brake systems used in today's GM automobiles. Theory/Lab.

AUMG 1152**GM AUTOMOTIVE BRAKE SYSTEMS II**

The theory and application of the operation and repair of anti-lock brake systems and traction control systems used in GM vehicles, with an emphasis given to preventive maintenance, system diagnosis, failure analysis and proper service procedures. It includes the discussion and operation of specialized shop tools and equipment. Shop safety is stressed. Theory/Lab.

AUMG 1162**GM SPECIALIZED ELECTRONICS TRAINING I**

The theory and application of electrical principles and concepts. Subjects covered include proper use of digital multimeters, OHM's Law, series circuits, parallel circuits and series parallel circuits. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive application. Theory/Lab.

AUMG 1172**GM SPECIALIZED ELECTRONICS TRAINING II**

The theory and application of semiconductor devices, batteries, starting systems and service manual usage. Subjects covered include diode, transistors, microprocessor and basic automotive system. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive applications. Theory/Lab.

AUMG 1214**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

AUMG 1272**GM MANUAL DRIVETRAIN I**

An introduction to the theory and application of manual transmissions/transaxles, helical gearset operation, planetary gearset operation and powerflow. It includes an overview, discussion and hands-on diagnosis and repair of various manual transmissions and transaxles. Theory/Lab.

AUMG 1292**GM MANUAL DRIVETRAIN I**

The theory, demonstration and application of component and system function, operation, adjustment, diagnosis and service, which includes principles of suspension geometry and alignment angles. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMG 1302**GM AUTOMOTIVE ELECTRICAL SYSTEMS I**

The theory and application of batteries, starting and charging systems used on GM vehicles, which includes battery testing service and diagnosis; and starting system testing, diagnosis and service. Emphasis is on system operation, proper test equipment usage and diagnostic and safety procedures. Theory/Lab.

AUMG 1312**GM MANUAL DRIVETRAIN II**

A detailed look and interaction with the manual drivetrain field both in theory and application. The focus is on the diagnosis and repair of final drives, differentials, driveline, 4-wheel drive systems and vibration analysis. Emphasis is given to preventive maintenance, system diagnosis, failure analysis and proper service procedures and includes the discussion and operation of specialized shop tools and equipment. Shop safety is stressed. Theory/Lab.

AUMG 1314**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previously required AUMG core courses.

AUMG 1322**GM STEERING AND SUSPENSION II**

The theory, demonstration and application of GM steering and suspension system operation, diagnosis and service, and includes electronic steering and suspension, CV joint wheels, tires and axles related to noise, vibration and harshness. The use of specialized tools and equipment, proper vehicle lifting, and supporting procedures are involved, and the latest product considerations are discussed. Safety is stressed. Theory/Lab.

AUMG 1342**GM AUTOMOTIVE ELECTRICAL SYSTEMS II**

The theory and application of advanced auto electricity, which covers the theory, testing, diagnosis and repair of body electrical accessories including electrical windows, power seats, windshield wipers, cruise controls, audio systems and computer controlled body electronics. Theory/Lab.

AUMG 2522**GM AUTOMATIC TRANSMISSIONS & TRANSAXLES I**

An introduction into the theory and application of automatic transmissions and transaxles, and includes an overview discussion and hands-on activities with the various components that make up the automatic transmission, how they function and the logical process to diagnose a malfunction. Theory/Lab.

AUMG 2532**GM AUTOMOTIVE HEATING & AIR CONDITIONING I**

The theory, demonstration and application of components and system operation, adjustment, diagnosis and service, which includes common HVAC principles and service. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

AUMG 2544**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required AUMG core courses.

AUMG 2582**GM AUTOMOTIVE ENGINE PERFORMANCE**

The theory and application on GM electronic engines controls. Subjects include tune up, electronic carburetors, throttle body and multiple injection systems, turbo chargers, electronic and computer controlled ignition systems, charging systems and unlinking systems. Emphasis is on diagnosis, adjustments and repair procedures using electrical meters, scopes and infrared diagnostic equipment. Theory/Lab.

AUMG 2632**GM AUTOMATIC TRANSMISSIONS & TRANSAXLES II**

Interactive diagnosis, disassembly, component inspection, failure analysis, reassembly and dynamometer testing of rear wheel drive and front wheel drive transmissions / transaxles is taught. Strong emphasis is placed on the diagnosis of and scan tool operation on computer controlled transmissions and transaxles. The proper use of transmission specialty tools and shop procedures, as well as safety is emphasized. Theory/Lab.

AUMG 2672**GM AUTOMOTIVE HEATING & AIR CONDITIONING II**

The theory, demonstration and application of GM climate control systems operation, diagnosis and service, also includes automatic temperature controls. Emphasis is given to preventive maintenance, system diagnosis and failure

analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

AUMG 2682**GM CAPSTONE**

The theory and application of GM electronic engines controls as they apply to OBD II systems. Advanced theory on GM electronic fuel systems with further diagnosis and testing using the Tech2 scan tool and advanced use of lab scopes and specialized testing equipment are emphasized. Represents a culmination of the program of study and incorporates a review of learning objectives. Theory/Lab.

AUMG 2812**INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required AUMG core courses.

AUTOMOTIVE - PRO-TECH (AUMP)**AUMP 1031****CAREER AND COLLEGE CORNERSTONE**

A theory and demonstration of basic vehicle components and operation, independent service center operations and procedures, including service literature, parts supply procedures, shop safety, hand and power tool usage, automotive measuring devices and systems including precision instruments, metric and decimal systems and program orientation. Emphasis is on career networking focusing on the variety of related career opportunities within the automotive service industry. Included are materials and activities designed to aid the student in completing his/her Career Passport, including exposure to experts in the automotive service industry. Theory.

AUMP 1051**AUTOMOTIVE ENGINES I**

The theory, demonstration and application of engine repair procedures according to manufacturer's specification, which includes disassembly, cleaning, inspection, measurement, service and reassembly and R&R. Emphasis is given to system diagnosis and failure analysis including the proper use of hand tools, precision measurement devices and other specialized equipment. Safety is stressed. Theory/Lab.

AUMP 1052**AUTOMOTIVE ENGINES II**

The theory, demonstration, and application of the principles of engine operation, which includes the identification of engine parts and component functions of the cooling, lubrication, fuel, ignition,

emission, mechanical, electrical and electronic systems. Emphasis is given to diagnosis, failure analysis and service according to manufacturer's specifications. Theory/Lab.

**AUMP 1055
INTERNSHIP I**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required core courses.

**AUMP 1072
ELECTRICAL/ELECTRONICS TRAINING I**

The theory and application of electrical principles and concepts. Subjects covered include proper use of digital multimeters, OHM's Law, series circuits, parallel circuits and series parallel circuits. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive applications. Theory/Lab.

**AUMP 1082
ELECTRICAL/ELECTRONICS TRAINING II**
The theory and application of semiconductor devices, batteries, starting systems and service manual usage. Subjects covered include diode, transistors, microprocessor and basic automotive system. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive applications. Theory/Lab.

**AUMP 1202
ELECTRICAL DIAGNOSIS**

Emphasizes hands on learning in the areas of electrical diagnosis, diagnostic procedures, information retrieval, component accessibility and diagnostic equipment usage. Lab.

**AUMP 1231
AUTOMOTIVE BRAKE SYSTEMS I**

An introduction into the theory and application of conventional automotive brake systems, as well as an introduction to anti-lock systems. It includes an overview, discussion and hands-on activities with the various components and vehicles that make up the brake systems used in today's automobiles. Theory/Lab.

**AUMP 1242
AUTOMOTIVE BRAKE SYSTEMS II**

The theory and application of the operation and repair of anti-lock brake systems and traction control systems used in vehicles, with emphasis given to preventive maintenance, system diagnosis, failure analysis and proper service procedures. It includes the discussion and operation of specialized shop tools and equipment. Shop safety is stressed. Theory/Lab.

**AUMP 1281
AUTOMOTIVE SUSPENSION & STEERING I**

The theory, demonstration and application of component and system function, operation, adjustment, diagnosis and service, including principles of suspension geometry and alignment angles. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

**AUMP 1282
AUTOMOTIVE SUSPENSION & STEERING II**

The theory, demonstration and application of component and system function, operation, adjustment, diagnosis and service, including principles of suspension geometry and alignment angles. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

**AUMP 1285
INTERNSHIP II**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previously required AUMP core courses.

**AUMP 1371
AUTOMOTIVE MANUAL DRIVETRAIN I**

An introduction to the theory and application of manual transmissions/transaxles, helical gearset operation, planetary gearset operation and powerflow. It includes an overview, discussion and hands-on diagnosis and repair of various manual transmissions and transaxles. Theory/Lab.

**AUMP 1372
AUTOMOTIVE MANUAL DRIVETRAIN II**

A detailed look and interaction with the manual drivetrain field both in theory and application. The focus is on the diagnosis and repair of final drives, differentials, driveline, 4-wheel drive systems and vibration analysis. Emphasis is given to preventive maintenance, system diagnosis, failure analysis and proper service procedures, and includes the discussion and operation of specialized shop tools and equipment. Shop safety is stressed. Theory/Lab.

**AUMP 1391
AUTOMOTIVE MANUAL DRIVETRAIN II**

An introduction into the theory and application of automatic transmissions and transaxles, and includes an overview discussion and hands-on activities with the various components that make up the automatic transmission, how they function and the logical process to diagnose a malfunction. Theory/Lab.

**AUMP 1392
AUTOMOTIVE AUTOMATIC TRANSMISSIONS & TRANSAXLES II**

Interactive diagnosis, disassembly, component inspection, failure analysis, reassembly and dynamo-meter testing of rear wheel drive and front wheel drive transmissions/transaxles. Strong emphasis is placed on the diagnosis of and scan tool operation on computer controlled transmissions and transaxles. The proper use of transmission specialty tools and shop procedures, as well as safety is emphasized. Theory/Lab.

**AUMP 1395
INTERNSHIP III**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required AUMP core courses.

**AUMP 1901
INTERNSHIP I**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their education process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. This internship is for students entering OSU Institute of Technology with Cooperative Alliance Automotive Service Technology course credit. Lab.

**AUMP 1904
ELECTRICAL/ELECTRONIC SKILLS**

An introduction to the theory and application of electrical principles and concepts. Subjects covered include proper use of digital multimeters, Ohm's Law, series circuits, parallel circuits, series-parallel circuits, diodes, transistors, microprocessors and basic automotive electronic systems. Emphasis is placed on diagnostic procedures through on-bench and practical exercises using automotive applications. Theory/Lab.

**AUMP 1912
BRAKE SKILLS I**

An introduction into the theory and application of conventional automotive break systems, as well as an introduction to anti-lock systems. It includes an overview, discussion and hands-on activities with the various components and vehicles that make up the break systems used in today's automobiles. Theory/Lab. °

**AUMP 1913
INTERNSHIP II**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their education process. All work is performed

in accordance with industry standards and guidelines, and supervised by industry and school representatives. For students entering OSU Institute of Technology with Cooperative Alliance Automotive Service Technology course credit. Lab.

**AUMP 1922
BRAKE SKILLS II**

The theory and application of the operation and repair of anti-lock brake systems and traction control systems used in vehicles, with emphasis given to preventive maintenance, system diagnosis, failure analysis and proper service procedures. It includes the discussion and operation of specialized shop tools and equipment. Theory/Lab. °

**AUMP 1923
INTERNSHIP IV**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their education process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. For students entering OSU Institute of Technology with Cooperative Alliance Automotive Service Technology course credit. Lab.

**AUMP 1931
INTERNSHIP III**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their education process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. For students entering OSU Institute of Technology with Cooperative Alliance Automotive Service Technology course credit. Lab.

**AUMP 1934
SUSPENSION & STEERING SKILLS**

A theoretical demonstration and application of component and system function, operation, adjustment, diagnosis and service, and includes principles of suspension geometry and alignment angles, as well as the electrical and electronic principles needed for diagnosis and service of these systems. Emphasis is given to preventative maintenance, system diagnosis, and failure analysis. Theory/Lab. °

**AUMP 1941
INTERNSHIP V**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their education process. All work is performed in accordance with industry standards and guidelines and supervised by industry and school representatives. For students entering OSU Institute of Technology with Cooperative Alliance Automotive Service Technology course credit. Lab.

**AUMP 1944
ENGINE PERFORMANCE SKILLS**

The theory of application of electronic engine control, subjects include tune-ups, electronic carburetors, throttle body and multiple injection systems, turbo chargers, electronic and computer controlled ignition systems, charging systems and unlinking systems. Emphasis is on diagnosis, adjustments and repair procedures using electrical meters, scopes and infrared diagnostic equipment. Also, the theory and application of electronic engine controls as they apply to OBD II systems are taught. Advanced theory on electronic fuel systems with further diagnosis and testing using scan tools and advanced use of lab scopes and specialized testing equipment are emphasized. Theory/Lab. °

**AUMP 2471
AUTOMOTIVE ENGINE PERFORMANCE I**

The theory and application of electronic engine control, subjects include tune ups, electronic carburetors, throttle body and multiple injection systems, turbo chargers, electronic and computer controlled ignition systems, charging systems and unlinking systems. Emphasis is on diagnosis, adjustments and repair procedures using electrical meters, scopes and infrared diagnostic equipment. Theory/Lab.

**AUMP 2472
AUTOMOTIVE ENGINE PERFORMANCE II**

The theory and application of electronic engines controls as they apply to OBD II systems. Advanced theory on electronic fuel systems with further diagnosis and testing using scan tools and advanced use of lab scopes and specialized testing equipment is emphasized. Theory/Lab.

**AUMP 2475
INTERNSHIP IV**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required AUMP core courses.

**AUMP 2591
AUTOMOTIVE HEATING & AIR CONDITIONING I**

The theory, demonstration and application of components and system operation, adjustment, diagnosis and service, which includes common HVAC principles and service. Emphasis is given to preventive maintenance, system diagnosis and failure analysis. Safety is stressed. Theory/Lab.

**AUMP 2592
AUTOMOTIVE HEATING & AIR CONDITIONING II**

The theory, demonstration and application of climate control systems operation, diagnosis and service, which also includes automatic temperature controls. Emphasis is given to preventive maintenance, system diagnosis

and failure analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

**AUMP 2595
INTERNSHIP V**

A cooperative agreement between industry and education, which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and is supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing and have successfully completed all previous required AUMP core courses.

**AUMP 2694
AUTOMOTIVE CAPSTONE**

Designed to allow students to utilize and refine skills previously learned in the educational process. Included are the diagnosis and servicing of electronically controlled systems found on today's vehicles, as well as the proper use of special tools and information used to make repairs to industry standards. Includes discussion of student goals and duties specific to the industry, and specific competencies demonstrated during the course. Students complete the Career Passport, post tests and exit assessments. Theory/Lab.

**AUMP 2782
ADVANCED AUTOMOTIVE DIAGNOSTICS**

The theory and application of electronic engine control as they apply to OBD II systems. Advanced theory on electronic fuel systems with further diagnosis and testing using scan tools and advanced use of lab scopes and specialized testing equipment are emphasized. Theory/Lab.

° *Part of a Cooperative Alliance Agreement with technology centers and is not offered on the OSU Institute of Technology campus.*

BUSINESS ADMINISTRATION (BADM)

**BADM 1113 
INTRODUCTION TO BUSINESS**

Acquaints students with the U.S. business system, including areas of management, organization, human resources, marketing, finance, and ethics in the global economy. Theory.

**BADM 2063
BUSINESS LAW I**

Business Law I introduces students to the law and enforcement agencies. It includes business law for contracts, agencies, employment, personal property and bailments. Theory.

**BADM 2153 
MARKETING PRINCIPLES**

Examines the methods and principles used by professional marketing executives. Careers in marketing and business administration and how they relate to the business environment are examined. Theory.

BADM 2232**ENTERPRISE DEVELOPMENT BUSINESS CAPSTONE**

A study of applied problems that are of particular interest to the business environment. Theory.

BADM 2323**MICROCOMPUTER ACCOUNTING APPLICATIONS**

A study of small computer application packages using microcomputers. Includes packages for general ledger, accounts receivable, accounts payable, billing, payroll, inventory control and fixed assets. Theory.

BADM 2373**BUSINESS COMMUNICATIONS**

Emphasizes composition and preparation of written business communications. Elements of cultural diversity, proofreading and listening skills are also addressed. Theory/Lab.

BADM 2513**PRINCIPLES OF FINANCE**

A practical problem solving approach to planning, making investments and financial decisions for the business concern. Focus is on the United States financial system and securities market, time value of money, valuation capital, capital investment decisions and optimum capital structure. Theory. Prerequisite: ACCT 2203 or Division Chair approval.

BADM 2903**BUSINESS/OCCUPATIONAL INTERN**

Students work in a supervised business environment performing live assignments. Students are required to schedule, complete, and interview with workplace supervisor prior to the intern experience.

BIOLOGY (BIOL)**BIOL 1014 (L, N)****GENERAL BIOLOGY. (NON-MAJORS)**

An introduction to various topics in biological science, including basic chemistry, cellular biology, studies of animals, plants, protist, and fungi, human biology, genetics and heredity, and environmental/population studies. Theory/Lab.

BIOL 1114 (L, N)**GENERAL BIOLOGY**

Involves biological principles, population, man and the environment. Genetics, reproduction, development, concepts of evolution, selection, adaptation, speciation, taxonomy, and various concepts involving ecosystems are studied. Theory/Lab.

BIOL 1404 (N)**GENERAL BOTANY**

Morphology and anatomy of plants. Plant functioning: photosynthesis, water relations, translocation, hormonal regulations, photoperiodism. Survey of the plant division, algae and fungi. Lab. Prerequisite: BIOL 1114 or Division Chair approval.

BIOL 1604 (N)**ZOOLOGY**

Morphology, physiology, ecology, embryological development behavior, life histories and importance to man of representatives of major groups. Evolution of systems and mechanisms which have allowed animals to survive and adapt to diverse habitats. Theory/Lab. Prerequisite: BIOL 1114 or Division Chair approval.

BIOL 2104 (L, N)**HUMAN ANATOMY**

An introductory study of the human body's structure and function with the emphasis on anatomical principles. Topics of study begin at the cellular level and follow development through the major organ system. Theory/Lab. Prerequisite: BIOL 1114 or Division Chair approval.

BIOL 2114 (L, N)**HUMAN PHYSIOLOGY**

An introductory study of the integrative nature of physiology, and the cooperative function of multiple body systems while maintaining homeostasis. Integrates physiology with the cellular and molecular levels of biology. Theory/Lab. Prerequisite: CHEM 1314 (BIOL 1114 preferred, but not required) or Division Chair approval.

BIOL 2124 (L, N)**GENERAL MICROBIOLOGY**

The fundamentals of microbiology, including a selection of representative microorganisms, microbial control and the importance of microorganisms to people. A laboratory concerned with techniques of observation and control of microorganisms. Theory/Lab. Prerequisites: BIOL 1114 or equivalent, CHEM 1314 or equivalent, or Division Chair approval.

BIOL 2134 (L, N)**MICROBIOLOGICAL INVESTIGATIONS AND RESEARCH**

Students are given the opportunity to conduct scientific research for a semester over the topic of microorganism isolations and identification. Microbes of fungal and bacteria found in the areas of water and soil reclamation projects are the focus of our research. Discussion topics also include the importance of bacteria, environmental concerns of aquatic habitats, and the differences in soil from disturbed areas of land. Students involved in the laboratory also work in collaboration with college students at Southeastern Oklahoma State University with results. Theory/Lab.

BUILDING CONSTRUCTION (BLD)**BLD 1503****CONSTRUCTION EXPERIENCE AND/OR TRADE SKILLS EDUCATION I**

A cooperative agreement between industry and education, which allows the students to utilize either Construction Life Experience and/or Trade Specific Education skills in carpentry,

electrical, masonry, mechanical and plumbing as it relates to the Construction Technologies Division. All work is performed in accordance with the industry standards and is supervised by construction contractors or career technology centers' representatives. Theory/Lab. °

BLD 1603**CONSTRUCTION EXPERIENCE AND/OR TRADE SKILLS EDUCATION II**

A cooperative agreement between industry and education, which allows the students to utilize either Construction Life Experience and/or Trade Specific Education Skills in carpentry, electrical, masonry, mechanical and plumbing as it relates to the Construction Technologies Division. All work is performed in accordance with the industry standards and supervised by construction contractors or Career Technology Centers' representatives. Theory/Lab. °

BLD 1703**CONSTRUCTION EXPERIENCE AND/OR TRADE SKILLS EDUCATION III**

A cooperative agreement between industry and education, which allows the students to utilize either Construction Life Experience and/or Trade Specific Education skills in carpentry, electrical, masonry, mechanical and plumbing as it relates to the Construction Technologies Division. All work is performed in accordance with the industry standards and supervised by construction contractors or career technology centers' representatives. Theory/Lab. °

BLD 1803**CONSTRUCTION EXPERIENCE AND/OR TRADE SKILLS EDUCATION IV**

A cooperative agreement between industry and education, which allows the students to utilize either Construction Life Experience and/or Trade Specific Education skills in carpentry, electrical, masonry, mechanical and plumbing as it relates to the Construction Technologies Division. All work is performed in accordance with the industry standards and supervised by construction contractors or career technology centers' representatives. Theory/Lab. °

BLD 2090 (1-9 CREDIT HOURS)**SPECIAL PROJECTS**

Individual study under the supervision of an instructor may be arranged with credit hours to be determined. Projects may be undertaken in any area of the building construction field. Theory/Lab. Prerequisite: Division Chair approval.

BLD 2303**ESTIMATING II**

Extensive use is made of contract documents for quantity take off, pricing and bid preparation. Students also learn the development of unit labor and material prices, output and production, methods of approximate estimating and how subcontractors and material suppliers bid and give quotations. Theory/Lab. Prerequisite: CNS 1303 AND CS 1013. Offered in the fall semester.

BLD 2503**WALL AND ROOF SYSTEMS**

Techniques of exterior and interior wall construction, including structural steel framing, metal buildings, wood masonry and other wall systems. Other specific roof systems include steel joist, metal deck, wood trusses, tee-slabs, roof insulation, built-up roofing, shingles and metal roofing systems. Theory/Lab. Prerequisites: CNS 1113, CNS 1202, CNS 1223. Offered in the fall semester.

BLD 2513**INTERIOR FINISHES AND SPECIALTIES**

Interior finishes for walls and ceiling systems is featured, as well as specialty items including: trim, finish hardware, millwork, doors and frames. Theory/Lab. Prerequisites: CNS 1113, CNS 1202, CNS 1223. Offered in the spring semester.

BLD 2805**CONSTRUCTION INTERNSHIP**

A cooperative agreement between industry and education, which allows the students to utilize and refine skills learned in their educational process. All work is performed in accordance with the industry standards and supervised by construction contractors and school representatives. Lab. Prerequisite: Departmental approval and an Institution GPA of 2.5 or greater.

BLD 2905**CONSTRUCTION INTERNSHIP**

A cooperative agreement between industry and education, which allows students to utilize and refine skills learned in their educational process. All work is performed in accordance with the industry standards and supervised by construction contractors and school representatives. Lab. Prerequisite: CNS 1303, CNS 2403, CNS 2432, departmental approval and an Institution GPA of 2.5 or greater.

^o Part of a Cooperative Alliance Agreement with technology centers and is not offered on the OSU Institute of Technology campus.

CIVIL ENGINEERING TECHNOLOGY (CET)**CET 2103****CONSTRUCTION MANAGEMENT AND ECONOMICS**

Students learn and apply their knowledge of economic principles in making decisions and choosing among alternatives. It includes the study of basis of equivalent worth, rate of return, payback analysis, estimating, scheduling and an overview of the construction industry. Theory. Prerequisite: MATH 1513.

CET 2123**PROPERTIES OF SOILS**

Students learn and apply properties of soils in related engineering problems. It includes the study of critical properties of soils, soil types/soil structure, soil classification, site investigation, movement of water through soil, stress analysis,

shear strength, foundations, site improvement and soil stability in slopes. Theory/Lab. Prerequisite: MATH 1513.

CET 2212**TRANSPORTATION**

Students learn and apply design components of modern roadway and other transportation systems. Theory. Prerequisites: MATH 1613, SURV 2303.

CET 2323**STATICS**

Students learn and apply concepts of forces, moments, reactions, free-body diagrams, friction, internal forces and moments of inertia. Theory. Prerequisite: MATH 1613.

CET 2805**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their education process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: complete a minimum of three semesters of related course work or Division Chair's approval.

CET 3114**STRENGTHS OF MATERIALS AND STRUCTURAL ANALYSIS**

Students learn and apply concepts of stress, strain and deformation of bodies in tension, compression, shear, bearing, and torsion. It includes the study of basic analysis and design of columns, beams, cables and arches, lateral loads, and slope/deflection theory. Theory. Prerequisite: CET 2323 and MATH 2144.

CET 3123**DYNAMICS**

Students learn and apply the study of dynamic motion of particles. It includes the study of kinematics, Newton's Laws, and work and energy principles. Theory. Prerequisites: CET 2323, MATH 2144.

CET 3213**STEEL STRUCTURES**

Students learn and apply principles of steel design to analyze and design structural steel members loaded with various types of force. Theory. Prerequisites: CET 3114.

CET 3313**FLUID MECHANICS AND HYDRAULICS**

Students learn and apply basic fluid properties in related engineering problems. It includes the study of conservation equations, dimensional analysis, modeling structures in hydraulic applications, flow in conduits, open channel flow, water pumps and pump selection hydraulic measurements, and forces acting on submerged bodies. Theory. Prerequisite: CET 2323 and MATH 2144.

CET 3533**ENGINEERING MATHEMATICS**

Students learn and apply principles of upper level math and computer skills as they relate to civil engineering technology problems. Focus is placed on linear algebra, statistics and probability, and Excel computations and programming. Theory. Prerequisites: MATH 2144.

CET 3543**FUNDAMENTALS OF ENGINEERING EXAM PREPARATION**

Prepares students to take the Fundamentals of Engineering Examination. Students apply their knowledge of both the civil and general engineering portions of the exam by reviewing problems and testing on these topics in the same manner as the FE exam. Prerequisite: Classification as a senior.

CET 4213**REINFORCED CONCRETE DESIGN**

Students learn and apply their knowledge of principles of reinforced concrete to analyze and design structural members with various types of forces. Theory/Lab. Prerequisite: CET 3114.

CET 4224**HYDROLOGY**

Students learn and apply basic principles of surface and groundwater hydrology and their application. It includes the study of hydrologic cycle, weather and hydrology, hydrographs, hydrologic measurements, runoff and peak flow analysis. Theory. Prerequisite: CET 3313.

CET 4233**WATER/WASTE WATER MANAGEMENT**

Students learn and apply chemical and biological concepts, mass balance, water/wastewater quality, unit operations/processes, the design of processes in water/wastewater treatment plants, and solid waste management. Theory. Prerequisites: CHEM 1314, CET 3313.

CET 4413**CAPSTONE**

Students apply their knowledge of civil engineering topics by completing a project, which include planning, design, and a final presentation. Theory/Lab. Prerequisite: classification as a senior.

CET 4812**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their education process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: complete a minimum of five semesters of related course work or Division Chair's approval.

CHEMISTRY (CHEM)

CHEM 1314 (L, N) GENERAL CHEMISTRY I

The study of fundamental laws, periodic principles, and theories dealing with the structure and interaction of matter, chemical bonding, chemical reactions, the physical states of matter, changes of state, and solutions. These fundamental concepts are applied to the solution of quantitative problems related to chemistry. Theory/Lab. Prerequisite or Co-requisite: MATH 1513 or Division Chair approval.

CHEM 1515 (L, N) GENERAL CHEMISTRY II

A continuation of General Chemistry I; requires an understanding of the fundamental laws and theories dealing with the structure and interactions of matter. These principles are used in understanding the properties of gases using Boyles' Law, Charles' Law, Gay-Lussac's Law and Dalton's Law. Liquids and solids are examined with respect to interionic and intermolecular forces. Solutions are discussed with respect to solubility of substances and the effects of temperature and pressure. Factors involved with reaction rates and chemical equilibrium are studied. Nomenclature, definitions, control and measurement of pH of acids and bases are presented. Determination of oxidizing and reducing agents. Selected topics involving the fundamentals of nuclear, organic, and biochemistry are studied. Fundamental principles are applied to the solution of quantitative problems related to chemistry. Theory/Lab. Prerequisite: CHEM 1314.

CONSTRUCTION TECHNOLOGY (CNS)

CNS 1111 INTRODUCTION TO CONSTRUCTION

Study targets the general concepts, ideas, history and relationships of the construction trade, including employment opportunities, job descriptions, general safety and standards. Theory. Offered in the fall and spring semesters.

CNS 1113 CONSTRUCTION MATERIALS AND PROCEDURES

The latest information on materials, systems and methods used in the construction industry. It is formatted around the Construction Specifications Institute (CSI) 16 divisions. Also strengthens the skills the student has gained in the College Cornerstone experience. Includes a Career Cornerstone experience emphasizing networking with professional and student organizations, continues to develop the students Career Passport, and gives students the opportunity to have career shadowing experience with the experts in the field. Theory/Lab. Offered in the fall and spring semesters.

CNS 1123 FIELD ENGINEERING I

The principles and procedures of site layout to include establishing grades for bulk excavation, building pads, site drainage, site utilities and site improvement are examined. Also includes extensive use of the transit level, builder's level and laser. Theory/Lab. Offered in the fall and spring semesters.

CNS 1202 CONSTRUCTION BLUEPRINTS AND SPECIFICATIONS

The study of the symbolic language and different components of blueprints including floor plan elevations and details for the Architectural and M.E.P. drawings. Also includes the study of the specifications and their relation to building projects. Theory/Lab. Offered in the spring semester.

CNS 1213 CONSTRUCTION SAFETY OSHA 30 HOUR

Job site construction safety and current OSHA standards for the construction industry are studied and applied. Theory. Offered in the summer semester.

CNS 1223 FIELD ENGINEERING II

Techniques and procedures of construction project layout is emphasized, including linear and angular measurements, erection of batter boards and other layout reference points for interior and exterior layout. Assignments involve the use of construction plans and specifications. Theory/Lab. Prerequisite: CNS 1123. Offered in the spring and summer semesters.

CNS 1303 ESTIMATING I

Quantity take-off with emphasis on excavation, concrete, masonry, structural steel, rough carpentry, H.M./wood doors with hardware and miscellaneous specialty items are studied. Theory/Lab. Prerequisites: MATH 1513, CNS 1113, CNS 1202. Offered in the summer semester.

CNS 1333 FIELD ENGINEERING III

An introduction and application of plans surveying procedures and field problems related to linear and angular measurements, including coordinate geometry, differential leveling and topographic surveys. Application of theory involves the use of modern survey equipment including Total Stations and Data Collectors. Theory/Lab. Prerequisites: CNS 1223, MATH 1613. Offered in the spring semester.

CNS 2090 (1-9 CREDIT HOURS) SPECIAL PROJECTS

Individual study under the supervision of an instructor is arranged with credit hours to be determined. Projects may be undertaken in any area of the Construction Technology Department options. Theory/Lab. Prerequisite: Division Chair approval.

CNS 2403 PROJECT SCHEDULING

Project schedules are developed, which include bar method and the (CPM) critical path method. Selected assignments require computer utilization. Shop drawings and material submittals scheduling are also included. Theory. Prerequisite: CNS 1303, CNS 2432. Offered in the fall semester.

CNS 2413 MECHANICAL SYSTEMS

An in-depth examination is made of mechanical systems as to identification, application and function. Emphasis is placed on plumbing, heating, cooling, air distribution and ventilation systems. Theory/Lab. Offered in the summer and fall semesters.

CNS 2432 CONSTRUCTION DOCUMENTS AND SHOP DRAWING REVIEW

A study of the submittal process, which includes reviewing specifications for items that need to be submitted, creating a submittal tracking log and the checking of submittals. Closeout process, which includes as-builts, warranties and owner manuals are covered, Course also covers the division zero and one specifications as they relate to bidding, bonds, insurance and the general conditions. Theory/Lab. Prerequisites: CNS 1113, CNS 1202, CS 1013. Offered in the summer semester.

CNS 2543 CONCRETE CONSTRUCTION

Reinforced concrete construction techniques, including forming systems, concrete placement and finishing are covered, with an emphasis on slabs, walls, beams, columns, curb and gutter, bridge and highway construction. Pre-case and tilt-up systems are also included. Theory/Lab. Prerequisite: CNS 1113. Offered in the summer semester.

CNS 2683 C.M. CAPSTONE EXPERIENCE

Designed for the graduating student, this course includes the fundamental theories and strategies of construction management and administration. It expands the concepts presented in previous construction course work through simulation and actual problem resolution practice. The student completes his/her Career Passport, exit assessment instruments and other graduation requirements. Theory/Lab. Prerequisites: CNS 1213, CNS 2403, BLD 2303 and at least one Internship. Offered in the summer semester.

CNS 2693 PRINCIPLES OF CONSTRUCTION MANAGEMENT

Students study construction management principles and techniques and learn the application of these principles through lecture, case studies and laboratory experiences. Topics covered include planning, organizing, staffing, directing, cost and risk control, subcontractor

management, purchasing and project start up and close out procedures for a commercial construction project. Theory. Prerequisite: CNS 2432. Offered in the summer semester.

CNS 2800 (1-12 CREDIT HOURS) CONSTRUCTION INTERNSHIP

A cooperative agreement between industry and education allows the students to utilize and refine skills learned in their educational process. All work is performed in accordance with industry standards, and supervised by construction contractors and school representatives. Lab. Prerequisite: Departmental approval and an overall 2.0 GPA or greater.

CNS 2900 (1-12 CREDIT HOURS) CONSTRUCTION INTERNSHIP

A cooperative agreement between industry and education, which allows the students to utilize and refine skills learned in their educational process. All work is performed in accordance with industry standards and supervised by construction contractors and school representatives. Lab. Prerequisite: Departmental approval and an overall 2.0 GPA or greater.

COMPUTER SCIENCE (CS)

CS 1013

COMPUTER LITERACY & APPLICATIONS

An applied exploration of personal computing in which students learn system operation and maintenance, Internet technologies and primary desktop applications. Theory.

CS 2103

COMPUTER CONCEPTS & APPLICATIONS FOR BUSINESS

Students are provided with up-to-date materials about information (IT) in his/her personal world, both at home and at work. Students are exposed to knowledge they need to know about IT, along with knowledge they want to learn about how to use computers and associated IT for their direct benefit. Special emphasis is placed upon personal computers use and security with respect to Internet access and use. Students learn Office 2010 skills they can use this software to enhance their lives, both at home and at work. Theory.

CULINARY ARTS (CUA)

CUA 1003

ADVANCE CULINARY CONCEPTS

An introductory hands on instruction in using knife skills, cooking methods, safety and sanitation, starch and vegetable cookery, stocks, soups, intro to sauce, organizing menu rotation, mise en place and final preparation, serve/safe, bread and pastry introduction, and intro to basic dining room operations. There is one field trip to network with potential employers and OSUIT Culinary Arts. Theory/Lab.

CUA 1005

INTRO TO CULINARY CONCEPTS

Students learn how to purchase and prepare healthy cooking for three to five people. Cooking methods for vegetarian, seafood, beef, and pork are presented. Instructor demos first, then teams of two demonstrate their competencies. Students provide the final touches for the lunch line foods and beverages and bread and pastry introduction. Theory/Lab.

CUA 1101

VEGETARIAN AND PLANT BASED CUISINE

Students learn how to create and cook many different styles of vegetarian and plant based cuisines. They learn what ingredients can and cannot be used in certain varieties of vegetarian cuisine. Students also learn how to design plant based cuisine menus and learn their different applications. Students learn how to cook and utilize different vegetarian ingredients. Lecture is on how the cuisine has evolved and changed over the years and what we see it doing in the future.

CUA 1102

CULINARY THEORY

An introduction to the food service industry teaches students how to establish and maintain high standards of personal and industry sanitation and safety, as well as identify various tools and equipment used in today's kitchens. Students learn to effectively communicate the meaning of kitchen and dining room brigades, explain the basics of heat transfer and cooking methods, and also discuss the process of menu building and costing. Students are taught the basic production of white stock, brown stock and fumet, as well as mother sauces and soup production, and are introduced to dairy products, coffee and tea, herbs and spices. Theory.

CUA 1135

SKILL DEVELOPMENT I

An introduction to commercial kitchen equipment: meat grinder, sausage stuffer, food processor, conventional and convection ovens, steamers, and steam jacketed kettles. The student receives an introduction to basic sauces and soups, and learns culinary knife skills and cuts. Lab.

CUA 1145

SKILL DEVELOPMENT II

Students learn quantity food production skills in preparation of breakfast food, meats, vegetables, stocks, soups, sauces, desserts, sandwiches, salads and grilled food items. Students train in a "real world" environment and are exposed to production forecasting, cost controls, profit and loss statements and customer service skills. Students participate in an early morning rotation in breakfast cookery. Lab. Prerequisite: CUA 1135.

CUA 1151

FOOD SAFETY

An introduction to safe food production practices governed by changing federal state regulations. Topics covered include; prevention of food-borne illness through proper handling of potentially hazardous foods, HACCP procedures, legal procedures, legal guidelines, kitchen safety, facility sanitation, safe food preparation, storing and reheating guidelines. Students take the National Restaurant Association ServSafe examination. Theory.

CUA 1162

FOOD SERVICE MANAGEMENT

The principles, theories, human relations techniques and decision making skills required to manage a workforce profitably. Management techniques are discussed, as well as legal aspects of discrimination, hiring, continuous employment practices, and employee termination. Students take a National Restaurant Association Education Foundation examination for this Supervision text. Theory

CUA 1243

INTRODUCTION TO BASIC FRUIT AND VEGETABLE CARVING

Knife handling techniques, fruit preparation, basics of using color, designing and preparing a plan for carving, preparation of different garnishes and vessels, making of vegetable showpieces, making of fruit showpieces, and display techniques.

CUA 1294

BREAKFAST COOKERY

Designed to introduce students to action stations, breakfast cooking concepts, and high volume breakfast cooking. Include instruction and practical application in the following: eggs cooked to order, omelets, pancakes, waffles, French toast and hot cereals. Student is also trained in offering daily or weekly specials to include crepes, quiches and poached egg dishes, and buffet set up for quantity breakfast feeding. Lab. Prerequisite: CUA 1135, CUA 1145.

CUA 1311

MEAT FABRICATION

Introduces students to beef, pork, chicken, fowl, and fish identifications and fabrication, as well as purchasing and cost control fundamentals in the food service industry. Prerequisites: CUA 1135, CUA 1145.

CUA 1375

BREAD AND PASTRY PRODUCTION

An introduction to baking, emphasizing the basic formulas, fundamentals, and procedures. Students learn proper terminology, equipment, and utensils. Additional emphasis is placed on restaurant production of pies, cakes, variety breads, fillings, sweet dough, and specialty items. Students prepare classical pastries and present whole decorated desserts, plated, individual, flambé, and frozen. Lab. Prerequisites: GTGE 1111, CUA 1102, CUA 1135, CUA 1145.

CUA 1415**DINING ROOM OPERATIONS**

Students learn and apply the skills to recognize A la Carte Dining Room equipment, and service techniques related to customer service. The technique of banquet setting and Mise en Place, and the importance of an appropriate setting and atmosphere are also taught. Students learn how to establish and maintain high standards for personal and industry sanitation and safety, and also acquire knowledge in cash handling procedures, guest seating, and managing a dining room.

CUA 2101**EXPLORING WINES**

Learn the basics of wine making, buying, handling, opening – pouring and tasting. Study of the major white grape varieties as well as reds, and explore wine geography. A field trip to a winery or a wine and spirit store is also included. Theory. *Must be 21 years of age to participate.*

CUA 2103**AQUAPONICS**

Introduction and production of a sustainable system of aquaculture in which the waste produced by farmed fish, or other aquatic animals, supplies nutrients for plants grown hydroponically, which in turn purifies the water.

CUA 2123**ADVANCED BAKING**

Students utilize and develop the skills learned in Baking & Pastry (CUA 1375) to prepare more complex and challenging plated desserts and cakes. Advanced cakes include piping techniques, use of fondant, sculpted cakes, and tiered wedding cakes. Basic use of gum paste and coloring techniques are covered. Advanced desserts include production of entremets, classic European Tortes, chocolates and confections, and soufflés. Theory/Lab. Prerequisites: CUA 1135, CUA 1145, CUA 1375.

CUA 2183**SHOWPIECES**

Students develop skills needed to plan, execute, and display artistic showpieces made from food products. Mediums covered are pulled sugar, cast sugar, pastillage, ice, chocolate, tallow, and salt dough. Basic uses of color, form, and design are covered. Students prepare pieces for display in the dining room, as well as for competitions. Theory/Lab. Prerequisites: CUA 1135 and CUA 1145.

CUA 2213**CONTEMPORARY AMERICAN RESTAURANT**

Students apply, demonstrate and review basic cooking methods and apply them to a contemporary American restaurant. Students learn the facets of running the front of the house including cash handling, menu costing, service, and dining room setup. They also learn to run a hot line during dinner service. Production focuses on modern techniques and presentations and the creation of seasonal menus highlighting

locally sourced ingredients. Students focus on presentation and quality for their guests.

CUA 2285**MODERN CUISINE EXPERIMENTAL KITCHEN**

Students apply, demonstrate and review modern cooking methods and apply them to recipe development, and also learn different techniques in modern cuisine and learn how to implement them into regular food production. Students have the opportunity to experiment with methods and techniques learned and prepare a showcase dinner for friends and family. Students use modern equipment including immersion circulators, anti-griddles, centrifuges, rotary evaporators, static homogenizers, and many other unique tools utilized in modern cuisine. Theory/Lab. Prerequisites: GTGE 1111, CUA 1135, CUA 1145, CUA 1294.

CUA 2315**BUFFET COOKERY**

Students learn to prepare foods for quantity service. Students fabricate to portion size main protein items. They prepare all soups, sauces, vegetables, starches, and garnishes. Students utilize the cooking methods and techniques learned in SKILLS 1 and SKILLS 2, and apply these skills in a busy, live service environment. Emphasis is on food quality, proper methods, techniques, and professionalism. Theory/Lab. Prerequisites: GTGE 1111, CUA 1135, CUA 1145, CUA 1294.

CUA 2415**GARDE MANGER**

A competency based introduction to the world of the cold kitchen. It includes instruction and application of condiments, cold soups and sauces (including vinaigrettes), hors d'oeuvres, terrines, pates, galantines, ballotines, roulades, sausage, and cheese. Cold and hot smoking, curing and pickling are also covered. Sanitation and mise en place are essential in the cold kitchen. Theory/Lab. Prerequisite: Prerequisites: GTGE 1111, CUA 1135, CUA 1145, CUA 1294.

CUA 2473**AMERICAN CUISINE**

Introduces regional recipes, local history, and culture with distinct regional ingredients. Each week the class explores recipes and historical and cultural information, as well as a guide to ingredients specific to that region. Lab. Prerequisites: GTGE 1111, CUA 1135, CUA 1145, CUA 1294, CUA 1375, CUA 2315, CUA 2415.

CUA 2552**PURCHASING**

Students are Introduced to the methods of purchasing and cost control in food service systems, how to define the market and its regulations, identify the ethical principles of a food purchaser, and how to identify characteristics of the quality food necessary to maintain specific demands. The types of food storage and inventory control are discussed, as well as the role of governmental agencies

in assuring food quality and laws that affect purchasing operations and the need for record keeping. Students learn a wide range of product identification and how to identify products by sight, taste and smell, and are also taught the method of meat identification and shown how to break down various primal cuts of meat and how to trim and present retail cuts as well, The purchasing class also maintains the department's organic garden when weather permits.

CUA 2575**INTERNATIONAL COOKERY**

Students practice foods cooked to order, and prepare foods served during lunch hour in the Culinary Arts restaurant, to include sautéing, braising, steaming, grilling, frying, roasting, and broiling. Students practice skills associated with line cooking including: cooking vegetables, grains, legumes, pastas, eggs, meats and cereals. Instructions are also provided on catering and banquet cooking and service. Lab. Prerequisites: GTGE 1111, CUA 1135, CUA 1145, CUA 1162, CUA 1214, CUA 1294, CUA 1375, CUA 2315, CUA 2415.

CUA 2595**CULINARY SOFT SKILLS**

Students must be flexible and adaptive and participate in off-campus cooking demonstrations, recruiting trips to technology centers and high schools, research assignments, and make presentations to other classes. Students learn tracking and cost control, receiving and storing food, store room maintenance, and budget control. Theory and practical review on cooking methods are taught and Mystery Basket and Chefs Table Cooking competencies are examined. Students also demonstrate cooking and service techniques. Students conduct Sanitation and Safety inspections, take corrective action where needed, and team with instructor to assist on internship visits. Students have the opportunity to consult and assist a client with planning an event. A field trip is scheduled during the semester. Prerequisite: Division Chair approval.

CUA 2623**CULINARY ARTS CAPSTONE**

Students learn and practice foods cooked to order. The students prepare foods served in the Culinary Arts restaurant to include sautéing, braising, steaming, grilling, frying, roasting and broiling. Students practice skills associated with line cooking including; cooking vegetables, grains, legumes, pastas, eggs, meats. All program requirements must be complete before enrolling in this course. Student must have a minimum 2.0 cumulative GPA. Co-requisite: CUA 2809. Lab. CUA 1102, CUA 1311, CUA 1135, CUA 1145, CUA 1151, CUA 1162, CUA 1214, CUA 1294, CUA 1311, CUA 1375, CUA 2315, CUA 2415, CUA 2553, CUA 2575, CUA 2595, CUA 2809.

CUA 2809**CULINARY INTERNSHIP**

Students work in industry with supervised employment and observation. All program requirements must be complete before enrolling in this course. Student must have a minimum 2.0 cumulative GPA. Co-requisite: CUA 2623. Lab. CUA 1102, CUA 1311, CUA 1135, CUA 1145, CUA 1151, CUA 1162, CUA 1214, CUA 1294, CUA 1311, CUA 1375, CUA 2315, CUA 2415, CUA 2553, CUA 2575, CUA 2595.

DIESEL & HEAVY EQUIPMENT TECHNOLOGY – CASE NEW HOLLAND (DCNH)

DCNH 1323**ELECTRONIC SYSTEMS**

Requires the student to use diagnostic testing as specified by manufacturer software, literature, troubleshooting charts and wiring diagrams to complete required service, repair, or replacement procedures on CNH agricultural and construction equipment electronic systems. Students identify, locate, service, test, and repair connectors, sensors, actuators, switches, and control modules. Students use onboard diagnostic systems, T adapter Kits, Digital Volt/Ohm Meters, electrical repair kits, crimper tools, and the EST service tool. Theory/Lab. Prerequisite: DHES 1223. (Same course as DHES 1323)

DCNH 1333**CNH HYDRAULIC SYSTEMS**

Designed to teach the systems operation and the testing, adjusting, maintenance, and repair procedures for pilot operated hydraulic systems, load sensing pressure compensated hydraulic systems, electro-hydraulic systems and hydrostatic systems specific to CNH agricultural and construction equipment. Students identify system components are able to discuss their operation and application. Students identify different systems and troubleshoot live units, trace the oil flow through the systems and state the systems operation and application. Students use onboard diagnostic systems, T adapter Kits, Digital Volt/Ohm Meters, flow meters, pressure gauges, hydraulic schematics and CNH specific tools to diagnose hydraulic system malfunctions. Theory/Lab. Prerequisite: DHES 1233.

DCNH 2416**CNH ENGINES & FUEL SYSTEMS**

An introduction to engine terminology, operating principles and maintenance; CNH Engine systems are examined along with diagnostic, repair and maintenance procedures. The student is given an understanding of the theory, operation, troubleshooting and repair of diesel engine intake, exhaust and fuel systems used in CNH equipment. The function and operation of various types of fuel systems, fuel system maintenance and basic troubleshooting is covered, and emphasizes the application of repair procedures

for engines. Disassembly, parts evaluation and reusability, failure analysis, assembly, tune-up procedures, and troubleshooting are covered along with the proper use of the EST service tool. Safety, special tool use, and use of service publications are stressed throughout the course. Theory/Lab.

DCNH 2514**CNH POWER TRAIN**

Discussion of the basic components, operations, maintenance, diagnostics with the EST service tool and the repair of power train systems used in CNH agricultural and construction equipment using proper special tooling. Included are basic components, couplings, clutches, manual transmissions, torque converters, and power shift transmissions, hydrostatic transmissions, differentials, brakes, and final drives. Hydraulically driven machines are also included. Theory/Lab.

DIESEL & HEAVY EQUIPMENT TECHNOLOGY (DHE)

DHE 2033**DIESEL SKILLS I**

A comprehensive coverage of safety issues as they pertain to the Diesel Industry. Specific safety rules, maintaining a safe work environment, following company policies and procedures and maintaining tools and equipment are stressed. Additionally, workplace relationships are examined and students are exposed to basic academic skills such as problem solving, reading comprehension and writing skills necessary to be successful within the Diesel Industry. Theory. °

DHE 2043**DIESEL SKILLS II**

The student demonstrates an ability to perform preventive and predictive maintenance on diesel vehicles. Maintenance and use of reference materials, pre-delivery inspections, scheduled maintenance inspections, scheduled services and the preparation of documentation of maintenance services are studied. Theory. °

DHE 2053**DIESEL SKILLS III**

Students study electrical circuits and charging and starting systems. Diagnosis, service and repair of electrical and electronic systems are performed. Students learn the use of meters and test equipment in troubleshooting electrical systems. Identifying electrical symbols used on wiring diagrams and schematics are covered. Students also diagnose, service, and repair starting systems and charging systems. Theory/Lab. °

DHE 2065**GAS COMPRESSION SKILLS I**

Students gain a basic understanding of the natural gas industry by tracing the flow of gas from the well to the end user. Natural gas

properties, equipment identification and function, safety, OSHA, EPA, Hazardous Materials and Waste regulations are included. Tools, fasteners, pipe, pipe fittings, valves, tubing, tubing fittings and precision measurements are studied.

Students take a technical pretest to determine their entry-level technical knowledge. In addition, students study the operation and application of two and four stroke cycle reciprocating engines to include engine cooling and lubrication systems, lube oil analysis, startup procedures, tune-up procedures, preventive and predictive maintenance. Proper alignment and installation of large stationary engines is included. Theory/Lab. °

DHE 2075**GAS COMPRESSION SKILLS II**

Introduces electrical laws and principles, and includes the use of volt/ohm meters, amp probes, wiring diagrams and electrical schematics, wire and connector repair methods and semiconductors. Students learn to diagnose, maintain and repair electrical circuits, charging circuits and starting circuits. Standby electrical power generation is also included. Emphasis is on diagnostics, preventive maintenance and correct repair procedures. Also covered are the overhaul procedures for reciprocating natural gas engines. This includes disassembly, inspection, measurements, failure analysis and reassembly. The use of hand tools, special tools, precision measurement tools, shop safety and usage of manuals is stressed. Theory/Lab. °

DHE 2090 (1-9 CREDIT HOURS)**SPECIAL PROJECTS**

An individual study is conducted under the supervision of an instructor. Projects may be undertaken in any area of diesel and heavy equipment with credit hours assigned according to level and amount of effort required. Theory/Lab. Prerequisites: Written instructor-student plan and the program chair's approval.

DHE 2800 (1-12 CREDIT HOURS)**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHE 2900 (1-12 CREDIT HOURS)**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and

guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

° *Part of a Cooperative Alliance Agreement with technology centers and is not offered on the OSU Institute of Technology campus.*

DIESEL & HEAVY EQUIPMENT TECHNOLOGY - AGGREKO TECHNICIAN TRAINING PROGRAM (DHEA)

DHEA 1113 MAINTENANCE FUNDAMENTALS

Introduces skills and knowledge required by all service technicians including OSHA, EPA, hazardous materials, and waste regulations, precision measurement, tools, fasteners, pipe, pipe fittings, valves, tubing, tubing fittings, as well as copper tube flaring, swaging, cutting and brazing. Students are introduced to product identification and service literature usage. The career cornerstone course includes a review of the OSU Institute of Technology Handbook, a technical pre-test, and career exploration with Aggreko. Students review the history of Aggreko and the service provided by Aggreko. Theory/Lab.

DHEA 1123 DIESEL ENGINE I – DIESEL FUNDAMENTALS AND MAINTENANCE

An introduction to the theory and operation of the four stroke diesel engine along with standard maintenance procedures for the Aggreko diesel generator package. It includes component identification and function, the four engine systems, electronic governor principles, and safety issues. The use of the Aggreko Generator Quality Checklist, and associated maintenance procedures are emphasized. Engine servicing and preventative maintenance are examined. Theory/Lab.

DHEA 1133 INTERNSHIP I

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

**DHEA 1213
DC/AC ELECTRICAL FUNDAMENTALS**
Safety and the basic principles of AC/DC electrical circuits are covered. Subjects

included are operating characteristics of the circuits, various components, electrical laws, series circuits, parallel circuits, series-parallel circuits, magnetism, impedance, and resonance. Students locate and identify components from schematics. The operation of electrical components such as switches, relays, contactors, starter boxes, transformers, relays, timers, capacitors and motor starting relays are also examined. Theory/Lab.

DHEA 1233 INTERNSHIP II

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEA 1313 GENERATOR SYSTEMS I – THEORY & OPERATION

A study of the fundamental theory, operation and application of the electrical generator. AC generator principles, automatic voltage regulation, generator control systems, and generator wiring configurations are introduced. The focus is on the Aggreko canopy size generator. (30 – 300 kW). Students study start up procedures, total system function, maintenance and repair.

DHEA 1323 AGGREKO BASIC REFRIGERATION

The use of industry specialized tools, as well as copper tube flaring, swaging, cutting and brazing is covered. The theory of the compression refrigeration cycle, components which make up a refrigeration system, the operation and analysis of basic refrigeration systems including evacuation, charging, recovery, control adjustments and efficiency checks are included. Theory/Lab.

DHEA 1343 SEA UNITS AND NEW GENERATION II AIR CONDITIONERS

Introduces the student to the two basic air conditioners used in the Aggreko fleet, the Special Events Air conditioner (SEA) and the New Generation II air conditioner. Topics include installation parameters and procedures, applications and limitations for each, control schemes, wiring schematics, controller programming, refrigerant circuits, Thermostatic Expansion Valve (TXV) operation, and special applications. The 15- and 30-ton SEA units are covered along with the 35- and 70-ton New Generation II units. Safety, refrigerant handling procedures, and special considerations for R-410a are topics of discussion in conjunction with hands-on exercises. Theory/Lab. Prerequisite: DHEA 1323.

DHEA 2412 (12 CREDIT HOURS) INTERNSHIP III

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEA 2413 AGGREKO MOTOR STARTING & MOTOR CONTROLS

Introduces the fundamental concepts of electrical motors and associated electrical controls. Topics include ladder diagrams, schematic diagrams, contactors, and motor starters, control relays, timing relays, pilot control devices, AC/DC motors and related control devices. Upon completion, students are able to properly select, install and troubleshoot motors and associated control systems. Theory/Lab. Prerequisite: DHEA1213.

DHEA 2423 ELECTRICAL DISTRIBUTION

The various systems a customer might request, including single-phase 120/240 volt, and 3-phase systems that include 240 volt delta, 120/208 volt, and 277/480 volt are covered. Also covers the principles behind selecting an electrical distribution system including the advantages, disadvantages and limitations of each. The following topics are covered: distribution equipment, system operation, planning, company policy, safety regulations, correct phasing, load capabilities, protection, and installation. Theory/Lab. Prerequisite: DHEA1213, DHEA 1313.

DHEA 2433 INTERNSHIP IV

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEA 2523 DIESEL ENGINE II – TROUBLESHOOTING & REPAIR/REPLACEMENT

The typical problems associated with diesel engines and how to identify the probable causes are covered. Safety and the use of technical manuals are stressed, as well as emphasizing the repair and replacement procedures for diesel

engines, parts evaluation, reusability and failure analysis. Trouble shooting scenarios, repair, and/or replacement of engine components based on actual Aggreko service calls and historic data. Theory/Lab, Prerequisite: DHEA 1123, DHEA 1213.

DHEA 2533 INTERNSHIP V

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEA 2543 OIL FREE AIR COMPRESSORS – THEORY & OPERATION

An introduction to the Aggreko air compressor, refrigerated air dryer, and desiccant air dryer fleet. It is designed to enhance the student's ability to operate, troubleshoot, maintain and repair an oil free air compressor, desiccant air dryer, and refrigerated air dryer. Other topics covered include: compressed air safety, principles of compressed air, rotary screw compressor operation, electrical and pneumatic controls, installation and applications. Theory/Lab, Prerequisite: DHEA 1123, DHEA 1213, DHEA 2523.

DHEA 2613 GENERATOR SYSTEMS II – ADVANCED GENERATOR CONTROLS

Familiarizes the student with advanced generator controls currently being used in the Aggreko fleet. Both the Deif (GEMPAC) and Deep Sea Electronics (5510) controllers are discussed in depth. Compatible computer software is also covered in detail. Each student has the opportunity to learn to navigate through the controllers programs using the touch pad and applicable software. Other covered topics include uploading the newest versions of software, completing retrofits, and setting up configurations for specific operations such as paralleling and base load. Theory/Lab, Prerequisite: DHEA 1313.

DHEA 2623 AGGREKO CAPSTONE

Involves team projects to examine the installation, operation, service and repair of Aggreko mobile units, and also covers the controls, wiring, schematic reading, system diagnosis and safety. Special emphasis is placed on the integration of all the technical and general education classes, and is arranged so the student has a very good understanding of the Aggreko business model, and includes exit assessments and other graduation requirements. Theory/Lab.

DIESEL & HEAVY EQUIPMENT TECHNOLOGY - CAT DEALER PREP (DHEC)

DHEC 1113 INTERNSHIP I

A cooperative agreement between industry and education allows the students to utilize and refine skills learned during their educational process. All work is performed in accordance with industry standards and guidelines, and is supervised by industry and school representatives. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEC 1124 INTRODUCTION TO CATERPILLAR

A review of the OSU Institute of Technology Student Handbook, and discussions of OSU Institute of Technology: class, lab, and internship policies and procedures. Upon completion, students demonstrate the ability to administer and use the Caterpillar Literature Library. Critical literature, such as service and parts manuals and reporting systems like SIMS (Service Information Management System) is included. Students identify hardware and tools, and describe proper uses, which includes a pre-test, an introduction to Caterpillar and participating dealer history, and career exploration. Theory/Lab.

DHEC 1134 CAT ELECTRICAL FUNDAMENTALS

The theory and application of basic electrical concepts, the use of diagnostic tools, troubleshooting and wiring repair procedures. Emphasis is put on electrical systems analysis, along with preventive and predictive maintenance. Students locate and identify machine components from schematics. Students also analyze charging and starting system faults. Theory/Lab.

DHEC 1213 CAT HYDRAULIC FUNDAMENTALS

Introduces the laws and principles of fluid mechanics. Students locate and identify machine components from schematics, draw and read schematics, and identify fittings, seals and components used in hydraulic systems on Caterpillar equipment. Pascal's Law is used to calculate force-pressure-area relationships. Students also calculate energy-work-power relationships. Theory/Lab. Prerequisite: DHEC 1124.

DHEC 1223 CAT FUEL SYSTEMS

A thorough examination of Caterpillar fuel systems, including forged body, sleeve metering, scroll types and unit injection. Operation, testing and adjusting are stressed. Theory/Lab. Prerequisite: DHEC 1124.

DHEC 1233 INTERNSHIP II

A cooperative agreement between industry and education allows students to utilize and refine skills learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEC 1313 INTERNSHIP III

A cooperative agreement between industry and education allows students to utilize and refine skills learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEC 1323 CAT ENGINE FUNDAMENTALS

An introduction to Caterpillar engine terminology and operating principles, and includes the identification and function of components and engine systems. Safety, precision measurements, use of hand tools, and technical manuals are stressed. Students disassemble, determine reusability, assemble and adjust components. Engine servicing and preventive maintenance are examined. Theory/Lab.

DHEC 1333 CAT MACHINE HYDRAULIC SYSTEMS

Designed to teach the systems operation, and the testing and adjusting procedures for the pilot operated hydraulic systems, the load sensing pressure compensated hydraulic system, the electro-hydraulic system and the hydrostatic system. Students identify different systems, trace the oil flow through the systems and state the systems operation. Students also identify system components and are able to discuss their operation. Theory/Lab. Prerequisite: DHEC 1213.

DHEC 2413 CAT ENGINE DIAGNOSTICS AND REPAIR

The application of repair procedures for Caterpillar internal combustion engines is emphasized. Parts evaluation, reusability, failure analysis, and diagnostics are covered. Safety, special tools, and service literature are stressed. Theory/Lab. Prerequisites: DHEC 1323.

DHEC 2423**CAT MACHINE ELECTRONIC SYSTEMS**

Examines the application and operation of electronic systems used by Caterpillar for engines, transmissions, hydraulic systems, and monitoring systems. Diagnosis, system analysis and repairs are emphasized. Theory/Lab. Prerequisites: DHEC 1134, DHEC 1333.

DHEC 2433**INTERNSHIP IV**

A cooperative agreement between industry and education allows students to utilize and refine skills learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEC 2513**INTERNSHIP V**

A cooperative agreement between industry and education allows students to utilize and refine skills learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEC 2524**CAT POWER TRAIN I**

The basic components and operations of power train systems used in Caterpillar machines are discussed, and includes basic components, couplings, manual shift transmissions and power shift transmissions. Basic components and component function are explained as they relate to the operation of various power train systems. Theory/Lab.

DHEC 2532**CAT MOBILE AIR CONDITIONING**

Examines theory and application of refrigeration principles as applied to Caterpillar mobile equipment. Emphasis is placed on preventive maintenance, diagnostics, repair, and regulation compliance. Theory/Lab. Prerequisites: DHEC 1134.

DHEC 2603**CAT POWER TRAIN II**

The methods for transferring power are discussed. Mechanical power train components include differentials, brakes, final drives, and undercarriage. Hydraulically driven machines are also included. The content is treated as general information for power train components in all Caterpillar machines. Theory/Lab. Prerequisite: DHEC 2524.

DHEC 2636**CAT CAPSTONE**

An applied research project, and includes improvements in diagnostics, service and maintenance processes, technical support systems, emerging technology, etc. The technical aspect of study includes verification of competencies in areas such as: air conditioning, engines, drive train, electronics, hydraulic systems and safety. Project management is stressed as a key to completing the objectives. Diagnostic tooling is used to evaluate machine system operation. Students also participate in a post-test to determine technical competency gain. Theory/Lab.

DIESEL & HEAVY EQUIPMENT TECHNOLOGY - GAS PROCESSORS ASSOCIATION NATURAL GAS COMPRESSION (DHEG)

DHEG 1144**GAS COMPRESSORS**

Introduces the theory, application, maintenance, and repair of the reciprocating, rotary, and centrifugal natural gas compressor, including operating principles, identification of the component parts and their functions, design characteristics, methods of balancing, and lubrication systems. Calculations of gas flow, rod loads, compressor sizing, horsepower ratings and compressor analysis charts are included. Safety, precision measurement, use of the manuals, use of tools, and proper adjustments are included with overhaul exercises. Theory/Lab.

DHEG 1153**FUNDAMENTALS OF MAINTENANCE**

Students gain a basic understanding of the natural gas industry by tracing the flow of gas from the well to the end user. Natural gas properties, equipment identification and function, safety, OSHA, EPA, Hazardous Materials, and Waste regulations are included. Tools, fasteners, pipe, pipe fittings, valves, tubing, tubing fittings and precision measurements are studied. Students take a technical pretest to determine their entry-level technical knowledge. Theory/Lab.

DHEG 1213**GAS COMPRESSION CAPSTONE I**

The culmination of the mechanical portion of the Natural Gas Compression program, and preparation for the first full summer semester internship. Students research employability skills, prepare and critique job applications, resumes, interview skills and portfolios. During preparation of the resumes and portfolios students discuss how to best present the skills acquired in the previous classes, as well as how to describe the safety training received in preparation for the summer internship at natural gas compression facilities. Theory/Lab.

DHEG 1243**ENGINE PRINCIPLES**

A study of operation and application of two and four stroke cycle engines to include engine cooling and lubrication systems, lube oil analysis, startup procedures, tune-up procedures, preventive and predictive maintenance. Proper alignment and installation of large stationary engines are included. Theory/Lab.

DHEG 1253**ADVANCED ENGINE TECHNOLOGY**

Introduces the overhaul procedures for reciprocating natural gas engines, which includes disassembly, inspection, measurements, failure analysis, and reassembly. The use of hand tools, special tools, precision measurement tools, shop safety, and usage of manuals is stressed. Also includes an introduction to gas turbine engine operating principles and systems. Theory/Lab.

DHEG 1306**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEG 1312**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEG 1313**ENGINE AIR, FUEL AND STARTING SYSTEMS**

Students study the intake, exhaust, fuel and starting systems plus mechanical and hydraulic governors used on natural gas engines including an introduction to air/fuel ratio control systems. Theory of operation and development of skills in the repair, adjustment and testing of the component parts of these systems is also included. The effects of fuel properties, air/fuel ratio, and emissions on both rich burn and lean burn natural gas engines are studied. Theory/Lab. Prerequisites: DHEG 1243, DHEG 1253.

DHEG 1323**DC/AC CIRCUIT ANALYSIS**

The basic principles of DC/AC electrical circuits is covered. Subjects included are: operating characteristics of the circuit's various components, electrical laws, series circuits, parallel circuits, series-parallel circuits, magnetism, impedance, and resonance. Theory/Lab.

DHEG 1363**CNG REFUELING SYSTEMS CODES AND REGULATIONS**

Students study and apply safety regulations and the four primary fire codes covering CNG fill stations and maintenance facilities including National Fire Protection Association (NFPA) 52 Vehicular Gaseous Fuel Systems Code, 70 National Electrical Code, and 30A Code for Motor Fuel Dispensing Facilities and Repair Garages, and International Fire Code.

DHEG 1373**CNG REFUELING SYSTEMS OPERATION, MAINTENANCE, AND INSPECTION**

A basic introduction to CNG, health hazards and facility safety procedures, gas quality, fill station components and systems, fill station operation, maintenance, and inspection. Theory/Lab.

DHEG 2413**ENGINE ELECTRICAL**

Students study the theory and application of the ignition systems from magnetos to CPUs, electronic governors, air fuel ratio control systems and control panels used on natural gas engines with emphasis on maintenance, diagnostics, and repair of the systems and components. Theory/Lab. Prerequisites: DHEG 1313, DHEG 1323.

DHEG 2423**ELECTRICAL MOTORS, GENERATORS AND ALTERNATORS**

A study of the operation, design and analysis of various DC motors, AC motors, Power Transformers and AC power generators. Load requirements and sharing, environmental conditions, national electrical code, generator operation, and electric motor and generator wiring diagram are also covered. Theory/Lab. Prerequisite: DHEG 1323.

DHEG 2513**ELECTRICAL DEVICES AND CONTROLS**

A comprehensive study of the principles and techniques of electromechanical devices such as switches, circuit protection devices, relays, and solenoids. In addition, the course covers the national electric code, ladder logic and wiring diagrams. Theory/Lab. Prerequisites: DHEG 1323.

DHEG 2523**PROGRAMMABLE LOGIC CONTROLLERS (PLC)**

A study of PLC programming, PLC ladder logic diagrams, sensor input, output, control devices, rack configuration and programming

rungs with addresses. PLC configuration and troubleshooting techniques are also covered. Theory/Lab. Prerequisites: DHEG 1323, DHEG 2423.

DHEG 2609**INTERNSHIP II**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEG 2623**INSTRUMENTATION AND CONTROLS**

The study of the basics of pneumatics, electrical analog and digital modes of control; and hands-on practical exercises in calibrating, tuning, aligning, and troubleshooting. Data acquisition and data communications are also included. Theory/Lab. Prerequisites: DHEG 1323.

DHEG 2633**GAS COMPRESSION CAPSTONE II**

An applied research project identified during internships, as a work-based problem in need of improvement. Research could include improvements in diagnostic, service, and maintenance processes, technical support systems, sales, inventory control, cataloging systems, customer service, etc. The theory and application of equipment used in the conditioning of natural gas in gathering systems which includes separators, dehydration units, and chemical treatment units are studied, as well as the theory and application of equipment used in a natural gas processing plant. Students take a post-test to determine competency gain in their technical area. Theory/Lab. Prerequisites: DHEG 2513, DHEG 2623.

DIESEL & HEAVY EQUIPMENT TECHNOLOGY - KOMATSU (DHEK)**DHEK 1104****KOMATSU GENERAL BASICS**

A study of Metric and English precision measurement, tool and fastener identification and use, personal safety, equipment safety and shop safety, and is designed to acquaint students with the federal safety regulations relating to maintenance safety: EPA, OSHA, Hazardous Materials and Waste. Included is a review of the OSU Institute of Technology Student Handbook, and discussions of class, lab and internship policies and procedures. A Career Cornerstone course and includes a technical pre-test, an introduction to Komatsu history, career exploration and information for the student's Career Passport. Theory/Lab.

DHEK 1124**KOMATSU PARTS AND SERVICE PUBLICATIONS**

An explanation of the purpose and use of Komatsu Publications, including operations manuals, maintenance manual, reusability guides, service management publications, microfiche and computer based CSS and CARE. Students become familiar with Komatsu terminology, machine and engine nomenclature and the part numbering system. Students practice locating information using Komatsu publications and complete service reports, pre-delivery reports and receiving reports. An introduction to customer service skills is included. Theory/Lab.

DHEK 1143**KOMATSU INTERNSHIP I**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have a valid driver's license, be in good academic standing and have successfully completed required core courses: DHEK 1104, DHEK 1124.

DHEK 1216**KOMATSU ENGINES AND FUEL SYSTEMS**

A study of the operation, maintenance and repair of engines and related fuel systems used in Komatsu equipment. Presents terminology, concepts and techniques needed to properly diagnose and repair engines, and emphasizes the rebuilding procedures and testing of engines and fuel systems. It includes cleaning, inspection, measurement, troubleshooting techniques, tune-up procedures, and failure analysis. The proper usage of tools, precision measurement devices, safety, and service publications is stressed. Theory/Lab.

DHEK 1243**KOMATSU INTERNSHIP II**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEK 1323**KOMATSU BASIC HYDRAULICS**

A study of the fundamentals, theory and application of mobile hydraulic principles. Students locate and identify machine components from schematics, draw and read schematics, identify fittings, seals and

components used in hydraulic systems on Komatsu equipment. Pascal's Law is used to calculate energy-work-power relationships. Hydraulic principles and operation of pumps, control valves, actuators, fluid conditioners used on Komatsu equipment are covered, as well as failure analysis, diagnostics and reconditioning of hydraulic components. Theory/Lab. Prerequisite: DHEK 1104.

DHEK 1333

KOMATSU BASIC ELECTRICAL SYSTEMS

An introductory study of electricity and electrical components and circuit, and introduces the student to electrical principles, electrical and electronic diagnostic tools. Students use OHM's Law to calculate volts, amps and ohms within series and parallel circuits, interpret and draw schematics using common electrical symbols. Students locate and identify machine components using schematics, diagnose and repair wiring circuits, starting and charging system faults. Theory/Lab. Prerequisite: DHEK 1104.

DHEK 1343

KOMATSU INTERNSHIP III

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEK 2416

KOMATSU WHEEL LOADERS

A study of the structure and function of Komatsu wheel loaders. Students identify and locate power train and hydraulic components, troubleshoot torque converter, transmission and hydraulic systems, and examine the application, operation, maintenance and troubleshooting of the components in Komatsu wheel loader. Students learn components and theory of operation, as well as disassembly and assembly techniques. Students diagnose and repair differentials, brakes and planetary drives. Repair procedures on the articulated joint. Hydraulic systems are reviewed with emphasis on the steering system. Students study how to use test results for diagnoses purposes, and how to use Komatsu publications to determine which attachments can be used for special applications. Students use PM Clinic Test Kit. Theory/Lab. Prerequisites: DHEK 1216, DHEK 1323, DHEK1333.

DHEK 2443

KOMATSU INTERNSHIP IV

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their

educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEK 2516

KOMATSU HYDRAULIC EXCAVATORS

A basic study of the structure and function of Komatsu designed hydraulic excavators, and requires the student to select and use the correct Komatsu troubleshooting charts for diagnose and repair of electronic system; also, test and adjust hydraulic controlling components and engine systems. Students identify, locate and troubleshoot electronic sensors and switches. Students use onboard monitors for diagnostic purposes; learn the proper use of Komatsu Electrical "T" Adapter Kits for use with digital volt/ohm meters; and use electrical repair kits and crimper tools. Students also use Komatsu publications to determine which attachments can be used for special applications, and study how to use test results for diagnoses purposes. Theory/Lab. Prerequisite: DHEK 2416.

DHEK 2543

KOMATSU INTERNSHIP V

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEK 2626

KOMATSU CAPSTONE

An applied research project identified during internships as a work based problem in need of improvement. Research can include improvements in diagnostics, service and maintenance processes, technical support systems, etc. The technical areas of study include the evolution of Komatsu crawler tractor design, including structure and function. Students identify and locate power train and hydraulic components, troubleshoot and adjust damper, torque converter and transmission. Students diagnose, service and repair differentials, final drives and steering brakes, controls and linkages; remove, repair and install powerpack; identify, evaluate, service, repair and adjust undercarriage components; study the wear characteristics of undercarriage components; evaluate competitive track design. Before going on their final internship, students participate in a post-test to determine technical competency gain. Theory/Lab. Prerequisite: DHEK 2516.

DHEK 2653

VEHICLE AIR CONDITIONING SYSTEMS

The basics of compression refrigeration systems to cars, trucks, and mobile equipment. The use of hand tools and other specialized air conditioning/refrigeration tools are emphasized in the laboratory, as well as identification of sealed system components and their function, and system maintenance and repair. Theory/Lab. Prerequisites: DHEK 1333.

DIESEL & HEAVY EQUIPMENT TECHNOLOGY - MHC KENWORTH TRUCK TECHNOLOGY (DHEM)

DHEM 1133

INTERNSHIP I

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHEM 1134

PREVENTATIVE AND PREDICTIVE MAINTENANCE

A review of pre-delivery, preventive maintenance (PM), commercial vehicle inspection program (CVIP), and the responsibilities of the service technician to ensure that all PM items are performed to a benchmark standards. Students review PM standards established by the Commercial Motor Vehicle Safety Act (CMVSA); American Standard Inspection Procedures for Motor vehicles, Trailers, and Semi-Trailers operated on Public Highways (ANSI); the National Highway Traffic Safety Administration (NHTSA); and the Commercial Vehicle Safety Alliance (CVSA) "Vehicle Out-of-Service Criteria". Students perform walk-around inspections; A, B, C, and D inspections; trailer inspections, pre-delivery inspections and test coolant; and learn proper disposal methods for used oil, filters, coolant, batteries, etc. Theory/Lab.

DHEM 1154

MAINTENANCE FUNDAMENTALS

An introduction to the skills and knowledge required by all service technicians including precision measurement, safety regulation compliance, lifting and blocking, torque wrench use, Kenworth product identification, and service literature usage. The career cornerstone course includes a review of the OSU Institute of Technology Handbook, a technical pre-test, development of the career passport, and career exploration. Theory/Lab.

**DHEM 1233
INTERNSHIP II**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

**DHEM 1243
CHASSIS, STEERING AND SUSPENSION**

An introduction to vehicle chassis frames, drive shafts, various suspension systems, truck steering components, and truck and trailer alignment. Students study frame design, frame damage, alignment and repair, drive shaft construction, arrangements proper phasing, drive shaft inspection and servicing, vibration diagnosis and u-joint replacement. Students study the maintenance, repair, adjustments and alignment of common truck and trailer suspension systems. Truck steering components, basic alignment procedures, servicing and diagnostics are also studied. Theory/Lab.

**DHEM 1253
ELECTRICAL CIRCUITS, CHARGING AND STARTING SYSTEMS DIAGNOSTICS AND REPAIR**

Introduces electrical laws and principles, and includes the use of digital volt/ohm meters, amp probes, wiring diagrams and electrical schematics, wire and connector repair methods, and semiconductors. Students learn to diagnose, maintain, and repair electrical circuits, charging circuits, and starting circuits. Emphasis is on diagnostics, preventive maintenance, and correct repair procedures. Theory/Lab.

**DHEM 1323
TRANSMISSION SYSTEMS**

An introduction to clutches, manual transmissions, drivelines and differentials. Emphasis is on power flow, diagnostics, disassembly, inspection, failure analysis, repair and assembly. Theory/Lab.

**DHEM 1333
INTERNSHIP III**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

**DHEM 1343
BRAKE SYSTEMS**

A review of hydraulic and pneumatic principles as they apply to braking systems, including anti-skid and traction control. Maintenance and repair of the air brake systems components and medium duty hydraulic brake system components is covered. Students perform foundation brake maintenance. Theory/Lab.

**DHEM 2433
INTERNSHIP IV**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

**DHEM 2444
ELECTRONIC ENGINE INTERFACE**

A study of the operation, diagnosis, maintenance and repair of electronic fuel management and other computer controlled systems. Students are trained to use diagnostic equipment to determine the condition of electronic components including troubleshooting and performance aspects of engines and other computer controlled systems. Theory/Lab.

**DHEM 2452
AIR CONDITIONING SYSTEMS**

A study of the theory, application, and repair of mobile air conditioning and refrigeration systems. Emphasis is on preventive maintenance, design, failure analysis, troubleshooting, proper repair and refrigerant recovery recycle methods. Theory/Lab.

**DHEM 2523
DIESEL ENGINE AND FUEL SYSTEMS**

An introduction to diesel engine terminology, operating principles and maintenance. Engine systems are examined along with diagnostic, repair, and maintenance procedures. Students study fuel injection systems used by major diesel engine manufacturers, as well as the function and operation of various types of fuel systems, fuel system maintenance and basic troubleshooting. Theory/Lab.

**DHEM 2533
DIESEL ENGINE OVERHAUL TECHNIQUES**
Emphasizes the application of repair procedures for diesel engines. Disassembly, parts evaluation and reusability, failure analysis, assembly, tune up procedures and troubleshooting is covered. Safety, special tool use, and use of service publications are stressed. Theory/Lab.

**DHEM 2543
INTERNSHIP V**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned during their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

**DHEM 2616
CAPSTONE**

An applied research project identified during internships, as a work-based problem in need of improvement. Research can include improvements in diagnostic, service, and maintenance processes; technical support systems; customer service; etc. Advanced application of diagnostics principles relating to engine, power train, electrical systems, electronics, brakes and other truck systems, and development of preventive maintenance systems are studied. Theory/Lab.

**DIESEL & HEAVY EQUIPMENT
TECHNOLOGY - SOUTHWESTERN
ASSOCIATION INDUSTRIAL & FARM
EQUIPMENT (DHES)**

**DHES 1113
INTERNSHIP I**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

**DHES 1123
FUNDAMENTALS OF MAINTENANCE**

An introduction to the skills and knowledge required by all service technicians including: precision measurement; environmental and safety regulation compliance; safety and personal protection equipment; fastener identification; hand and power tool identification, use and safety; lifting and blocking; torque wrench use; tapping, threading, and thread inserts. Students receive forklift operation training and testing, and demonstrate the ability to follow written instructions, complete business forms and perform basic math skills. Includes a review of the OSUIT Student Rights and Responsibilities. Theory/Lab.

DHES 1133**PRE DELIVERY & PREVENTIVE MAINTENANCE**

Includes a review of pre-delivery, preventive maintenance (PM) and the responsibilities of the service technician to ensure that all PM items are performed to a benchmark standard. Students review pre-delivery and PM standards established by equipment manufacturers and associations, and use manufacturer service and maintenance software and literature to determine proper pre-delivery and PM procedures, as well as oil sampling etc. They perform walk around inspections, pre-delivery inspections, test coolant, and learn proper disposal methods for used oil, filters, coolant, batteries, etc. Introduce correct machine operation, specifically related to safety precautions listed in the operators manual, as well as regulations for safe machine transportation to include tie down, flagging, permitting and weight distribution. Theory/Lab.

DHES 1143**PRINCIPLES OF GPS APPLICATIONS**

An explanation of how the GPS system works, sources of errors, and methods used for improving the basic accuracy of the system, including Differential GPS. The wide range of GPS agricultural applications is introduced and the main types and features of various GPS receivers are discussed. Students identify proper manufacturer terminology used in GPS applications. Theory/Lab.

DHES 1213**INTERNSHIP II**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHES 1223**WIRING CIRCUITS, CHARGING AND STARTING SYSTEMS**

Introduces electrical laws and principles, and includes the use of digital volt/ohm meters, amp probes, wiring diagrams and electrical schematics, wire and connector repair methods, and semiconductors. Students learn to diagnose, maintain, and repair electrical circuits, charging circuits, and starting circuits. Emphasis is on diagnostics, preventive maintenance, and correct repair procedures. Theory/Lab.

DHES 1233**HYDRAULIC PRINCIPLES**

A study of the fundamentals, theory and application of mobile hydraulic principles. Students locate and identify machine components from schematics; draw and read

schematics; and identify fittings, seals and components used in hydraulic systems on agricultural and construction equipment. Pascal's Law is used to calculate energy-work-power relationships. Hydraulic principles and operation of pumps, control valves, actuators, fluid conditioners used on modern equipment are covered, as well as failure analysis, diagnostics and reconditioning of hydraulic components. Theory/Lab.

DHES 1313**INTERNSHIP III**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHES 1323**ELECTRONIC SYSTEMS**

The student is required to use diagnostic testing as specified by manufacturer software, literature, troubleshooting charts and wiring diagrams to complete required service, repair, or replacement procedures on agricultural and construction equipment electronic systems. Students identify, locate, service, test and repair connectors, sensors, actuators, switches and control modules, and use onboard diagnostic systems, T-adaptor Kits, Digital Volt/Ohm Meters, electrical repair kits, crimper tools and the EST service tool. Theory/Lab. Prerequisite: DHES 1223.

DHES 1333**HYDRAULIC SYSTEMS**

Designed to teach the systems operation and the testing, adjusting, maintenance and repair procedures for pilot operated hydraulic systems, load sensing pressure compensated hydraulic systems, electro-hydraulic systems and hydrostatic systems specific to agricultural and construction equipment. Students identify system components and discuss their operation and application, and identify different systems and troubleshoot live units, trace the oil flow through the systems and state the systems operation and application. Students use onboard diagnostic systems, T adapter Kits, Digital Volt/Ohm Meters, flow meters, pressure gauges, and hydraulic schematics tools to diagnose hydraulic system malfunctions. Theory/Lab. Prerequisite: DHES 1233.

DHES 2413**INTERNSHIP IV**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed

in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHES 2416**ENGINES AND FUEL SYSTEMS**

An introduction to engine terminology, operating principles and maintenance; engine systems are examined along with diagnostic, repair and maintenance procedures. The student is given an understanding of the theory, operation, troubleshooting and repair of diesel engine intake, exhaust and fuel systems used in equipment. The function and operation of various types of fuel systems, fuel system maintenance and basic troubleshooting is covered. The application of repair procedures for engines is emphasized. Disassembly, parts evaluation and reusability, failure analysis, assembly, tune-up procedures, and troubleshooting are covered, along with the proper use of the EST service tool. Safety, special tool use, and the use of service publications are stressed. Theory/Lab.

DHES 2512**MOBILE AIR CONDITIONING**

A study of the theory, application, and repair of mobile air conditioning and refrigeration systems. Emphasis is on preventive maintenance, design, failure analysis, troubleshooting, proper repair and refrigerant recovery recycle methods. Theory/Lab. Prerequisite: DHES 1223.

DHES 2513**INTERNSHIP V**

A cooperative agreement between industry and education allow students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must have successfully completed all previous core and academic courses as listed in the program Information Guide, have a minimum 2.0 institutional GPA, a valid driver's license or Division Chair or designee approval.

DHES 2514**POWER TRAIN**


Discussion of the basic components, operations, maintenance, diagnostics with the EST service tool and the repair of power train systems used in agricultural and construction equipment using proper special tooling. The basic components, couplings, clutches, manual transmissions, torque converters, and power shift transmissions, hydrostatic transmissions, differentials, brakes, and final drives are included, as well as hydraulically driven machines. Theory/Lab.

DHES 2603**YIELD MONITORING, VARIABLE RATE AND AUTO STEER DIAGNOSTICS**

Summarizes how GPS integrates with guidance systems, yield monitoring systems, and variable rate technologies, also provides an explanation of the components of yield monitoring, variable rate, and auto steer systems along with the integration of machine electronics and hydraulics into those systems. System design, principles of operation, sensors, calibration, and system diagnostics are studied. Theory/Lab.

DHES 2633**CAPSTONE**

An applied research project identified during internships, as a work-based problem in need of improvement. Research can include improvements in diagnostic, service, and maintenance processes, technical support systems, customer service, etc. Advanced application of diagnostics principles relating to engine, power train, electrical systems, electronics, hydraulics, brakes and other equipment systems, and development of preventive maintenance systems are included. Theory/Lab.

ECONOMICS (ECON)**ECON 2103 (S)** 
MICROECONOMICS

An introduction to the general concepts of economic reasoning, emphasizing microeconomic theory of the U.S. system. Includes allocation of resources, distribution of final output to the individual, overall functioning of price system, and the relationship of price, quantity and profit in a capitalistic market economy. Prerequisite: ECON 2203. Theory.

ECON 2203 
MACROECONOMICS

An introduction to the general concepts of economic reasoning emphasizing macroeconomic theory of the U.S. system. Includes monetary policy, national income and employment, money and banking, economic growth policies and interrelationships with the world economy. Theory.

ELECTRICAL CONSTRUCTION TECHNOLOGY (ECNT)**ECNT 1102****INTRODUCTION TO THE ELECTRICAL TRADES**

An introduction in electricity, study targets the general concepts, ideas, history and relationships of the electrical trade, including employment opportunities, job descriptions, general safety and standards. Theory. Offered in the fall and spring semesters.

ECNT 1103**DC & AC CIRCUIT ANALYSIS**

A study of electricity involving electrical laws, units, components, impedance and magnetism. Theory/Lab.

ECNT 1233**ELECTRICAL MOTORS AND CONTROLS**

An in-depth study of single phase, 3-phase and D.C. motors; stop/start stations; forward and reverse; hard and soft start and ladder diagrams are taught. Theory/Lab. Offered in the spring semester.

ECNT 1253**ELECTRICAL WIRING METHODS I – RESIDENTIAL**

An examination, study and implementation of electrical wiring and wiring devices found in various types of residential structures. Study to include National Electrical Code as it applies for these occupancies. Theory/Lab. Offered in the spring semester.

ECNT 1313**NATIONAL ELECTRICAL CODES**

An in-depth study of the latest National Electrical Code is taught, with emphasis on the total code and the licenses that can be obtained in this state and others. Theory. Prerequisite: ECNT 1253. Offered in the spring semester.

ECNT 2473**ELECTRICAL WIRING METHODS II**

Analysis of electric power distribution of transformer secondary systems as it pertains to the construction of commercial installations is focused on, and includes feeder and service calculation as required by National Electrical Code. Theory/Lab. Prerequisite: ECNT 1253. Offered in the summer semester.

ECNT 2533**ELECTRICAL WIRING METHODS III**

An in-depth study of hazardous locations, more detailed coverage of branch circuits and their associated calculations, site lighting and industrial light fixtures, lighting protection, plus the study of panel board, motor control bus ways and other industrial products and centers, tools. Prerequisites: ECNT 1253, ECNT 2473.

ECNT 2613**PROGRAMMABLE LOGIC CONTROLLER'S (PLC) FOR ELECTRICIANS**

Industry has traditionally relied on engineers and instrumentation and control technicians to design, build, operate, maintain, and repair Programmable Logic Controller (PLC) systems. As PLC's have evolved, many organizations have found it beneficial for other maintenance groups such as electricians and mechanical technicians to help support engineers and I&C technicians in the area of PLC's. Designed for incumbent work force technicians and student technicians not traditionally responsible for PLC systems, but require basic skills and knowledge for entering into PLC support roles. Focus is placed on

fundamental programming and wiring of PLC systems. Theory/Lab. Prerequisite: ECNT 1233.

ECNT 2616**ELECTRICAL CONSTRUCTION - ELECTRICAL CAPSTONE EXPERIENCE**

An in-depth examination of all studied wiring systems, layouts and characteristics. The use of blueprints to make estimates of materials and labor costs is stressed. Special emphasis is placed on integration of all fundamental and general education classes (i.e. math, English, technical writing). The course is arranged so the student has a solid understanding of the electrical contracting business. The National Electrical Code, safety, and the electrical methods taught in previous classes are used, and the student completes the exit assessment instrument and other graduation requirements. Theory/Lab. Prerequisites: ECNT 1253, ECNT 2473, ECNT 2533, must have completed one internship, or approval by the Division Chair. Offered in the summer semester.

ECNT 2633**ELECTRICAL CONSTRUCTION ESTIMATING**

An in-depth examination of wiring systems, layouts, and characteristics. The use of blueprints to make estimates of material and labor costs is stressed and special emphasis is placed on National Electrical Code standards and safety practices. Theory/Lab. Offered once a year.

ECNT 2806**ELECTRICAL CONSTRUCTION BEGINNING INTERNSHIP**

A cooperative agreement between industry and education, which allows the student to utilize and define skills learned in their educational process. All work is performed in accordance with the industry standards, and supervised by an electrical utility journeyman and school representative. Lab. Prerequisites: Division Chair approval and an overall GPA of 2.5 or greater.

ECNT 2906**ELECTRICAL CONSTRUCTION ADVANCED INTERNSHIP**

A cooperative agreement between industry and education, which allows the student to utilize and define skills learned in their educational process. All work is performed in accordance with the industry standards, and is supervised by an electrical utility journeyman and school representative. Lab. Prerequisites: ECNT 2516, ECNT 2626, departmental approval, and an overall GPA of 2.5 or greater.

ENGLISH (ENGL)**ENGL 0143****ENGLISH FUNDAMENTALS**

Reviews the fundamentals of English, including grammar, standard usage, spelling, punctuation, and basic writing skills. A competency-based

course and the student's COMPASS test scores determine placement. Prepares students for entry into a college-level English course and does not count toward graduation or any degree program. Theory.

ENGL 1033

TECHNICAL WRITING I

The writing process and strategies for improving writing, with the emphasis on clear, concise writing for specific audiences and purposes. The assignments and activities reflect real-world work situations and writing requirements such as letters and memoranda. Theory.

ENGL 1113

FRESHMAN COMPOSITION I

The writing process and strategies for improving writing. The assignments reflect the fundamentals of expository writing, with an emphasis on structure, organization and style. A brief review of grammar and punctuation, a study of sentence structure, and practice writing paragraphs and compositions. Theory.

ENGL 1213

FRESHMAN COMPOSITION II

The focus is on patterns of developmental and expository writing, seeking to hone the writing skills learned in English 1113, as well as research skills and persuasive writing. The emphasis is on technique, style and form. Theory. Prerequisite: ENGL 1113 or Division Chair approval.

ENGL 2033

TECHNICAL WRITING II

Emphasizes the writing process taught in ENGL 1033, and includes a brief review of composition techniques. The assignments include various types of technical reports with emphasis on preparation, data collection and research, organization, style, format, graphics, technical descriptions and formal report writing. Theory. Prerequisite: ENGL 1033 or ENGL 1113; or Division Chair approval.

ENGL 2113

CREATIVE WRITING

The focus is on improving students' abilities to develop creative writings while learning techniques for reading like writers. Assignments reflect the vocabulary of writers, and class is structured primarily as a workshop for students to read and critique their peers' writing. Offers instruction for invention, genre exploration, revision, and appropriate etiquette in a workshop setting. Assignments require the use of microcomputers and word processing software.

ENGL 2413 (D, H)

INTRODUCTION TO LITERATURE

A study in fiction, drama/film, and poetry. Written critical exercises and discussion. Theory. Note: available online.

ENGL 2543 (H, I)

SURVEY OF ENGLISH LITERATURE I

Selected reading of major English writers to 1800. A survey of key works, authors, genres, literary history and criticism. Theory.

ENGL 2653 (H, I)

SURVEY OF ENGLISH LITERATURE II

Selected reading of major English writers from 1800 to present. A survey of key works, authors, genres, literary history and criticism. Theory.

ENGL 2773 (D, H)

SURVEY OF AMERICAN LITERATURE I

An introduction to the works of the chief American writers from colonial days through the Civil War, with attention both to the historical context and to selected works chosen for close analysis. Theory.

ENGL 2883 (D, H)

SURVEY OF AMERICAN LITERATURE II

An introduction to the works of the chief American writers from the Civil War to the present, with attention both to the historical context and to selected works chosen for close analysis. Theory.

ENGL 3323

TECHNICAL WRITING III

Reviews the basics of technical writing and recognizable workplace formats. Also focuses on the ethical and accurate transfer of information to technical and non-technical audiences, problem solving strategies, critical thinking skills, revision and editing strategies, as well as using visual aids to convey accurate information. Theory. Prerequisites: ENGL 1213 or ENGL 2033; or Division Chair approval.

ENGINEERING TECHNOLOGY (ETD)

ETD 1101

SAFETY APPLICATIONS

Students learn OSHA regulations and practice safety procedures in the following areas: hazard recognition and control, materials handling, flammables, fire protection, electrical safety, machine guarding, confined spaces, personal protective equipment, and accident investigation and reporting, lock out tag out, and general first aid. Theory.

ETD 1102

BASIC MECHANICS

Introduces students to general shop safety and practices, proper use and care of general hand tools, soldering techniques, applications of precision measuring and layout, and proper use and care of general power tools such as drill presses and grinders. Theory/Lab.

ETD 2090 (1-9 CREDIT HOURS)

SPECIAL PROJECTS

An individual study under the supervision of an instructor. Projects are undertaken in any area of the engineering technology field with credit hours determined by the level and amount of effort required. Theory/Lab.

ETD 2411

EMPLOYMENT EXPLORATION

Students develop effective résumé and cover letter writing skills, as well as interview techniques. Intended to assist students with

focusing on their search for full-time employment (AAS students) or internship opportunities (BT students). Theory/Lab.

ETD 3093

SPECIAL PROJECTS

Designed to allow students an opportunity to gain fundamental knowledge and skill in the area of gas and flow measurement. Focus is placed on the design and implementation of a gas flow loop, and includes devices such as pressure, flow, temperature transmitters, compressors, gas chromatographs and related equipment. Theory/Lab.

ETD 4414

CAPSTONE

The culminating student experience in Engineering Technologies, and utilizes applied research projects identified during student internships. Students work in teams to investigate alternatives for real problems which have the potential to increase employer productivity. The student teams analyze potential, design alternative solutions, test the most viable alternative, interpret the findings, document the best practices and promote deployment back to employers. Faculty assists students in the design and conduct of their applied research efforts. Theory/Lab. Prerequisites: Taken in the semester of graduation or the Division Chair's approval and the student must have a minimum 2.0 retention GPA.

ELECTRICAL AND ELECTRONICS TECHNOLOGY (ETDE)

ETDE 1133

INTRODUCTION TO ELECTRICAL/ELECTRONICS

A general survey of the Electrical/Electronics technologies career cluster with an emphasis upon the general terminology, tools and equipment, safety procedures, and general occupational outlook. Through authentic contextual based projects this class develops practical wiring skills, a basic understanding of series and parallel circuits, general component recognition and understanding, and basic soldering procedure, and serves as an introduction to industrial electrical controls. Students must have taken or be enrolled in College Algebra. Theory/Lab. Pre-requisite or co-requisite: MATH 1513.

ETDE 1243

DC ELECTRONICS AND METROLOGY

Students learn to apply DC principles and analysis to solve parameters of electronic circuits and related systems. Measurements are made with volt meters, amp meters, and ohm meters. Students are introduced to the science of measurements; to help master metrology learners complete a course project related to measurements. Students learn to draw and interpret electrical/electronic symbols, diagrams

and schematics in accordance with industry standards. Through application, analysis, and presentations each learner demonstrates mastery of basic electrical/electronic principles and technical reporting. Students must have taken or be enrolled in College Algebra. Theory/Lab. Prerequisite or co-requisite: MATH 1513.

ETDE 1263

AC ELECTRONIC AND PHOTONICS

Students learn to apply AC principles and analysis to solve parameters of electronic circuits and related systems. Wavelength and phase angles are introduced as a more complex form of signal analysis. As an introduction to Photonics, students learn optoelectronic sources and detectors that operate in the UV, IR, and visible wavelengths. Measurements are made with multimeters, oscilloscopes, frequency counters and other test equipment. Students learn to draw and interpret electrical/electronic symbols, diagrams and schematics in accordance with industry standards. Through application and analysis each learner demonstrates mastery of basic electrical/electronic practices, as well as construct and troubleshoot circuits and complete a course project with lasers. Students must have taken or be enrolled in Trigonometry. Theory/Lab. Prerequisite: MATH 1513, ETDE 1243. Prerequisite or co-requisite: MATH 1613.

ETDE 1333

INDUSTRIAL ELECTRICAL SYSTEMS

Designed to give the student a broad overview and exposure to a variety of electrical and electronic principles and practices. A combination of classroom activities, study and research, and hands on applications so the student has a clear understanding of the topics, as well as the ability to manipulate appropriate tools, software and equipment. Theory/Lab.

ETDE 1343

MOTORS AND CONTROLS

Introduces the fundamental concepts of electrical motors and associated electrical controls. Topics include ladder diagrams, schematic diagrams, contactors, motor starters, control relays, timing relays, pilot control devices, AC/DC motors and related control devices. Upon completion, students should be able to properly select, install and troubleshoot motors and associated control systems. Theory/Lab.

ETDE 1363

ELECTRONIC DEVICES & STANDARDS

Students learn to identify, specify, and troubleshoot electronic devices used in power supplies, amplifiers, oscillators, sensor circuits, electro-optical, and industrial control circuits. Students learn how to research and use manufacturer specification sheets. Device measurements are made with multimeters, oscilloscopes, frequency counters and other test equipment. Students are introduced to standards development for measurements and devices. An overview of professional organizations such as American National Standards Institute, International Standards

Organization, and National Institute of Standards and Technology is included. Students complete a course project integrating devices into a working system. Technical reports and presentations are vital components of the course. Theory/Lab. Prerequisites: ETDE 1243 and ETDE 1263.

ETDE 1373

DIGITAL SYSTEMS & MICROCONTROLLERS

Introduces digital logic, number systems, and circuits as they relate to computing, memory, and control systems. Topics include numbering systems, logic gates, flip-flops, counters, shift registers, latches, decoders, multiplexers, interfaces, displays, I/O, and timing circuits. Students learn how to research and use manufacturer specification sheets. Students learn computer communication systems, communication standards, and troubleshooting. Microprocessors, microcontrollers, and embedded systems are introduced. Students complete a course project using a microcontroller that demonstrates hardware control and software programming. Technical reports and presentations are vital components of the course. Theory/Lab. Prerequisite: ETDE 1363.

ETDE 2102

MAINTENANCE THEORY AND APPLICATION

The purpose is to inject at an early stage that maintenance training is an important function and is critical to the business' success. Next is to educate the student in an understanding of the typical categories maintenance organizations fall into and the importance of each. Students learn the tools to critically examine each challenge and troubleshoot to conclusion. Theory.

ETDE 2112

MECHANICAL SYSTEMS & EQUIPMENT

An introduction to basic mechanical devices and systems. Topics include instruction on mechanical components and equipment such as gears, belts, pulleys, and bearings in mechanical systems. Also provide instruction in fundamental concepts applicable to the mechanics of industrial production equipment, and teaches basic industrial application of mechanical principles with an emphasis on power transmission. Instruction also includes: mechanical tools, fasteners, basic mechanics, lubrication, bearings, packing, seals, and power transmission equipment. Theory/Lab.

ETDE 2113

INTRODUCTION TO PLCs

An introductory course in programmable logic controllers (PLCs) and their applications in industrial environments. Topics include ladder logic programming, input and output modules, power supplies, selection and installation of controllers, and interfacing controllers with equipment. Upon successful completion, the student should be able to install PLC's and create basic programs. Theory/Lab.

ETDE 2123

PLC APPLICATIONS

Programmable logic controllers (PLCs) and their applications in industrial environments. Topics include basic programming, hardware specifications, and wiring. After successful completion, the student is able to program and troubleshoot fundamental PLC systems and related control devices. Theory/Lab. Prerequisite: ETDE 2113.

ETDE 2133

INSTRUMENTATION

The fundamentals of industrial instrumentation, and topics include the operation and calibration of electric, electronic and pneumatic instruments, as well as the basic physical laws of temperature, pressure, flow and level. Upon successful completion, the student is able to design, install, maintain and calibrate basic instruments and control devices. Theory/Lab. Prerequisites: ETDE 1243, ETDE 1263.

ETDE 2173

INTRODUCTION TO DCS SYSTEMS

The design of machine systems using the principles of mechanical design ergonomics, economics and production processes. Students increase their drafting and design competency through development of detail and assembly drawings and associated technical documents. Prerequisites: Intro to PLCs, Instrumentation. Theory/Lab.

ETDE 2223

ELECTRICAL POWER DISTRIBUTION

Students study the physical properties of electromagnetic and electromechanical energy conversion devices and their application to conventional rotating machines. Electrical energy generation, transmission and distribution and relay technology are also covered. Prerequisites: ETDE 1243, ETDE 1263, ETDE 1363.

ETDE 2253

HYDRAULICS & PNEUMATICS

Hydraulic principles, types of hydraulic fluids and their characteristics are covered. Describes components of the hydraulic system and their functions, including filters and strainers, reservoirs and accumulators, pumps, piping, tubing and hoses, control valves, relief valves, and actuating devices. Covers a variety of operating principles of reciprocating, positive displacement, rotary, and dynamic air compressors. Covers primary and secondary air treatment. Includes valves, logic devices, cylinders, and air motors. Theory/Lab. Prerequisite: ETDE 1343.

ETDE 2273

ELECTRONIC CONTROL DEVICES

An introduction to a wide range of electronic devices and industrial automatic controls. Emphasis is placed on motor speed/position controls and programmable devices. Topics include specialized switches, sensors, stepper motors, stepper motor controllers, variable

frequency drives, and control systems common to the industrial environment. Upon completion, the learner is able to install, troubleshoot, and program variable frequency drives and stepper control systems. Students also analyze how variable speed drives save energy and maintenance costs in industrial applications. Theory/Lab. Prerequisites: ETDE 1363.

**ETDE 2343
MOTORS AND CONTROLS II**

A continuation of ETDE 1343 "Electrical Motor Controls," and focuses on advanced electrical controls, devises and related control circuitry. Advanced timing functions and circuits, pilot control and sequencing, as well as variable frequency control are covered. Prerequisite: Intro to Motor Controls. Theory/Lab.

**ETDE 2467
INTERNSHIP (AAS PROGRAM)**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All works is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: recommendation by program instructor and a minimum overall GPA of 2.5.

**ETDE 2812
ELECTRICAL/ELECTRONICS INTERNSHIP**

An internship is a cooperative agreement between industry and education which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines and is supervised by industry and school representatives. Lab. Prerequisites: recommendation by program instructor and a minimum overall GPA of 2.5.

**ETDE 3112
ELECTRICAL/ELECTRONICS
INSTRUMENTATION INTERNSHIP**

A cooperative agreement between industry and education which allows students to utilize and refine skills previously learned in their educational process. All works is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: recommendation by program instructor and a minimum overall GPA of 2.5.

**ETDE 3133
PROCESS MEASUREMENT AND CONTROL**

An advanced course in electronic/pneumatic instrumentation devices commonly used in process measurement and control systems. Students work in a teaming environment to apply various control methodologies (i.e., PID, etc.) to monitor and control process variables in solving real world problems. Upon successful completion, the student is able to design, install, maintain and calibrate process measurement and control systems. Theory/Lab. Prerequisites: ETDE 4233, ETDE 2133.

**ETDE 3213
PROJECT MANAGEMENT AND ENGINEERING
ECONOMICS**

The principles and techniques of managing engineering projects are presented, and emphasis is placed on project teams, design process, estimates, project budgeting, scheduling, proposals, and Microsoft. project.

**ETDE 3223
INDUSTRIAL NETWORKS**

Students learn the fundamentals of local area networks and their operation in the industrial control environment. Topics include the characteristics of network topologies, system hardware (repeaters, bridges, routers, gateways), system configuration, and installation and administration of the LAN. Upon completion, students are able to install, maintain, and manage typical industrial control networks. Theory/Lab. Prerequisite: ETDE 2123

**ETDE 3313
HEAT TRANSFER AND FLUID MECHANICS**

A calculus-based course offering fundamental principles of thermal-fluid sciences important to the design synthesis and operation of process control systems. Students analyze fluid systems using Bernoulli and general energy equations, laminar and turbulent flows, flow and pressure measurements and flow forces. Students also study heat transfer by conduction, convection, and radiation. Theory. Prerequisites: MATH 2144.

**ETDE 3513
PROGRAMMING FOR INSTRUMENTATION**
Introduces students to computer-based data acquisition and process control using graphical programming to automatically measure physical properties encountered in instrumentation engineering technology. Prerequisites: ETDE 2113.

**ETDE 4233
LIQUID AND GAS FLOW MEASUREMENT**
Provides guidelines for the selection and use of liquid and gas flow meters and their theory of operation, advantages/disadvantages. Topics include methods and equipment that are used for accurate calibration, gas and liquid flow calculations, fluid properties, and the use of primary and secondary flow standards. Theory/Lab. Prerequisites: ETDE 3313.

**ETDE 4313
DISTRIBUTED CONTROL SYSTEMS**
The practical applications of distributed control systems (DCS). Included is the relationship between programmable logic controllers and the DCS, as well as the importance of the human machine interface (HMI) and advanced control strategies. Theory/Lab. Prerequisites: ETDE 3223.

**ETDE 4813
INSTRUMENTATION CAPSTONE**
The Capstone course is the culminating student experience in Instrumentation Engineering. Students work in teams from the

project's conception phase, through design and construction, to completion. Through these phases students employ principles and techniques acquired in ETDE 3093 Project Management and Engineering Economics. Faculty serve as technical advisors to assist students in the design and conduct of their applied research efforts. Prerequisites: Division chair's approval and the student must have a minimum 2.5 GPA.

**ENGINEERING GRAPHICS TECHNOLOGY
(ETDG)**

**ETDG 1143
INTRODUCTION TO DESIGN/DRAFTING**
Students learn basic use and application of AutoCAD as a drafting tool through the creation of geometrical shapes, parts, drawings, and electrical symbols and schematics. Students also gain a basic understanding of the fields of civil, mechanical, and architectural design and drafting. Students must have taken or be enrolled in Intermediate Algebra or higher. Theory/Lab. Pre-requisite or co-requisite: MATH 0163.

**ETDG 1192
APPLIED AUTOCAD**
Each learner produces geometric figures using basic AutoCAD drawing and editing commands, and progress to advanced AutoCAD features that enhance productivity and accuracy. Drawings are scaled and plotted according to industry standards. All learners use the Windows operating system to manage drawing files, and compare their time on a project with the minimum acceptable time allotted to a practicing technician for completion of the same task. In order to improve life-long learning skills, the learner uses written or on-line resources to independently determine a solution when presented with an unknown concept. Students must have taken or be enrolled in College Algebra. Theory/Lab. Prerequisite: ETDG 1143. Pre-requisite or co-requisite: MATH 1513.

**ETDG 1253
TECHNICAL DRAWING**
Using visualization skills and considering spatial relationships each learner creates technical drawings that include orthographic, section and auxiliary views. Complete dimensioned drawings are created according ANSI and other industry standards. Using Microsoft software, all learners produce a bill of material, calculate unit conversions and perform Internet research. Students must have taken or be enrolled in College Algebra. Theory/Lab. Prerequisite: ETDG 1143. Pre-requisite or co-requisite: MATH 1513.

**ETDG 1523
ARCHITECTURAL DESIGN**
Students use architectural theories to design an aesthetic and structurally sound, light commercial building, and apply drafting standards to produce construction documents while maintaining ADA specifications for the purpose of building a

commercial structure. Students also use software that allows designers early exploration of design concepts and forms, and the ability to more accurately maintain the designer's vision through the design, documentation, and construction process. Make a change and it's automatically updated across the project, an essential element in the building information modeling (BIM) process. The software taught supports sustainable design, clash detection, and construction planning and fabrication. Students must have taken or be enrolled in College Algebra. Theory/Lab. Prerequisite: ETDG 1143. Pre-requisite or co-requisite: MATH 1513.

ETDG 2143

ARCHITECTURAL MODELING

Students learn to use software that allows designers early exploration of design concepts and forms, and the ability to more accurately maintain the designer's vision through the design, documentation and construction process. Make a change and it's automatically updated across the project, an essential element in the building information modeling (BIM) process. This software provides support to sustainable design, clash detection, construction planning and fabrication. Students must have taken or be enrolled in Intermediate Algebra. Theory/Lab. Prerequisite or corequisite: MATH 0163.

ETDG 2203

INTRODUCTION TO GIS

Each learner uses AutoCAD Map to gather, analyze, compile and manipulate data to create accurate, and fully integrated Geographic Information Systems (GIS) mapping projects. Students must have taken or be enrolled in Intermediate Algebra. Theory/Lab. Prerequisite or corequisite: MATH 0163.

ETDG 2223

PIPING DRAFTING AND DESIGN

The principles of piping systems function and design, preparation of pipe drawings from sketches and specifications, bills of material handling and preparation. It also includes introduction of heat exchangers, calculation of pipe and equipment for drawings and design requirements using industry standards. Students must have taken or be enrolled in College Algebra. Theory/Lab. Prerequisite: ETDG 1143; corequisite: MATH 1513.

ETDG 2293

MECHANICAL DESIGN

The design of machine systems using the principles of mechanical design ergonomics, economics and production processes. Students increase their drafting and design competency through development of detail and assembly drawings and associated technical documents. Theory/Lab. Prerequisites: ETDG 1192, ETDG 1253, ETDG 2423.

ETDG 2423

SOLIDWORKS

Students use SolidWorks, mechanical design automation software to create parametric, solid

models of parts and assemblies, taking into consideration design intent and file naming conventions. Mechanical assemblies and detail drawings are derived from individual solid parts. Solid model part files are converted to an appropriate format for use in manufacturing processes. Students must have taken or be enrolled in Intermediate Algebra. Theory/Lab. Pre-requisite or co-requisite: MATH 0163.

ETDG 2523

DESIGN DRAFTING CAPSTONE

The culminating experience in the fundamental theories and practices in Design Drafting. Expands the concepts presented in previous course work through simulation and actual problem resolution. Lab. Prerequisites: program instructor approval and a minimum overall GPA of 2.5.

ETDG 2623

BUILDING STRUCTURES

Students create construction documents of structural steel framework and support systems of commercial and industrial buildings using their own design for beam-to-girder and beam-to-column connections. Students calculate dimensional and design information using the Manual of Steel Construction as a reference. Students create fabrication drawings of the individual components of framework and support systems of buildings for manufacturing and delivery to the construction site. Theory/Lab. Prerequisite: ETDG 1253.

ETDG 2663

CIVIL TECHNOLOGY APPLICATIONS

Students learn and apply knowledge in the field of land surveying drafting and civil drafting. Includes the study of converting field notes to drawings, developing plans and profiles for underground utilities, and paving and developing site grading plans. Theory/Lab. Prerequisite: ETDG 1192.

ETDG 2674

CIVIL DRAFTING

Students develop an understanding of the field of Civil Drafting, which includes standard procedures, plan and profile sheets, alignments, and other key elements of the civil design field. Students also use a computer aided design program to gather, analyze, compile and manipulate data to create accurate and fully integrated Geographic Information Systems (GIS) mapping projects. Theory/Lab. Prerequisites: ETDG 1192.

ETDG 2812

DESIGN DRAFTING INTERNSHIP

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: recommendation by program instructor and minimum overall GPA of 2.5.

MANUFACTURING TECHNOLOGY (ETDM)

ETDM 1153

INTRODUCTION TO MANUFACTURING

Students learn general shop safety and practices, applications of precision measuring and layout, and operation of basic industry machine tools including conventional lathes and mills. Students also learn basic manufacturing processes as they relate to industry standards. Theory/Lab.

ETDM 1333

CNC MANUFACTURING PROCESSES AND FIXTURES

Students identify applications of tool and tooling used on CNC lathes and mills, identify proper speeds and feeds for material, tool geometry, ANSI standards for inserts and tool holders, as well as research new technology. Students learn to create a process flow, and then improve the process by saving time and money. Theory/Lab. Prerequisites: ETDM 1353, ETDM 1413.

ETDM 1343

CNC MACHINE PROGRAMMING

The student learns programming methods for milling and turning machines, which includes manual and computer assisted utilized to produce industry related parts and components, bench-marked to industry standards in a variety of materials. Students must have taken or be enrolled in Intermediate Algebra. Theory/Lab. Prerequisites: ETDM 1353. Pre-requisite or co-requisite: MATH 1613.

ETDM 1353

CNC MACHINE OPERATION

The student learns general shop safety and operation, basic machine operations. MDI, DNC, and other data input methods utilized in the set-up and operations of CNC machine tools to produce industry related parts to specified tolerance and quality, including milling and turning center. Theory/Lab. Corequisite: ETDM 1153.

ETDM 1413

CONVENTIONAL MFG PROCESSES AND TOOLING,

Students learn the appropriate tools and tooling for lathes and mills, ANSI standards for inserts and tool holders, proper speed and feed for materials, proper tool geometry, create a process flow and identify process improvement opportunities available with new technology. Theory/Lab. Prerequisite: ETDM 1153, MATH 1513.

ETDM 2112

MANUFACTURING INTERNSHIP

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: recommendation by program instructor and minimum overall GPA of 2.5.

ETDM 2123**APPLIED MFG PROCESSES**

Students are able to identify motivating factors in the workplace for diverse people, and explain and demonstrate an MRP system. Students learn to select the proper machine operations and fixtures necessary to accurately perform a process, calculate cost of required material, estimate machine run times to determine actual costs of producing a part, and identify the individual components of and create a production schedule. As part of a practical, real world project, the students define and discuss the steps necessary to move a manufacturing company toward lean manufacturing by explaining and demonstrating lean manufacturing principles and practices as applied to their project. Theory/Lab.

ETDM 2203**AUTOMATED MANUFACTURING TECHNIQUES**

Students are introduced to the Programmable Logic Controller (PLC), their control schemes, and applications in modern automation, process documentation techniques, and robotics. Students are also introduced to modern manufacturing concepts like JIT, and Lean Technologies, including their applications. Theory/Lab.

ETDM 2423**QUALITY SYSTEMS & PRACTICES**

Students learn to use various quality processes to improve the manufacturing of industry products. Statistical process control (SPC), total quality management (TQM), and the various steps involved in earning ISO certifications are taught as projects with an emphasis on how quality effects customer service and customer relations. A variety of testing equipment is used to verify the quality of manufactured items. Theory/Lab.

ETDM 2463**CAM APPLICATIONS**

The students learn advanced CNC programming methods on the CNC mill and lathe using computer assisted programming software and verify program performance by setting-up and operating the machine to perform advanced operations to specifications. Theory/Lab. Prerequisite: ETDM 1343, ETDM 1353.

POWER PLANT (ETDP)**ETDP 1113****INTRODUCTION TO POWER PLANTS**

A survey of electric power generation and power plant systems and processes. Emphasis is placed on generating station facilities, power utility philosophy, organizational structure, communication, health and safety, and career paths. Students must have taken or be enrolled in Intermediate Algebra. Theory. Pre-requisite or co-requisite: MATH 0163.

ETDP 2112**PIPING AND INSTRUMENT DIAGRAMS**

Students develop proficiency in the reading, understanding, and application of system Piping and Instrumentation Diagrams. Students gain proficiencies in reading P&ID's, tracing systems, use of P&ID's for troubleshooting systems, and Lock-out/Tag-out. Also covered is safety programs and a basic understanding of OSHA regulations. Theory/Lab. Prerequisite: ETDP 1113.

ETDP 2123**BOILERS**

Students gain competency in the theory of typical boilers used in the generation of electricity. Topics include Boiler Classification, Boiler Design and Construction, Boiler Fittings and Auxiliaries, Boiler Operation and Maintenance, Steam Tables, and Environmental Controls. Theory only. Prerequisites: ETDP 1113.

ETDP 2133**MECHANICAL SYSTEMS**

Students gain competency in the practical use, operation, and maintenance of mechanical equipment related to power generation facilities. Topics include basic mechanics, fans, blowers, pumps valves heat exchangers, conveying equipment, bearings, and lubricants. Theory/Lab Co-requisite: ETDE 2253.

ETDP 2143**COMPLIANCE REGULATIONS**

Students gain competencies in the understanding and application of compliance regulations associated with the Power Generation Industry. Major focus is on NERC and Environmental compliance regulations. Theory. Prerequisites: ETDP 1113.

ETDP 2153**COMBUSTION SYSTEMS AND PROCESSES**

Students gain competency in the practical use, operation and maintenance of combustion systems. Topics include combustion process, air fuel mixture, igniters, burners and access air. Theory. Prerequisite: ETDP 2133.

ETDP 2173**WATER SYSTEMS AND PROCESSES**

Students gain competency in practical use, operation, and maintenance of various water systems typically found in power plant facilities. Topics include steam/water cycle, condenser and circulating water, cooling towers, feedwater components and cycle operation, water treatment, and demineralization. Theory/Lab Prerequisite: CHEM 1314.

ETDP 2223**PRIME MOVERS**

Students gain competency in the theory of operation of typical prime movers used in the generation of electricity. Topics include steam turbines, gas turbines, combustion turbines, and combined cycle turbines. Theory Prerequisite(s) ETDE 1343.

ETDP 2216**CAPSTONE**

The culminating student experience in Engineering Technologies; utilizes applied research projects identified during student internships. Students work in teams to investigate alternatives for real problems which have the potential to increase employer productivity. The student teams analyze potential, design alternative solutions, test the most viable alternative, interpret the findings, document the best practices and promote deployment back to employers. Faculty assists students in the design and conduct of their applied research efforts. Theory/Lab. Prerequisites: Taken in the semester of graduation.

ETDP 2313**THERMAL EFFICIENCY**


Students gain competency in the practical use of thermodynamic principles and how they relate to plant systems. Topics include heat transfer, fluid flow, and conservation of energy, tables of properties, steam cycles, and boiler systems. Calculations for determining plant efficiency are covered. Theory Prerequisite PHYS 1114.

ETDP 2612**INTERNSHIP**

A cooperative agreement between industry and education allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: faculty approval and a minimum 2.5 GPA.

GENERAL STUDIES (GEN)**GEN 2090 (1-9 CREDIT HOURS)
SPECIAL PROJECTS**

Individual study under the supervision of an instructor with credit hours to be arranged. Projects relevant to the student's major area of study may be selected. Theory/Lab. Prerequisite: The Division Chair's approval.

GEOGRAPHY (GEOG)**GEOG 2243 (S, N) ****FUNDAMENTALS OF GEOGRAPHY**

An introduction to basic geographic concepts, with an emphasis on the interrelationships of people with their physical and cultural environment. Theory.

GEOLOGY (GEOL)

GEOL 1014 (L, N) EARTH SCIENCE

The study of sciences related to earth and our solar system – geology, meteorology, oceanography, and astronomy. Theory.
Notes: available online; Physical Science elective.

GRAPHIC DESIGN (GRD)

GRD 1133

BASIC DRAWING

Basic Drawing is the start of an ongoing exploration of drawing skills as they relate to the Graphic Design field. Beginning studies deal with the principles of linear perspective and the use of light and shadow. Through sketching, students will look for line, tone, and texture. Subjects include still life studies, and outdoor sketches. Theory/Lab.

GRD 1143

BASIC DESIGN

The study of design elements and principles, as well as foundation design including shape, form, and line. Theory/Lab.

GRD 1213

ADVERTISING DESIGN I

Understanding the fundamentals of advertising creation is at the core of this course. Students learn how the design principles shape advertising layout, how engagement techniques persuade readers, and how to research the demographics of the target audience and media outlets to find suitable environments to effectively communicate a products message to its intended consumer. Projects include exercises in copywriting, layout and design using traditional methods, as well as applications on the computer. Theory/Lab.
Prerequisites: GRD 1133, GRD 1143, VIS 1123.

GRD 1243

ADVANCED DRAWING

After a brief refresher on perspective and form, students focus on the human figure and learning to see like an artist. In class projects include gesture drawings from live models, drawing from statues and toys, as well as self-portraits; out of class projects include copying old masters, keeping a sketchbook, and one research project.
Prerequisites: GRD 1133.

GRD 1333

DESIGN PRODUCTION

Print production has the responsibility of turning a creative idea into printed material including, but not limited to, magazine and newspaper ads, brochures, outdoor signage, and posters. Advanced page layout production techniques in the preparation of job printing from one to four color print designs, as well as principles of pre-press processes are covered while the student

achieves the three targets of production: time, quality, and costs. Theory/Lab. Prerequisites: GRD 1143, GRD 1213, GRD 2513, VIS 1203. Co-requisites: VIS 1343, VIS 1373.

GRD 1363

SURVEY OF 20TH CENTURY DESIGN

Covering human history from 1900 until the present day, Survey of 20th Century Design concentrates on religion, environment, society and politics and how these areas have influenced design in modern culture. The major objective is to explore the progression of graphic design. The student develops a bank of knowledge consisting of information and imagery. Theory.

GRD 2413

ADVERTISING DESIGN II

Advertising agencies, newspapers, magazines, outdoor, electronic/digital, and other communications media are studied. The course strives to develop the conceptualization, interpersonal skills, and the ability to work in creative team environments that are the mainstay of the industry. Theory/Lab. Prerequisites: GRD 1213, GRD 1333, VIS 1343, VIS 1373. Co-requisite: GRD 2423 or Division Chair approval.

GRD 2423

ADVANCED DESIGN PRODUCTION

Students are expected to synthesize advanced skills in order to produce a multi-page publication, as well as related print works. Students explore and apply concepts in print production from planning through job completion. Students develop problem solving techniques, organization, time management, and reproduction issues and design mechanics that are applied to each project. Theory/Lab. Prerequisites: GRD 1333, VIS 1343, VIS 1373. Co-requisite: GRD 2413 or Division Chair approval.

GRD 2523

BRANDING/IDENTITY DESIGN

The foundation of the course emphasizes branding solutions in identity design. It involves the creation of thumbnails through comprehensive layout stages and final production which are used in presentations. The course includes several Identity projects that are conceptualized, designed, and produced for real and/or hypothetical companies which provide a product or service. Theory/Lab. Prerequisites: GRD 2413, GRD 2423. Co-requisite: GRD 2543.

GRD 2543

GRAPHIC DESIGN PRACTICUM

Students work to address actual client needs through client meetings, visual research, and prototype development. Students are involved with projects from the initial meeting with the client through delivery of the finished work. Projects are designed to further develop the students' interpersonal communication and production knowledge while working in a design studio team environment. Lab. Prerequisites: GRD 2413, GRD 2423 or Division Chair approval.

GRD 2623

CONSUMER DESIGN

Emphasizes conceptual design solutions for projects ranging from thumbnail stage to super-comprehensives for 3D pieces such as packaging and product display and 2D pieces such as magazine advertisements and annual reports. Solutions include design rationales that involve writing, marketing and printing production. Theory/Lab. Prerequisites: GRD 2523 or the Division Chair approval.

GRD 2696

GRAPHIC DESIGN CAPSTONE

Represents the final culmination of the program of study involving either hypothetical or live assignments and incorporates all of the learning objectives. A branded portfolio, interactive CD, and web site of work produced, as well as a resume will be required for job preparation and real job interviewing. Post-tests will be administered and included in the student's final grade. Participation in an industry portfolio review and multiple industry interviews are required. Theory/Lab. Prerequisites: all required courses on GRD plan of study. Co-requisites: GRD 2623 or Division Chair approval.

GRD 2800 (3-12 CREDIT HOURS)

GRAPHIC DESIGN INTERNSHIP

On-the-job training in industry, and emphasizes supervised employment and observation. Lab. Prerequisite: GRD 2543 or the Division Chair approval and must have a minimum GPA of 2.0.

GENERAL TECHNOLOGY – AIR CONDITIONING (GTAC)

GTAC 1503

BASIC REFRIGERATION

Emphasizes principles of basic refrigeration for non-air conditioning and refrigeration majors. The operation, diagnosis and service of basic refrigeration units and related controls are included as well as, refrigerant charging efficiency checks and electrical wiring. Theory/Lab.

GTAC 1603

BASIC AIR CONDITIONING AND HEATING

The principles of basic air conditioning and heating for non-air conditioning and refrigeration majors. Includes the operation, diagnosis and service of basic air conditioning-heating systems and related components, as well as electrical circuits, control adjustment and efficiency checks. Theory/Lab. Prerequisite: GTAC 1503 or the Division Chair's approval.

GENERAL TECHNOLOGY – AUTOMOTIVE (GTAU)

GTAU 1652 ENGINE AND MEASUREMENT FUNDAMENTALS

The identification, principles and operation of internal combustion engines are covered through theory, demonstration and practical laboratory. Includes identification and basic operation of related engine systems, principles and use of automotive precision measuring devices using the metric and decimal systems, class and program orientation, introduction to shop safety and hand and power tool usage. Theory/Lab.

GENERAL TECHNOLOGY – CONSTRUCTION (GTCT)

GTCT 1183 WELDING

Designed to develop knowledge and skills in the welding of ferrous and non-ferrous metals using the arc processes of stick electrodes, MIG (Microwire Inert Gas), and TIG (Tungsten Inert Gas). Oxygen-acetylene cutting and welding processes, and weld testing procedures are included. Theory/Lab.

GENERAL TECHNOLOGY – ENGINEERING (GTET)

GTET 1193 MICROPROCESSOR APPLICATIONS

Includes microprocessors in control applications, such as transducers, input signals, logic operations, output signals and actuators. Applications from automotive, air conditioning, diesel, machine tools and electronics are emphasized. Theory/Lab.

GTET 1353 AC ELECTRICAL POWER GENERATION

Principles of single and three-phase power generation, including operation, construction, control and maintenance. Theory/Lab.


**GTET 2402
MICRO INSTRUMENTATION**
Cleaning, repair, fabrication and testing of various aircraft instruments, and includes synchros, servos and other related devices. Theory/Lab.

**GTET 2463
MICRO-ELECTRONICS PRINCIPLES**
Emphasizes basic electrical and electronics principles directed towards the application of the watch and micro-instrument industry. Includes basic rules and laws of magnetism and electricity, batteries, solid state devices, digital circuits and displays, stepper motors and quartz crystals. Theory/Lab.

**GTET 2593
DIRECT DIGITAL CONTROLS**
Process measurement and control fundamentals are explored, including the physics of temperature, pressure, flow and level. Emphasizes direct digital control and pneumatic control as it relates to the heating and refrigeration industry. Theory/Lab. Prerequisites: ACR 1126, ACR 1203, ACR 1206, ACR 1343.

**GTET 2703
TECHNOLOGY PROGRAMMING**
The emphasis is on programming in areas other than business accounting. It is not language dependent, but requires use of one or more languages and includes technical problems simulation and graphics. Theory/Lab.

GENERAL TECHNOLOGY (GTGE)

GTGE 1111 
COLLEGE CORNERSTONE
College Cornerstone serves as the foundation for students to build upon during their time at OSU Institute of Technology, and is delivered through one's home department. Students must document, defend, or demonstrate the ability to perform tasks required to meet the objectives of each unit including e-mail proficiency, library research, resource tools, learning styles and study strategies, career exploration, and time and money management. Theory.

**GTGE 2030 (1-9 CREDIT HOURS)
OCCUPATIONAL PRACTICUM**
An individualized experience in the area of specialization under the supervision of an instructor. Hours and responsibilities are arranged. Normally, experience is associated with employment. Theory/Lab. Prerequisite: The Division Chair's approval.

**GTGE 2040 (1-9 CREDIT HOURS)
WORKSHOPS**
Designed for a variety of workshop experiences. Specific topics are designated as the workshop is scheduled and is based on expressed needs. Theory/Lab.

**GTGE 2050 (1-9 CREDIT HOURS)
DIRECTED INDIVIDUAL PROBLEMS**
Individual problems are under the direction of an instructor with specific responsibilities to be arranged. Problems are normally related to the individual's specialty area. Theory/Lab. Prerequisite: The Division Chair's approval.

**GTGE 2060 (1-9 CREDIT HOURS)
SEMINARS**
A variety of seminars and/or research experiences with specific topics designated as the workshop is scheduled based on expressed needs. Theory/Lab.

**GTGE 2070 (1-9 CREDIT HOURS)
TECHNOLOGICAL DEVELOPMENTS**
Individual projects directed by an instructor with responsibilities to be determined. Projects are normally associated with some significant development within the individuals area of specialization. Theory/Lab. Prerequisite: The Division Chair's approval.

GENERAL TECHNOLOGY – HEAVY EQUIPMENT (GTHE)

**GTHE 1223
HYDRAULICS AND PNEUMATIC PRINCIPLES**
Hydraulic and pneumatic operation and principles of pumps, control valves, actuators, oil conditioners, conveying materials, graphic symbols and flow diagrams. Theory/Lab.


GTHE 1241 SPECIALIZED ELECTRONICS TECHNOLOGY (GM-SET)

Applying theory and application of electrical principles and concepts, students study the use of electrical measurement devices, wiring diagrams, proper wire repair methods, semiconductors and microprocessors. Emphasis is on a diagnostic procedure through on-bench and practical exercises using automotive application. Theory/Lab.


GENERAL TECHNOLOGY – INFORMATION TECHNOLOGY (GTIT)

**GTIT 1133
COMPUTER LITERACY & APPLICATIONS (Cooperative Alliance)**
An applied exploration of personal computing in which students learn system operation and maintenance, Internet technologies and primary desktop applications. Theory/Lab.

HEALTH & HUMAN PERFORMANCE (HHP)

HHP 1113 
PERSONAL HEALTH
A comprehensive study of personal health with emphasis on mental health, human sexuality, growth and development, psychoactive drugs, communicable diseases, degenerative diseases, consumer, and community health resulting in a positive change in the health attitudes and practices of students. Theory.

HISTORY (HIST)

HIST 1483 
U.S. HISTORY TO 1865
The history of the United States from European colonization through the Civil War period. One class is usually offered each semester with an emphasis on Native American contributions to the U.S. History. Theory.

HIST 1493 **U.S. HISTORY SINCE 1865**

The history of the United States from the reconstruction period to the present is discussed. Emphasis is given to the growth of industry and its impact on domestic and foreign affairs. Theory. Note: available online.

HIST 1613 (H) **WESTERN CIVILIZATION TO 1500**

An exploration of western civilization from the ancient world to the Reformation with a multicultural perspective on the study of mankind. Theory.

HIST 1623 (H) **WESTERN CIVILIZATION AFTER 1500**


A continuation of HIST 1613 with an emphasis on the period from the Reformation to the present. Theory.

HIST 2323 **OKLAHOMA HISTORY**

Development of the state of Oklahoma from prehistory to present is discussed. Among the material covered relating to Oklahoma are the geography and geology, prehistoric cultures, Native American heritage, Civil War, Cimarron Territory, Indian Territory, Oklahoma Territory, statehood, development of political institutions, ethnic diversity, economic development, politics and other aspects contributing to the formation of the state. Course satisfies the Oklahoma State Department of Education requirement for teacher certification. Theory.

HUMANITIES (HUM)**HUM 1013 (H)** **HUMANITIES I**

Themes of human expression as reflected through art, music and literature from the classical era through the Renaissance are examined. Theory.

HUM 1033 (H) **HUMANITIES II**

A continuation of HUM 1013 beginning with the Renaissance, with the emphasis on contemporary thought. Theory. Designated as Humanities. Prerequisite: HUM 1013 (preferred but not required) or Division Chair approval.

HUM 1113 (H) **MUSIC APPRECIATION**

A course designed to give students an appreciation of music through analysis of the impact of music over various time periods of the civilization of humankind throughout the world. Theory.

HUM 2243 (H) **NATIVE PEOPLES OF NORTH AMERICA**

A study of the history and cultures of Native Americans from pre-colonial to present times. Emphasis is on tribal cultures, traditions, and experiences, conflicts with European explorers

and settlers, and U.S. government relations. Students discuss cultural differences, as well as legal and political issues affecting Native Americans today. Theory.

HUM 2453 (H)**INTRODUCTION TO FILM**

An introduction to the basics of motion pictures, film theory, history and appreciation. Theory.

HUM 2563 (I, H)**COMPARATIVE CULTURES**

Comparison of environments, economies, social and political organizations and other aspects of culture among selected literate and preliterate societies. Theory.

HUM 2663 (I, H, D)**STUDY/TRAVEL/WORK ACROSS CULTURES & BORDERS**

In today's world, interaction with people of other cultures is no longer an exceptional event, but an increasingly familiar occurrence. Often these interactions occur at the local supermarket or even with a routine customer service phone call. Also, it is ever more common for Americans to interact across cultures as part of their personal or work travels to other countries. Prepares participants to more effectively engage with people of other cultures and cope with the inevitable challenges faced when crossing political and social borders.

HIGH VOLTAGE LINEMAN PROGRAM (HVLP)**HVLP 1121****INTRODUCTION TO HIGH VOLTAGE LINEMAN PROGRAM**

High Voltage industry career opportunities, including salary information, placement requirements, current trends, research on companies and the physical, mental, and social needs in the high voltage industry are covered. Topics related to being successful in college and a career cornerstone experience that emphasizes networking with professionals and student organizations are included. Theory.

HVLP 1132**HIGH VOLTAGE LINEMAN SAFETY**

Pole top rescue, bucket truck rescue, and the many safety hazards that exist, including heat exhaustion, heat stroke, insect bite or stings in the High Voltage industry are covered. Administering first aid, training opportunities that must occur, and the proper use of different types of fall protection are studied. Theory/Lab.

HVLP 1216**HIGH VOLTAGE INTERNSHIP I**

A cooperative agreement between industry and education, which allows the student to utilize and define skills learned in their educational process. All work is performed in accordance with the industry standards and is supervised by an electrical line foreman or utility worker. Students

work with different types of companies and with various types of material and equipment. Lab. Prerequisite: HVLP 2563, departmental approval, and an Institution GPA of 2.5 or greater, and current CDL.

HVLP 1243**HIGH VOLTAGE POLE CLIMBING TECHNIQUES**

Strength and flexibility training needed to perform the duties of a line technician as well as wooden pole climbing techniques tool recognition and proper use, material recognition, and knot tying are covered. Students work with various types of material and equipment. Safety instructions are emphasized and required safety equipment is used while in the pole climbing area. Theory/Lab.

HVLP 1316**HIGH VOLTAGE INTERNSHIP II**

A cooperative agreement between industry and education which allows the student to utilize and define skills learned during their educational process. All work is performed in accordance with the industry standards and is supervised by an electrical line foreman or utility worker. Students work for different types of companies and with various types of material and equipment. Lab. Prerequisites: HVLP 2483, departmental approval, an institution GPA of 2.5 or greater, and current CDL.

HVLP 1353**DC AND AC HIGH VOLTAGE CIRCUIT ANALYSIS**

A study of electricity involving electrical properties of materials, electrical laws, units, components, impedance, and magnetism. Covers the theory of operation of the equipment used to generate and distribute electrical energy from the source to the end user. Theory/Lab.

HVLP 2416**HIGH VOLTAGE INTERNSHIP III**

A cooperative agreement between industry and education, which allows students to utilize and define skills previously learned in their educational process. All work is performed in accordance with industry standards and supervised by an electrical line foreman or utility worker. Students work for different types of companies and with various types of material and equipment. Lab. Prerequisites: HVLP 2483, departmental approval, an Institution GPA of 2.5 or greater, and current CDL.

HVLP 2483**PRINCIPLES OF OPERATION OF HIGH VOLTAGE DISTRIBUTION SYSTEMS**

A study of overhead and underground high voltage systems. Transformer configurations, conduit sizing, line voltage drops and the installation of overhead and underground systems are covered. Students work with various types of material and equipment. Theory/Lab. Prerequisites: HVLP 2563 & HVLP 2663.

HVLP 2516**HIGH VOLTAGE INTERNSHIP IV**

A cooperative agreement between industry and education, which allows the student to utilize and define skills learned in their educational process. All work is performed in accordance with the industry standards and supervised by an electrical line foreman or utility worker. Students work for different types of companies and with various types of material and equipment. Lab. Prerequisites: departmental approval, an Institution GPA of 2.5 or greater, and current CDL.

HVLP 2553**UNDERGROUND DISTRIBUTION SYSTEMS**

While similar in nature to overhead systems, an underground system has its own requirements. Construction techniques, tools and equipment and traffic control are given extensive coverage. Troubleshooting maintenance and care of personal equipment are covered with special emphasis on safety. Students work with various types of material and equipment. Theory/Lab. Prerequisite: HVLP 2483.

HVLP 2563**OVERHEAD DISTRIBUTION SYSTEMS**

An in-depth study of construction techniques, tools, equipment and care of personal protective equipment used in overhead distribution systems. Troubleshooting and safety practices are emphasized. Students work with various types of material and equipment in this hands on course. Theory/Lab. Prerequisite: HVLP 1243, HVLP 1353.

HVLP 2643**ADVANCED DISTRIBUTION SYSTEMS**

A study of high voltage and the distribution electrical field. High voltage equipment, tools, distribution equipment and safety procedures are covered. Local rules and regulations, as well as electrical codes are covered as they pertain to these two types of installations. Students work with various types of material and equipment. Theory/Lab. Prerequisites: HVLP 2563, HVLP 2553, and completed two (2) H.V. Internships.

HVLP 2663**HEAVY CONSTRUCTION EQUIPMENT AND OPERATION**

Students prepare to take the test for a State of Oklahoma Class A Commercial Driver's License. The study and use of various types of equipment, such as the digger truck and bucket truck, used in overhead and underground high voltage systems. Students have the opportunity to take the CDL test during this course. Theory/Lab. Prerequisite: Departmental approval and current CDL permit.

HVLP 2673**TRANSMISSION PRINCIPLES**

An in-depth study of construction techniques, tools, equipment, and care of personal protective equipment used in transmission construction, which includes building and maintaining different transmission structures. Students learn the skills required for hot-sticking at different voltages

69Kv to 138Kv lines using hook-ladders and baker-boards. Theory/Lab. Prerequisite: HVLP 2483.

HVLP 2716**HIGH VOLTAGE INTERNSHIP V**

A cooperative agreement between industry and education, which allows the student to utilize and define skills learned in their educational process. All work is performed in accordance with the industry standards and supervised by an electrical line foreman or utility worker. Students work for different types of companies and with various types of material and equipment. Lab. Prerequisites: Departmental approval, an Institution GPA of 2.5 or greater, and current CDL.

HVLP 2726**HIGH VOLTAGE LINEMAN CAPSTONE EXPERIENCE**

The designing of distribution, transmission, and underground systems, and includes the procuring and estimating of the material involved in these systems. Local rules and regulations, as well as electrical codes are covered as they pertain to these types of installations. Reviews the high voltage lineman procedures learned in previous courses as needed. Students work with various types of material and equipment. Theory/Lab. Prerequisites: HVLP 2643 and completed four (4) High Voltage Internships.

HVLP 2812**HIGH VOLTAGE INTERNSHIP**

A cooperative agreement between industry and education, which allows the student to utilize and define skills learned in their educational process. All work is performed in accordance with the industry standards and is supervised by an electrical line foreman or utility worker. Lab. Prerequisites: Departmental approval, an institution GPA of 2.5 or greater, and current CDL.

INFORMATION TECHNOLOGIES (ITD)**ITD 1013****FUNDAMENTALS OF INFORMATION TECHNOLOGIES**

An overview of information technologies, it's systems and culture, in which students work in teams on real-world, multi-level projects in learning environments reflective of current, high-performance business settings. Topics include general literacy and terminology, history, societal impact and cultural shifts, career fields and opportunities, technology forecasting and trends, as well as contemporary ethical issues. Theory/Lab.

ITD 1213**HARDWARE SYSTEMS SUPPORT**

Focus is on the management and maintenance of hardware and operating system environments. Topics include user administration, security, backup/recovery, and advanced systems performance evaluation and troubleshooting. Theory/Lab.

ITD 1223**NETWORK SYSTEMS**

Students examine network concepts, standards, technologies, media, protocols and topologies. Topics include connectivity, network devices, basic security, local and wide area networks, network design, transmission media, structured cabling, IP addressing and Open System Interface (OSI) model. Theory/Lab. Note: available online beginning Spring 2015.

ITD 1243**PRINCIPLES OF INFORMATION SECURITY**

Students explore the principles of information assurance, with an emphasis on current threats and vulnerabilities. Topics include infrastructure and operational security; cryptography; legal and ethical issues; and security policies, practices and procedures. Theory/Lab.

ITD 1253**OBJECT-ORIENTED PROGRAMMING USING C#**

Students learn how to design, code, and test applications in C# using object-oriented programming techniques. Topics include classes, data types, variables, methods, recursion, operators, control statements, inheritance and polymorphism, arrays, packages, interfaces, Input/Output, and strings. Theory/Lab.

ITD 1333**OBJECT-ORIENTED PROGRAMMING USING JAVA**

Students learn how to design, code and test applications in Java using object-oriented programming techniques. Topics include classes, data types, variables, methods, recursion, operators, control statements, inheritance and polymorphism, arrays, packages, interfaces, exception handling, Input/Output, Java applets and strings. Theory/Lab.

ITD 1353**WEB PROGRAMMING AND DEVELOPMENT**

Students learn web development through the application of various development principles, tools and technologies. Topics include audio, video and image formats; HTML; Dynamic HTML; XML; FTP; CSS; and JavaScript. Theory/Lab.

ITD 1373**VOICE, DATA & WIRELESS CONCEPTS**

Students investigate telecommunication, data and wireless systems, technologies and policies. Topics include network architectures, transmission and media, protocols, operations, security and emerging technologies. Theory/Lab.

ITD 1423**ROUTER TECHNOLOGIES**

Students examine Wide Area Networks (WANs) and routing. Topics include router configuration, operation and troubleshooting; password recovery; multiple router installations; routing protocols; Ethernet; and TCP/IP. Theory/Lab. Prerequisite: ITD 1223.

ITD 2133 **TECHNICAL SUPPORT MANAGEMENT**

Focus is on research techniques, help desk systems support, installation, as well as computer systems upgrades and maintenance.

Topics include device setup and configuration, backup/recovery, advanced troubleshooting and problem-solving measures, and preventative maintenance. Theory/Lab. Prerequisite: ITD 1213.

ITD 2153**LAN/WAN IMPLEMENTATION AND SUPPORT**


An advanced course on the design, configuration, and maintenance of switches, routers, local area networks (LANs), virtual local area networks (VLANs) and wide area networks (WANs). Topics include: LAN configuration, operation and troubleshooting; WAN configuration, operation and troubleshooting; advanced routing protocols, and network troubleshooting. Theory/Lab. Prerequisite: ITD 1223.

ITD 2183**APPLICATION DEVELOPMENT USING JAVA**

Students explore advanced programming techniques using Java. Topics include JDBC, file processing, graphical user interfaces, network programming and sockets, thread, security, servlets, swing, properties, introspection, collections and architectures. Theory/Lab. Prerequisite: ITD 1333.

ITD 2203 **DATABASE SYSTEMS**


An introduction to database systems, with emphasis on data modeling and the design of efficient database systems. Topics include database architecture, ER and EER models, the relational data model, SQL queries, normalization, indexing and security. Theory/Lab.

ITD 2223 **OPERATING SYSTEMS**


Focuses on operating systems and system security. Topics include operating system installation, configuration and implementation, and operating system security architectures. Theory/Lab.

ITD 2263 **GRAPHICAL USER INTERFACE DEVELOPMENT**

Students learn how to design, develop and evaluate interactive application interfaces. Topics include events, regular expressions, exception handling, debugging, and testing. Theory/Lab. Prerequisite: ITD 1253.

ITD 2313 **SCRIPT PROGRAMMING**

Students learn to develop and execute scripts. Topics include regular expressions, Linux scripting, Windows scripting, and other scripting technologies. Theory/Lab.

ITD 2413 **ENTERPRISE SECURITY MANAGEMENT**

Students learn the basic principles and the managerial aspects of securing enterprise information systems. Topics include risk

management, security policy and plan development, security architectures, incident handling, disaster recovery planning, system administration, access control and change management. Theory/Lab. Prerequisite: ITD 2223.

ITD 2453**EVENT-DRIVEN PROGRAMMING USING VISUAL BASIC**

Event-driven programming in Visual Basic, and furthers student understanding of efficient program design. Topics include controls and their properties, variables and constants, data types, decision making, procedures and functions, multiple forms, error handling, classes, variables, lists, repetition, dynamic arrays and data files. Theory/Lab. Prerequisite: ITD 1253.

ITD 2643 **LINUX WORKSTATION & SERVER OS**

Focuses on workstation and server Linux operating systems. Topics include operating system installation, configuration, maintenance and security. Theory/Lab.

ITD 3163 **IT ENTERPRISE OPERATIONS**


Students gain a working knowledge of the roles, functions, structures and constituencies of IT organizations. Topics include major IT systems and terminology, planning, compliance, quality assurance, environmental responsibility and internal/external customer relations. Theory/Lab. Prerequisite: ITD 2413.

ITD 3201 **EMPLOYMENT ORIENTATION**

Focuses on employment and career readiness, students demonstrate job readiness, as well as the ability to articulate their professional goals and develop the materials and skills necessary to secure appropriate employment. Topics include employment procedures and guidelines, career planning and job searches and common workplace issues. Theory. Prerequisites: Students must have completed no less than 24 credit hours of technical coursework towards degree and have a minimum 2.5 cumulative GPA.

ITD 3243 **SERVER PROGRAMMING AND CONFIGURATION**

Students learn server programming through the application of advanced development principles, tools, and technologies. Topics include PHP; server configurations for web applications; database manipulation; Secure Sockets Layer (SSL); cookies; and JavaScript. Theory/Lab. Prerequisites: ITD 1353, ITD 2203.

ITD 3253 **NETWORK ADMINISTRATION**


Focuses on network administration and topics include: network design; installing and configuring network shares using Active Directory; monitoring, troubleshooting and optimizing system performance; and establishing system policies and procedure. Theory/Lab. Prerequisites: ITD 1223 and ITD 2223. Note: available online beginning Spring 2015.

ITD 3323 **ENTERPRISE FRAMEWORK PROGRAMMING**

Students gain a working knowledge of advanced topics in C# and the .NET platform. Topics include: C#, XML, database programming, source control and multithreading. Theory/Lab. Prerequisite: ITD 2263.

ITD 3333 **DISTRIBUTED APPLICATION DEVELOPMENT**

Students learn to develop enterprise applications. Topics include: data structures, web applications and interprocess communication. Theory/Lab. Prerequisite: ITD 2263.

ITD 3423 **SECURE ELECTRONIC COMMERCE**

Students explore secure e-commerce technologies, models and issues, and the evolution of e-commerce. Topics include digital currency methods, electronic transactions, public and private key infrastructure, smart cards and biometrics, web security, legal and ethical issues, inventory management, secure shell, digital certificates and encryption technologies. Theory/Lab. Prerequisite: ITD 1353.

ITD 3433 **DIGITAL FORENSICS**

Students are introduced to the procedures and techniques used to identify, extract, validate, document and preserve electronic evidence. Topics include forensic tools, resources, policies and procedures. Theory/Lab. Prerequisites: ITD 1223, ITD 2223.

ITD 3443 **NETWORK SECURITY**


Students examine operating systems and network security. Topics include servers, encrypted files, intrusion detection, packet filtering, network monitoring, user and group permissions, security templates and firewalls. Theory/Lab. Prerequisites: ITD 1223, ITD 2223.

ITD 3463 **DATABASE APPLICATION DEVELOPMENT**

Students create secure database applications using advanced database development tools and techniques. Topics include variable types, logic structures, creating and working with program units, subprograms and functions, Dynamic SQL, database development and utilization, access control and database security utilities. Theory/Lab. Prerequisite: ITD 1253, ITD 2203.

ITD 3513**INFORMATION SYSTEMS ASSURANCE**

Focuses on the system elements of information assurance and computer security. Topics include access control and integrity, system analysis, security in programming, network security, design and analysis methods for high assurance information systems, safety, system reliability, specification of mission-critical system properties, software and hardware validation, verification and certification. Theory/Lab.

ITD 3523 **COMPUTER SECURITY**


Focuses on computer security from basic risk assessment to public key encryption. Topics include: confidentiality, integrity, and availability; threat, vulnerability, and risk; security controls and auditing; vulnerability scanning; encryption and cryptography, including Advanced Encryption Standard (AES) and public key systems; computer viruses; building secure and trusted software; the Orange Book and the Common Criteria; and data base security. Theory/Lab. Prerequisite: ITD 3443.

ITD 3533 **SECURITY SYSTEM ADMINISTRATION**

Students learn to protect systems and networks from threats and vulnerabilities. Topics include provisioning; network installation; hardware and software systems for mission-critical enterprises; system configuration, and maintenance; as well as incident handling and response. Theory/Lab. Prerequisites: ITD 2223, ITD 2313.

ITD 3543 **ENTERPRISE NETWORKING**

Students analyze virtual and physical infrastructure, as well as enterprise wireless and mobile platforms. Topics include the implementation, monitoring and troubleshooting of convergent network systems; mobile device integration and administration; wireless local area network (WLAN) security; virtualization management; and voice over Internet protocol (VoIP) technologies. Theory/Lab. Prerequisite: ITD 3253.

ITD 3613 **EMERGING AND CONVERGING TECHNOLOGIES**

Students are provided with opportunities to explore emerging and converging Information technologies and their implications. Topics vary by academic term. Theory/Lab.

ITD 3623 **CONTROL SYSTEMS SECURITY**

Students gain a working knowledge of several control systems security issues, including common risks and mitigation strategies. Topics include: process control network communications, vulnerability identification, network monitoring and incident management. Theory/lab. Co-requisite: ITD 3443.

ITD 3633 **IT ORGANIZATIONAL TRAINING**

Students apply learning theory and instructional design principles to the development, delivery and evaluation of information technology-related training. Topics include needs analysis, learning theory, instructional techniques and technologies, implementation and evaluation. Theory/Lab. Prerequisite: Students must have completed no less than 24 credit hours of technical coursework toward the degree.

ITD 3643**DATA CENTER IMPLEMENTATION AND MAINTENANCE**

Students acquire a working knowledge of the processes and procedures necessary to design, install and maintain data center environments. Topics include: virtual and physical computing infrastructure, cloud deployment models, fire detection and suppression, environmental controls and impact, power systems, physical security and system monitoring. Theory/Lab. Prerequisites: ITD 1223, ITD 2223.

ITD 3653 **FORENSICS PROGRAMMING**

Students learn to develop and apply software tools and technologies to assist with the recovery, preservation, analysis and presentation of computer code and digital evidence. Topics include log file and registry parsing, analysis of memory and core dumps, assembly language, machine code, and stack analysis. Theory/Lab. Prerequisite: ITD 2313.

ITD 3663 **MOBILE PROGRAMMING**


Students learn to write programs for mobile devices, as well as about key issues and concepts involved with mobile system programming. Topics include user interface design, data access models, network and device performance, and sometimes-connected networks. Theory/Lab. Prerequisites: ITD 1253 and ITD 1353.

ITD 3673 **IT ENTERPRISE MANAGEMENT**

Focuses on the management of an IT enterprise, and topics include strategic planning and sourcing, needs assessment, vendor relations, budget and contract administration, project portfolio management, managing personnel and change, sustainability and major management/ leadership methodologies. Theory/Lab. Prerequisite: ITD 3163.

ITD 3683 **MOBILE AND NETWORK FORENSICS**

Students apply advanced digital forensics techniques and technologies to complex information systems. Topics include mobile, network and storage forensics, alternating operation systems, and incident response. Prerequisite: ITD 3433.


ITD 3713 **SOFTWARE DEVELOPMENT MANAGEMENT**

Students learn to manage complex software development projects. Topics include software development project management, software engineering tools and techniques, and design patterns. Theory/Lab. Prerequisites: ITD 3323 and ITD 3333.

ITD 4113 **IT PROJECT MANAGEMENT (CAPSTONE COURSE)**

Introduces students to the principles and application of project management techniques

with an emphasis on the design and management of computer information systems projects. Topics include project planning, work team design, project estimation techniques, project reporting, identifying and controlling project risks, budgets, and quality assurance. Theory/Lab. Prerequisite: ITD 4800 or with the Division Chair approval; and a minimum 2.5 cumulative GPA. Co-requisite: ITD 4123.

ITD 4123 **APPLIED RESEARCH AND DEVELOPMENT (CAPSTONE COURSE)**

The culminating educational experience in Information Technologies, in which students work in multidisciplinary teams on substantial, applied research projects to investigate alternate solutions to real problems relating to employer productivity. The various projects require student teams to analyze potential design alternatives, interpret results, document best practices, and report their findings. Theory/Lab. Prerequisites: ITD 4800 or with the Division Chair approval; and a minimum 2.5 cumulative GPA. Co-requisite: ITD 4113.

ITD 4700**ENTREPRENEURSHIP**

Students gain a working knowledge of entrepreneurial practices, challenges and issues, and develop the core skills necessary for successful entrepreneurial careers. Lab. Prerequisites: ITD 3201, MGMT 2243 and approval by the entrepreneurship coordinator and the Division Chair.

ITD 4800 (1-12 CREDIT HOURS)**INTERNSHIP**

A cooperative agreement between industry and education in which students utilize and refine previously learned skills, and gain a working knowledge of and experience with contemporary industry culture, standards and practices. Lab. Prerequisites: ITD 3201, a minimum 2.5 cumulative GPA, and approval by the internship coordinator and the Division Chair.

ITD 4900 (1-12 CREDIT HOURS)**ADVANCED INTERNSHIP**

A cooperative agreement between industry and education in which students utilize and refine previously learned skills, and expand their working knowledge of and experiences with contemporary industry culture, standards and practices. Lab. Prerequisites: ITD 4800, a minimum 2.5 cumulative GPA, and approval by the internship coordinator and the Division Chair.

MATHEMATICS (MATH)**MATH 0143****MATH FUNDAMENTALS**

The areas of mathematics directly applied to practical, real-world situations are emphasized. Prepares students for entry into a college-level mathematics course, placing emphasis on math at the pre-college level. Topics covered include application of adding, subtracting, multiplying

and dividing with whole numbers, fractions, decimals, problems with percent and ratio and proportion. This competency-based course and the student's COMPASS test scores determine placement. The course does not count toward graduation or any degree program. Theory.

MATH 0153

ALGEBRA FUNDAMENTALS

The areas of elementary algebra directly applied to practical, real-world situations are emphasized, and is designed to build on skills learned in basic math, and establish a foundation in algebraic concepts and problem solving to prepare students for entry into a college-level algebra course. This competency-based course and a score of 0-44 on the Algebra COMPASS test determines placement. The course does not count toward graduation or any degree program. Theory.

MATH 0163

INTERMEDIATE ALGEBRA

A review of fundamental operations of algebra involving first degree equations, simple quadratic equations, equations with two variables, and systems of equations and inequalities. This is a competency-based course and a score of 45-67 on the Algebra COMPASS test determines placement. The course does not count toward graduation or any degree program. Theory.

MATH 1493

MATH FOR CRITICAL THINKING

A study of the fundamental structures of mathematics for non-math or non-science/engineering majors. Topics include problem-solving, estimation, set theory, logic, number theory, algebraic equations, the qualities, and applications. Theory.

MATH 1513 (A)

COLLEGE ALGEBRA

Quadratic equations, functions and graphs, inequalities, systems of equations, exponential and logarithmic functions, determinants, permutations and combinations and the binomial theorem are all covered. Theory. Prerequisites: MATH 0153 or MATH 0163 or a score of 45 or above on the COMPAS College Algebra test, or a 68 or above on the Algebra COMPASS test.

MATH 1613 (A)

TRIGONOMETRY

The major emphasis is on solving right and oblique triangles with applications. Radian measure and graphing of trigonometric functions, complex numbers and solving logarithmic and exponential functions, and vector analysis are also covered. Theory.

MATH 2003

BUSINESS MATHEMATICS

Applications of mathematical principles of business are discussed. Topics covered include trade and cash discounts, mark up and mark down, payroll and simple and compound interest. Theory.

MATH 2144

CALCULUS I

An introduction to derivatives, integrals, and their applications. Theory. Prerequisites: MATH 1513, MATH 1613.

MATH 2153

CALCULUS II

A continuation of 2144, including series and their applications, elementary geometry of three dimensions and introductory calculus of vector functions. Theory. Prerequisite: MATH 2144.

MATH 2423

MATH CONCEPTS FOR EDUCATORS

Designed to provide the foundations for teaching arithmetic and geometry on the elementary level. Origins of numerals, number bases, systems of whole numbers, integers, rational numbers, real numbers, and intuitive geometry are some of the topics included. Also focuses on current issues in mathematics education and research, as well as the use of microcomputers in mathematics education. Theory.

MATH 2713 (A)

ELEMENTARY CALCULUS

Algebraic functions and their graphs, derivatives, techniques and applications, integration of algebraic functions and applications of the definite integral. Theory. Prerequisite: MATH 1513 or equivalent, or Division Chair approval.

MATH 3103 (A)

DISCRETE MATHEMATICS

Students investigate discrete mathematical concepts, to include: logic, Boolean algebra, probability and combinatorics, set theory, proofs, proof techniques, relations, functions, graph theory and trees. Theory. Prerequisites: MATH 1513 and STAT 2013 or Division Chair approval.

MANAGEMENT (MGMT)

MGMT 2243

SMALL BUSINESS MANAGEMENT

Designed for individuals considering going into business for themselves. Emphasis is given to governmental regulations, financial needs, location factors, purchasing and pricing, inventory, advertising, bookkeeping, tax records and reports, banking, choosing personnel and credit and collections. Theory.

MGMT 2313

PRINCIPLES OF MANAGEMENT

An introduction to the basic theory and principles of management. Emphasis is on the functions of management: planning, organizing, staffing, directing, and controlling. A survey approach to current trends in management and possible future developments in organization and administration is used. Theory.

MGMT 2413

SUPERVISORY MANAGEMENT

The problems of first-line managers are covered, as well as skills needed to lead, coordinate, direct, and control the work of others to achieve organizational goals. Theory. Prerequisite: PSYC 1113 or PSYC 2313; or Division Chair approval.

MGMT 2603

HUMAN RESOURCE MANAGEMENT

An interactive study of the operating environments, policy development and other functions typical of the expanding field of Human Resource Management (HRM) and Development (HRD). Theory.

MGMT 2913 (D)

LEADERSHIP AND ORGANIZATIONAL BEHAVIOR

Students gain an advanced understanding of organizational and behavioral dynamics in contemporary professional environments, as well as develop and enhance their own organizational and leadership skills. Topics include leadership patterns, resource management, diversity, professional growth, motivation, organizational development and change implementation, group dynamics and performance improvement. Theory.

MARKETING (MKTG)

MKTG 2153

MARKETING PRINCIPLES

Examines the methods and principles used by professional marketing executives. Careers in marketing and business administration and how they relate to the business environment are examined. Theory. For Career Technology Centers only.

MULTIMEDIA TECHNOLOGY (MMT)

MMT 1113

INTRODUCTION TO 3D

Students are introduced to basic 3D design software and learn fundamental techniques to model objects, environments, and characters; and utilize primitive elements to build more sophisticated pieces. Proper procedure, workflow, modeling tools, texture mapping, and basic lighting to create 3D models are covered. Theory/Lab.

MMT 1143

INTRODUCTION TO MOTION GRAPHICS

An introduction to terminology and concepts of Motion Graphics. Students gain hands-on experience learning core concepts of making things move on screen to communicate emotions and ideas. Theory/Lab. Prerequisites: VIS 1123, GRD 1143.

MMT 1153**INTRO TO VIDEO EDITING**

Using provided footage students learn solid fundamentals for building sequence and story through the use of editing techniques. Class activities include the study of classic movies and a variety of approaches to editing, spacing, meaning, and emotional content. Theory/Lab. Prerequisite: MMT1453.

MMT 1201**ACTING & IMPROVISATION**

Artists in general and animators in particular, whether in 2D or 3D, are essentially actors, conveying emotion through physical and emotional expression. Using improvisation techniques, students learn how to think quickly, and to speak and move according to the emotion needing to be communicated. Theory/Lab.

MMT 1202**CREATIVE PROBLEM SOLVING**

Creativity is the ability to see past the ordinary, to observe things in new ways and new combinations. It is a skill, and numerous techniques exist for enhancing and strengthening one's creative abilities. This class stresses visual observation, puzzle solving, and techniques for breaking out of self-imposed critical limitations. Theory/Lab.

MMT 1223**3D MODELING I**

A continuation of Introduction to 3D, this course refines the student's understanding of polygons, NURBS and Sub-Divisions to model more complex objects and environments. Students work in greater depth on texture mapping, UV editing and shader networks. Theory/Lab. Prerequisites: MMT 1113, GRD 1133, GRD 1143.

MMT 1323**3D MODELING II**

Covers the creation, development and execution of an original character, suitable props and related environments following the industry standard process for development. Basic Rigging concepts will also be introduced. Theory/Lab. Prerequisites: MMT 1223, GRD 1243.

MMT 1433**2D ANIMATION**

An introduction to the techniques, concepts and terminology of animation based on the 12 Principles of Animation. Starting with simple animations of squares and circles, the class will progress to character animation and storytelling. Theory/Lab. Prerequisites: GRD 1133, GRD 1143, MMT1201.

MMT 1453**STORYBOARDING**

Covers the basics of staging and continuity, with an emphasis on dramatic storytelling. Final boards are timed in motion software to produce an animatic. Good drawing skills are a must. To maximize the learning of the storyboard process, students work on paper rather than digitally until the animatic phase. Theory/Lab. Prerequisites: GRD 1243, MMT 1401.

MMT 1463**BEGINNING ZBRUSH**

ZBrush is one of the most powerful and widely used modeling tools in the film and game industries. Students learn the fundamentals of sculpting objects, how to modify them in other programs such as Maya and Photoshop, before taking them back into ZBrush for final polishing. The class works in tandem with MMT1323-Modeling 2. Theory/Lab. Prerequisites: GRD 1243, MMT1223.

MMT 2113**GAME DESIGN FUNDAMENTALS**

Students learn and execute the fundamentals of styles of play, rules of engagement, development of levels, interface design, character development, storytelling, various types of game worlds, game play and the user experience. Theory/Lab. Prerequisites: GRD 1243, MMT1453, VIS 2533.

MMT 2143**3D MOTION GRAPHICS & SPECIAL EFFECTS**

Using industry standard software, students combine various types of footage (stills, 3D animation, live footage, text, etc.) into motion graphic sequences, adding special light and motion effects, as well as creating new material within the software. Theory/Lab. Prerequisites: MMT 2433, MMT 1453, MMT 1153.

MMT 2423**INTRODUCTION TO WEB DESIGN**

An introduction to the basic concepts of web site design and production. Students are introduced to basic web production software, and utilize the Internet as a source for research and teaching/learning delivery. Students produce and maintain a personal online web site. Theory/Lab. Co-requisite: VIS 1123.

MMT 2433**3D ANIMATION I**

After a character is modeled, textured, and rigged, it's time to animate the figure. The class concentrates on introducing the techniques and principles of classic animation and how to achieve them via the Maya tool set. Theory/Lab. Prerequisites: MMT1433, MMT1323, MMT1201, MMT 1453.

MMT 2453**INTERFACE DESIGN**

Students learn basic design principles for user-friendly, intuitive interfaces across a variety of devices. Topics include navigation, legibility, accessibility, and authoring of content architecture based on targeted end-users. Theory/Lab. Prerequisites: GRD 1143, VIS 1373 or Division Chair approval.

MMT 2533**3D ANIMATION II**

Students continue to refine animation skills up to the point of starting on the final project: conceiving, storyboarding, and animating an original 11 second animation for the 11 Second

Club monthly contest. Basic lighting and rendering are also introduced. Prerequisites: MMT 2433.

MMT 2716**MULTIMEDIA CAPSTONE**

The final culmination of the program of study involving either hypothetical or live assignments, and incorporating all of the learning objectives. A branded digital portfolio, interactive CD, and web site of work produced, as well as a resume are required for job preparation and real job interviewing. Post-tests are administered and included in the student's final grade. Participation in an industry portfolio review and multiple industry interviews are required. Theory/Lab. Prerequisites: all required courses on MMT plan of study. Prerequisites: All required MMT courses or the Division Chair's approval.

MMT 2800 (6-12 CREDIT HOURS)**MULTIMEDIA INTERNSHIP**

The internship consists of on-the-job training in the industry, and emphasizes supervised employment and observation. Lab. Prerequisites: MMT 2513 or the Division Chair's approval and have a minimum GPA of 2.0. Theory/Lab. Prerequisites: VIS 2533, VIS 2443.

MUSCOGEE CREEK NATION (MVSK)

Courses are offered through OSU Institute of Technology on behalf of the College of the Muscogee Nation.

MVSK 1113 (H)**NATIVE AMERICAN HISTORY**

Designed to provide a brief overview of Pre-Columbian North American history and a more detailed examination of Oklahoma American Indian History to November 1907. Assists students in gaining a basic and fundamental knowledge of First American Oklahoma history from a perspective seldom explored and often ignored by academia. Students learn the significance of the American Indian to the development of Oklahoma and the government of the United States of America. Theory. Prerequisites: None.

MVSK 1123**BEGINNING CREEK LANGUAGE**

Students learn basic phrases, expressions, methods of communication in the Creek language. Beginning level conversational proficiency is emphasized. Theory.

MVSK 1133**INTERMEDIATE CREEK LANGUAGE**

A continuation of the Beginning Creek Language with an additional focus on reading, writing and comprehending the language. Activities emphasize Creek language interaction among students for achieving a higher level of conversational proficiency. Theory. Prerequisite: MVSK 1123 or permission of instructor.

MVSK 1213 (H)**NATIVE AMERICAN TRIBAL GOVERNMENT**

Designed to provide a brief overview of selected North American Indian Tribal Governments. Exposes students to various methods used in the development of Tribal Governments, their Constitutions, laws, and organizations. Some Pre-Columbian history is examined as it applies to modern federal tribal governments. Theory. Prerequisite: None.

MVSK 1233 **HEALTH CARE SYSTEMS/OPERATION**

An overview of health care delivery systems including different models and components and their applications. A brief historical summary, the interface of public and private organizations, and review of the various personnel who comprise these systems, are examined in relation to their impact on health care delivery. *

MVSK 1243**HEALTH CARE CODING/BILLING**

Procedural coding guidelines for the ICD-9-CM classifications, CPT coding, evaluation and management, primary care, anesthesia/general surgery, the integumentary system, orthopedics, cardiology, OB/GYN, radiology, pathology and laboratory, billing and collections, filing the claim form, handling reimbursement and auditing/appeals. *

MVSK 1353**HUMAN RELATIONS (S)**

Provides a better understanding of human behavior as related to interpersonal relations on the job. Foundations of human behavior, strategies for effective human relations, fundamental skills of working as a team leader and team member, and ways of anticipating, preventing, and coping with challenges of human relations are major areas of study.

MVSK 2013**ADVANCED MVSOKOKE LANGUAGE**

Designed to give students intensive practice at the advanced level of reading, writing and speaking the Muscogee language. Listening and speaking skills are emphasized. Students write a series of brief compositions and focus on developing new vocabulary. Students participate in simulated conversations using the Muscogee language. Theory. Prerequisites: MVSK 1123, MVSK 1133 or permission of instructor.

MVSK 2053**INDIAN LAND ISSUES**

An overview of the Federal land tenure system, Indian land history and Indian land law, and also identifies the roles of the various disciplines with trust duties involving Indian land tenure. Theory.

MVSK 2113**TRIBAL COURT SYSTEMS**

Designed to provide an overview of American Indian Tribal Court Systems, and exposes students to Tribal Court Systems and its role in the Tribal Government and law enforcement within Tribal jurisdictions. *

MVSK 2133**CONVERSATIONAL MVSOKOKE LANGUAGE**

Focuses on listening and speaking the Creek language with intense practice on topics of everyday life. Theory.

MVSK 2153**GRANT WRITING**

The mechanics of proposal writing and the political and social aspects of "grantsmanship." Students develop skills in identifying sources of grant funding, doing useful research to support their applications, and tailoring their proposals to specific audience interests. Theory.

MVSK 2163**PROJECT MANAGEMENT (SERVICE LEARNING)**

A form of experiential learning. Students plan, implement and participate in a tribal community service project to develop a better understanding of the project management function. Culminates with students developing a portfolio of their service learning experience that addresses local needs, documents civic responsibility and highlights project achievements. Theory. *

MVSK 2223**FEDERAL INDIAN LAW**

Focuses on the nature and scope of Indian law, including the legal framework of the government to government relationship between tribal, federal, and state governments. A historical overview of federal Indian relations and policy is provided, including basic doctrines of federal Indian law. *

MVSK 2243**HISTORY OF THE MVSOKOKE**

Historical perspective of the Mvskokvke, pertinent documents, historical figures, and analysis of events. *

MVSK 2253**MVSOKOKE PRACTICUM: READING AND WRITING MVSOKOKE**

Emphasizes integration of skills and strategies for reading and writing, including comprehension, vocabulary, fluency, sentence structure, and writing Mvskoke. Theory.

MVSK 2273**GOVERNMENTAL ACCOUNTING**

The study of budgetary and financial accounting/reporting as applied at the state, local, and special-purpose governments; financial accounting and reporting for not-for-profit organizations. Prerequisite: ACCT 2103. *

MVSK 2323**CONTEMPORARY MVSOKOKE LIFE**

The Mvskoke have preserved traditions and created new celebrations reflecting a unique contemporary way of life. Food, art, ceremony, and clothing are as distinctive as they are modern. *

MVSK 2333**MVSOKOKE LITERACY PROJECT (SERVICE LEARNING)**

A form of experiential learning. Students plan, implement and participate in a tribal community service project to develop Mvskoke literacy. Culminates with students developing a portfolio of their service learning experience that addresses local needs, documents civic responsibility and highlights project achievements. *

MVSK 2423**THE CONTEMPORARY MVSOKOKE COMMUNITY (SERVICE LEARNING)**

A form of experiential learning that focuses on today's Mvskoke community. Students assess, design and implement a small project that serves a community's need. Culminates with students developing a portfolio of their service learning experience that addresses local needs, documents civic responsibility and highlights project achievements. *

MVSK 2433**MVSOKOKE PRACTICUM: NEW SPEAKERS PRACTICE**

Focuses on listening and speaking, providing the opportunity to function in the Mvskoke language in a variety of everyday situations. *

MVSK 2513 **COMMUNITY HEALTH**

Designed to create an awareness of current trends, basic issues, controversial issues and fundamental principles in health promotion and health education. Particular emphasis is placed in promoting the physical, mental and social welfare of Native American citizens in schools and communities based on The Healthy People 2000: Health Promotion and Disease Prevention Objectives. Theory.

MVSK 2523 (S)**PERSONAL AND FAMILY LIVING**

Designed to empower students to take action for the well-being of themselves and others as they effectively manage the roles and responsibilities created by family, career and community interactions. Theory.

MVSK 2533**UTILIZATION OF COMMUNITY RESOURCES**

Students are taught the value of fostering good community relations that directly impact program services. The function of various community services is assessed as well as the study of those resources to enhance the quality of assistance to clients. *

* Funding is available through College of the Muscogee Nation. Not eligible for Federal Financial Aid for MVSK courses.

NUTRITIONAL SCIENCES (NSCI)

NSCI 1113 (N)

INTRODUCTION TO NUTRITION

Explores functions of the nutrients in human life process and relationship to disease and health conditions, including nutrient relationship to health as a basis for food choices. Theory. Prerequisite: The Division Chair's approval.

NURSING (NURS)

NURS 1113

EKG INTERPRETATION

A discussion of the physiology of cardiac conduction, and the basics of how to read an EKG strip, and the normal components of the EKG waveform. We examine basic cardiac dysrhythmias, including atrial and ventricular dysrhythmias, and blocks. Finally, selected nursing diagnoses for patients with dysrhythmias are offered, along with suggested associated nursing interventions.

NURS 1123

DISEASES AND DIAGNOSTIC METHODS

Examines the etiology, signs and symptoms, diagnostic procedures, treatment, prognosis, and prevention of selected diseases and disorders for each body system. (Prerequisite: None).

NURS 1128

FOUNDATIONS OF NURSING

Introduces the student to the roles of the nurse as a provider of care, a manager of care, and a member within the discipline of nursing. As a provider of care, the student learns to assist the client to meet his/her needs when health fluctuates on the wellness-illness continuum. An overview of the nursing process is presented as a method for planning care for clients throughout the life span along with the significance of providing culturally competent nursing care. Emphasis is placed on establishing nurse/client relationships and therapeutic communications. Skills associated with the role of the nurse are the primary focus. Admittance to the nursing program is required. Concurrent enrollment in NURS 1322, unless previously taken NURS 1322 and passed.

NURS 1132

PRE-NURSING PREPARATION

Designed to promote success in the nursing program. Students are assisted in evaluating their own learning styles and discovering their most effective study methods. An explanation of cognitive levels of test questions is included, with emphasis on application-style questions found in nursing course exams, as well as in the national licensure exam, and exercises in critical thinking are integrated. Exposure to the use of nursing informatics and time management skills further enhances the student's probability of success in the nursing program. Student must be in good academic standing and completed all remedial coursework prior to enrolling for course.

NURS 1133

LPN TO RN TRANSITION (LPN ONLY)

Designed to provide career mobility for the eligible licensed practical nurse, and provides an introduction to the nursing process with a focus on man's adaptation to meet his basic needs. Skills in interpersonal relationships and physical assessment are developed with special emphasis on nursing process, communication, values clarification and role change. A review of dosage calculation methods also occur. Pre-requisite: NURS 1229, LPN's only.

NURS 1143

PROFESSIONALISM IN HEALTHCARE

Provides an understanding of the importance of professionalism and the need to perform in a professional, ethical, legal, and competent manner. Describes professional standards that apply to all health care workers- the "common ground" that everyone shares in providing the highest quality of health care and service excellence for patients, visitors, and guests.

NURS 1229

NURSING CARE OF FAMILIES

The student utilizes theoretical knowledge, nursing process and clinical skills to meet the individual needs of the client during the developmental processes of pregnancy, birthing, post-partum, pediatric care, and psychiatric/mental health nursing. Growth and development and the management of common disease/abnormality processes of these components are addressed. The students explore coping assistance and psychological considerations and abnormalities, including cultural factors. The role of the student, as a member in the profession, is expanded through the recognition of: 1) accountability, 2) identification, and 3) the desire for personal and professional development. Clinicals, laboratory skills, and theory are incorporated to enable the students to plan and provide safe, quality nursing care for clients and their families in the above specified settings. The clinical component utilizes theory content from NURS 1229, Nursing Care of Families. Prerequisite: NURS 1128, NURS 1322.

NURS 1322

NURSING DOSAGE CALCULATION

Math for Nurses is designed to introduce the nursing major to the mathematical skills essential for calculating medication dosages. Content includes conversion between metric, apothecaries, and household systems of measurement; calculation of oral and parenteral dosages; intravenous flow rate calculations; pediatric calculations; and intensive care calculations. Concurrent enrollment in NURS 1128 required, must pass both courses.

NURS 2003

PHARMACOLOGY IN NURSING

Designed to present basic concepts and principles of pharmacology and terminology used in pharmacology as related to the role of the nurse. Included are sources of

drug manufacturing, introduction to drug classifications, and the usage of drugs in the health status of individuals throughout the life span. Other related concepts include legal and ethical responsibilities and considerations, and utilization of the nursing process when administering medication therapy. Pharmacology is also integrated throughout the nursing curriculum. Pre-requisite: NURS 1128, (Only students accepted into the OSUIT Nursing Program may enroll, Nursing Elective.)

NURS 2091 OR 2092 (1-2 CREDIT HOURS) INDIVIDUALIZED STUDY/SPECIAL PROJECTS

The study and/or analysis of a selected topic in Nursing, individual and/or group study allowed. Courses may be repeated with a different topic up to 9 credit hours. (Individualized Study, open to OSUIT enrolled Nursing Students only.)

NURS 2129

NURSING CARE OF ADULTS I

The student utilizes theoretical knowledge, nursing process and clinical skills to meet the biological-psychological-sociological needs of individual adults experiencing medical-surgical disorders. Theory related to an expanded assessment is presented and emphasis is placed on the students functioning more independently when providing client care within an interdisciplinary framework. Professional growth and personal accountability are stressed. The clinical content utilizes theory content from NURS 2129, Nursing Care of Adults I. Theory and campus laboratory skills enable the student to plan and provide care for clients with acute and chronic illnesses in clinical setting. Prerequisite: NURS 1229.

NURS 2222

NURSING CAPSTONE SEMINAR

The student uses the nursing process to analyze current trends and issues influencing nursing, and examines the impact of social and technologic changes in relation to the nursing profession and discusses ethical and legal issues; analyze concepts common to effective leadership and management; and assist in NCLEX-RN preparation. Co-requisite: NURS 2229.

NURS 2229

NURSING CARE OF ADULTS II

Focuses on the provision of advanced care for adult clients in complex settings. The student demonstrates an internalization of the nursing process in the coordination of care for individuals and groups of clients. In the roles of provider and manager of care the student provides the opportunity to practice accountability for their own nursing judgments and actions. The clinical component utilizes theory from NURS 2229. Selected clinical experiences provide management and critical care opportunities for the student to apply concepts, principles, and skills acquired in related theory classes. Prerequisite: NURS 2129, co-requisite: NURS 2222.

NURS 2303 **MEDICAL TERMINOLOGY**

Focuses on development of competence in medical terminology, including root words in light of anatomy, physiology, and pathology; procedures of body systems, diagnostic procedures, abbreviations, documentation guidelines, and pharmacology.

OFFICE INFORMATION SYSTEMS (OIS)

Courses are a part of a Cooperative Alliance Agreement with technology centers and are not offered on the OSU Institute of Technology campus.

OIS 1013**OFFICE PROCEDURES**

The office professional's role and responsibilities in the office and in public relations are covered. Office ergonomics; office communications including mail/shipment handling, telephone skills and telecommunications; meetings, conferences and travel arrangements; use of office equipment are included in the Office Information Systems Technology Career Cornerstone, which also provides a broad range of career information. Theory/Lab. Prerequisite: OIS 1323 or instructor approval.

OIS 1113**LEGAL TERMINOLOGY I**

Includes careers for legal secretaries, law office personnel/functions, ethics, state/federal court systems, introduction to prepare legal documents; spelling and defining legal terms and phrases. Theory.

OIS 1143**DESKTOP PUBLISHING**

Prepares the student to design and produce documents integrating graphics and text using electronic publishing software on personal computers. Theory. Prerequisite: OIS 1323 or CS 1013 or instructor approval.

OIS 1153**MEDICAL TERMINOLOGY I**

Teaches the spelling and meaning of medical terms, root words, prefixes, suffixes, multiple combinations, and basic anatomy. Theory.

OIS 1173**MEDICAL TERMINOLOGY II**

A continuation of Medical Terminology I and includes prefixes suffixes combining forms, basic anatomy, medical reports and forms. Theory. Prerequisite: OIS 1153.

OIS 1282**RECORDS MANAGEMENT**

Emphasizes principles and practices of effective records management for manual and automated systems. Covers the rules for alphabetic, numeric, and subject filing and alphabetic indexing for computer databases. Theory.

OIS 1323**KEYBOARDING**

Develops keyboarding speed and accuracy on the personal computer through application of the touch methods, as well as formatting of letters and memos using word processing software. Theory/Lab.

OIS 1333**DOCUMENT PRODUCTION**

Provides continued development of keyboarding speed and accuracy on the personal computer and includes formatting office letters, memos, and administrative communications. Theory/Lab. Prerequisite: OIS 1323.

OIS 1343**ADVANCED DOCUMENT PRODUCTION**

Reinforces previously learned word processing skills and uses a project-based approach to develop advanced proficiency in managing documents using word processing software. Mailable documents requiring advanced formatting tools are created and edited. Theory. Prerequisite: OIS 1333.

OIS 1373**BUSINESS COMMUNICATIONS**

Emphasizes composition and preparation of written business communications. Elements of cultural diversity, proofreading and listening skills are also addressed. Theory.

OIS 1383**CUSTOMER SERVICE**

Students explore practices and models that promote positive and continuing relationships with internal and external customers, with emphasis on helping organizations exceed customer expectations. Theory/Lab.

OIS 1413**BUSINESS COMPUTER APPLICATIONS**

Students learn word processing, spreadsheet, database, and presentation software for the preparation of written business communications, financial records, charts and graphs, summary reports, and visual communications. Theory/Lab.

OIS 1423**INTEGRATED APPLICATIONS**

Students integrate desktop applications of word processing, spreadsheets, database, and presentations in the completion of various office and administrative assignments. Theory/Lab.

OIS 1433**WEB DESIGN BASICS**

Students learn to design, develop, deploy and maintain web sites. Topics include mark-up languages, database integration and interactive web page development. Theory/Lab. Prerequisite: CS 1013.

OIS 2090**SPECIAL PROJECTS**

Special projects utilize individual study under the supervision of an instructor. Projects may be undertaken in any area of office administration

training with credit hours determined by level and amount of involvement. Theory/Lab. Prerequisite: the Division Chair's approval.

OIS 2101**EMPLOYMENT ORIENTATION**

Focuses on employment and career readiness. Upon completion, students will demonstrate job readiness, as well as the ability to articulate their professional goals, and develop the materials and skills necessary to secure appropriate employment. Topics include employment procedures and guidelines, career planning and job searches and common workplace issues. Theory. Prerequisites: Possess a minimum 2.5 cumulative GPA or have the Division Chair's approval.

OIS 2503**DATABASE APPLICATIONS**

Include database design, creation, maintenance and reporting using a microcomputer database application package. Theory.

OIS 2526**MEDICAL TRANSCRIPTION I**

Emphasizes transcription of medical diction for physicians, hospitals and clinics and study of disease processes. Theory/Lab.

OIS 2573**ICD-9-CM CODING**

Studies the International Classification of Diseases, Ninth Revision, Clinical Modification (ICM-9-CM). Theory. Prerequisite: OIS 1173.

OIS 2583**ELECTRONIC MEDICAL OFFICE PROCEDURES**

Administrative software is used, such as Medisoft, to input patient information, schedule appointments, handle billing, produce lists and reports, and submit third-party payer claims for reimbursement. Theory.

OIS 2593**MEDICAL OFFICE PROCEDURES**

Includes responsibilities of the medical secretary, including medical specialties, chart notes, CPT coding, law, ethics and bioethics of the medical profession. Theory.

OIS 2683**PROJECT MANAGEMENT**

Introduces students to the principles and application of project management techniques with an emphasis on the design and management of business and administrative systems projects. Topics include project planning, work team design, project estimation techniques, project reporting, identifying and controlling project risks, budgets, and quality assurance. Theory/Lab.

OIS 2800 (1-12 CREDIT HOURS)**INTERNSHIP**

A cooperative agreement between industry and education in which students utilize and refine previously learned skills, and gain a working

knowledge of and experience with contemporary industry culture, standards and practices. Lab. Prerequisites: OIS 2101 and approval by the internship coordinator and the Division Chair.

OIS 2853**LEGAL TERMINOLOGY II**

Covers legal document preparation; basic reference materials; criminal, contracts, torts, real estate, wills and trusts, marriage and divorce principles and procedures, spelling and defining legal terms and phrases. Theory. Prerequisite: OIS 1113.

OIS 2863**LEGAL TERMINOLOGY III**

Includes legal document preparation, forms of business organization, bankruptcy, law library and citation of authorities, administrative agencies, spelling and defining legal terms and phrases. Theory. Prerequisite: OIS 1113.

OIS 2900 (1-12 CREDIT HOURS)**ADVANCED INTERNSHIP**

A cooperative agreement between industry and education in which students utilize and refine previously learned skills, and gain a working knowledge of and experience with contemporary industry culture, standards and practices. Lab. Prerequisites: OIS 2101 and approval by the internship coordinator and the Division Chair.

ORTHOTIC AND PROSTHETIC TECHNOLOGIES (OPT)**OPT 1204****UPPER EXTREMITY PROSTHETICS**

Students review kinesiology, biomechanics, and nervous supply of the upper extremity; and practice safe lab procedures and material utilizations for varying designs of upper extremity prosthetic fabrication. Lecture is given on all levels of upper extremity amputation, conventional components, principles of fabrication and harnessing. Repair/replacement and design criteria are covered, as are transhumeral and transradial external power components and techniques of fabrication and utilization properties of each. Theory/Lab. (An additional \$300 (three hundred) charge for lab and material fees applies to this course.)

OPT 1214**SPINAL ORTHOTICS**

A close examination of the normal anatomy of the human spine with concentration on biomechanics relating to technical design. Pathological study includes the effects of disease, injury and malformation of the spine and identification of those specific pathologies as related to functional loss and orthotic management. Fabrication techniques, including material selection, design, adjustment and repair are covered, as well as lab safety procedures. Theory/Lab. (An additional \$300 (three hundred) charge for lab and material fees applies.)

OPT 1304**TRANSTIBIAL PROSTHETICS**

Covers physical deficits that result from limb loss following transtibial amputation. Different levels of transtibial and partial foot amputation, management, prosthetic materials and components, lab safety and equipment techniques, as well as principles of fabrication, suspension and static alignment are also covered. Theory/Lab. (An additional \$300 (three hundred) charge for lab and material fees applies.)

OPT 2101**ORIENTATION TO INTERNSHIP**

Designed to prepare students to enter the professional environment first as orthotic and prosthetic interns, and then as entry-level employees. Students explore and develop core transferrable skills including resume writing, interview strategies, time management and soft skills. The goal is to prepare students for their internship experience in the O&P profession, and to enhance their ability to identify and obtain employment.

OPT 2314**PREFAB AND PEDORTHIC TECHNIQUES**

An Orthotic Fitters and Pedorthic education module. Facility practice procedures, fitting, adjusting and repair of the prefabricated orthoses are taught. Students also learn patient procedures in conjunction with that of an Orthotic Fitter - fitting, adjusting and provision of prefabricated orthoses within the identified American Board for Certification scope of practice. Prescription criteria, fitting of prefabricated orthoses as indicated relating to disease, malformation and injury of the human condition are covered. Also offers an in depth study of the various disorders and injuries of the foot and ankle complex. Additional topics include education pertaining to the normal anatomy of the foot and ankle, physical and biomechanical assessment of the foot, gait analysis, footwear analysis, and prescription criteria for the various pedorthic treatment modalities. Theory/Lab. (An additional \$250 (two hundred and fifty) charge for lab and material fees applies.)

OPT 2324**LOWER EXTREMITY ORTHOTICS**

Lab procedures, design, modification, fabrication, adjustment, and repair of lower extremity orthoses are taught. Lab safety and procedures are emphasized. Review of the ankle, knee and hip complex is covered with particular attention placed on anatomy and biomechanics. A brief overview of standing systems and reciprocating gait orthoses are covered as well. Theory/Lab. (An additional \$300 (three hundred) charge for lab and material fees applies.)

OPT 2404**TRANSFEMORAL PROSTHETICS**

Students cover the physical deficits that result from limb loss following transfemoral amputation. Levels of amputation, medical management,

materials and components, and principles of fabrication, dynamic alignment are presented. Fabrication techniques, designs and component selection for various transfemoral amputations are given. Fluid control mechanisms and various other types of knee units are reviewed. Comprehensive lab safety and utilization is covered. Theory/Lab. (An additional \$300 (three hundred) charge for lab and material fees applies.)

OPT 2414**UPPER EXTREMITY ORTHOTICS**


The study of the normal anatomy and biomechanics of the upper extremity. Emphasis is on upper extremity pathology and the appropriate orthotic interventions. Students are educated regarding lab procedures, safety, material choice and properties together with the design and fabrication of custom upper extremity orthoses. Theory/Lab. (An additional \$300 (three hundred) charge for lab and material fees applies.)

OPT 2812**INTERNSHIP (12 CREDIT HOURS)**


A cooperative agreement between an approved orthotic and prosthetic facility and OSU Institute of Technology to offer supervised on-the-job professional experience to completing students. Provides the opportunity to apply concepts and practice in a real industry environment. Students are required to make arrangements with an approved facility one semester prior to the start of the course. Weekly reports are required to be submitted to the supervising faculty member. Theory/Lab. Prerequisite: The student must have completed a minimum of 12 hours of college credit in general education with a grade point average of 2.5 or better (in a 4.0 grading scale), completed a minimum of 24 hours of college credit in technical education in his/her program of study, and have been recommended by the faculty of his/her program of study.

ORIENTATION (ORIE)**ORIE 1011** **COLLEGE STRATEGIES**

Designed for freshman students and emphasizes the consideration of academic, social, vocational and other basic concerns common to first-year college students. Theory.

PHILOSOPHY (PHIL)**PHIL 1013 (H, S)** **ETHICS OF LEADERSHIP**

Designed to provide emerging and existing leaders the opportunity to explore philosophies of leadership and ethics in order to develop and improve their leadership skills. Emphasis is on integrity, personal morality, honest, and social responsibility, and integrates readings from the humanities, experiential exercises, films, and case studies. Theory.

PHIL 1213 (H, S) 
ETHICS

Examines the types of situations that pose ethical problems in the workplace. Emphasis is on integrity, personal morality, honest and social responsibility. Case studies and comparison/contrast of legal/ethical issues are also discussed. Theory. Available online.

PHIL 1313 (H, S)
INTRODUCTION TO LOGIC

Students investigate contemporary issues to develop the reasoning and analytical skills essential to the application of critical-thinking processes and principles. Topics include basic logical concepts and systems, language and arguments, symbols and translation, as well as deductive and inductive reasoning. Theory.

PHOTOGRAPHY (PHO)

PHO 1113
FUNDAMENTALS OF PHOTOGRAPHY

Students learn basic camera operations, including shutter speed, aperture and their relation to exposure, types of cameras, basic lighting and composition. Theory. Co-requisites: PHO 1123, PHO 1133.

PHO 1123
DIGITAL DARKROOM

An introduction to the processes and procedures of Macintosh OS basics as well as PhotoShop and Lightroom. Topics covered include histograms, image manipulation, color balance, layers, masking and digital workflow. Theory/Lab. Co-requisites: PHO 1113, PHO 1133.

PHO 1133
DIGITAL PHOTOGRAPHY

The processes and procedures of digital photography are introduced. Students work with digital cameras to capture images appropriate to the digital environment. Special consideration is given to understanding the digital photographer's workflow, including digital file types. Theory/Lab. Co-requisites: PHO 1113, PHO 1123.

PHO 1243
PHOTOGRAPHIC THINK TANK

An exploration into current trends, technology, techniques, business and ethics in photography. Course consists of discussion, lecture, electronic presentation and guest speakers from industry. Theory. Prerequisites: PHO 1113, PHO 1133, PHO 1123.

PHO 1313
STUDIO I

Students experience controlled light environments, electronic flash, and incandescent lighting with special emphasis in lighting theory and application. Students also work with view camera systems. Theory/Lab. Prerequisites: PHO 1113, PHO 1133, PHO 1213 or Division Chair's approval.

PHO 1353
PHOTOJOURNALISM

Course topics include equipment, manipulation of photographic processes, adapting photographic skills to publication requirements, deadline and assignments and simple feature to complex photo essays. Theory/Lab. Prerequisite: PHO 1113, PHO 1123, PHO 1213 or the Division Chair's approval.

PHO 2413
STUDIO II

Advanced lighting techniques including portraiture, product and lighting for different surfaces using a variety of camera formats are studied. Students cover the American Society of Media Photographers professional business practices. Theory/Lab. Prerequisites: PHO 1313, PHO 2523 or the Division Chair's approval.

PHO 2423
PORTRAIT PHOTOGRAPHY

Students study and work with advanced studio and location photography including special lighting, posing people, communication techniques, equipment demands and restrictions. Theory/Lab. Prerequisites: PHO 1313, PHO 2453 or the Division Chair's approval.

PHO 2453
ADVANCED DIGITAL PHOTOGRAPHY

Building on the techniques and processes learned in Digital Photography, students learn progressive digital camera techniques, color correction, prepress processes and digital workflow. Special emphasis is placed on image scanning and output, image enhancement, file preparation, special effects and file manipulation. Theory/Lab. Prerequisites: PHO 1113, PHO 2523 or the Division Chair's approval.

PHO 2483
COLOR AND DIGITAL CONCEPTS

An advanced color theory course exploring issues in digital color, digital photography and image file formats. Various software packages are used to prepare color projects. Students develop an understanding of value and color as it applies to color models and demonstrate knowledge of both printed and digital output. Emphasis is placed on problem solving, development of visual color acuity, understanding color harmony, calibration and imaging techniques, and the psychological, societal, and environmental impact of color. Theory/Lab. Prerequisites: PHO 1113, PHO 1133, PHO 1123 or Division Chair's approval.

PHO 2503
INTRODUCTION TO VIDEO PRODUCTION

An introduction to digital video concepts as related to lighting, shooting and editing. Students gain hands-on experience in a variety of studio lighting scenarios, video pre-planning, shooting, and post and Premier production using Final Cut Pro non-linear editing suites. This is a project-oriented and collaborative learning experience. Theory/Lab. Prerequisite: PHO 2523. Photographic Design or the Division Chair's approval.

PHO 2513
EDITORIAL PORTRAITURE

Innovative applications of studio and location portrait techniques, with emphasis on personal expression and subject matter are explored. Students work with different types of lighting with an emphasis on producing images suitable for publication. Theory/Lab. Prerequisite: PHO 2423 or the Division Chair's approval.

PHO 2523
PHOTOGRAPHIC DESIGN

An in-depth focus on aesthetic considerations and communication methods used in effective graphic design. Students work with advanced camera, studio and location techniques to produce problem-solving photographic illustrations. Theory/Lab. Prerequisites: PHO 1113, PHO 1123, PHO 1133 or the Division Chair's approval.

PHO 2543
PHOTOGRAPHY PRACTICUM

Students work to address actual client needs through client meetings, and visual research. Students are involved with projects from the initial meeting with the client through delivery of the finished work. Projects are designed to further develop the students' interpersonal communication, and production knowledge while working as a professional photographer. Lab. Prerequisites: PHO 2703, PHO 2503, PHO 2413 and Division Chair's approval.

PHO 2696
PHOTOGRAPHY CAPSTONE

The final culmination of the program of study involving either hypothetical or live assignments that incorporates all of the learning objectives. A branded portfolio, interactive CD, Internet web site of work produced and resume are required for job preparation and real job interviewing. Post-tests are administered and included in the student's final grade. Participation in an industry portfolio review and multiple industry interviews are required. Theory/Lab. Prerequisites: All required courses on the PHO plan of study or Division Chair approval.

PHO 2703
ADVERTISING PHOTOGRAPHY

Advanced studio and location photography including the areas of catalog and advertising work is covered. Students explore product lighting and work closely with the client and art director. Theory/Lab. Prerequisites: PHO 2413, PHO 2453 or the Division Chair's approval.

PHO 2713
ADVANCED PORTRAIT PHOTOGRAPHY

A study of applied studio and location portraiture directed toward challenging students to create expressive and innovative portraits while developing personal style for lighting, posing and personality interpretation. Theory/Lab. Prerequisite: PHO 2423 or the Division Chair's approval.

PHO 2723**DOCUMENTARY PHOTOGRAPHY**


In this news photography class the students explore current social and cultural issues. Emphasis is on informative images that effectively communicate issues to the viewer. Theory/Lab. Prerequisites: PHO 1353, PHO 2763 or the Division Chair's approval.

PHO 2773**VISUAL VALIDATION**

Exploration of the student's chosen interest area with emphasis placed on quality and concept. A body of work is produced and formally presented to an audience in order to successfully complete the course. Theory/Lab. Prerequisites: PHO2703 Advertising Photography, PHO 2513 Editorial Portraiture and PHO 2763 Advanced Photojournalism or the Division Chair's approval.

PHO 2800 (3-12 CREDIT HOURS)**PHOTOGRAPHY INTERNSHIP**

Involves on-the-job training in industry, which emphasizes supervised employment and observation. Theory/Lab. Prerequisites: PHO 2713, PHO 2773 or the Division Chair's approval and must have a minimum GPA of 2.0.

PHYSICAL SCIENCE (PHYS)**PHYS 0123** 
SCIENCE

Designed to prepare students for entry into a college level science course, and familiarizes the student with the basic concepts of physics, chemistry, earth science and life science. Students learn proper laboratory proceedings and are able to apply the scientific method in solving problems in the lab experiments. Does not count toward graduation or any degree program. Placement is determined by entry assessment scores. Theory/Lab.

PHYS 1114**GENERAL PHYSICS I**

Emphasizes the areas of mechanics and thermodynamics. The laboratory portion utilizes computer-generated data and graphs. Theory/Lab. Prerequisites: MATH 1513 and MATH 1613 or Division Chair approval.

PHYS 1204 
GENERAL PHYSICAL SCIENCE

A lecture and demonstration course designed to assist students in interpreting their physical environments. Topics from astronomy, chemistry, geology and physics are covered. Theory/Lab. Note: One year of Algebra recommended.

PHYS 1214**GENERAL PHYSICS II**

A continuation of General Physics I (PHYS 1114), and includes topics from electricity, magnetism, light, optics and modern physics. Theory/Lab. Prerequisite: MATH 1513, PHYS 1114 or Division Chair approval.

PIPELINE INTEGRITY (PIT)**PIT 1113****INTRODUCTION TO PIPELINES AND FACILITIES**

An introduction to the basics of the pipeline industry and duties of a Pipeline Integrity Technologist. Students gain an understanding about pipelines, products transported in pipelines, basic pipeline design and pipeline terminology. Theory. Co-requisite: MATH1513

PIT 1143**PIPELINE MATERIALS AND COMPONENTS**

A study of the physical basics of a pipeline. Materials and processes used to manufacture pipe, and basic maintenance are discussed in detail. Students must have taken or be enrolled in Intermediate Algebra or higher. Theory/Lab. Pre-requisite or Co-requisite MATH 0163 or higher.

PIT 1283**PROCESSING AND PRODUCT HANDLING**

Students explore pipeline equipment maintenance schedules, operations and maintenance activities, failure investigation and a variety of maintenance and repair topics. Theory/Lab.

PIT 1293**INTRODUCTION TO CORROSION CONTROL**

An introduction to the various types of corrosion found in the pipeline industry. Students study the different types of corrosion, the basics of cathodic protection, in-line inspections, coatings, and a variety of pipeline inspection techniques. Also examine both the application and management of pipeline corrosion. Students also learn appropriate assessment and repair methods for pipeline corrosion. Theory/Lab. Pre-requisites MATH 1513.

PIT 2183**REGULATIONS AND COMPLIANCE**

Students examine the federal regulations that govern the operation of liquid and gas pipelines. Also included are industry specifications and guidelines applicable. Theory Lab. Pre-requisites PIT 1293, PIT 2212.

PIT 2203**INTEGRITY MANAGEMENT CONCEPTS I**

An examination of methodologies used to identify and evaluate pipeline defects. Topics covered include pipeline evaluation techniques including pigging, ultrasonic, sampling, and leak detection surveys. Theory/Lab. Pre-requisites PIT 1293, PIT 2212.

PIT 2212**INTERNSHIP**

A cooperative agreement between industry and education which allows students to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines, and supervised by industry and

school representatives. Pre-requisites: Student must be in good academic standing and have successfully completed all required Pipeline Integrity, and Arts and Sciences courses. Exceptions are made only upon written approval of the Engineering Technologies Division Chair. 12 Credit Hours. Pre-requisites: recommendation by program instructor and a minimum overall GPA of 2.5. Theory/Lab. Pre-requisite: PIT 1283, PIT 1293.

PIT 2232**NACE CP1 PREP**

Students prepare for the National Association of Corrosion Engineer's level one examination. Theory/Lab. Pre-requisites PIT 1223, PIT 2112, PIT 2123.

PIT 2243**PIPELINE MAINTENANCE AND REPAIR**

Students examine general pipeline repair activities, mitigation/remediation of exposed pipeline, coatings, and the creation of assessment reports. Theory/Lab. Prerequisites: PIT 2183.

PIT 2263**INTEGRITY MANAGEMENT CONCEPTS II**

Students create assessment reports, and inline inspection programs, document predictive vs. actual anomalies, identify preventative/mitigative measures and explore requirements necessary to prevent pipeline incidents. Theory/Lab. Pre-requisites PIT 2123.

PIT 2283**CAPSTONE**

The culminating experience in Pipeline Integrity Technology, and includes the fundamental theories and practices of pipeline integrity, and expands the concepts presented in previous work through simulation and actual problem resolution. Lab. Prerequisites: program instructor approval and a minimum overall GPA of 2.5. Theory/Lab. Pre-requisite PIT 2212, PIT 2203.

PLANT SCIENCE (PLNT)**PLNT 1213****INTRODUCTION TO PLANT AND SOIL SYSTEMS**

Introduces the concepts of plant and soil systems including cropland, rangeland and pastureland. A systems approach to the importance of plant and soil resources to the producer, consumer and citizen; modern management and production practices; maintenance of natural resources is covered. Theory.

PLNT 2013**PRINCIPLES OF CROP SCIENCE**

Involves production, management, and improvement of agronomic crops and structure and growth of crop plants relating to management strategies and adaptation to varying abiotic and biotic factors. A hands-on

identification of crops, weeds and seed quality factors; application of tools and techniques is included. Theory. Prerequisite: PLNT 1213.

PLNT 2113

PRINCIPLES OF PEST MANAGEMENT

Decision-making as it deals with the total cropping plan is stressed. An individual determines economic injury and treatment thresholds from observation or through various survey techniques; weed problem, plant populations, disease problems and insect problems. The student performs yield checks and makes recommendations for handling a variety of pest related problems. The use of Global Positioning and Geographic Information Systems in recording pest management data is covered. Theory. Prerequisite: PLNT 1213 or Division Chair approval.

POLITICAL SCIENCE (POLS)

POLS 1011

CONTEMPORARY POLITICAL ISSUES I

A discussion of current and generally controversial political and social issues. Theory.

POLS 1021

CONTEMPORARY POLITICAL ISSUES II

A discussion of current and generally controversial political and social issues. Theory. Prerequisite: POLS 1011 or Division Chair approval.

POLS 1031

CONTEMPORARY POLITICAL ISSUES III

A discussion of current and generally controversial political and social issues. Theory. Prerequisite: POLS 1021 or Division Chair approval.

POLS 1113

U.S. GOVERNMENT

Provides an overview of the American constitutional government. The role of the political parties and pressure groups, the legislative, executive and judicial branches and the role of national government in foreign affairs, fiscal-monetary policies and civil rights are examined. Theory.

PSYCHOLOGY (PSYC)

PSYC 1113 (S)

INTRODUCTORY PSYCHOLOGY

An introduction presenting the principles, theories, vocabulary and applications of the science of psychology. Heredity and environment, development of personality, behavior, learning applications and life span development are discussed. Theory.

PSYC 2313 (S)

PSYCHOLOGY OF PERSONAL ADJUSTMENT

A beginning course in psychology which emphasizes basic principles of personality,

motivation, attitude development and positive problem solving models in personal, social and career settings. Theory.

PSYC 2583 (S)

DEVELOPMENTAL PSYCHOLOGY

A study of the nature and course of development of human behavior from birth through childhood, adolescence, adulthood and old age. Theory. Prerequisite: PSYC 1113 or Division Chair approval.

READING (READ)

READ 0143

READING FUNDAMENTALS

Reviews the fundamentals of reading with an emphasis toward the improvement of reading comprehension and vocabulary skills. A competency-based course and student's COMPASS test scores determine placement. Does not count toward graduation or any degree program. Theory.

RESIDENTIAL CONSTRUCTION (RESC)

Courses are a part of a Cooperative Alliance Agreement with technology centers and are not offered on the OSU Institute of Technology campus.

RESC 1101

INTRODUCTION TO RESIDENTIAL CONSTRUCTION

Provides a historic overview of residential construction and examines career opportunities in the residential construction marketplace. Theory.

RESC 1103

READING PLANS AND ELEVATIONS

Students learn the techniques for reading and interpreting blueprints and specifications with an emphasis on those drawings and types of information that is relevant to the carpentry trade. Quantity take-offs are also examined. Theory/Lab.

RESC 1113

SITE LAYOUT

Covers the basic principles, equipment, and methods used to perform site layout tasks, as well as topics such as distance measurement and differential leveling, responsibilities of surveyors, field engineers, and carpenters. Students examine site plans and plot plans as they relate to the situation of a structure on a building site. Theory/Lab.

RESC 1203

FOUNDATIONS AND FLATWORK

Topics covered include the construction of forms for continuous, stepped continuous, pier, and grade beam concrete footings. Also covered are edge forms used for on-grade concrete slabs and similar structures. Forming terms, parts of forms, and the procedures for constructing basic footing and edge forms are included. Theory/Lab.

RESC 1213

INTRODUCTION TO CONCRETE AND REINFORCING MATERIALS

Students examine the properties, characteristics, and uses of various types of cement, aggregates, and other materials that, when mixed together, form different types of concrete. Procedures for concrete volume estimates and testing of freshly mixed concrete are covered along with methods and materials for curing concrete. Theory/Lab.

RESC 1303

FLOOR SYSTEMS

Covers the basics, and the procedures for laying out and constructing wood floors using common lumber, as well as engineered building materials. Theory/Lab.

RESC 2313

WALL AND CEILING SYSTEMS

Topics covered include the procedures for laying out and framing walls and ceilings, including roughing-in door and window openings, constructing corners and partition T's, bracing walls and ceilings and applying sheathing. Theory/Lab.

RESC 2323

ROOF FRAMING SYSTEMS

Examines the various kinds of roofs and contains instructions for laying out rafters for gable roofs, hip roofs, and valley intersections. Students learn roof framing using both the stick-built method and pre-engineered trusses. Theory/Lab.

RESC 2403

THERMAL AND MOISTURE PROTECTION

Students learn how to select and install various types of insulating materials in walls, floors, and attics. The uses and installation practices for vapor barriers and waterproofing materials are also covered. Theory/Lab.

RESC 2413

INTERIOR FINISHES

Topics covered include the installation of metal doors and related hardware in steel-framed, wood-framed, and masonry walls, along with their related hardware. The uses, application and installation procedures for various types of wood trim are also covered. Students also study the various types of cabinets available and their installation. Theory/Lab.

RESC 2424

CAPSTONE

Can be either an in the classroom experience or an on the job internship. The in the classroom experience allows the students to use the knowledge from all the previous course work to put a plan together to develop and build a residential construction project. The internship is a cooperation between industry and education allowing a student to utilize and refine skills learned in their educational process. A minimum of 225 clock hours. Theory/Lab.

RESC 2454 INTERNSHIP

A supervised cooperative industry experience which allows students the opportunity to utilize and refine skills previously learned in their educational process. All work is performed in accordance with industry standards and guidelines. Lab. Prerequisite: Student must be in good academic standing.

SOCIOLOGY (SOC)

SOC 1113 (S) INTRODUCTORY SOCIOLOGY

Assists the student in understanding the social influences on day-to-day life by examining the sciences of human society. Major emphasis is placed on the study of group behaviors. Theory.

SPANISH (SPAN)

SPAN 1115 ELEMENTARY SPANISH I

Offers college level instruction in the fundamentals of pronunciation, elements of grammar, easy reading and conversation. Theory.

SPAN 1215 ELEMENTARY SPANISH II

A continuation of SPAN 1115, and It includes instruction in pronunciation, grammar, more difficult reading and advanced conversation. Theory. Prerequisite: SPAN 1115 or Division Chair approval.

SPEECH (SPCH)

SPCH 1113 INTRODUCTION TO SPEECH COMMUNICATIONS

Offers instruction on preparation and delivery of extemporaneous speeches. Emphasis is on audience and purpose analysis, topic research, visual aids and delivery methods. Activities include delivering various speeches before an audience. Speaking situations, commonly encountered in business and industry, receive special attention. Theory.

SPCH 2313 SMALL GROUP COMMUNICATIONS

Focuses on enhancing student understanding of and skills for participation in small group interaction. Addresses various social dimensions of group processes, such as group development, leadership, conflict resolution and verbal and nonverbal communication strategies. Particular emphasis is on task-oriented groups. Theory.

STATISTICS (STAT)

STAT 2013 (A) ELEMENTARY STATISTICS

An introduction to descriptive statistics, basic probability concepts, statistical distributions

sampleings, estimations, hypothesis testing, correlation, and regression. Theory. Prerequisite: MATH 1513 or Division Chair approval.

STAT 2023 (A) ELEMENTARY STATISTICS FOR BUSINESS AND ECONOMICS

Basic statistics for undergraduate business majors. Descriptive statistics, basic probability, discrete and continuous distributions, point and interval estimation, hypothesis testing, correlation and simple linear regression. No credit for students with credit in 2013 or 2053. Prerequisite(s): MATH 1483 or 1513.

SURVEYING (SURV)

SURV 1011 INTRODUCTION TO SURVEYING

Each learner demonstrates proper procedures of use, and capabilities of several different surveying instruments, including a transit, theodolite, total station, and a builder's level. Each learner also performs mathematic computations to solve surveying related problems. Theory/Lab. Prerequisite or co-requisite: MATH 0163.

SURV 1223 LAND LAW I

Each learner determines how the concepts of boundary creation, ownership transfer, and description of real property, easements, and the history of boundaries are applied to the practice of land surveying. Theory.

SURV 2223 LAND LAW II

Each learner understands the role of the surveyor in the legal system and applies the legal principles of locating conveyances, and boundaries in the field to the practice of surveying. Theory. Prerequisite: SURV 1223.

SURV 2303 SURVEYING I

An introduction to and application of plane surveying procedures and field problems related to linear and angular measurements, differential leveling and topographic surveys. Students gain competency through a series of practical and real world field applications. Theory/Lab. Prerequisites: MATH 1513 and SURV 1011.

AUTOMOTIVE SERVICE TECHNOLOGY - TOYOTA (TTEN)

TTEN 1631 BRAKE FUNDAMENTALS

Emphasizes theory, demonstration and practical lab work to cover the components and operation of automotive brake systems. Includes principles of hydraulics and friction, and an introduction to anti-lock brake systems and principles, general shop safety and asbestos hazards. Theory/Lab.

TTEN 1641 SUSPENSION FUNDAMENTALS

The theory, demonstration and practical lab work used to cover the components and operation of automotive suspension and steering systems is covered. It includes suspension and alignment geometry principles and benefits of proper alignment service. Electrical and electronic suspension and steering systems are introduced. General shop safety is covered. Theory/Lab.

TTEN 1651 ELECTRICAL FUNDAMENTALS

Emphasizes theory, demonstration and practical lab work of basic automotive electrical systems. It includes circuit types and applications and emphasizes the use of electrical testing and measuring equipment. Safety is stressed. Theory/Lab.

TTEN 1661 MEASUREMENT FUNDAMENTALS

The principles, identification and use of automotive precision measuring tools and devices using the metric and decimal systems of measure are covered through theory, demonstration and practical laboratory instruction. Shop safety using hand and power tools is stressed. Theory/Lab.

TTEN 1671 ENGINE FUNDAMENTALS

The identification, principles and operation of internal combustion engines are covered through theory, demonstration and practical laboratory. It includes identification and basic operation of related engine systems and introduction to shop safety and hand and power tools usage. Theory/Lab.

TTEN 1702 DEALER SERVICE INFORMATION/ PROFESSIONAL TECHNICIAN PORTFOLIO

Consists of theory, demonstration and application of Toyota Motor Sales USA dealership operations, expectations and procedures with emphasis on dealership service operations, Toyota quality and customer satisfaction. Emphasis is on the career networking focusing on the variety of related career opportunities within the automotive service industry. Included are the materials and activities designed to aid the student in the completion of his/her Professional Technician Portfolio (T-PORT), including exposure to experts in the automotive service industry. It includes technician procedures and responsibilities regarding work ethics, shop and personal safety, tools and equipment, environmental and warranty policies, reference materials, pay system, product identification, employee/ employer and customer relations. The Toyota Certified Technician Program (TCTP) and Automotive Service Excellence (ASE) certification are introduced and participation is required. Toyota entry requirements must be met. Safety is stressed. Theory/Lab.

TEN 1704**TOYOTA ELECTRICAL SYSTEMS**

Consists of theory, demonstration and application of electrical system operation and service, and includes circuit construction and components. Testing using proper test equipment and techniques for on-car and off-car procedures are taught. Instruction also involves Toyota battery, starting and charging system tests with emphasis given to system diagnosis, failure analysis and service according to Toyota specifications. Safety is stressed. Theory/Lab.

TEN 1723**TOYOTA MINOR SERVICE**

Consists of theory, demonstration and application of minor Toyota vehicle service emphasizing Toyota quality and customer satisfaction. Includes, but is not limited to: pre-delivery service, Toyota recommended scheduled maintenance, used car inspections, rotate and balance tires, cooling system service, accessory installation and basic electrical system tests. Other skills emphasized include proper decision making techniques and the proper procedures and use of Toyota reference materials, repair orders, flat rate and warranty manuals, tools and equipment, care and handling of vehicles. Tools are required and safety stressed. Theory/Lab.

TEN 1812**TOYOTA BODY ELECTRICAL**

Consists of theory, demonstration and application of electrical circuit operation and testing on Toyota simulators and vehicles using meters, wiring diagrams, repair manuals and other printed material, as well as video information. Testing is performed according to Toyota specifications and includes wire repair and component testing with emphasis on systematic testing, failure analysis, diagnosis and service according to Toyota specifications. Safety is stressed. Theory/Lab.

TEN 1823**TOYOTA BRAKE SYSTEMS**

Consists of theory, demonstration and application of Toyota brake systems operation, diagnosis, preventive maintenance and service, and includes proper use of specialized tools and equipment for Toyota. Power brakes, load sensing braking systems, as well as antilock brake systems are taught with emphasis given to system diagnosis, failure analysis and Toyota recommended service procedures. Safety is stressed. Theory/Lab.

TEN 1824**INTERNSHIP**

A cooperative agreement between industry and education which allows T-TEN students to utilize and refine skills previously learned in their educational process. All work is performed to industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing, completed

previous core courses and must have a valid driver's license.

TEN 1913**TOYOTA ENGINE REPAIR**

Consists of theory, demonstration and application of Toyota engine repair and service procedures. Subjects included are identification, diagnosis, inspection, disassembly, measurement and assembly with emphasis given to the use of Toyota repair manuals, special tools, precision measurement device, troubleshooting techniques and shop safety. Theory/Lab.

TEN 1923**TOYOTA CLIMATE CONTROL SYSTEM**

Consists of theory, demonstration and application of Toyota vehicle heating, ventilating and air conditioning (HVAC) systems, and includes basic heating, refrigeration and air conditioning, component identification and function, air flow systems, electrical circuits related to HVAC systems, special tools and equipment usage, as well as system service, repair and adjustments, recovery, recycling and charging and performance testing. Emphasis is also placed on diagnosis and safety. Theory/Lab.

TEN 1943**INTERNSHIP**

A cooperative agreement between industry and education which allows T-TEN students to utilize and refine skills previously learned in their educational process. All work is performed to industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing, completed previous required T-TEN core courses and must have a valid driver's license.

TEN 2090 (1-9 CREDIT HOURS)**SPECIAL PROJECTS**

Individual study is arranged under the supervision of an instructor with credit hours to be determined. Projects may be undertaken in any area of Automotive Technology. Theory/Lab. Prerequisite: The program chair's approval.

TEN 2114**TOYOTA EFI AND COMPUTER CONTROL SYSTEMS**

Consists of theory, demonstration and application of the component functions of Toyota ignition, electronic fuel injection and emission control systems. It includes the use of Toyota special tools, simulators and vehicles with emphasis on system diagnosis, failure analysis and service according to Toyota specifications. Safety is stressed. Theory/Lab.

TEN 2133**TOYOTA ENGINE CONTROL DIAGNOSIS**

Consists of theory, demonstration and application of Toyota engine control components including the ignition system, fuel injection system and emission control system using the Toyota diagnostic tool and other specialized

equipment available to the Toyota technician. Emphasis is on maintaining, servicing and diagnosis using Toyota specifications. Safety is stressed. Theory/Lab.

TEN 2134**INTERNSHIP**

A cooperative agreement between industry and education which allows T-TEN students to utilize and refine skills previously learned in their educational process. All work is performed to industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing, completed previous required T-TEN core courses and must have a valid driver's license.

TEN 2233**TOYOTA MANUAL DRIVETRAINS**

Consists of theory, demonstration and application of Toyota manual transmissions and transaxles and other related drivetrain components. Component/system operation, service, adjustments and overhaul are covered. Emphasis is given to system maintenance, diagnosis and failure analysis and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

TEN 2234**TOYOTA AUTOMATIC TRANSMISSIONS**

Consists of theory, demonstration and application of Toyota automatic transmissions/transaxles and related drivetrain components and includes component and system operation, testing, minor service, as well as transmission disassembly/assembly. Electronic control operation and diagnosis are emphasized, and involves the use of specialized tools and equipment. Safety is stressed. Theory/Lab.

TEN 2253**INTERNSHIP**

A cooperative agreement between industry and education which allows T-TEN students to utilize and refine skills previously learned in their educational process. All work is performed to industry standards and guidelines, and supervised by industry and school representatives. Lab. Prerequisites: Student must be in good academic standing, completed previous required T-TEN core courses and must have a valid driver's license.

TEN 2343**TOYOTA SUSPENSIONS/NVH**

Consists of theory, demonstration and application of Toyota steering and suspension systems. Operation, diagnosis, adjustments and servicing are emphasized using proper procedures, special equipment and tools. A holistic approach to Toyota vehicle suspension systems including noise, vibration and harshness (NVH) analysis using Toyota diagnostic tools is taught and safety is stressed. Theory/Lab.

TTEN 2353**TOYOTA CAPSTONE**

Designed to allow students to utilize and refine skills previously learned in the educational process. Included is the diagnosis and servicing of electronically controlled systems found on Toyotas, as well as the proper use of special tools and information used to make repairs to industry standards. Includes discussion of student goals and duties specific to the industry and specific competencies demonstrated. Students complete the Career Passport, post tests and exit assessments. Theory/Lab.

VISUAL COMMUNICATIONS (VIS)**VIS 1123****INDESIGN PUBLISHING I**

Students are introduced to the Macintosh operating system, file management, basic typography and desktop printer output. A basic overview of industry appropriate applications are covered. Theory/Lab.

VIS 1143**INTRODUCTION TO MOTION GRAPHICS**

Students are introduced to a sampling of web animation techniques, and are exposed to flash animation, GIF animation, and after effects animation. Skills acquired from this course are applied to advanced authoring classes Theory/Lab.

VIS 1203**INTRODUCTION TO TYPOGRAPHY**

Type measurement, methods of type, production, historical survey of type, use of type and type design are covered. Theory/Lab. Prerequisites: GRD 1133, GRD 1143. Co-requisite: VIS 1123.

VIS 1223**INDESIGN PUBLISHING II**

A project-driven course emphasizing page layout software. Students create single and multi-page, black and white layouts. Projects incorporate keyboard shortcuts, file management, typographic rules, grids, style sheets and master pages using industry appropriate page layout applications. Theory/Lab. Prerequisite: VIS 1123 or Division Chair's approval.

VIS 1343**DIGITAL ILLUSTRATION**

Covering digital illustration and drawing. Primary emphasis is on the use of illustration software. Various peripheral devices will be used including scanners and color printers. Theory/Lab. Prerequisite: VIS 1123.

VIS 1373**DIGITAL IMAGING**

Designed to develop a working knowledge of scanning and photo enhancement software on computer publishing systems. The course uses a problem-oriented approach in handling digital images as used in design. Alternative illustration techniques are included, combining stock

digital images and created images. Includes an introduction to prepress requirements and four-color process. Theory/Lab. Prerequisite: VIS 1123. Co-requisite: VIS 1223 or the Division Chair's approval.

VIS 2433**MULTIMEDIA PRACTICUM**

Explores a variety of multimedia communication vehicles including text, graphics, video, audio and interactivity through the planning, design and production of titles. Students experience working in a producer/client relationship as well as organizing, planning and producing a variety of projects. Emphasis in the class is in developing interpersonal communication, and web production skills. Theory/Lab.

VIS 2533**ADVANCED DIGITAL IMAGING**

Explores advanced digital imaging using problem solving techniques as they pertain to design, color correction, color theory, image restoration and repair, special effects/filters, and advanced masking/channel techniques. It includes a comprehensive knowledge of prepress and web output requirements and four-color/web-color space conversion issues as well as various aspects of color theory. Theory/Lab. Prerequisite: VIS 1373 or Division Chair's approval.

WATCHMAKING & MICROTECHNOLOGY (WMT)**WMT 1116****CAREER CORNERSTONE / MICROTECHNOLOGY**

Explores the culture, challenges and opportunities that exist in the watchmaking industry. Introduces terminology, theory and techniques needed to utilize watch technology. A heavy emphasis is placed on topics related to microtechnology including: metric system of measurement and measuring devices, tracing, sawing, precision filing, drilling, turning, heat treating, surface finishing, tool making, and tool sharpening. A basic understanding of the mechanical movement is learned and connections are drawn between micromechanics and watch service. Also included are instruction and laboratory experiences in shop and equipment maintenance and safety. Lab.

WMT 1126**ADVANCED MICROTECHNOLOGY I**

Builds upon and expands the foundations learned in WMT 1116. Additional advanced micromechanics proficiencies are learned and built upon including the construction, fitment and craftsmanship of high quality precision parts and mechanisms. Additional movement theory and service practices are learned. Also included are instruction and laboratory experiences in shop and equipment maintenance and safety. Lab. Prerequisites: WMT 1116.

WMT 1216**ADVANCED MICROTECHNOLOGY II**

Further the development of manufacturing skills with advanced machining techniques, such as use

of the cross slide, milling and machined surface finishing techniques. Additional movement theory, service practices and construction techniques culminate in application of higher-level watch servicing proficiencies. Also included are instruction and laboratory experiences in shop and equipment maintenance and safety. Lab. Prerequisites: WMT 1126, MATH 1513 OR MATH 1613, PHYS 1114.

WMT 1226**EXTERNAL WATCH**

Emphasizes the case and bracelet. Students learn case and bracelet design and construction, as well as refinishing techniques. Proper replacement of case parts such as crown and case tubes, pushers, bezels, gaskets and crystals is covered in detail, including water resistance theory and practical examination. Students are taught proper preparation and final presentation for the finished case as part of watch service. Lab. Prerequisite: WMT 1216.

WMT 1316**QUARTZ WATCH REPAIR**

Emphasizes the delicate operation of servicing, repairing, testing, and adjusting the modern quartz watch movement. Theory is taught on lubrication, electricity, stepping/servo motors, capacitors, basic circuitry functions, and electronic measurements. Practical classroom exercises focus on movement service, parts handling and lubrication, cleaning techniques, testing equipment, and cell replacement as part of complete watch service. Lab. Prerequisites: WMT 1226, ENGL 1033 OR ENGL 1113, POLS 1113.

WMT 1326**MECHANICAL WATCH REPAIR**

Emphasizes the operation, design, and theory behind the modern mechanical watch movement. Classroom exercises prepare the student for diagnosis, repair, and maintenance of movement systems including: winding and setting mechanism, the barrel and mainspring, as well as understanding and analysis of functional principles of the gear train of modern mechanical watch movements. Students focus on complete watch service, quality and understanding the culture and craftsmanship behind complete watch service, culminating in the creation of the school watch. Lab. Prerequisite: WMT 1316.

WMT 2416**ESCAPEMENT AND OSCILLATOR**

Emphasizes understanding and analysis of functional principles of the escapement of modern mechanical watch movements, as well as theory on historical escapements. Students complete projects involving the proper setup and adjustment, diagnostic procedures, and repair techniques of the Swiss lever escapement in conjunction with watch service. Terminology of the balance wheel and hairspring, their composition and theory basics are covered, leading into the next course. Lab. Prerequisite: WMT 1326.

WMT 2426**PRECISION TIMING AND AUTOMATIC WATCHES**

Develops the student's professional knowledge and combines watch service with technical learning experiences in the watch regulating unit, hairspring

vibration, hairspring manipulations, and precision timing procedures. Students learn additional theory and repair of automatic winding mechanisms and how this mechanism affects overall timing accuracy. Additional complications are introduced at this time. Lab. Prerequisite: WMT 2416.

WMT 2516

CHRONOGRAPH WATCHES

Culminates the theoretical and practical procedures used in the service and repair of high-grade mechanical chronograph watches. Emphasis is on precision timing and adjusting, as well as repairing and adjusting a variety of chronograph mechanisms through watch service. Lab. Prerequisites: WMT 2426, SPCH 1113 OR SPCH 2313.

WMT 2526

SHOP MANAGEMENT AND WORKFLOW STUDIES

Emphasizes professional after sales service shop management strategies. Includes personal productivity evaluations and workflow practices. Students experience a wide variety of movements and repairs in order to be well prepared for the workplace. This setting synthesizes technical, behavioral, business and interpersonal skills into a holistic endeavor that prepares the student for the real world. Lab. Prerequisite: WMT 2516.

WMT 2616

ESTIMATING AND QUALITY CONTROL

Builds upon all previous courses with additional estimating methods, cost/profit analysis and consistency analysis. It also combines all the previous courses quality control steps into one, focused study from initial intake of a repair through completion with a specific emphasis on quality. Lab. Prerequisites: WMT 2526, HIST 1483 OR HIST 1493, PHIL 1013 OR PHIL 1213.

WMT 2626

ADVANCED MECHANICAL WATCH REPAIR AND CAPSTONE

Students concentrate on improving quality, consistency and productivity in preparation for their final examination and entrance to the workplace. The AWCI CW21 Certification examination is administered, as well as a final comprehensive exam of program competencies. The Capstone course culminates the entire educational effort to provide a practical application of the many different components related to their occupation. Students are required to participate in the exit assessment procedures to fulfill the requirements of this program of study. Lab. Prerequisite: WMT 2616.

WELDING AND METAL FABRICATIONS (WELD)

Courses are a part of a Cooperative Alliance Agreement with technology centers and are not offered on the OSU Institute of Technology campus.

WELD 1103

READING WELDING BLUEPRINTS

Topics covered include identification and description of welding symbols, description

of various types of welds including fillet weld, groove weld, and non-destructive examination symbols. Students learn how to read welding symbols on drawings, specifications and welding procedure specifications. Welding detail drawings are examined and students gain an understanding of the various lines used on drawings, as well as fill, object view and dimensioning. Theory/Lab.

WELD 1113

OXY-FUEL WELDING AND CUTTING, AND PLASMA CUTTING

Covers the safety requirements for oxy-fuel cutting, identifies oxy-fuel cutting equipment and the setup requirements for oxy-fuel cutting. Students learn how to light, adjust, and shut down oxy-fuel equipment. Students perform cutting exercises that include straight line cuts, piercing, bevels, washing, and gouging. Also included is the exploration of plasma cutting equipment, safety issues relating to plasma cutting, setup of plasma cutting equipment and cutting methods common to plasma cutting. Metals are pierced, slotted, squared and beveled using plasma cutting equipment. Theory/Lab.

WELD 1123

INTRODUCTION TO SHIELDED METAL ARC WELDING (SMAW)

Describes the SMAW process and the accompanying safety requirements. Setup of the arc welding equipment is explored in detail. Students learn how to prepare the metal for welding, strike the arc, detect and correct arc blow, make stringer, weave, overlapping beads, and fillet welds. Theory/Lab.

WELD 1203

NON-DESTRUCTIVE TESTING

Topics covered include different methods of conducting non-destructive testing including liquid penetrant, magnetic particle, ultrasonic, and radiographic tests. Procedures for verifying that welds meet mandated requirements by using non-destructive testing techniques are also covered. Theory/Lab.

WELD 1213

INTRODUCTION TO GAS TUNGSTEN ARC WELDING (GTAW)

Describes the GTAW process and the requisite safety concerns. Uses of the GTAW welding process are discussed along with an examination of various filler metals and shielding gasses. Students learn how to pad in all positions using GTAW and carbon steel filler metals. Other skills introduced include multi-pass, V-butt, and open-groove welds with carbon steel filler metals in the 1G, 2G, 3G and 4G positions. Theory/Lab.

WELD 1302

PHYSICAL CHARACTERISTICS AND MECHANICAL PROPERTIES OF METALS

Students study the physical characteristics, mechanical properties, composition, and classification of common ferrous and nonferrous metals. Other topics covered include visual inspection, magnetic testing, and x-ray

fluorescent spectrometry methods used to identify metals. Students also explore the need and procedure for preheating and post-heating metals in order to preserve weldment strength, ductility, and weld quality. Theory/Lab.

WELD 2313

INTRODUCTION TO FLUX CORED ARC WELDING (FCAW)

Students learn the proper procedures for setting up FCAW equipment and make V-groove pipe welds using the equipment. Welds are performed in the 1G-Rotated, 2G, 5G and 6G positions. Theory/Lab.

WELD 2322

JOINT FIT-UP AND ALIGNMENT OF STRUCTURAL STEEL

Explores various job code specifications and describes the fit-up gauges and measuring devices used to check fit-up, alignment & the use of plate & pipe fit-up & alignment tools. Theory/Lab.

WELD 2323

ELECTRODE SELECTION AND WELD QUALITY

Explores the various types of welding electrodes and filler metals. The role of the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME) are studied. Students learn the proper storage and control of filler metals used in code welding. The AWS and ASME codes governing welding are examined, and students learn to identify and explain weld imperfections. Theory/Lab.

WELD 2402

WELDING DESIGN

Explores the methods and processes used to clean and prepare various types of base metals for cutting and welding; and identifies and explains joint design for a variety of welding application. The AWS Code is also examined. Theory/Lab.

WELD 2405

SHIELDED METAL ARC WELDING (SMAW)

The setup and use of SMAW equipment is explored. Students make open-root pipe welds in the 1G, 2G, 5G and 6G positions. Theory/Lab.

WELD 2412

JOINT FIT-UP AND ALIGNMENT OF PIPE

Topics covered include the proper cleaning and preparation of base metals before welding, job code specifications, use of fit-up gauges and measuring devices.

Administration, Faculty & Staff

OSU Institute of Technology is a branch campus of the Oklahoma State University system. The campus' academic programs and policies are governed by the Board of Regents for Oklahoma State University and the A&M Colleges.

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