TABLE OF CONTENTS

WASHBURN INSTITUTE OF TECHNOLOGY

Welcome

We are glad you have chosen to attend Washburn Institute of Technology. This catalog provides lots of important information, including descriptions and requirements for the 30+ technical certificates and Associate of Applied Science degrees offered on our campus. In addition, our admission, enrollment, and graduation processes are explained to help you navigate your path to success. We are ready and eager to help you meet your goals!

In 2015, Washburn University celebrated 150 years committed to our vision and mission as a student-centered, teaching-focused institution. At Washburn Institute of Technology, we are proud of our outstanding teachers and staff who will support you as you prepare for your career and perhaps continue to complete your baccalaureate and advanced degrees.

This is an exciting journey, so make sure you are familiar with the important deadlines listed in this catalog. We recognize that “life happens along the way” when one starts a long-term goal, so I encourage you to seek help, take part in all that Washburn has to offer, and enjoy the journey. Best wishes for a successful year!

JuliAnn Mazachek, Ph.D.
President

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There has never been a more exciting time for you to be part of Washburn Institute of Technology. With more than 30+ technical certificates and Associate of Applied Science (AAS) degrees; Adult Basic Education (ESL/GED)” and non-credit customized training we have a pathway toward your career aspirations.

The faculty and staff are industry experts and are dedicated to the multifaceted mission of delivering the highest quality in career and technical education, with a strategic approach emphasizing innovation, student success, and business and community collaboration.

Our unique affiliation with Washburn University allows for seamless transition to advanced degrees and creates a rich environment for our students. As a Washburn student you have access to student organizations, pre-professional clubs, dining services, health and counseling services, membership to the Student Recreation & Wellness Center, and so much more.

Washburn Tech is here to assist you in furthering your education whether you are still in high school or already in the workforce looking to expand your skill sets, and I hope you will take full advantage of all that this remarkable college has to offer.

Scott Smathers
Dean, Washburn Institute of Technology

General Information

Mission and Vision Statement

Mission Statement

Washburn Institute of Technology's mission is to empower individuals with a quality education to be highly skilled and successful leaders in their chosen field.

Vision Statement

Washburn Institute of Technology's vision is to be the chosen regional destination for career and technical education.

Core Values

Core values guide decision making and provide the foundation for directing our efforts, resources, and conduct. In fulfilling the mission, the faculty, staff, administration, and students are committed to the following core values of Washburn Institute of Technology:

Creating positive **IMPACT**. **I**nclusion. **M**odernization. **P**artnership. **A**chievement. **C**ommunity. **T**ransformation.

- Inclusion - Creating a welcoming and supportive environment for all learners, faculty, staff and visitors, regardless of their background or identity.
- Modernization - Ensuring financial stability while developing new ideas, methods and technologies that improve teaching and learning, scholarship and the lives of others.
- Partnership - Fostering collaboration among learners, faculty, staff and external partners to solve problems and achieve common goals.
- Achievement - Demonstrating excellence by providing high-quality teaching and learning, conducting meaningful scholarship and producing graduates who are prepared to make a difference in the world.
- Community - Becoming a valued community asset and an Employer of Choice.
- Transformation - Helping learners to develop knowledge, skills and values.

History of Washburn Institute of Technology

Training education in Northeast Kansas began during World War II when Topeka School District in Topeka, Kansas established Topeka Trade School in 1941. In addition to machine shop and auto mechanics courses, the school eventually provided wartime and civil service training for Topeka Army Airfield personnel as well as pre-induction training for student bound for military service.

In 1963, The Kansas Legislature passed legislation which has had, and will continue to have, far reaching effects on career and technical education in Kansas. The intent of this legislation is revealed in the following excerpts from the statute:

> "It is the intention of the Legislature and the purpose of this act to provide a means whereby the State of Kansas in cooperation with local communities can provide facilities for training and preparation of students for productive employment as technicians and skilled workers and to more nearly equalize educational opportunities."

Washburn Institute of Technology (WIT) was founded as Northeast Kansas Vocational Technical School in 1964, the school was renamed Kaw Area Vocational Technical School in 1967, and in 1992 was renamed Kaw Area Technical School (K.A.T.S.).

In 2008, Kaw Area Technical School (K.A.T.S.) affiliated with Washburn University of Topeka. As a results of this affiliation the name of the institution was changed to Washburn Institute of Technology, also known as Washburn Tech.

For more information on Washburn Tech's history, please visit washburntech.edu/about-us/history.html (https://www.washburntech.edu/about-us/history.html).

Equal Education and Employment Opportunity

Washburn Tech is committed to a policy of equal educational and employment opportunity without regard to race, color, religion, age, national origin, ancestry, disability, sex, marital or parental status, or sexual orientation/gender identity. Each unit within Washburn Tech is charged with conducting its practices in conformity with these principles.

Equal educational opportunity includes, but is not limited to, admissions, recruitment, extracurricular programs and activities, counseling and testing, financial aid, health services, and employment.

Equal employment opportunity includes, but is not limited to, recruitment, hiring, assignment of duties, promotion determinations, compensation, benefits, training, and termination. Positive action shall be taken to assure the full realization of equal opportunity for all employees of Washburn Tech.

Responsibility for monitoring and implementation of this policy is delegated to the Equal Opportunity Director; however, all employees will share in the specific activities necessary to achieve these goals.

Equal Opportunity Director
Morgan Hall, Room 200K
Washburn University
Phone: 785-670-1509

Email: eodirector@washburn.edu

Open Meetings and Records

Washburn Tech is a public institution of higher education. As a public institution, the meetings of its governing board are open to the public under the provisions of the Kansas Open Meetings Act (K.S.A. 75-4317 et seq) and the records of Washburn Tech are subject to inspection as provided under the Kansas Open Records Act (K.S.A. 45-215 et seq).

Washburn University Notice of Non-Discrimination

Washburn University prohibits discrimination on the basis of race, color, sex, religion, age, national origin, ancestry, disability, marital or parental status, sexual orientation/gender identity, genetic information or other non-merit reasons, in University programs and activities, admissions, educational programs or activities, and employment, as required by applicable laws and regulations. The following person has been designated to handle inquiries regarding the non-discrimination policies:

Michelle Godinet, Equal Opportunity Director
Washburn University
1700 SW College Ave.
Topeka, KS 66621
(785) 670-1509, eodirector@washburn.edu

Harassment Policies

Bullying

Bullying and cyberbullying are repeated and/or severe aggressive behaviors that the student knew or should have known would intimidate, intentionally harm or control another person physically or emotionally, and are not protected by freedom of expression. Bullying is disruptive to the educational process, and is not acceptable behavior at Washburn Tech.

Racial Harassment

Racial harassment is unlawful discrimination on the basis of race, color or national origin under Title VI and VII of the Civil Rights Act of 1964, and the Kansas Acts Against Discrimination, and shall not be tolerated. Racial harassment may result from verbal or physical conduct or written/graphic material that is racially motivated, and which:

- affords a student different treatment, solely on the basis of race, color or national origin, in a manner which interferes with or limits the ability of the student to participate in or benefit from the services, activities or programs of the school,
- is sufficiently severe, pervasive or persistent so as to have the purpose or effect of creating a hostile academic environment or is sufficiently severe, pervasive or persistent so as to have the purpose or effect of interfering with a student's academic performance or ability to participate in or benefit from the services, activities or programs of the school.

Harassment

2.1.1 Responsibility. All individuals must be allowed to pursue their activities at the University free from sexual harassment, unwelcome sexual advances and sexual violence. Such conduct will not be tolerated. The responsibility for maintaining a sexual harassment-free campus environment rests with all Employees.

2.1.2 Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment;
- Submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting such individual;
- Such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment;
- Such conduct emphasizes the sexuality of an individual in a manner which prevents or impairs that individual's full enjoyment of work and/or educational benefits, environment, or opportunities, or,
- Such conduct is in the form of sexual violence.

2.1.3 Unwelcome sexual advances, request for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when:

- The conduct has the purpose or effect of interfering with the individual's work or academic performance, or of creating an intimidating, hostile, or offensive working or educational environment;
- Imposed by an Employee or agent of the University and denies, limits, conditions, or provides different aid, benefits, services, or treatment, or
- Imposed by a third party upon an Employee or Student who is engaged in a University-related activity.

2.1.4 Sexual Violence is defined as physical sexual acts perpetrated against an individual's will or where the individual is incapable of giving consent due to the victim's use of drugs or alcohol or an intellectual or other disability. Examples include, but are not limited to, rape, sexual assault, sexual battery and sexual coercion.

2.2 Employee Harassment. Section 703 of Title VII of the Civil Rights Act of 1964 defines harassment on the basis of sex.

2.3 Student Harassment. Sexual harassment of students is a violation of Title IX of the Education Amendments of 1972, which prohibits sex discrimination in education.

2.4 Complaints. Complaints of sexual harassment are to be made to the:

Equal Opportunity Director
Morgan Hall Room 200K, Washburn University
Phone: 785-670-1509
Email: eodirector@washburn.edu
Online: https://www.washburn.edu/statements-disclosures/equal-opportunity/index.html (https://www.washburn.edu/statements-disclosures/equal-opportunity/)

3. Harassment—General

3.1 Responsibility. All individuals must be allowed to pursue activities at the University free from harassment based on race, color, religion, age, national origin, ancestry, disability, sex, sexual orientation, gender identity, genetic information or marital or parental status. Responsibility for maintaining a harassment free campus environment rests with all

Employees and Students, and others while on the University campus or involved in University-sponsored activities.

3.1.1 Harassment is defined to have occurred when, on the basis of race, color, religion, age, national origin, ancestry, disability, sex, sexual orientation, gender identity, genetic information or marital or parental status a hostile or intimidating environment is created in which verbal or physical conduct, because of its severity and/or persistence, is likely to interfere significantly with an individual's work or education, or affect adversely an individual's living conditions.

3.2.1 Legal Implications.

3.2.1 Harassment of an Employee is a violation of Section 703 of Title VII of the Civil Rights Act of 1964 which defines harassment on the basis of sex.

3.2.2 Sexual harassment of a Student is a violation of Title IX of the Education Amendments of 1972 which prohibits sex discrimination in education.

3.2.3 Complaints. Complaints of harassment (as defined in this section) are to be made to the:

Equal Opportunity Director
Morgan Hall Room 200K, Washburn University
Phone: 785-670-1509
Email: eodirector@washburn.edu
Online: https://www.washburn.edu/statements-disclosures/equal-opportunity/index.html (https://www.washburn.edu/statements-disclosures/equal-opportunity/)

Complaints must be filed within 180 days of the latest alleged incident.

3.3 Harassment—Complaint Procedures. Individuals who believe they may be or are victims of harassment in violation of the University's equal opportunity/harassment policies, should promptly take one or more of the steps outlined in the complaint procedure. It is not necessary for all steps to be taken or to be taken in order. Nothing in these procedures shall be construed as preventing any individual from pursuing any other legal action.

Any retaliation against an individual who files a complaint of discrimination/harassment or against individuals who participate in the proceedings is strictly prohibited.

Curriculum Approval

Curriculum at Washburn Tech is designed to prepare students for the work place. The curriculum approval process starts with curriculum that is develop by qualified instructors in consultation with industry experts. New curriculum and substantive curriculum changes are approved by each program's advisory board made up of local and regional employers. The curriculum is next approved by the Curriculum Committee. The process is managed and overseen by the assistant deans. New programs are approved by the Washburn University Board of Regents and then reviewed and approved by the Kansas Postsecondary Technical Education Authority and the Kansas Board of Regents.

Curriculum changes that are approved by the Curriculum Committee are entered into the Kansas Board of Regents' data base for each program. Washburn Tech has participated fully in the state program alignment process and offers aligned curricula in those programs that have completed that process.

Assessment of Student Learning

The assessment of student learning is an integral part of the teaching and learning process and Washburn Tech strives to create a culture of assessment surrounding all the curricular and co- curricular activities in which students participate. Valid and reliable assessment is important for three reasons:

- To improve student learning
- To provide accountability to stakeholders, such as students, parents, legislators, accrediting agencies, and the public
- To assist in the process of accreditation, both of Washburn Tech and of individual programs

In order to foster this culture of assessment, Washburn Tech has created an institution-wide assessment committee. The mission of the Washburn Tech Assessment Committee is to aid the Washburn Tech community's assessment efforts to ensure that student learning is a responsibility shared by the entire community. The committee will support the collection, analysis and dissemination of the evidence of student learning to make certain that changes in student learning goals and outcomes are based on evidence. The mission of the Assessment Committee is to assist Washburn Tech in providing evidence that the mission of Washburn Tech delivers innovative educational and training opportunities for individuals to strengthen the communities we serve.

To help the Washburn Tech Assessment Committee satisfy its mission, the following are shared expectations:

- Every program has student learning goals.
  - Each program outcome is measurable.
  - Evidence is consistently collected and accessible to appropriate constituents.
  - Evidence is regularly analyzed i.e. the program has an established schedule for review of evidence.
  - The program has an appropriate mechanism to institute changes which are suggested by the evidence.

Students share the responsibility for the evaluation of student learning by completing assessment activities which provide the data required for reliable analysis of the curricular activities.

Washburn Institute of Technology Accreditation

Programs at Washburn Institute of Technology are included in the accreditation for University, which is accredited by:

The Higher Learning Commission of the North Central Association:
Higher Learning Commission (https://www.hlcommission.org/)
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604

Individual programs accredited by national organizations:

- Auto Collision - ICAR
- Auto Service Technology – ASE
- Carpentry - NCCER
- Cabinet/Millwork - NCCER
- Practical Nursing –KSBN

- Plumbing Technology - NCCER
- Surgical Technology – CAAHEP

Campus and Facilities

Washburn Institute of Technology has three campuses in Topeka:

- Huntoon Campus: 5724 SW Huntoon St., Topeka, KS
- Washburn Tech East: 2014 SE Washington St., Topeka, KS
- Cosmetology: 109 SW 29th St., Topeka, KS

Cafe

Vending machines are available and provide a variety of snacks and drinks. No food is allowed in classrooms or laboratory areas without instructor approval.

Library

Each technical program maintains a resource library of materials pertinent to that program. Both print and electronic resources are available. Washburn Tech students have access to the libraries on the Washburn University campus at 1700 S.W. College Avenue.

Student Privileges on Washburn University Campus

Secondary students may use the Washburn University Library and receive discounts at many Topeka area businesses by presenting their Washburn Institute of Technology ID.

Post-secondary students with Washburn Tech ID cards may use the iCard to access the facilities at the Student Recreation and Wellness Center, to attend University Theatre productions and Sporting Events, to receive medical services at the University Health Center, to enjoy discounts at the University Bookstore, and to access all services at the University Library and the Law Library.

Bus Passes

High school and post-secondary students with Washburn Tech ID cards may use the Topeka Public Bus system free of charge.

Admission, Registration and Enrollment

Admission and Enrollment

Admission

Washburn Tech Admissions staff along with Program Navigators and Advisors in Student Services at Washburn Tech offer many services for applicants and current students. An established application process makes for seamless transition from admission to enrollment. Easy access to technical education is possible due to August and January start dates for many programs and courses.

Admissions counselors are available to assist applicants through the application and enrollment processes. They are skilled in providing professional assistance to both traditional and non-traditional students. Of the current, approximately 1,200 students, almost half are adult students re-entering the classroom environment. Washburn Tech Program Navigators and Advisors monitor and support our students as they progress through their programs of study. Students in need of accommodations must apply through the Office of Student Accommodation Services.

Enrollment Process

Applicants who wish to apply for admission to Washburn Tech need to have the abilities necessary to benefit from instruction in a particular occupational field. Prospective students are required to meet assessment requirement for their desired technical program before they are eligible to enroll. Typically, this requirement is satisfied with the Accuplacer entrance examination. Applicants may only enroll in one technical program at a time. Exceptions to this may be considered upon special request to Student Services. Applicants who have alternative tests scores such as ACT, ASSET, SAT, TABE, or prior college work (including earned Bachelors/Associates degrees should consult with an admissions counselor or advisor to determine if they are qualified for their chosen technical program. Students must be enrolled no later than the beginning of the 3rd day of class. Exceptions are at the discretion of the Associate Director of Tech Admissions.

High School Enrollment Procedures

Enrollment is open to qualified students who are currently enrolled in high school as junior and seniors. High school students who wish to enroll in a technical program at Washburn Tech must follow the procedures listed below.

1. Complete an online application at applytech.washburn.edu (https://applytech.washburn.edu).
2. Speak with your High School Counselor and submit an in-progress official high school transcript and consent to enroll form.
3. Discuss program of interest with a Recruiter. Some programs may require additional steps prior to admission, such as entrance exams or a separate application.
4. Enroll during designated enrollment periods. Most program registration is done on a first come, first served basis. Many programs have limited enrollment capacity and/or are competitive programs. Recruiters can provide program specific information.

Post-Secondary Enrollment Procedures

Post-secondary students who wish to enroll in a technical program must follow the procedures listed below:

1. Complete an online application at applytech.washburn.edu (https://applytech.washburn.edu/).
2. Submit an official high school transcript or GED transcript, and official transcripts from any post-secondary institutions attended.
3. Discuss program of interest with a Recruiter. Some programs may require additional steps prior to admission, such as entrance exams or a separate application.
4. Enroll during designated enrollment periods. Program registration is done on a first completed, first served basis. Many programs have limited enrollment capacity and/ or are competitive programs. Recruiters can provide program-specific information.

Probationary Enrollment

Students not meeting requirements for regular admission will be admitted conditionally. Students admitted conditionally will be required to work with the Center for Student Success and Retention to create individualized pathways for success.

Adding and Withdrawing Classes

Adding and withdrawing from classes during a term will impact a student's credit hour completion for Satisfactory Academic Progress (SAP) for purposes of financial aid. Course withdrawals after the 2nd day of the semester through the withdrawal deadline will reflect a "W" (withdrawal) on the student transcript.

Transfer of Credits

Individuals who want to transfer credits to Washburn Tech from another institution may submit an official transcript for review. The determination of whether to accept credits from another institution will be based upon many factors including the content/competencies of previous course work, the duration of previous course work, student attendance, grades earned in course work completed, and other criteria. Only those courses in which the individual earned a "C" or better will be considered

for transfer credit. Students must complete a minimum of one-half of the required program credit hours at Washburn Tech. The final decision regarding the number of credits that will be transferred in will be determined by an assistant dean in consultation with the program instructor(s).

Challenge/Test Out Policy

The institution provides a prescribed set of courses that meet the needs of the employers in our community. It is Washburn Tech policy to ensure that students meet the course requirements in a timely manner; students might not be required to take courses that cover materials that have already been mastered. Therefore, students may apply to complete a challenge exam, which with a passing grade will allow the student to test out of a specific course or courses.

In order to be eligible to attempt a challenge exam, the following procedure must occur:

- The student should request a challenge/test-out request form from their Program Navigator & Advisor. This challenge/test-out request form must be completed by the following dates of each term:
  - **Fall** -- July 1st preceding the Fall semester
  - **Spring** -- November 1st preceding the Spring semester
  - **Summer** -- April 1st preceding the Summer semester
- The advisor will then verify that the student is eligible for the challenge exam by obtaining consent from the instructor of the course and the coinciding Assistant Dean of Instruction.
- If approval is granted, a completion date of the exam will be issued to the student and instructor.
- If the student successfully passes the exam, the student will satisfy graduation requirements associated to the course for which the test-out was completed.
- If the student does not successfully pass the challenge exam, the student may remain enrolled in the full course for credit and pay the full tuition and fees associated with the course.
- The cost for a challenge exam is $50.00. The exam fee is non-refundable and will not be applied to the full tuition and fee amount that will be charged if the student remains enrolled in the standard course as a result of not passing the exam.
- The course for which the challenge exam was taken will be transcript as a credit/no-credit course.
- No financial aid is available for courses that an individual is approved to test out.
- Students may test out of no more than ½ of the technical program's prescribed credits.

Prior Learning Assessment

Washburn Tech is committed to providing credit for prior learning in accordance with the guidelines approved by the Kansas Board of Regents.

Credit Granted for Military Service

Credit awarded for military service is based upon the recommendations of the Commission on Accreditation of Service Experiences which was appointed by the American Council on Education. Credit will be granted to all service members in accordance with the recommendations of the ACE Guide to the Evaluation of Educational Experiences in the Armed Services. Students should provide their military service record in one of the following formats according to their branch of service: DD 214 form, DD 295 form, Department of Defense transcript, Community College of the Air Force transcript, or the Army/American Council on Education Registry transcript. Military credit is subject to the same limitations as regular transfer credit (i.e. technical credit limits and no credit awarded for course duplications). For more information and to secure forms for making application, students should contact the Student Services Office.

Audit Policy

Students who want to attend classes, but do not want to receive credit, may audit classes. Students who audit classes do not need to take the general entrance test. To enroll as an audit student, individuals must have the approval of Student Services and must pay the same tuition and fees as credit earning students. Audit students are not eligible for federal financial aid. Audited courses are not assigned grades; students are **not** required to turn in class assignments or take examinations. Students enrolled in an audited class may not convert to a credit status after the first week of class. If students request a change to credit status, they must first meet all admissions requirements (take the entrance test and achieve the required score and meet the technical standards associated with the program).

In the case of a lab-based class, students must either complete the safety class that is part of the program or test out of the safety portion of that program prior to gaining access to lab activities.

Individuals who want to enroll to earn credits will be given priority over those who express interest in auditing classes.

Audit exceptions may be reviewed on an individual basis by the Assistant Dean of Instruction.

Re-enrollment Procedures

Same Program

Individuals who did not complete a program of study but want to re-enroll in the same program need to contact the Student Services and Admissions Office for details. In some instances, when the curriculum has changed significantly, an individual must re-enroll for the entire program. **If students are dismissed for the remainder of a semester due to misconduct, they will not be permitted to re-enroll the following semester.** To re-enroll after the required time lapse, students must contact the Student Services and Admissions Office and submit a new online application at applytech.washburn.edu (https://applytech.washburn.edu).

Program Change

Students who want to withdraw from one program and enroll in another program at Washburn Tech the following semester must meet with their Program Navigator & Advisor. Students must complete a new online application at applytech.washburn.edu (https://applytech.washburn.edu) and meet the Admissions requirements for the program in which they want to enroll.

Changes to Class Schedules

Any individual who enrolls in a program of study for consecutive semesters will be expected to meet the Graduation Plan in place at the time they enrolled. All programs of study consist of courses that are taught in a sequential manner; some courses are offered only once during

the school year. Because of this, changes regarding part-day or full-day schedules need to be discussed with a Program Navigator & Advisor.

Institutional refunds are calculated, according to the published schedule for **all** students who attend Washburn Tech and reduce the number of hours enrolled. The refund schedule applies to each course from which a student withdraws. Refunds for short-term classes will be prorated based on the full-semester course refund schedule. Withdrawal from a course and enrollment in another course are treated as two separate transactions.

Continuing Student Enrollment

Typically, program requirements established at the time of admission do not change for students. For programs containing multiple semesters to complete, students must complete the re-enrollment form indicating their intentions to return to Washburn University Institute of Technology (WIT). Students graduating from their high school prior to completing their WIT program must also complete a new online application reflecting their status as a post-secondary student.

- Re-enrollment for the Spring semester
  - Re-enrollment forms and/or a new online application (if applicable) must be completed by close of business on the last day of classes for the preceding Fall semester.
- Re-enrollment for the Summer semester
  - Re-enrollment forms and/or a new online application (if applicable) must be completed by close of business on the last day of classes for the preceding Spring semester
- Re-enrollment for the Fall semester
  - Re-enrollment forms and/or a new online application (if applicable) must be completed by close of business one month prior to the first date of classes for the Fall semester.

If a student has a hold(s) on their account preventing registration, the hold(s) must be addressed and removed at least five business days prior to the start of classes. Failure to address holds on accounts may result in administrative withdrawal from the program.

Failure to complete a re-enrollment form and/or a new online application (if applicable) by the deadlines outlined above, or addressing account holds, may result in withdrawal from the program.

After deadlines have passed, a student's ability to return to the program will be determined on a first come, first served basis alongside all other new and returning students.

Application for Graduation

Students planning to complete a technical certificate must submit an online Application for Graduation, located in the Graduation and Beyond box of MyWashburn, to initiate a graduation audit. This graduation audit will be completed early in the semester/term in which the student plans to graduate. The online application should be submitted in September for the fall semester and in February for the spring and summer semesters. A student is not a candidate for graduation until the online application is on file. Students who do not meet the requirements for graduation in the semester specified on the Application for Graduation form must file another application for the subsequent semester in which they plan to graduate. Hard copy Application for Certificate forms are available in the Student Services Office for those students whose academic program or registration status preclude them from participating in the online process (for example, if they are not able to declare their certificate).

Degree Conferment

Washburn University Board of Regents with the recommendation of the faculty of Washburn Tech confers degrees at the end of the fall and spring semesters and summer session to students who have met all requirements as of the last day of final examinations for that session. All work not completed by the last day of finals will result in a graduation date of the following semester or later if a previous "incomplete" has not been finalized.

If a student is concurrently enrolled at another institution and intends to use the work to complete graduation requirements at Washburn Tech, an official transcript from the institution must be received within two weeks of Washburn Tech's last day of instruction date of the graduating semester in order to have the degree conferred in the same semester. Washburn Tech holds a commencement ceremony at the end of the fall and spring semesters. Students who complete requirements for a certificate or degree during fall semester will be invited to participate in the fall commencement ceremony. Students who complete requirements for a certificate or degree during the spring semester will be invited to participate in the spring commencement ceremony. Students completing required coursework in summer session will be invited to participate in spring or fall commencement, depending on their program of study. All such candidates must have applied to graduate online through their MyWashburn first.

Washburn University Transition

The Washburn University School of Applied Studies, in conjunction with Washburn Tech, offers coursework at a reduced tuition rate that leads to the completion of an associate of arts or associate of science degree for qualifying programs. This opportunity requires coursework at both Washburn Tech and Washburn University. Students who plan to pursue a baccalaureate degree are encouraged to take advantage of this option. For information contact the Washburn University School of Applied Studies at (785) 670-2114.

Associate Degree Affiliations

Washburn Institute of Technology is pleased to offer articulation agreements with all Kansas community colleges in addition to Washburn University in Topeka. This allows coursework from most Washburn Institute of Technology programs to transfer toward an associate degree from these institutions. However, the transfer of academic credit is determined by the accepting institution, and it is the responsibility of the student to request information from the accepting institution to learn how Washburn Institute of Technology credits will transfer in each case. Students are encouraged to obtain additional education and training whenever possible to enhance marketability, employability, and retention in the workplace.

Notice to Applicants

You are hereby notified that in the event your application for admission to state approved technical education courses or programs is denied by Washburn Tech, you may appeal to the Dean of Washburn Tech within thirty (30) days from the date of receiving the decision.

Student Services

Campus Advocate

The Campus Advocate is a person who is trained to provide support in various forms to Washburn Institute of Technology students, staff, and faculty. Services provided by the advocate are free of cost and confidential and available during normal business hours. For more information call the campus advocate at (785) 670-3348 or email techadvocate@wasburn.edu (techadvocate@washburn.edu). Services provided by the Campus Advocate include:

- Safety planning
- Victim's rights information
- Client support at legal proceedings and medical advocacy
- Emotional support
- Referrals to community and campus resources
- Sharing reporting rights and options

Counseling Services, Washburn University

Students experiencing difficulty with academic work or who have personal concerns may want to utilize the Counseling Services' office located in Kuhne Hall, room 200. Office hours are Monday through Friday, 8am - 5pm or other times by appointment. Students can drop-in to make an appointment or call (785) 670-3100, select option 2 to speak to a counselor 24 hours a day, seven days a week (student ID required). Confidentiality is maintained for all types of counseling. Students under the age of 18 will need parental consent to use the Counseling Services' office.

Support Services for Students with Disabilities

The Assistant Director of Student Accessibility Services works with students with documented disabilities to provide equal access to Washburn Tech programs and to coordinate entrance and exit testing for all students.

Washburn Tech provides technical education for high school and postsecondary students. Applicants who, with reasonable accommodations, can perform the essential functions of the occupation for which training is being sought, may request and be granted such reasonable accommodations assistance for the duration of their course. Reasonable accommodations may also be requested for assistance with the Admissions Test prior to enrollment. Applicants requesting accommodations should contact the Washburn Tech Assistant Director of Student Accessibility Services for appropriate referral.

The Assistant Director of Student Accessibility Services is responsible for assisting students with disabilities in arranging accommodations and for helping to identify resources on campus for students with disabilities. Qualified students with disabilities must register with the office to be eligible for services. The office MUST have current documentation on file in order to provide services. Accommodations, based on individual needs, may include such services as test readers and/or scribes, extended time for test taking, adaptive computer technology, or alternate media materials. Requests for accommodations should be submitted at least two months before services may begin; however, if you identify a need for an accommodation at any point during a semester, please contact the Assistant Director of Student Accommodation Services immediately. Students may contact the Assistant Director of Student Accessibility Services directly by phone at (785) 670-3364 or voluntarily identify themselves to the instructor for a referral.

Washburn Tech does not offer a specialized curriculum for students with disabilities. All academic, technical and conduct program standards must be met. Modifications or accommodations cannot fundamentally alter the essential nature of the program.

It is the policy of Washburn Tech to assure equal employment and educational opportunity to qualified individuals without regard to race, color, sex, age, ancestry, marital or parental status, disability, religion, national origin or sexual orientation/gender identity. Complaints are to be made to:

Equal Opportunity Director
Morgan Hall, Room 200K
Washburn University
Phone: (785) 670-1509
Email: eodirector@washburn.edu
Online: https://www.washburn.edu/statements-disclosures/equal-opportunity/index.html (https://www.washburn.edu/statements-disclosures/equal-opportunity/)

Confidentiality

All documentation submitted to Washburn University Institute of Technology is kept confidential, and is used solely to determine the applicant's eligibility for accommodations. Instructors/relevant Washburn University Institute of Technology staff are also instructed to treat

as confidential all information they received relative to the student's disability and accommodations.

Contact Details:
Assistant Director of Student Accessibility Services
Washburn Institute of Technology
Building A, Room AC117
5724 SW Huntoon Street
Topeka, KS 66604
Phone: (785) 670-3364

Advising

Student Services staff members are available for academic advising and career planning. Staff provide guidance about school-related matters such as graduation requirements, changes of program, occupational information as well as grade and attendance concerns. Students are encouraged to seek assistance in a timely manner. Assistance is available on a walk-in basis or by appointments.

Bookstore

The Washburn Tech bookstore is located in the west wing of the Administration building and is a satellite of the Washburn University Bookstore (Ichabod Shop) on the University campus. Students can purchase textbooks, supplies, apparel and snacks at the bookstore. Books can also be pre-ordered on the website: http://washburn.edu/current-students/bookstore.html

Washburn University Sporting Events

Single game tickets at Washburn University are available free of charge to postsecondary Washburn Tech students who present a Washburn ID.

Information Technology Services

The Washburn Information Technology Services (ITS) Department provides computing, networking, video, wireless Internet access, and voice services at Washburn University Institute of Technology. Students may receive assistance with user accounts, e-mail, wireless connectivity, and other services by calling (785) 670-3000 or visiting ITS staff.

Students admitted to Washburn Tech are given access to Washburn University's Web portal, MyWashburn (my.washburn.edu (http://my.washburn.edu)). Tools available in MyWashburn include campus announcements, e-mail, Washburn University class registration (for students enrolled in coursework at Washburn University), and connection to online classes or materials related to coursework. MyWashburn may be accessed from any Internet connection, on or off campus. Students can receive support for online courses from the Online Education staff by sending e-mail to online-ed-support@washburn.edu.

On campus, students may connect to the Internet and computing resources using equipment in computer labs or via wireless using a personal laptop or other device near one of the many wireless access points.

Career Engagement

Washburn Tech strives to assist all qualified students and graduates to secure employment in their field of study. (Employment is not guaranteed). Instructors, who maintain a close relationship with business and industry through their program advisory committees and business contacts, provide placement assistance to students completing their program.

Washburn's Student Life and Career Engagement staff facilitate workshops that prepare students for employment. Workshop topics include, but are not limited to job search techniques, resume writing, and interview preparation. Each semester, Washburn Tech hosts a Career Fair to introduce students to employment opportunities. In addition, employers inform Washburn of job openings on a regular basis. This information is shared with students a number of ways:

- Posted on Handshake (https://washburn.joinhandshake.com/login/) (https://washburn.joinhandshake.com/login)
- Distributed to related program instructors to share with students.
- Sent electronically to students.

Veterans Education Benefit Programs

To apply for Veterans Administration (VA) educational benefit programs, the students should contact the School Certifying Official in the University Registrar's Office, Morgan Hall 102, 785-670-1074, or call the VA at 1-888-442-4551.

Student recipients of Veterans related educational assistance must certify their enrollment each semester through the - University Registrar's Office to assure continuous benefits. Students receiving Veterans assistance must contact the University Registrar's Office any time they drop or add classes. Changes in enrollment, such as dropping courses, adding courses, or formally withdrawing from the University, must be submitted to the VA. VA regulations require veterans to pursue an educational objective, file a degree plan, regularly attend classes, and make satisfactory progress. Students should contact the School Certifying Official for detailed information regarding veteran educational programs, benefits and requirements.

Military Deployment Withdrawal

Students who are called to active duty and must withdraw from classes as a result should contact the Student Services Office and Financial Aid Office.

Health Services

As an affiliate of Washburn University, Washburn Tech post-secondary students may utilize the services of the Washburn University Student Health Service on the main campus or the mobile clinic at the Huntoon Campus. This service exists to enhance the learning and development of students and staff, through provision of prompt whole- patient-centered medical care, with a strong emphasis on education, prevention, affordability and patient advocacy. Student Health Services is located in 170 Morgan Hall, on the Washburn University Campus. Medical care, including physical exams, care of acute injuries and illness, immunizations and lab tests, and referral to outside providers as needed, is available to all enrolled students. Three nurse practitioners and a registered nurse are available for health care and counseling.

A low-cost health insurance program is available to all postsecondary students enrolled in six or more credit hours per semester. Literature regarding student insurance options is available in the Student Services Office. Students should be aware that many of the technical programs work with potentially dangerous equipment and that while students will be taught how to work safely around the equipment before they use it,

accidents may still happen. For this reason, it is recommended that all students purchase health insurance.

Student Recreation and Wellness Center

Washburn Tech postsecondary students may utilize the Student Recreation and Wellness Center located on the Washburn University main campus. The facility components include a rock-climbing wall, indoor track, gymnasium, cardiovascular and resistance training area, multi-purpose room, wellness suite, and locker rooms. Program offerings include formal, intramural, group exercise, climbing, and wellness opportunities.

Student Organizations

SkillsUSA

SkillsUSA is a national organization that promotes technical excellence through organized student competition among technical institutions. The Washburn Tech chapter has a proud history of success on the state and national levels. Student activities promote leadership, technical skill development, and public service; any Washburn Tech student in good standing may participate in SkillsUSA. Faculty sponsors supervise the activities and training for competitions.

National Technical Honor Society

The National Technical Honor Society recognizes and honors Washburn Tech students for outstanding academic and personal achievements. The National Technical Honor Society promotes the qualities of honesty, service, leadership, and career development.

Washburn Tech students are nominated for The National Technical Honor Society by the instructors or may self-nominate. They must be in the last semester of their program. Students are evaluated on the basis of their academic and attendance records, community involvement, character and financial accountability. Final selection into The National Technical Honor Society is made by a committee of instructors and an administrator.

Student Activities Council

Washburn Tech students can volunteer to serve on the Student Activities Council. Students meet to plan activities and offer suggestion to improve the campus and the learning environment. The students learn leadership, teamwork, and social skills.

Washburn Tech Care Closet

Mission Statement

The purpose of the Washburn Tech Care Closet is to provide short-term emergency assistance to Washburn Tech students and/or staff who are in crisis situations, with the hope that students will be able to complete their training and that staff will resolve temporary emergencies so they can focus on carrying out their job responsibilities.

Belief Statements

Most people, at one time or another, need help. Crisis situations will be handled on an individual basis; confidentially will be strictly adhered to. The Washburn Tech Care Closet will not be able to help all individuals who request assistance. However, it will help as many individuals as expertise, funds and time will allow.

Guidelines for Providing Assistance

The Washburn Tech Care Closet has a limited budget. Funds devoted to one person must be limited. Ways in which the Washburn Institute of Technology Care Closet may be able to assist include, but are not limited to, food donations, transportation assistance, personal hygiene, counseling and referral to community agencies for additional services. Referrals for assistance may be made by students or staff to the Campus Advocate or Associate Dean of Student Life located on the Huntoon Campus, Suite AC117.

Gender Neutral Restrooms

At Washburn Tech, we work to provide a welcoming, supportive community for all students, faculty and staff. The following restrooms are identified as “Family Restrooms” on the Huntoon Campus. That means, that if you have a family member such as a child or individual who needs assistance, these are available to you. Those are also considered gender neutral.

Location:

- AC-017
- AW-116
- C-101
- C110A
- C-119A
- C-203
- D-110
- D-105D
- H-103
- K-103

Adult Education Center

Adult Learning (GED) preparation classes are offered on the Huntoon and Washburn Tech East campuses.

The AO-K program is also offered through the Adult Education Center. Individuals who want to work toward their GED and to acquire technical training at the same time can do so through the AO-K program. The tuition costs for the Technical classes are paid by the Kansas Board of Regents. The student only pays the $30 student materials fee and the cost of taking each of four tests to earn the GED. Learn more at https://www.washburntech.edu/admissions/adult-education.html.

Vehicles and Parking Policies on Campus

(Policies Apply to Bicycles As Well)

Individuals who drive to the Washburn Tech campus must assume the responsibility for safe and legal operation of a vehicle on or near the campus. The following guidelines apply to those who drive vehicles onto the Tech campus:

1. Students and staff will enter and leave the campus in an orderly and safe manner at all times

2. A speed limit of no more than 15 miles per hour will be observed on campus
3. Reckless driving and speeding will not be tolerated
4. Student parking is not permitted in front of the administration building or where curbs are painted yellow
5. Parking must be within the lines denoting parking areas
6. All traffic must stop for school buses that are loading and unloading on the campus
7. City police and University police may issue tickets for violations
8. With reasonable suspicion, any vehicle parked on the Washburn Institute of Technology premises may be subject to search for illegal drugs or weapons
9. Bicycles brought onto campus must be placed in the bicycle racks provided.

Washburn police officers provide emergency "jump starts" and "lock-outs."

The provisions of the City of Topeka traffic codes and state traffic statues, Chapter 8 of the Kansas Statutes Annotated, are applicable to the operation and condition of motor vehicles operated on the University campus except as may be otherwise provided in these regulations by the Washburn University Board of Regents. Persons operating or parking a vehicle on campus shall be fully responsible for that vehicle and its contents. Washburn University Institute of Technology has no responsibility for vehicles or protection of any vehicles or their contents while on campus. An enrolled student shall be held responsible for violations by vehicles registered to them through the State Motor Vehicle Department regardless of the operator at the time of the violation.

Accessible Parking

Certain parking spaces are designated as accessible parking. Parking in these spaces is reserved for those persons whose vehicles display:

1. A specially issued vehicle license plate displaying the international symbol of access to the physically disabled;
2. A disabled veteran license plate issued in accordance with K.S.A. 8-161;
3. A specially issued identification placard displaying the international symbol of access to the physically disabled.

Violators of handicap parking laws will receive traffic citations issued by officers of Washburn University, City of Topeka, Shawnee County and/or State of Kansas. Fines will be according to the city code of State statutes.

Designated Parking

The Washburn Tech campuses have open parking except where specifically designated.

General Vehicle Operations

Parking Over-length Vehicle

Over length or oversized vehicles such as buses, trucks and campers cannot be parked in regular parking spaces. Visiting groups and charter buses may arrange for special parking assignments and permits with the University Police Department.

Overnight Camping or Sleeping

Parking for camping or overnight sleeping in vehicles is prohibited.

Prohibited Parking Practices

The following acts are prohibited and Washburn Institute of Technology tickets may be issued for such infractions:

1. Double parking or blocking streets;
2. Parking on sidewalks or grass; Parking in service or restricted areas;
3. Parking across drive entrances or sidewalk crossings;
4. Parking outside marked spaces;
5. Parking in fire hydrant zone;
6. Parking over-length vehicle without permit;
7. Parking in a space for which the vehicle is not permitted;

Any other parking violation(s) as defined by city code or State statutes.

Vehicle Removal

Motor vehicles parking in violation of any of these regulations may be deemed a common nuisance and the nuisance abated by removal or towing away of the vehicle. The cost of abating, towing and impounding shall be the responsibility of the owner of the vehicle.

A fee of $25.00 shall be charged for all Washburn Tech tickets issued for parking violations (except for accessible parking violations.) Such fees are due and payable to the Washburn Tech Cashier (Building A, Room AW137) during business hours. Fees are due within five (5) business days following the date the ticket was issued.

If the fees are not paid, a late payment fee of $10.00 shall be assessed on the sixth day following the date of issuance of the ticket. Students, instructors, and staff are all subject to these fee and late fees.

Failure to Pay

Students with unpaid fees and/or late payment fees shall have a hold placed on their transcripts and re-enrollment until fees are paid in full.

Hearings

A person who wants to contest the issuance of a Washburn Tech ticket issued to him/her for parking violations may obtain a hearing in accordance with the following procedures:

1. A verbal complaint regarding a specific ticket issuance shall be made to the Associate Dean of Student Life within five (5) business days of the issuance of the ticket. The Associate Dean has five (5) business days to gather information and respond to the complaint.
2. If the individual is not satisfied with the disposition of the complaint regarding a specific ticket, the individual may then submit, in writing, their reason for a review request to the Director of Campus Police within five (5) business days after receiving the first response. A hearing will then be scheduled by the Parking Ticket Review Board that will consist of two students, two instructors or staff members, and the University Chief of Police. The decision of the Parking Ticket Review Board shall be final.

Visitors to Campus

A visitor is defined as an individual who is not a student, faculty, or staff member of Washburn Tech. Visitors ticketed on campus for parking violations may be excused for such parking violations by taking or mailing the Washburn Tech Parking Violation Notice, with proper identification, to the Associate Dean of Student Life on the Tech campuses.

Students

Students are defined as those individuals who are currently enrolled at Washburn Tech or were enrolled for the preceding regular or summer term and have not graduated. Any individual having evidence showing that they will not be a Tech student for the current or next term will be considered a **visitor**.

Vehicles and Pedestrians

Vehicles shall yield to all pedestrians.

Vehicle Speed Limits

All vehicles are to be driven prudently and not in excess of 15 mph on the streets and roads of the Washburn Tech campuses.

Accidents, Reporting of

All accidents, including motor vehicles, occurring on the Washburn Tech campuses should be reported to the Police Officer on duty. The Topeka Police Department also has jurisdiction to investigate all accidents occurring in the City of Topeka.

Emergency Preparation

To prepare students and staff in the event of an emergency, fire drills and tornado drills may be held throughout the year on a regular basis. When the alarms sound, all students should immediately cease working and exit the classroom or shop area in the manner designated by their instructor. Maps designating the appropriate exit routes are posted in, or adjacent to, all classrooms on campus. Failure to comply with emergency protocols may result in disciplinary action.

iAlert

Washburn University has implemented iAlert, a mass message emergency notification system which significantly enhances our ability to maintain a safe academic environment for students, faculty and staff. Participation in the iAlert system is voluntary. It is the responsibility of the student to register for the free service and to keep the contact information up to date. For complete information on iAlert and details on how to register, go to washburn.edu/iAlert (https://www.washburn.edu/student-life/services/ialert/) or call (785) 670-1154.

Campus Tobacco Policy

The word “tobacco” is all-inclusive and refers to smoking, smokeless tobacco and electronic devices that simulate smoking. The use of tobacco products on Washburn Tech property is limited to the designated outdoor areas. The areas are designated by a green barrel with bright orange painted rings; the guidelines related to tobacco use are posted on or adjacent to the barrels. Smoking is permitted within 6-8 feet of the barrel. The use of tobacco products is prohibited except in the designated areas.

Inspection of Property and Equipment

The administrator in charge of the Washburn Institute of Technology campus, or their designee, shall have access at all times to all Washburn Institute of Technology property and equipment located therein. Students, employees of the school, Advisory Board members or other persons authorized to use school property or equipment should not have a reasonable expectation of privacy to school property or equipment used by them, including: vehicles, lockers, desks, tool boxes, and similar property. Such property and equipment is subject to periodic inventory and periodic inspection for maintenance and cleaning purposes and may be thoroughly searched should the administrator, or their designee, determine there are reasonable grounds for suspecting that the intended search will turn up evidence that the student or the employee has violated or is violating the rules of the school. Searches made in conjunction with or made at the request or direction of law enforcement agencies shall require a search warrant or a determination that probable cause and exigent circumstances exist for such a search.

Computers, network hardware (including servers) and software owned or leased by Washburn University/Washburn Institute of Technology are also subject to periodic inventory and inspection for maintenance, replacement, upgrades and/or cleaning purposes. The use of such technology is subject to the policies of the institution, the policies of Washburn University, or State or Federal law.

Falsification of Documents

Falsification of enrollment or program assignments/clinical documentation will result in disciplinary action that may include dismissal from the technical program.

Off-Campus Conduct

Off-campus conduct affects a substantial University interest. A substantial University interest is defined to include:

- Any situation where it appears that the student’s conduct may present a danger or threat to the health or safety of themself or others; and/or
- Any situation that significantly impinges upon the rights, property or achievements of self or others or significantly breaches the peace and/or causes social disorder; and/or
- Any situation that is detrimental to the educational mission and/or interests of Washburn University;

There is no time limit on reporting violations of the *Student Conduct Code;* however, the longer someone waits to report an offense, the harder it becomes for University officials to obtain information and witness statements and to make determinations regarding alleged violations.

Though anonymous complaints are permitted, doing so may limit Washburn University’s ability to investigate and respond to a complaint. Those who are aware of misconduct are encouraged to report it as quickly as possible to the Office of Student Life (785-670-2100) and/or to the Washburn University Police Department (785-670-1153).

A responding student facing an alleged violation of the *Student Conduct Code* will not cause an investigation to be terminated by withdrawing from the University. A responding student who does withdraw will still be given the same notice and opportunity to participate in the investigation as though he/she were still a student at Washburn.

University email is Washburn University’s primary means of communication with students. Students are responsible for all communication delivered to their University email address.

Violations of the Law

Alleged violations of federal, state and local laws may be investigated and addressed under the *Student Conduct Code.* When an offense occurs,

over which Washburn University has jurisdiction, Washburn University's conduct process will usually go forward notwithstanding any criminal complaint that may arise from the same incident. Washburn University reserves the right to exercise its authority of interim suspension upon notification that a student is facing criminal investigation and/or complaint (additional grounds for interim suspension are outlined below). Interim suspensions are imposed until a hearing can be held, typically within two weeks.

Within that time, the suspended student may request an immediate hearing from the Associate Vice President for Student Life to show cause why the interim suspension should be lifted. This hearing may resolve the allegation, or may be held to determine if the interim suspension should be continued. The interim suspension may be continued if a danger to the community is posed and Washburn University is delayed or prevented from conducting its own investigation and resolving the allegation. In such cases, the University will only delay its hearing until such time as it can conduct an internal investigation or obtain sufficient information independently or from law enforcement upon which to proceed.

Standards of Conduct - Student Code of Conduct

Standards of Conduct

Washburn students are responsible for knowing the information, policies and procedures outlined in the Student Code of Conduct. Washburn University reserves the right to make changes to this code as necessary and once those changes are posted online, they are in effect. Students are encouraged to check online www.washburn.edu/knowthecode (https://www.washburn.edu/student-life/services/files/Student_Conduct_Code.pdf) for the updated versions of all policies and procedures.

Tuition, Fees, and Financial Aid

Tuition and Fees

Tuition rates and fees are reviewed and approved by the Washburn University Board of Regents annually. The current tuition and fee structure can be viewed at: https://www.washburntech.edu/admissions/tuition-fees/index.htm (https://www.washburntech.edu/admissions/tuition-fees/)l. All courses and technical programs have related fees. There are four main fee categories:

1. Enrollment – a one time fee that secures a student's enrollment in a program.
2. Transcript – a fee charged for the preparation of a transcript when requested by a student.
3. Materials and Technology – a per credit hour fee that offsets the cost of maintaining a modern technical campus.
4. Course specific fees – fees associated with a specific course, which includes the cost of supplies, materials, and certifications.

All fee information is available in the Student Services Office.

Financial Obligations

Tuition and fees are established by the Washburn University Board of Regents and are subject to change. Once a student has enrolled in classes, he or she is liable for tuition and fee charges unless the student withdraws from all classes during the 100% refund period. For students who have received financial aid, withdrawal from a program could result in that student owing a balance. Students considering withdrawing from a program need to be sure that the financial implications are clearly understood before withdrawing.

Payments

Semester tuition and fees are due by the published due date unless the student has an agency sponsorship authorization on file in the Washburn University Business Office.

Payments may be made using cash, checks, Visa, Master Card, Discover, American Express, or money orders. There is a 3rd party payment plan option for students that wish to spread the cost of the program over the semester. Students must enroll by the published due date in order to enroll in the plan. Payment plans are only for current semester charges. There will be a service charge for all returned items and a late fee for all missed payment plan payments.

Washburn Institute of Technology reserves the right to make adjustments to a student's account as needed, with or without prior notification, to ensure accurate schedules and/or billing.

Delinquent Accounts / Late Fees

Unpaid balances will be subject to additional fees in the form of late charges and may incur collection fees should a collection agency be needed to recover the balance. To avoid late fees, accounts must be paid in full each semester by the published due date. Additionally, a Business Office hold will be placed on the student account; this hold will prevent the release of transcripts and diplomas as well as prevent enrollment in subsequent terms on either Washburn nstitute of Technology or the Washburn University campus.

Withdrawal and Refund Policy

A student who withdraws from a semester in which they are enrolled may be allowed a credit of the institution/supply tuition charge for that semester based on the published refund policy.

Withdrawals (Official)

An official withdrawal occurs when a student notifies the Student Services Office of their intent to withdraw. The official withdrawal date is the actual last date of attendance.

Administrative Withdrawal

Washburn Tech may elect to initiate an administrative withdrawal of a student from all courses for any of the following reasons:

- Student fails to provide documentation required for full admission status.
- Student fails to meet Washburn Tech's standards for Satisfactory Academic Progress.
- Student is absent five consecutive days without notification. The last day of absence will be used as the withdrawal date.
- Student fails to meet the attendance requirements for their program and/or course as outlined in their program handbook and/or course syllabus.
- Student fails to attend the first two days of the semester and does not notify their instructor or the Student Services Office (program or course specific requirements may require 100% attendance; please adhere to program handbooks and/or course syllabus).

If an administrative withdrawal is initiated, written notification is sent to the student. Students have five business days to appeal an administrative withdrawal.

Students are not relieved of their financial obligations to Washburn Tech when an administrative withdrawal is processed.

All charges that are unpaid by students at the time of the administrative withdrawal are due upon notice of the withdrawal. Credits are applied, and, if applicable, refunds are issued in accordance with Washburn Tech's published refund policy.

Institutional Refund Policy

Percentage of Tuition to be refunded for a full-semester length course:

If. . .	Percentage Refunded
withdraws within first 2 days of class	100%
withdraws days 3-5 of classes	80%
If withdraws days 6-10 of classes	60%
If withdraws days 11-15 classes	40%
If withdraws day 16 or after	no refund

The first day a class is scheduled to meet constitutes the beginning of the course when calculating tuition refunds.

The Institutional Refund Policy determines the amount of institutional charges the student has incurred at the time of withdrawal. This calculation is automatically performed for both official and unofficial withdrawals. A request from the student is not required.

Please see Washburn Tech Student Handbook for additional information on refunds.

Refunds may take up to 45 days to process.

If tuition and fees were billed to, and paid by, a third party agency, Washburn Tech will refund any money due to that agency. If tuition and fees were not paid by a third-party agency, refunds will be made to the student, even if the payment(s) was made by someone other than the student.

Institutional Charges, Non-refundable (examples)

Item(s)/Description	Reason Cannot Be Returned
Uniforms, smocks, chef coats, work shirts	Sanitary/Health
Safety glasses, ear plugs, face shields	Sanitary/Health
Personal Protective Equipment (PPE)	Sanitary/Health
Gloves, respirators	Sanitary/Health
Shop supplies, lab materials/ supplies fee	Consumable Item
Online Training - Access Codes or Vouchers	Consumable Item
CDX fee for Auto students online access	Consumable Item
Certification Fees – Includes codes or vouchers	Consumable Item
Cosmetology Kits	Consumable Item
Practical Nursing Kits	Consumable Item
Practical Nursing ATI access fee	Consumable Item
Patches/Name Tags	Consumable Item
Culinary Arts Knife Sets	Consumable Item
Simulation “Sim” Lab fees	Student Specific/Consumable Item
Membership Fees	Student Specific/Consumable Item
Liability Insurance	Student Specific/Consumable Item

Institutional Charges, Refundable

Item(s)/Description	Reason Cannot Be Returned
Tuition	N/A
Materials / Technology Fee	N/A
Tool Usage (Tool Rental) Fee	N/A

Return of Title IV Funds - Financial Aid Recipients Only

The Return of Title IV Funds Policy set forth by the U.S. Department of Education applies to post- secondary students if they received, or were eligible to receive, federal financial aid. Federal financial aid includes Pell Grants and student loans.

The Return of Title IV policy determines the amount of federal funding the institution and/or the student may retain. During the first 60% of the semester, a student “earns” aid in direct proportion to the length of time he or she attended class. A student who withdraws after the 60% point may retain 100% of the federal disbursements. If a refund of federal financial aid is due, the student must generally pay a portion of the refund. If the refund is to the student loan program the student repays the refund in accordance to the terms outlined on the Master Promissory Note (MPN). If the refund is to the Pell Grant program, the student must return the funds to the U.S. Department of Education or make satisfactory repayment arrangements with the U.S. Department of Education. For the student to remain eligible for future financial aid, this must be done within 45 days of receiving notification from Washburn Institute of Technology.

Military Refund Policy

Students serving in the National Guard or Reserves who are called to active duty during an academic term are entitled to receive a full refund of tuition, material fees and refundable fees, if they withdraw or for all classes dropped. Students who are directed to report for active military duty during an academic term shall also be entitled to receive a full refund of tuition. All refunds will be contingent upon presentation of official documentation. Students who volunteer for military service may be subject to the institution’s non-military refund policy.

Medical Withdrawal

Students who are unable to continue their course of study for medical reasons can withdraw from their program and will be refunded tuition based on the above stated policies and refund deadlines.

Refund Due to Death of Student

If a student should pass away during a semester in which the student is enrolled, the student’s estate will be refunded the tuition, material fees and refundable fees based on above stated policies. To initiate this process, the family must contact Student Services.

Federal Financial Aid

There are several federal programs available to help students pay for educational expenses. All students interested in applying for federal financial aid must complete the free application for Federal Student Aid (FAFSA) and meet with the Financial Aid Officer to determine eligibility.

A student is eligible to apply for assistance from the federal financial aid programs if he or she meets the following criteria:

- Is a U.S. citizen or an eligible non-citizen.
- Has a high school diploma or its recognized equivalent.
- Maintains satisfactory progress in their course of study.

Files a Statement of Educational Purpose, a Statement of Selective Service Registration Status and a Certification Statement on Refunds and Defaults with the school.

A student is **not** eligible for federal financial assistance if he or she:

- Is enrolled as a secondary student;
- Is in default on a student loan or owes a refund on a Pell Grant;

- Has borrowed in excess of the annual or aggregate loan limits in the Federal Student Loan program.
- Reaches the “lifetime Pell eligibility limit”

Courses not leading to a certificate or an Associate’s Degree at Washburn Tech are not eligible for federal financial aid.

Continuing Education courses are not eligible for any federal financial aid programs.

Federal PELL Grant

The Pell Grant program provides grants to help undergraduate students with financial need to meet the cost of their post-secondary education. A student is not eligible for a Pell Grant if he/she has received a bachelor’s degree. Unlike a loan, a grant typically does not need to be repaid. Eligibility is determined by using the following factors:

- The Expected Family Contribution (EFC) provided by the U.S. Department of Education after submitting a FAFSA,
- Enrollment status,
- Cost of attendance.

Pell Grant funds are credited to a student’s account to pay for institutional charges at Washburn Tech. Any remaining proceeds are paid directly to the student to be used for other related educational expenses.

Federal Work Study (FWS)

Federal Work Study (FWS) is a need-based program that provides undergraduate students the opportunity to apply for jobs that allow them to earn money to pay educational expenses. To be considered for FWS funding, a student must submit a completed FWS application to the Financial Aid Office. Contact the Financial Aid Office to obtain job descriptions for all FWS positions and to determine eligibility.

Direct Loan Program (DL)

The three types of loans available under the DL program are Subsidized, Unsubsidized, and Parent loans for undergraduate students (PLUS).

The Subsidized and Unsubsidized loan programs are available to both dependent and independent students. Eligibility for the Subsidized Stafford loan is based on financial need while eligibility for the unsubsidized loan is not based on financial need. If a student’s financial need is not great enough, he/she may not be eligible for the entire amount of the Subsidized Stafford loan. In this situation the amount not received in the Subsidized Stafford loan may be received in the Unsubsidized Stafford loan program.

The maximum amount a dependent student can borrow per academic year (1 program) is $5,500, no more than $3,500 from the subsidized loan program. If a parent applies for a PLUS loan on behalf of their dependent student and is denied, the student may apply for an additional $4,000 from the unsubsidized program. The maximum amount an independent student can borrow per academic year (1 program) is $9,500, no more than $3,500 from the subsidized loan program. Under the Subsidized loan program, the government pays the interest due until the student enters repayment, six months after ceasing at least half- time enrollment. Under the Unsubsidized loan program, the student is responsible for interest that accrues from the date of the first disbursement.

Federal PLUS Loans are available to parents and/or step-parents, with a good credit history, to help pay for the education of a dependent undergraduate student who is enrolled at least half-time. Parents may borrow up to the total cost of attendance less any student aid received.

Loan funds are disbursed in two equal amounts after all requirements have been completed. If a student is enrolled in only one semester per academic year, the second half of the loan disbursement is available after completing the first half of the semester.

Repayment

Subsidized and Unsubsidized loan repayment begins six months after the student ceases to be enrolled at least half-time. PLUS loan repayment begins 60 days after the date of the second disbursement, or the parent may request delayed repayment.

Origination Fee

The federal government deducts loan fees from each of these loans.
Subsidized and Unsubsidized – 1.057%
PLUS – 4.228%

Credit Balances – Refund Checks

If a student account has a credit balance as a result of excess financial aid, a refund will be generated, except in the case of non-refundable payments, such as from a third party. The preferred method of refunding excess financial aid to the student is via direct deposit to a checking or savings account, (which the student sets up in WU-View, Electronic Refunds). Refund checks that are issued are available in the Cashier’s Office at Washburn Tech.

Subsidized and Unsubsidized – the refund check is issued to the student
PLUS - the check is issued to the parent who applied for the loan unless otherwise indicated on the PLUS application or a signed authorization from the parent requests the balance to be issued to the student.

Scholarships

Washburn Tech distributes scholarship opportunities to students as they become available. Each scholarship has specific criteria of eligibility and specific deadlines for application. Most scholarships are available for application between January and May for the upcoming fall or spring semesters.

Scholarship opportunities can be found on the Washburn Tech webpage and in the Student Services Office at Washburn Tech. Status updates are also added to the Washburn Tech Facebook page as new opportunities become available.

Other Sources of Financial Assistance

Many organizations and agencies provide financial assistance to students. These include but are not limited to: Kansas Dept. for Children and Families, Heartland Works, Jones foundation, Vocational Rehabilitation, and the Veterans Administration. Veterans may wish to contact the Regional Office of the VA for assistance at 1-800-827-1000. Information on any of these agencies can be obtained from the Washburn Tech Financial Aid Office.

Satisfactory Academic Progress (SAP)

Please see the section of this Academic Catalog titled "Satisfactory Academic Progress" for complete information on Washburn Tech's SAP policy

Satisfactory Academic Progress

Federal Guidelines

Federal regulations require that financial aid recipients maintain Satisfactory Academic Progress (SAP) in order to remain eligible for Title IV Federal Financial Aid. Title IV financial aid includes Federal Pell Grant, Federal College Work Study, Federal Stafford Loan (subsidized and unsubsidized), and Parent Loans for Undergraduate Students (PLUS). SAP standards may also be required for some alternative/private loans.

Washburn Institute of Technology reviews the following items at the end of each semester for all students who received federal financial aid:

1. Qualitative Measure: Cumulative Grade Point Average: 2.0 (required for all students)
2. Program Pace:
   All financial aid recipients must maintain pace of completion of 67% or greater. A student's pace is calculated as cumulative credit hours successfully completed divided by cumulative credit hours attempted/number of enrolled credit hours. (Successfully completed is defined as a "C" or better). For example, if a student enrolls in, and attempts, 24 credit hours and successfully completes/earns, 20 credit hours, pace is 83% (20/24) and the student would meet the pace requirement. On the other hand, if a student enrolls in, and attempts, 24 credit hours and successfully completes/earns, 15 credit hours, pace is 63% (15/24) and the student would not have met pace.
3. Maximum Time Frame for Program Completion:
   The maximum number of credit hours for which a student is eligible to receive financial aid cannot exceed 150% of the published length of the program. For example, if the published length of an academic program is 48 credit hours, the maximum number of credit hours must not exceed 72 credit hours, 48*1.5 = 72. Students are required to meet with an advisor to discuss an academic completion plan if and when they reach 100% and have not met graduation requirements.

Financial Aid Warning: If a student falls below any of the SAP standards at the end of the semester, they are automatically placed on warning for the next semester they attend. Students may remain eligible for financial aid during the warning semester.

Financial Aid Suspension/Cancellation: Students who falls below any of the SAP standards at the end of a warning semester, or at the end of any future semester, the student is placed on financial aid suspension and not eligible for financial aid unless a student completes the appeal process and is approved to be placed on probation.

A student is not automatically eligible for financial aid upon re-enrolling in a program. A student must take-action to earn a satisfactory SAP status before eligibility for financial aid can be regained.

Adding and Withdrawing Classes

Courses in which students receive a grade of incomplete "I", withdrawn "W", or failing "F", are not considered as completed hours for SAP purposes. However, an incomplete that becomes a satisfactory grade is counted in the cumulative GPA and as hours completed for SAP standards. Incompletes must be completed within the time frame approved by the instructor and the Assistant Dean & Director of Student Services.

Repeating Courses

If a student repeats any portion of a program, the most recent grade, not necessarily the best grade, is used when determining the qualitative and quantitative measures. However, all attempts are included when calculating pace and maximum time frame and all attempts remain on the transcript.

Credit/No Credit Options

Credit/No Credit classes are accepted as enrolled hours for SAP purposes. These classes always count as credit hours attempted when measuring SAP standards. If a student receives credit, the credit hours are included in the number of credit hours successfully completed. If a student receives no credit, the credit hours are not included in the number of credit hours successfully completed. Since there is no letter grade assigned for these classes, they are not included when calculating the cumulative grade point average.

Transferring Credits

Credits transferred to Washburn Tech from a previous institution are included when determining SAP.

Changing Programs

All grades earned at Washburn Tech are included in the SAP calculation. This is true even if a student changes programs.

Appeal Process

Appeals are accepted through the end of the 5th day of the subsequent semester.

Before students may appeal for reinstatement of financial aid eligibility, a Free Application for Federal Student Aid (FAFSA) must be on file for the semester funds are being requested.

Students who wish to appeal for reinstatement of enrollment must provide a written appeal to the Washburn Tech Financial Aid Office. Appeal forms are available in the Student Services Office. Written appeals must be supported with appropriate documentation. The SAP Appeal Committee reviews all appeals. The student will be notified in writing of the decision within ten days of receiving the appeal. This decision is final. If the appeal is approved financial aid may be reinstated.

Students who appeal because the maximum number of credit hours attempted was reached are required to meet with an advisor to review and revise their academic completion plan. The plan describes how the student intends to complete the program on a course-by-course or semester-by-semester basis.

However, reviewing the academic completion plan does not automatically reinstate financial aid eligibility. Students are required to follow the academic completion plan for each remaining semester to reach the graduation requirements successfully.

Return of Title IV Funds – Withdrawal from Classes

The Return of Title IV Funds Policy set forth by the U.S. Department of Education applies to post- secondary students if they received, or were eligible to receive, federal financial aid. Federal financial aid includes Pell Grants and student loans.

The Institutional Refund Policy determines the amount of institutional charges the student incurred at the time of withdrawal. This calculation is automatically performed for both official and unofficial withdrawals. A request from the student is not required. The Return of Title IV policy

determines the amount of federal funding the institution and/or the student may retain. During the first 60% of the semester, a student “earns” aid in direct proportion to the length of time he or she attended class. A student who withdrawals after the 60% point may retain 100% of the federal disbursements.

If a refund of federal financial aid is due, the student must generally pay a portion of the refund. If the refund is to the student loan program, the student repays the refund in accordance to the terms outlined on the Master Promissory Note (MPN). If the refund is to the Pell Grant program, the student must return the funds to the U.S. Department of Education or make satisfactory repayment arrangements with the U.S. Department of Education. For the student to remain eligible for future financial aid, this must be done within 45 days of receiving notification from Washburn Tech.

Other Academic Programs

Continuing Education

Continuing Education coordinates and supports programs designed to increase student and community access to "learning for a lifetime." These include training sessions for both on- and off-campus, summer sessions, professional development programs, and business and industry training.

Continuing Education courses are offered during days, evening and weekend hours. Students enrolling in these courses can continue their education, improve occupational knowledge and skills, study for personal enrichment, or pursue technical interests.

In addition to offering a broad range of courses which may lead to certificates, Washburn Institute of Technology recognizes the responsibility to develop other instructional programs in areas where community needs are identified and Washburn Institute of Technology has resources to respond to those needs including noncredit programs offered by Continuing Education.

Continuing Education course listings and schedules are available online at www.washburntech.edu/main/continuing- education/courses.html (https://www.washburntech.edu/business-community/continuing-education.html). The webpage is interactive and includes course descriptions and other information.

Continuing Education also offers custom training sessions to companies or groups requiring the same type of training. This training is often offered at a significant price saving to the individuals or companies.

Washburn Institute of Technology Continuing Education Department has partnered with Ed2Go Corporation for online training at an affordable price. If you would prefer to attend an online training session go to http://www.ed2go.com/washburn/ and make your selection.

Summer Session

As Washburn University Institute of Technology continues to broaden the scope of its educational activities, the technical training needs of an increasing number of students extends into the summer months. The Washburn Institute of Technology Summer Session includes day and evening classes, special summer institutes, and online courses.

Business and Industry Customized Training

The Washburn Institute of Technology, Business and Industry area's main focus is to build relationships with established and new local businesses and industry as well as with potential business and industry clients, creating workable training solutions to meet their production or employees' needs. This is accomplished by working together to develop an inventory of training programs to meet each company's training requirements. These training programs have the ability to be modified to meet the numerous changes in today's fast-paced technologies, using each company's current resources. Tech's Business and Industry area strives to create a training schedule in a manner designed to keep costs down and time away from the employee's work duties to a minimum.

The Business and Industry area also works with various government agencies, pursuing avenues to ensure the continued growth of our workforce and designed to aid initiatives to attract new businesses to our region. The Business and Industry area strives to be a consistent and reliable force in the growth, development and improvement of the workforce through collaboration with businesses, industry and government agencies.

Academic Policies

Attendance, Absences and Tardiness

Students are expected to attend classes every day to receive the maximum benefit from their instructional program. Washburn Tech realizes that, due to circumstances beyond the student's control (i.e., illness, a death in the family); daily attendance is not always possible. Absences and tardiness are recorded each day, regardless of the reason. For purposes of taking attendance, there is no excused or unexcused absence or tardy. Each program applies its own system, explained in each program syllabus, which may factor absences and tardiness into the student's daily and/or final grade and maintaining enrolled status in the program. Students are advised to visit with instructors regarding the grading and attendance systems used by the program in which the student is enrolled. Some programs require 100% attendance.

For high school students, if your home high school is closed for weather reasons, you are excused from attending classes at Washburn Tech. However, if your home high school is closed for holidays/breaks, professional development, parent teacher conferences, or the like, you are expected to attend class at Washburn Tech on the days that we are open and the high school is closed. For weather-related closings, home schooled students will be excused on days that the district in which they reside is closed.

An instructor, after due notice to the student, may request withdrawal of the student from a program because of nonattendance through the same date as the last day a student may withdraw for a program. This would **not** absolve the student of financial responsibility for tuition/fees for the program.

Adding, Withdrawing, and Changes to Classes

Adding Classes

Because Washburn Tech utilizes block scheduling, there are not often opportunities to add additional courses outside of one prescribed semester block of classes. However, the opportunity to add an additional course outside of one's prescribed block may sometimes be an option.

Students interested in adding an additional class should talk with their Academic Advisor located in the Student Services Office.

Incompletes

Courses in which students receive a grade of incomplete "I", withdrawn "W", do not necessarily affect a student's Academic Standing. However a grade of "F" (failing), will negatively impact the student's Academic Standing and potentially the student's eligibility for financial aid, according to the financial aid SAP policy. Grades of incomplete "I" or "W" are not calculated into the student's term or cumulative GPA.

However, an incomplete that becomes a letter grade ("A" through "F") is counted in the cumulative GPA and as hours completed for Academic Standing and SAP standards. Incomplete grades must be completed within the time frame approved by the instructor and the Assistant Dean of Instruction.

Students have no longer than the end of the next term (excluding summer) to make up an incomplete grade. If there are special circumstances involved that resulted in prolonged absences, additional time for make-up may be allowed. Any incomplete must be cleared with the instructor and the Assistant Dean of Instruction. Instructors have the right to set a shorter time frame to make up an incomplete grade.

Withdrawals - Individual Course and Term

Students seeking to withdraw from a course, or courses must contact their Academic Advisor. The withdrawal is not official until processed by registrar staff.

A student may voluntarily withdraw from the ***technical education program*** by submitting a written request to their Academic Advisor (including student's full name, WIN number, and program).

If a withdrawal occurs once the refund period has expired, no refund will be allowed upon withdrawal from either the semester or program. The withdrawal appears on the transcript with a "W."

The deadline for withdrawing from the semester is Friday of the 12th week of the semester. After that deadline, the student may not withdraw, and the instructor will report the grade earned by the student at the end of the semester.

More information on withdrawals can be found in the Tuition, Fees, and Financial Aid section of this catalog.

Repeating Courses

If a student repeats any portion of a program, the most recent grade, not necessarily the best grade, is used to determine the qualitative and quantitative measures. However, all attempts are included when calculating pace and maximum time frame and all attempts remain on the transcript.

Credit/No Credit Options

Credit/No Credit classes are accepted as enrolled hours for Academic Standing and Financial Aid SAP purposes. These classes always count as credit hours attempted when measuring Academic Standing and Financial Aid SAP standards. If a student receives credit, the credit hours are included in the number of credit hours successfully completed. If a student receives no credit, the credit hours are not included in the number of credit hours successfully completed. Since there is no letter grade

assigned for these classes, they are not included when calculating the cumulative grade point average.

Transferring Credits

Credits transferred to Washburn Tech from a previous institution that are accepted and meet Washburn Tech graduation requirements are included when determining Academic Standing and Financial Aid SAP.

Students who wish to transfer credits to Washburn Tech from another institution should notify the Student Records Administrator in the registrar area of the Student Services Office of the request. Acceptance of credits earned at the previous institution is based upon many factors including the previous coursework; the duration and attendance of coursework taken, competencies attained, and other criteria. When credit for previous course work is granted, the academic record of such work is included in determining SAP at Washburn Tech. Decisions regarding the acceptance of transfer credits rests with the Assistant Dean for Instruction.

Credit Granted for Military Service

(See Admission, Registration and Enrollment Section)

Changing Programs

Upon Admission into Washburn Tech, a student is enrolled into one technical education program. If the student wishes to change programs prior to completing a program, the student must contact their Academic Advisor, who will help determine if they meet program requirements for the new program.

- If the student is in good academic standing, they meet the minimum test scores required for the new program, and if there is a seat available in the new program, the program change may be approved.
- If the student is not in good academic standing, the Assistant Dean of Instruction may deny the program change.
- If there is no space available in the new program, the Assistant Dean of Instruction may approve the program change for a future semester.
- If the new program involves a selection process (i.e. in healthcare programs) the student must go through the required processes to be accepted into that program.

All grades earned at Washburn Tech are included in the Academic Standing and SAP calculations. This is true even if a student changes programs.

Academic Standing

Academic Standing refers to a student's grade point average, and determines whether students are eligible for positive results such as scholarships and graduation or negative consequences such as academic probation and academic suspension.

Washburn Tech Academic Probation and Reinstatement Policy

Good Standing:

A student who has a cumulative GPA or 2.0 or higher shall be considered in Good Standing.

Academic Probation:

An undergraduate student who does not achieve a 2.0 GPA for the semester and does not obtain a cumulative Washburn Tech GPA of 2.0 will be placed on Academic Probation for the next semester they attend. If there is a gap in attendance between a student being placed on Academic Probation, and returning to Tech, the status of Academic Probation will stand from the last semester of attendance. A student on Academic Probation may remain eligible for federal financial aid. The Financial Aid Office calculates Satisfactory Academic Progress (SAP) separate from Academic Standing. A student who earns a 2.0 GPA for the semester but does not have a 2.0 cumulative GPA will remain on Academic Probation.

Students who are placed on probation rather than being suspended by the Student Services Office are subject to any of or all of the following:

- Semester course registration revisions to promote success
- Mid-term grade checks and class attendance checks
- Counseling and possible required follow-up meeting with your Academic Advisor
- High School students: Your high school is notified of your status and may take further action.
- Academic coaching meetings

Students who remain on Academic Probation after one term and are failing to make satisfactory progress toward a certificate can face Academic Suspension.

Students who return to Academic Probation after being on Good Standing may also face Academic Suspension.

Academic Suspension:

Students who remain on Academic Probation after one term and are failing to make satisfactory progress toward a certificate may face Academic Suspension. A student with a current status of Academic Probation who does not have a semester 2.0 GPA, or a cumulative 2.0 GPA may be placed on Academic Suspension.

A grade of incomplete will not affect the GPA for the semester in which it is received. The awarded grade will affect the GPA for the subsequent semester.

Students placed on suspension may be subject to the following:

- Academic Suspension requires that a student sit out for at least one semester.*

*The summer session does not count as a full semester.

Students who face Academic Suspension may complete an appeal for reinstatement form through the Student Services Office. The Academic Probation and Reinstatement committee will review the appeal and the Associate Dean of Student Life will notify students as to the results of the appeal.

Appeal for Reconsideration of Suspension:

- Students whose GPA falls below that level may request reconsideration if there were extenuating circumstances beyond their control which prevented them from attaining the required academic standards.
- If any appeals for reconsideration of suspension are received, a meeting of the Academic Probation and Reinstatement committee will be convened to hear those appeals.

    - In order to appeal a suspension, the student must complete an Appeal for Reconsideration of Academic Suspension form two (2) weeks prior to the beginning of the semester/session in which the student wants to enroll.
    - The student will need to have a plan for how they will succeed academically going forward.
- The student is strongly encouraged to contact the Student Services Office to talk with an advisor PRIOR to submitting an Appeal for Reconsideration of Academic Suspension form.
- After a student has come off of Academic Suspension, they will remain on Academic Probation until their cumulative GPA reaches a 2.0 or higher.
- After a student has been suspended and reinstated multiple times, automatic reinstatement after sitting out a semester is no longer an option. Instead, a student must have an interview with the Academic Probation and Reinstatement committee.

A student returns to Good Academic Standing when their cumulative GPA reaches a 2.0 or higher.

Prerequisite Courses

A prerequisite is generally a course or other requirement that a student must complete prior to enrolling in the next course within the program. Prerequisites are used at most educational levels to measure a student's comprehension and preparedness in the discipline. The term "Gatekeeper" is sometimes used interchangeably with prerequisites; however, the term is more commonly used when referencing the successful completion of a developmental course prior to enrolling in the first non-developmental course that counts toward the degree program.

A student who fails a course prerequisite will need to complete the failed course before progressing to the next course in the program. The student can continue to take courses in the program only if:

- the courses do not require the failed prerequisite,
- the student receives approval from the failed course instructor, and
- the student receives approval from the Associate Dean of Technical Instruction.

A student who is removed from the program may apply for re-entry in the program or a different program with a written request to the Assistant Dean of Instruction, a detailed justification for re-entry, and strategies and goals for success.

Graduation Requirements

Students seeking to graduate from a technical education program must be in good academic standing (maintain a 2.0 grade point average or higher) and complete all courses with a C or better. Washburn Tech conducts two graduation ceremonies per year: one in December and one in May.

Test Out Policy

(See Admission, Registration and Enrollment Section (p. 9))

Credit Hour Definition

The Kansas Board of Regents has defined the term "credit hour" for lecture, lab, and other types of instruction as follows:

- LECTURE class - Each institution shall record one semester hour of credit for any student attending a lecture class, if the student has made satisfactory progress in the class and that class consists of at least 750 minutes of class instruction, plus time allocated for a final exam.
- LAB class - Each institution shall record one semester hour of credit for any student attending a lab class, if the student has made satisfactory progress in the class and that class consists of at least 1125 minutes of class instruction, plus time allocated for a final exam.
- OJT, CLINICAL, INTERNSHIP experience - Each institution shall record one semester hour of credit for any student attending on-the-job training, clinical, or internship experiences, if the student has made satisfactory progress in the class and that class consists of at least 2700 minutes of class instruction, plus time allocated for a final exam.
- DISTANCE LEARNING – The number of semester hours of credit recorded for each distance education course shall be assigned by the institution that provided the course, based on the amount of time needed to achieve the course competencies in a face-to-face format.

(Authorized by K.S.A. 72-7514, 74-32,140, and K.S.A. 2014 Supp. 74-32,141; implementing K.S.A. 2014 Supp. 71-601, K.S.A. 71-801, 74-32,140, and K.S.A. 2014 Supp. 74-32,141; effective Oct. 29, 2004; amended April 10, 2015)

Grades and Grading

Grades are issued by instructors four times per year, twice per semester. The following definition of letter grades will prevail:

Grade	Description
A	Excellent
B	Well Above Average
C	Average
CR	Credit Only (Practical Nursing and Surgical Technology Clinical Only)
D	Below Average
F	Failure
I	Incomplete
NC	No Credit (Practical Nursing and Surgical Technology Clinical Only)
W	Withdrawn

A grade of "I" or incomplete means that the student has not completed all the requirements of the course. Please see the section "Incompletes, Withdrawal, and Failures" listed above for more information.

Each ***course*** syllabus describes what kind of work will be graded in the course (i.e. quizzes, projects, exams, assignments, etc.) and the weight that each category of work contributes to the final grade. For example:

25% = Final Project
20% = Lab Project
20% = Quizzes
20% = Assignments
15% = Attendance/Participation

Students doing unsatisfactory work or failing will be notified by the instructor and a progress report will be completed. Instructors and/or Washburn Tech advisors will meet with those students to assist them in

making adjustments to the school/technical program or in changing their vocational objective. Each program establishes its own grading scale and guidelines regarding satisfactory progress within the program.

Grade Dispute

If students have questions about final grades assigned, they need to first address their concerns with the instructor within five school days after receiving official documentation of the grade(s). If the concern is not resolved at that level, students need to follow the grievance procedure outlined below.

Grievance Procedure

A student who has an academic or non-academic concern or complaint needs to follow these steps to address and resolve the issue:

1. The student shall first bring the issue informally to the attention of their program instructor within five business days after the concern was raised. Every effort must be made to resolve the concern at this level.
2. If, after every effort has been made to resolve the concern with the instructor, the student is not satisfied, the student may present a written grievance to the Associate Dean of Student Life within 30 days after the incident/issue that raised concern. The Associate Dean of Student Life will investigate the matter and render their decision within ten business days after receiving the written grievance. A written notice of the decision will be emailed to the student.
3. If the student wants to appeal the decision of the Associate Dean of Student Life, they must file a written appeal within five business days to the Dean of Washburn Tech. The Dean will render a decision on the grievance within five business days of the filing. A written notice of the decision will be emailed to the student.
4. The decision of the Dean will be final.

Note: Health Occupations students with issues or concerns not resolved at the classroom level, will take those issues/concerns to the Assistant Dean of Health Occupations before coming to the Associate Dean of Student Life.

Note: If the appeal is regarding dismissal from a program, the student may remain in class during the appeal process unless the student poses a risk to self or others.*

* Specific Programs may have different requirements on the ability to remain in class. Please refer to your program handbook for guidance.

Safety Practrices

Safety is a priority in every classroom, shop, and laboratory setting. All instructors provide information and demonstrations regarding safe practices in their program. Students must always adhere strictly to these practices. Students must pass a safety assessment prior to gaining access to labs and shops associated with their technical program. Instructors make safety practices an important part of their instructional procedures as well as their grading system. ***Lack of following established safety practices may result in program removal.***

Eye Protection

Many programs require the wearing of approved eye protection. Instructors will advise on the type of protection needed and the student is responsible for purchasing the required eye protection. ***Non-compliance with shop safety standards is a violation of the Student Code of Conduct.***

Medical Emergencies and Accidents

When injuries or accidents occur, students must notify the instructor immediately. All technical programs maintain first aid kits. If further assistance is required, students are referred to Student Health Services on the Washburn campus or a hospital emergency room. If the incident requires more immediate attention, a call will be placed to 911 requesting assistance. A*ny transportation costs associated with an ambulance will be at the expense of the student.* **No Washburn Tech staff will transport individuals with a medical emergency to the hospital**.

Dress Code

The appropriate and acceptable dress in each program will be determined by the program instructor. WIT places strong emphasis on work-ready appearance and grooming.

Leaving Buildings or Premises During Class Time

The staff at WIT has a responsibility to parents/guardians and participating high schools for the safety of all students. If students need to leave campus during their regularly scheduled class hours, they must check out with their instructor. Written parental permission must be on file with the classroom instructor and Student Services before high school students will be permitted to participate in field trips.

Personal Electronic Devices

The use of cell phones and other electronic devices is at the discretion of the instructor. WIT is NOT responsible for the theft of cell phones, other electronic devices, and related items.

Computer Ethics

Computers and the internet at WIT support education and research at the institution. For students to benefit from these resources, standards of use have been established as described below. Transmission of any material in violation of any U.S./State regulation or school policy regarding computer/internet use is prohibited. This includes but is not limited to copyright material protected by secret trade. **The use of Washburn Tech's computers and the internet is a privilege, not a right. Inappropriate use will result in loss of the privilege and possible disciplinary action including removal from the program/Washburn Tech.**

Authorized Academic Load

The maximum number of credit hours permitted for technical students is 26 credit hours per semester. Students who are taking courses on both the University campus and the technical campus are limited to 20 credit hours. Correspondence, extension, online, and evening courses taken concurrently are counted as a part of the total load. For summer sessions, the maximum number of hours permitted on the technical campus is 12. Superior students may petition the Assistant Dean for your particular program permission to enroll in more credits hours in a given semester. Superior students are students with a GPA greater than 3.0.

Washburn Tech students enroll into programs, which consist of a series of block-scheduled courses. Students may be part-time or full-time, and attend part-day or full-day. The academic load varies based on this enrollment status.

1.a. Part-day students may carry an academic load of 1-17 credit hours per semester, while full-day students may carry an academic load of 18-26 credit hours per semester, depending on their program of study.

1.b. Exceptions to this policy will only be granted by the Dean of the college. To obtain an exception, the student must submit a request in writing to the Dean (include student's full name, WIN number, and name of program) at least four weeks prior to the beginning of the next semester, so that a decision can be made prior to the first day of the semester.

Administrative Withdrawal

(See Tuition, Fees and Financial Aid Section (p. 17))

Transcripts

A transcript is an official copy of a student's permanent academic record. Official transcripts are available from the Washburn Tech Student Services Office. Each transcript costs $8.00. A Transcript Request form must be completed and the fee must be paid in advance. A transcript request will not be processed for students who have financial or other obligations to Washburn Tech or the University. Because a transcript contains confidential information, it cannot be released to anyone without the written request from the student. Any individual acting on behalf of the student with regard to requesting a transcript must have written authorization from the student and will be required to show photo identification. Students who are pursuing their education at Washburn University do not need to request a transcript as the information is available through the Student Information System shared by both campuses.

You may conveniently request your Washburn Tech transcript online through the National Student Clearinghouse system from the University Registrar's Office home page at the following link: https://www.washburn.edu/student-life/policies-forms/forms/transcript-request.html.

The National Student Clearinghouse transcript secure ordering system directs you through placing your order, including the delivery options and fees. You may request that your transcript be a paper, official mailed version or an electronic, official pdf transcript to be transmitted. Order updates are sent to you via email and text messages. You can also track your transcript order online and pay for your transcript with a major credit or debit card.Transcripts may be requested in person upon showing some form of photo identification at Washburn Tech' Student Services Office. Any transcript mailed, or faxed to, or picked up by the student will be marked "Issued to Student."

Transcripts may be requested in person upon showing some form of photo identification at Washburn Tech' Student Services Office. Any transcript mailed, or faxed to, or picked up by the student will be marked "Issued to Student."

The Transcript Request form may be obtained by printing it after accessing the Washburn Tech website: https://washburntech.edu/admissions/registrar.html. The Transcript Request form may be returned to the Washburn Tech Student Services Office by email to tech-transcripts@washburn.edu, mail, fax, or in person.

Current students may view their academic records via the web through their my.washburn.edu (http://my.washburn.edu) account.

Family Educational Rights and Privacy Act (FERPA)

Policy, Procedure, and Records

Washburn University maintains various student records to document academic work and to record interactions with University staff and officials. The Family Educational Rights and Privacy Act of 1974 (FERPA) was enacted to protect each student's right to privacy and to provide each student the right to inspect and review his/her education records. This Act is also commonly known as the Buckley Amendment. A notice of this policy is published each semester/term in the Registration Information Guide and by email each semester to all students. For purposes of FERPA, "student" is defined as an individual who is or has been in attendance at Washburn University. At the University, an individual is considered "in attendance" on the day classes begin of the term a student is first enrolled.

Directory Information

In accordance with the Family Educational Rights and Privacy Act of 1974 (FERPA), the University may release to the general public certain information about the student which has been identified by the institution as directory information. The following items are considered directory information at Washburn University: student's name, photo, current address and phone number, permanent address and phone number, university assigned e-mail address, classification status (i.e. freshman, sophomore, etc.), major field of study, dates of attendance, honors and awards received, degrees and certificates received and dates awarded, enrollment level and status (full-time, half-time, less than half-time, undergraduate or graduate), most recent educational institution attended, participation in officially recognized activities and sports and height and weight of members of athletic teams.

Students may "opt out" of the disclosure of directory information by completing a form in the Student Services Office. If a student "opts out", the University will not disclose directory information without the student's written consent. The "opt out" will remain in effect until the student submits a written revocation.

Types, Custodians and Locations of Education Records

With the exception of Directory Information as described above, student records are considered to be confidential. Only the custodians of the records, their designee, or their director/dean/vice president to whom that person reports has the authority to release the record. The following is a list of the types of records that the University maintains, their custodians, and their locations.

1. (Official) Academic Records: University Registrar, Morgan Hall 102B
2. Academic Records: Deans of Schools/College and/or Departmental Offices, Specific Locations listed in the Campus Directory
3. Academic Impropriety Records: Vice President for Academic Affairs Office, Bradbury Thompson Alumni Center 200
4. Admissions Records: Director of Admissions, Morgan Hall 100
5. Business Records: Bursar, Morgan Hall 103B
6. Career Services: Director of Career Engagement, Plass Learning Resources Center 219
7. Testing and Placement Records: Center for Student Success and Retention, Plass Learning Resources Center 315

8. Financial Aid Records: Director of Financial Aid, Morgan Hall 103K
9. International Student Records: Plass Learning Resources Center 220
10. Medical Records: Director of Student Health Services, Morgan Hall 140
11. Residence Hall Records: Director of Residential Living, Living Learning Center
12. Student Disciplinary Records: Student Life Office, Morgan Hall 240D Traffic and Security Records: Chief of Police, Morgan Hall 135
13. Veteran Records: University Registrar's Office, Morgan Hall

Student Access to Education Records

Students may inspect, review and/or receive copies of their education records upon written request to the appropriate record custodian with the exceptions noted below. The written request submitted to the record custodian or appropriate University staff should identify as precisely as possible the record or records he or she wishes to inspect. The record custodian or appropriate University staff must comply within a reasonable period of time, not to exceed 45 days from the receipt of the request. Copies of records accessible to the student will be provided at the student's expense. The charge to the student for any such records is 25 cents per page.

When a record contains information about more than one student, the student may inspect and review only the records which relate to him or her. If any question arises as to the identity of the requesting student, the student shall be asked to provide photo identification.

Washburn University reserves the right to refuse to permit a student to inspect or have access to the following records:

1. The financial statement of the student's parents.
2. Letters and statements of recommendation for which the student has waived his or her right of access, or which were placed in file before January 1, 1975.
3. Records connected with an application to attend Washburn University or a component unit of Washburn University if that application was denied.
4. Medical and counseling records. These records may be released, however, to other medical or psychological professionals at the written request of the student; and may be inspected by the patient at the discretion of the professional staff.
5. Law enforcement records.
6. Private notes of staff, faculty, and administrators.
7. Official transcripts of credit earned at other institutions which have been presented for admission or evaluation of credit and have become a part of the student's permanent record are not reissued or copies duplicated. Transcripts from other institutions, including the high school transcript and test scores, should be obtained from the original institution.
8. When a student is delinquent in a financial account to the University, has incomplete admission credentials, or about whom official disciplinary action has not been resolved, the appropriate university official may request that the student's record not be released. The effect of this action is that grade reports, transcripts, and diplomas/certificates are not released. In addition to these documents not being released, registration and enrollment at Washburn in subsequent semesters is not permitted.

Disclosure of Education Records or Personally Identifiable Information

The University will obtain written consent from the student before disclosing records or personally identifiable information from education records of the student, except in the cases of:

1. Directory Information, unless a student "opts out," as defined and explained above.
2. School officials who have a legitimate educational interest in the records. A school official is:
   a. A person employed by the University in an administrative, supervisory, academic or research or support staff position.
   b. A person employed by or under contract to the University to perform a special task, such as an attorney or auditor.
   c. A student serving on an official committee, such as disciplinary or grievance committee.
   d. A student employed by the university (through financial aid or departmental/administrative office) who assists another school official in performing his or her tasks.
   e. A person serving on the Board of Regents.
3. A school official has a legitimate educational interest if the need to review an education record is in order to fulfill his or her professional responsibilities for the University.
4. Officials of another school, school system, or institution of postsecondary education where the student seeks or intends to enroll, or where the student is already enrolled as long as the disclosure is for purposes related to the student's enrollment or transfer.
5. Authorized representatives of the Comptroller General of the U.S., Attorney General of the U.S., the Federal Secretary of Education, or state or local education authorities in connection with an audit of federal or state-supported education programs or with the enforcement of or compliance with federal legal requirements relating to those programs.
6. Financial aid personnel in connection with a student's application for or receipt of financial aid as necessary to determine the eligibility, amount, or conditions of the financial aid, or to enforce the terms and conditions of the aid.
7. Organizations conducting certain studies for or on behalf of the University.
8. Accrediting organizations to carry out their functions.
9. Parents of an eligible student who claim the student as a dependent for income tax purposes.
10. Authorities to comply with a judicial order or a lawfully issued subpoena.
11. Appropriate parties in a health or safety emergency if necessary to protect the health or safety of the student or other individuals.
12. The final results of any disciplinary proceeding conducted by the University to the alleged victim of a crime of violence or non-forcible sex offense.
13. To the student him-or herself.
14. To a court in the context of a lawsuit between a student and the institution.
15. To parents of a student under 21 of a drug or alcohol violation.
16. The final results of a disciplinary proceeding against a student whom the University has determined violated an institutional policy of an alleged crime of violence or non-forcible sex offense.

17. Information about sex offenders or other individuals required to register.
18. University Police Personnel shall have access to student class schedules in an emergency situation.
    a. University Police Personnel will attempt to verify the identity of the person requesting information and the emergency situation. The class schedule will not be released to the requesting individual but a police officer will attempt to contact the student directly.
    b. A record of each disclosure request must be made and maintained. The record should include the name and address of the requestor, date and time of request, and the nature of the emergency situation. These records of requests are considered part of the student's educational record.

Notice to Third Parties

The University must inform the parties to whom a student's education record or personally identifiable information is given that they are not permitted to disclose that information to another person (third party) without the written consent of the student and that the information is to be used only for the purpose(s) intended. Persons who receive a student's education record or personally identifiable information about the student may disclose such information to other persons only if the name of the additional persons and the legitimate interest of such persons is provided as a part of the original request.

Maintaining Education Records and Records of Requests and Disclosures

Each office that maintains education records shall adopt its own policy with regard to destruction of education records. No education record, however, may be destroyed if there is an outstanding request to inspect and review the record. Also, the record of requests for the disclosures of the education record and any explanation that are a part of the record must be maintained for as long as the education record to which it pertains is maintained.

Washburn University officials responsible for the various types of records will maintain a record of all requests for disclosure of information from a student's education records. The record will indicate the name of the party making the request, any additional party to whom it may be redisclosed, and the legitimate interest the party had in requesting or obtaining the information. The record of request is open to inspection of the student.

Records of requests and disclosures may not be maintained or may be maintained for only a limited time for:

1. requests made by the student him/herself;
2. requests for which the student has given written consent;
3. requests made by school officials with legitimate education interests;
4. requests for directory information; or
5. disclosures to comply with a judicial order or lawfully issued subpoena.

Student's Right to Challenge Information Contained in Education Records

Students have the right to challenge the content of an education record that they believe inaccurate, misleading, or in violation of their privacy rights. No hearing under this policy shall be granted for challenging the underlying basis for a grade; however, the accuracy of its recording could be challenged. Following are procedures for challenging the content of education records:

A student must ask the appropriate school official to change or modify the record by identifying the part of the record they want changed and specify why the information is inappropriate.

After researching the request, the Washburn University official may comply with the request and make the changes wanted in a reasonable time. If the school official decides not to comply, the student will be notified in writing of the decision and advised of his/her right to a hearing to challenge the information believed to be inappropriate.

All requests for a formal hearing by the student shall be directed to the appropriate Area Head and shall contain a concise written statement of the specific facts constituting the student's claim.

The **hearing will be conducted by a hearing officer** who is a University staff member but who does not have a direct interest in the outcome of the challenge and who shall be appointed by the appropriate Area Head or his/her designee. The hearing shall be held within a reasonable time of receipt of the student's request and the student shall be notified reasonably in advance by the hearing officer of the date, place and time of the hearing.

At the hearing, the student shall be afforded a full and fair opportunity to present evidence relevant to his/her claim and may, at his or her expense, receive assistance from any individuals of his/her choice.

The hearing officer shall make a written recommendation to the appropriate Area Head with written findings of facts concerning the student's request within ten working days of the hearing. The appropriate Area Head or his/her designee shall notify the student in writing of the decision within an additional fourteen working days of receipt of the hearing officer's report. The decision must include a summary of the evidence and the reasons for the decisions.

If the appropriate Area Head is adverse to the student's request, the student will be notified that he/she has a right to place in the record a statement commenting on the challenged information and/or a statement setting forth reasons for disagreeing with the decision.

The statement will be maintained as a part of the student's education records as long as the contested portion is maintained. If Washburn University discloses the contested portion of the record, it must also disclose the student's summary statement.

If the student's challenge to the content of a given record is successful, the University shall amend the education record accordingly and so inform the student in writing.

Complaints

A student who believes the University has not complied with federal law or regulations should check first with the office involved or the Area Head to which it reports. If the student wishes to file a complaint with the federal government concerning the University's failure to comply with the Privacy Act, he/she may send a written complaint to:

The Family Policy Compliance Office
400 Maryland Avenue, S.W.
Washington, D.C. 20202

Questions

Questions regarding FERPA may be directed to:

The University Registrar
102 Morgan Hall
785-670-1074

Programs, Technical Certificates and Graduation Requirements

Certificate Programs

Advanced Systems Technology

The Advanced Systems Technology program prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as pumps, electric motors, conveyor systems, production machinery, robotics and automation. Instruction includes electrical theory, wiring, motor controls, 3-Phase/Single Phase/ DC motors, programmable logic controllers (PLC), hydraulics and pneumatics, mechanical systems, welding, machining, and robotics. Students also learn to read various types of schematic drawings. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: OSHA-10 General Industry

Certificate Requirements

Code	Title	Hours
MAT 102	Technical Math II	3
IND 104	Basic Electricity I	3
IND 105	OSHA - 10 Hr Gen Industry Cert	1
IND 112	Fluid Power I	3
IND 116	Lathe/Mill/Grind for I.M.	3
IND 127	Mechanical Systems	3
IND 146	Industrial Welding Basics	3
IND 147	Mechanical Systems Reliability	3
IND 152	Electrical Control Systems I	3
IND 204	Electrical Control Systems II	3
IND 207	Fluid Power II	2
IND 213	Advanced ECS	3
IND 217	Indust Prog Logic Controllers	3
IND 223	Commercial & Industrial Wiring	3
IND 247	Industrial Process Control	3
IND 252	Robotics I	3
IND 256	Robotics II	3
Total Hours		**48**

Automotive Collision & Refinishing Technology

The Automotive Collision & Refinishing Technology program provides highly-qualified employees for entry-level positions in all areas of the profession. Students will learn to use modern hand and power tools, equipment, and computer-estimating software as well as handle collision repair tasks. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: I-CAR Pro Level 1 Non-Structural; I-CAR Pro Level 1 Refinish; OSHA-10

Certificate Requirements

Code	Title	Hours
CLR 121	Non-Structural A&D Repair 1	4
CLR 126	Non-Structural A&D Repair 2	4

CLR 131	Structural A&D Repair 1	2
CLR 132	Structural A&D Repair 2	2
CLR 141	Paint & Refinishing 1	3
CLR 142	Paint & Refinishing 2	3
CLR 151	Mechanical & Electrical	3
CLR 152	Intro to Est & Diagnostic Scan	2
CLR 162	Workplace Skills	1
CLR 221	Non-Structural A&D Repair 3	4
CLR 226	Non-Structural A&D Repair 4	5
CLR 241	Adv. Estimating & Blueprinting	2
CLR 242	Advanced Cutting & Welding	2
CLR 246	Paint & Refinishing 3	3
CLR 248	Paint & Refinishing 4	4
CLR 253	Mechanical & Electrical 2	3
CLR 256	Pulse Technology Welding	2
CLR 262	Plastic Repair Technology	2
IND 105	OSHA - 10 Hr Gen Industry Cert	1
Total Hours		**52**

Automotive Technology

The Automotive Technology program offers students a well-equipped modern facility with a fleet of late-model vehicles. Content includes the major systems on domestic, European, and Asian vehicles. Completion of the program prepares students for entry level positions as automotive technicians. The program is certified by the National Technicians Education Foundation (NATEF), an affiliate of the National Institute for Automotive Service Excellence (ASE). NATEF certification signifies that the program meets uniform national standards for instructional facilities, equipment, staff credentials, and curriculum. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: ASE Brakes; ASE Engine Performance; ASE Electrical/Electronic Systems; ASE Suspension & Steering; ASE Automatic Transmission/Transaxle; ASE Manual Drive Trains; ASE Engine Repair; ASE Heating & Air Conditioning

Certificate Requirements

Code	Title	Hours
AUT 111	Engine Overhaul	3
AUT 130	Manual Transmission I	2
AUT 140	Suspension and Steering I	3
AUT 145	Suspension and Steering II	3
AUT 150	Brakes I	3
AUT 155	Brakes II	4
AUT 161	Electrical I	3
AUT 162	Electricity/Electronics I	2
AUT 165	Engine Mechanical Diagnosis	2
AUT 170	Heating - Air Conditioning I	2
AUT 181	Engine Performance I	3
AUT 182	Engine Performance II	3
AUT 205	Auto Transmission/Transaxle I	2
AUT 215	Auto Transmission/Transaxle II	2
AUT 230	Manual Transmission II	2
AUT 260	Electricity/Electronics II	6
AUT 270	Heating - Air Conditioning II	2
AUT 281	Engine Performance III	5
Total Hours		**52**

Business Bookkeeping & Accounting

This program is no longer offered as of Fall 2022.

The Business Bookkeeping & Accounting program prepares students to obtain employment as an entry level accounting/payroll clerk. Instruction includes introduction to accounting, payroll accounting, QuickBooks Desktop, basic business and office management skills. Professional standards and ethics in business are stressed as well as extensive training in Microsoft Office applications. Written and oral communication skills, including grammar, are emphasized as well as workplace skills. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: Microsoft Excel Associate ; Microsoft Word Associate; Microsoft Access Associate; QuickBooks Desktop

Certificate Requirements

Code	Title	Hours
BAT 117	Intro to Acct & Acct Software	4
BAT 122	Business Communications	4
BAT 130	Word Processing	4
BAT 140	Document Processing	4
BAT 172	Spreadsheet Management	4
BAT 180	Human Relations	4
BAT 200	Business Law	4
BAT 212	Professional Skills & Ethics	4
BAT 215	Database Management	4
BAT 220	Intro Business & Office Mgmt	4
BAT 252	Payroll Accounting	4
BAT 265	Advanced Accounting Software	4
Total Hours		**48**

Cabinet/Millwork

The Cabinetmaking/Millwork program provides the student with the knowledge and skills necessary to plan and complete cabinetry, furniture and millwork. Students learn to work with prints, specifications and shop drawings, power tools, and equipment in design, layout, and construction of projects. Emphasis is placed on selecting proper materials, determining the best procedures, manufacturing parts to specification, and assembling and finishing. This program will offer

students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: NCCER Core; OSHA

Certificate Requirements

Code	Title	Hours
CHC 105	Introductory Craft Skills	3
IND 109	OSHA - 30 Hour Const Ind Cert	2
CBM 115	Design, Layout & Safety	6
CBM 130	Workplace Skills I	1
CBM 135	Print Reading	1
CBM 145	Cabinetry Materials & Products	6
CBM 150	Millwork	5
CBM 205	Machining Processes	6
CBM 215	Finishing Techniques	6
CBM 235	Methods of Construction	6
CBM 237	Crew Leadership	1
CBM 245	Cabinet Installation	5
Total Hours		**48**

Carpentry

The Carpentry program provides an introduction to blueprint reading, applied math, rigging and safety, site preparation, concrete, masonry, plumbing, HVAC, sheet metal, commercial carpentry, electrical, drywall, and demolition. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: NCCER Core; NCCER Carpentry 1; OSHA-30 Construction Industry

Certificate Requirements

Code	Title	Hours
CHC 105	Introductory Craft Skills	3
IND 109	OSHA - 30 Hour Const Ind Cert	2
MAT 101	Technical Math I	3
BDT 119	Carpentry Basics	4
BDT 122	Floors, Walls & Ceiling Frames	4
BDT 127	Windows, Doors & Stairs	3
BDT 137	Roof Framing	3
BDT 142	Masonry	3
or BDT 217	Construction Electricity	
Total Hours		**25**

Certified Logistics Technician

Our Certified Logistics Technician program consists of courses that cover a range of industrial safety and material handling topics, and participants who successfully complete the program will be eligible to take the assessment to become a Certified Logistics Technician. By completing our program and earning the MSSC Certified Logistics Technician credential, you will have the skills and knowledge needed to work safely and effectively in a logistics setting, including the ability to classify products based on their attributes, analyze customer orders, and create a plan for order processing. You will also be able to evaluate transportation modes, make informed decisions based on costs, benefits, and risks, and plan, organize, and manage the dispatch, routing, and tracking of products.

The knowledge, skills, and professional behavior developed through this program will help qualify and prepare individuals for in-demand, strong career pathways in high-performance logistics Students will be prepared to test for and earn the following certificates in:

- OSHA 30 General Industry
- Certified Logistics Associate
- Certified Logistics Technician

Program Information

- Program Start (semesters): All
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): Contact program for more details
- Industry-recognized credentials: MSSC Certified Logistics Associate, MSSC Certified Logistics Technician, OSHA 30 General Industry

Certificate Requirements

Code	Title	Hours
CLT 101	Supply Chain Logistics	4
CLT 102	Certified Logistics Technician	3
CLT 104	Certified Logistics Technician	4
IND 109	OSHA - 30 Hour Const Ind Cert	2
GEN 102	Workplace Skills	2
Total Hours		**15**

Certified Production Technician

The Certified Production Technology program was developed in collaboration with the Manufacturing Skills Standards Council (MSSC) to prepare students for positions in modern high technology industries at the production level. The program focuses on safety, quality, manufacturing processes, and industrial maintenance. This program will offer students preparation to test for the industry-recognized credentials listed below.

Please note that this program is only offered at Ft. Riley.

Program Information

- Program Start (semesters): August, January
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: MSSC CPT; OSHA-10

Certificate Requirements

Code	Title	Hours
CPT 101	Safety in Manufacturing Prod	3
CPT 102	Quality Practice & Measurement	3
CPT 103	Manufacturing Proc & Produc	3
CPT 104	Maintenance Training	3
IND 105	OSHA - 10 Hr Gen Industry Cert	1
CLT 250	Forklift Operation	1
Total Hours		**14**

Commercial & Heavy Construction

The Commercial and Heavy Construction Program introduces the basic skills used in commercial and heavy construction fields. Courses are a combination of lecture, lab, and the opportunity for worksite experience utilizing skills with equipment acquired from the courses. Math and reading are embedded in the curriculum. At the completion of the program, students are eligible to be NCCER Certified Craft Technicians. Class A CDL is an optional certification. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: NCCER Core; NCCER Heavy Equipment Level 1; NCCER Heavy Equipment Level 2; KS CDL; NCCER Site Layout Level 1; NCCER Site Layout Level 2; NCCER Heavy Highway Construction; NCCER Pipe Layer Level 1; Confined Space Safety; OSHA

Certificate Requirements

Code	Title	Hours
CHC 105	Introductory Craft Skills	3
CHC 110	Field Safety & Orientation	2
CHC 120	Site Layout I	1
CHC 122	Site Layout II	4
CHC 130	Safety Certifications	2
CHC 140	Heavy Highway I	6
CHC 150	Heavy Equipment I	5
CHC 180	Pipe Laying I	6
CHC 195	Class A CDL	1
CHC 250	Heavy Equipment II	7
CHC 255	Heavy Equipment II Application	6
Total Hours		**43**

Cosmetology

The Cosmetology program provides students with the necessary knowledge and skills to work in the field of cosmetology. The program includes classroom and clinical instruction and 1,500 contact hours required by the Kansas Board of Cosmetology (KBOC). In addition to learning marketing and salon customer service skills, students will learn how to artistically integrate haircutting and hairstyling for all clientele types, manage hair color and permanent waving, and apply facials and skin care. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: KS Cosmetology License

Certificate Requirements

Code	Title	Hours
Scientific Concepts [1]		5
Physical Services [2]		14
Design Services [3]		12
Chemical Services [4]		14
Business Practices/Student Specific Needs [5]		4
State Law [6]		2
Total Hours		**51**

1 COS 131 - COS 135
2 COS 141 - COS 147
3 COS 151 - COS 157
4 COS 161 - COS 167
5 COS 221 - COS 224
6 COS 231 - COS 232
7 make-up hours, if needed, for KBOC, after all coursework has been completed
0-22 contact hrs needed = no charge
23-45 contact hrs needed = 1 cr hr charge
46-68 contact hrs needed = 2 cr hr charge
69-91 contact hrs needed = 3 cr hr charge

Culinary Arts

The Culinary Arts program prepares students to serve under the supervision of chefs and other culinary professionals. Instruction includes culinary math, food safety and sanitation, use and care of equipment, food preparation, and cooking skills. Students will develop other essential skills including baking, purchasing, menu planning, introduction to restaurant supervision and management, and the exploration of international cuisines. Upon graduation students will have the skills and confidence to be a productive member of any restaurant team. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: NRAE ServSafe Manager; OSHA

Certificate Requirements

Code	Title	Hours
CUA 100	Culinary Math	4
CUA 110	Sanitation/Safety	3
CUA 120	Basic Cooking Principles	5

CUA 130	Food Prep I	6
CUA 135	Food Prep II	6
CUA 210	Basic Management Skills	3
CUA 215	Food Prep III	5
CUA 220	Workplace Skills	1
CUA 230	Food Prep IV	3
CUA 235	International Cuisine	4
CUA 240	Baking Principles I	4
CUA 245	Baking Principles II	4
Total Hours		**48**

Diesel Technology

The Diesel Technology program prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel powered equipment. Instruction includes both theory and hands-on activities in safety, repair, and maintenance of several types of diesel equipment, as well as tune-up and overhauling, transmissions, and differentials. Specific hands-on experience will be provided on Case, Caterpillar, Cummins, Fuller, Allison, Arvin Meritor, and Rockwell Eaton equipment. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: ASE Brakes; ASE Diesel Engines; ASE Electrical/Electronic Systems; ASE Suspension & Steering; OSHA

Certificate Requirements

Code	Title	Hours
IND 105	OSHA - 10 Hr Gen Industry Cert	1
DEM 111	Shop Skills & Safety Fundament	1
DEM 113	Electrical/Electronic Systems	5
DEM 116	Workplace Skills	1
DEM 123	Hydraulics	5
DEM 134	Scanner Diagnostics	1
DEM 138	Suspension and Steering	3
DEM 143	Brakes	3
DEM 148	Advncd Electrl/Electrnc Systms	5
DEM 221	Drive Trains	3
DEM 231	Diesel Engines I	5
DEM 241	Advanced Diesel Engines	5
DEM 248	Drive Trains II	3
or DEM 265	Diesel Internship I	
or DEM 275	Diesel Internship II	
DEM 250	Engine Performance	2
DEM 268	Aux Power Units/Refrigeration	2
DEM 274	Diesel Preventative Maintenanc	3
or DEM 265	Diesel Internship I	
or DEM 275	Diesel Internship II	
Total Hours		**48**

Early Childhood Education - Cert A

The Early Childhood Education program is designed to provide training in the processes and principles of growth and development of children from infancy through six years of age. Emphasis is placed on social,emotional, physical, and cognitive development, as well as support services relating to children. Upon completion of the program, students have opportunities for employment as teachers in early learning childcare centers and family child care home sites and as teacher's aides/paraprofessionals in state institutions.

Students entering the Early Childhood Education program will have on entry point and three possible exit points - Cert A (24 credits), Cert C (48 credits) or an AAS in Early Childhood Education.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: N/A

Certificate Requirements

Code	Title	Hours
ECE 100	Introduction to Early Childhood Education	3
ECE 127	Child Health, Safety, & Nutrition	3
ECE 112	Preschool Development	3
ECE 135	Infant & Toddler Development & Care	3
ECE 151	Early Childhood Curriculum Development	3
ECE 131	Children with Special Needs	3
ECE 148	Early Childhood Education Lab I	3
HCT 134	Human Growth & Development	3
Total Hours		**24**

Early Childhood Education - Cert C

The Early Childhood Education program is designed to provide training in the processes and principles of growth and development of children from infancy through six years of age. Emphasis is placed on social,emotional, physical, and cognitive development, as well as support services relating to children. Upon completion of the program, students have opportunities for employment as teachers in early learning childcare centers and family child care home sites and as teacher's aides/paraprofessionals in state institutions.

Students entering the Early Childhood Education program will have on entry point and three possible exit points - Cert A (24 credits), Cert C (48 credits) or an AAS in Early Childhood Education.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: N/A

Certificate Requirements

Code	Title	Hours
ECE 100	Introduction to Early Childhood Education	3
ECE 127	Child Health, Safety, & Nutrition	3
ECE 112	Preschool Development	3
ECE 135	Infant & Toddler Development & Care	3
ECE 151	Early Childhood Curriculum Development	3
ECE 131	Children with Special Needs	3
ECE 148	Early Childhood Education Lab I	3
HCT 134	Human Growth & Development	3
ECE 119	Creative Experiences for Young Children	3
ECE 212	Children's Play and Games	3
ECE 141	Early Language & Literacy Development	3
ECE 155	Early Childhood Education Lab II	3
ECE 202	Administration in Early Childhood	3
ECE 205	Foundation of Education	3
ECE 200	Developing Family Relationships	3
ECE 227	Early Childhood Education Internship	3
Total Hours		**48**

Electrical Technology

The Electrical Technology program prepares individuals to apply technical knowledge and skills for employment in electrical construction and maintenance. Instructional areas include safety, electrical theory, blueprint reading, wiring, electrical construction, residential and commercial electricity, and National Electrical Code. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: NCCER Core; NCCER Electrical Level 1; KS Journeyman Exam; OSHA

Certificate Requirements

Code	Title	Hours
CHC 105	Introductory Craft Skills	3
IND 109	OSHA - 30 Hour Const Ind Cert	2
ELE 120	National Electrical Code I	4
ELE 125	AC/DC Circuits I	4
ELE 132	Print Reading	2
ELE 135	Commercial Wiring	4
ELE 137	International Residential Code	3
ELE 140	Residential Wiring I	4
ELE 142	National Electrical Code II	4
Total Hours		**30**

Emergency Medical Technician

The Emergency Medical Technician (EMT) program is designed to provide instruction to individuals desiring to provide medical care at the Emergency Medical Technician level, a vital link in the healthcare team chain. Participants will have the opportunity to gain special skills, knowledge, and teamwork concepts necessary for gaining certification and practicing as an EMT in the State of Kansas. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January; Summer
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: KS EMT Certification; National Registry Exam EMT Certification; CPR

Certificate Requirements

Code	Title	Hours
EMS 110	EMT: Foundations of EMT	3
EMS 120	EMT: Asmt, Trauma & Med Mgmt	3
EMS 130	EMT:EMS Oper. & Practical Exam	3
Total Hours		**9**

Advanced Emergency Medical Technician

The Advanced Emergency Medical Technician (EMT) program is designed for individuals interested in providing care to patients in the pre-hospital setting at the advanced life support level. This program will provide participants with opportunities to gain information, skills, and attitudes necessary for certification and practice as AEMT's in the state of Kansas.

Program Information

- Required Math Score: Level 5
- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: KS EMT Certification; National Registry Exam EMT Certification; CPR

Certificate Requirements

Code	Title	Hours
EMS 200	Advanced Emergency Medical Technician I: Medical Emergencies	5
EMS 205	Advanced Emergency Medical Technician II: Trauma Emergencies	5
EMS 210	Advanced Emergency Medical Technician: Field Internship I	5
EMS 215	AEMT Internship II	5
Total Hours		**20**

Engineering Drafting & Design - Cert A

The Engineering Drafting & Design - Cert A program provides related and hands-on experience in the proper use of drafting tools and equipment; preparing drawings and reproductions; and developing skills, knowledge,

and techniques for use in a variety of areas in the profession. Related theory and technical instruction includes the study of applied algebra, geometry, and trigonometry, as well as scientific and physical principles of numerous construction and manufacturing materials and techniques. Students will learn the fundamentals of computer-aided drafting (CAD), emphasizing the use of computer hardware and software in processing and retrieving drawing and data files.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Contact program for more details
- Industry-recognized credentials: AutoCAD User Certification

Certificate Requirements

Code	Title	Hours
TED 108	Introduction to Drafting	3
TED 115	Technical Math	3
TED 128	Computer Aided Drafting I	3
TED 135	CAD II	3
TED 138	Machine Design	4
TED 145	Computer Aided Drafting III	4
TED 148	Industrial Design	4
Total Hours		**24**

Engineering Drafting & Design - Cert C

The Engineering Drafting & Design - Cert C program provides related and hands-on experience in the proper use of drafting tools and equipment; preparing drawings and reproductions; and developing skills, knowledge, and techniques for use in a variety of areas in the profession. Related theory and technical instruction includes the study of applied algebra, geometry, and trigonometry, as well as scientific and physical principles of numerous construction and manufacturing materials and techniques. Students will learn the fundamentals of computer-aided drafting (CAD), emphasizing the use of computer hardware and software in processing and retrieving drawing and data files. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: AutoCAD User Certification

Certificate Requirements

Code	Title	Hours
TED 108	Introduction to Drafting	3
TED 115	Technical Math	3
TED 128	Computer Aided Drafting I	3
TED 135	CAD II	3
TED 138	Machine Design	4
TED 145	Computer Aided Drafting III	4
TED 148	Industrial Design	4
TED 208	Architectural Design I	3
TED 215	Architectural Design II	3
TED 228	Civil Design I	3
TED 235	Civil Design II	3
TED 238	Structural Design	3
TED 245	Workplace Skills	3
TED 248	Manufact. Design & 3D Printing	3
TED 255	Presentation&Special Projects	3
or TED 260	Technical Drafting OJT	
Total Hours		**48**

Foundations of Healthcare

The Foundations of Healthcare program is designed for high school students who want to enter the field of nursing. This program meets state guidelines for the Kansas Nurse Aide and the Kansas Home Health Aide certification testing through the Kansas Department of Aging and Disability Services. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Required Math Score: Level 4
- Required Reading Score: Level 4
- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): No
- Industry-recognized credentials: CNA; CPR

Certificate Requirements

Code	Title	Hours
HCT 105	First Aid & CPR	1
HCT 108	Health Occupations I	4
HCT 126	Medical Terminology	3
HCT 128	Nurse Aide	5
Total Hours		**13**

Foundations of Phlebotomy

The Foundations of Phlebotomy program is designed for high school students who want to enter the field of phlebotomy or other healthcare fields.Students must be 18 years of age and must pass a national exam upon completion of the program to be eligible for certification. This program will offer students preparation to test for the industry-recognized credentials listed below.This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): No
- Industry-recognized credentials: American Medical Technologies Phlebotomy Technician

Certificate Requirements

Code	Title	Hours
HCT 105	First Aid & CPR	1
HCT 108	Health Occupations I	4
HCT 126	Medical Terminology	3
HCT 160	Fundamentals of Phlebotomy	2
HCT 164	Phlebotomy Lab	2
HCT 166	Phlebotomy Clinical Practicum	2
Total Hours		**14**

Graphics Technology

Please note that this program is not being offered in 2024-2025.

The Graphics Technology program is designed to prepare students for the graphics industry. Students will study the basics of imaging software through tutorials, projects and internship opportunities. Printing basics will be learned through study of basic print components and how they apply to graphics technology. Students are instructed on how graphics and print work together to provide entry-level skills for employment in the graphics industry. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: Adobe Certified Associate – Illustrator; Adobe Certified Associate - InDesign; Adobe Certified Associate - Photoshop

Certificate Requirements

Code	Title	Hours
GRP 110	Graphic Design I	4
GRP 121	Color Composition	4
GRP 133	Page Layout	4
GRP 141	Graphic Design II	4
GRP 143	Typography	2
GRP 148	Vector Based Graphics	3
GRP 163	Digital Printing	3
GRP 233	Graphic Design III	5
GRP 241	Paper & Bindery	3
GRP 244	Raster Based Graphics	4
GRP 248	Graphic Design IV	5
GRP 254	Production Graphics	4
GRP 258	Portfolio Preparation	3
Total Hours		**48**

Heating, Ventilation, and Air Conditioning (HVAC)

The Heating Ventilation and Air Conditioning (HVAC) program presents technical training to students in the areas of electricity, heating, residential air conditioning, refrigeration, sheet metal fabrication, direct digital controls (DDC) & commercial HVAC applications. This program provides students with industry credentialing in the areas of refrigerant handling safety, tool usage and basic commercial HVAC. Foundational skills and principles learned in this program prepare students to work in the commercial and residential HVAC market place. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: ICE Core + Residential; EPA 608; OSHA

Certificate Requirements

Code	Title	Hours
CEC 105	Workplace Skills	1
CEC 110	Safety Orientation/OSHA 10	1
CEC 115	Electrical Fundamentals	4
CEC 118	Electrical Fundamentals II	2
CEC 120	Heating System Fundamentals	3
CEC 123	Adv Electrical Theory for HVAC	3
CEC 126	Advanced Heating Systems	3
CEC 135	Sheet Metal Fabrication I	3
CEC 205	HVAC Fundamentals	4
CEC 207	Heating System Installation	3
CEC 210	EPA 608	1
CEC 215	Intro Mechanical Refrigeration	4
CEC 225	Heat Pumps	3
CEC 230	Commercial HVAC	4
CEC 235	Commercial HVAC Lab	4
Total Hours		**43**

Heavy Diesel Construction Technology

Please note that this program is not being offered in 2024-2025.

The Heavy Diesel Construction program prepares individuals to apply technical knowledge and skills to the general maintenance, repair, and overhaul of heavy construction equipment, along with the academic skills to be a valuable employee. Instruction includes foundational courses in theory and hands-on skills practice in safety standards, power trains, diesel engines, and welding.

Specialized courses for diesel construction include instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and techniques of welding and brazing. Machines and equipment in the lab include Case wheel loader, loader backhoe, and skid steers. Tier 4 and 3 Fiat engines plus engine cut-aways are provided for skills practice with tear-down, operations and diagnostics. Students are given the option to serve an internship with area dealers and may qualify for company sponsorship for their second term. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Required Math Score: Level 4
- Required Reading Score: Level 4
- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: ASE Brakes; ASE Diesel Engines; ASE Electrical/Electronic Systems; ASE Suspension & Steering; OSHA

Certificate Requirements

Code	Title	Hours
IND 105	OSHA - 10 Hr Gen Industry Cert	1
DEM 111	Shop Skills & Safety Fundament	1
DEM 113	Electrical/Electronic Systems	5
DEM 116	Workplace Skills	1
DEM 123	Hydraulics	5
DEM 142	Welding for Diesel	3
DEM 144	Brakes for Construction	2
DEM 150	EST Diagnostics	1
DEM 204	Advanced Machine Electrical	4
DEM 221	Drive Trains	3
DEM 224	Advanced Hydraulic Systems	3
DEM 231	Diesel Engines I	5
DEM 241	Advanced Diesel Engines	5
DEM 244	Heavy Equipment Operation	2
DEM 250	Engine Performance	2
DEM 252	Power Trains for Construction	3
DEM 268	Aux Power Units/Refrigeration	2
DEM 274	Diesel Preventative Maintenanc	3
Total Hours		**51**

Industrial Production Technology

The Certified Production Technology program prepares students for employment in manufacturing and production jobs that apply technical knowledge and skills to maintain inventory control, care for inventory, and minor repairs on current and automated systems and equipment. The program focuses on safety, quality, manufacturing processes, and industrial maintenance. This program will offer students preparation to test for industry-recognized credentials listed below.

Program Information

- Program Start (semesters) August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: MSSC CPT; OSHA-10

Certificate Requirements

Code	Title	Hours
CPT 101	Safety in Manufacturing Prod	3
CPT 102	Quality Practice & Measurement	3
CPT 103	Manufacturing Proc & Produc	3
CPT 104	Maintenance Training	3
IND 105	OSHA - 10 Hr Gen Industry Cert	1
CLT 250	Forklift Operation	1
GEN 102	Workplace Skills	2
IND 104	Basic Electricity I	3
MAT 102	Technical Math II	3
IND 112	Fluid Power I	3
IND 127	Mechanical Systems	3
IND 207	Fluid Power II	2
Total Hours		**30**

Information Systems Technology

The Information Systems Technology program prepares students to be computer service and network technicians for small office/home office networks and provides the foundation for enterprise level computer network technicians. Students will install and configure desktop computers, desktop operating systems, Novell NetWare, Microsoft Server, and Linus network operating systems. Students will learn to set up and configure routers, switches, wireless access points, and wireless bridges. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: CompTIA A+; CompTIA Network+; CompTIA Security+; Microsoft 365 Modern Desktop (MD-100); Cisco Certified Network Associate (CCNA)

Certificate Requirements

Code	Title	Hours
CRN 126	PC Hardware Fundamentals	4
CRN 136	PC Software Fundamentals	4
CRN 146	Fund of Computer Networking	4
CRN 156	Network Operating Systems I	4
CRN 166	Network Operating Systems II	4
or CRN 176	Desktop Operating Systems	
CRN 186	Network Security Fundamentals	4
CRN 221	Intro to Enterprise Networking	2
CRN 226	Intro Enterprise Netwrking Lab	3
CRN 231	Routing & Switching Essentials	2
CRN 236	Routing/Switching Essntls Lab	3
CRN 240	Workplace Skills I	2
CRN 241	Scaling Networks	2
CRN 246	Scaling Networks Lab	3
CRN 251	Connecting Networks	2
CRN 256	Connecting Networks Lab	3
CRN 265	Workplace Skills II	2
Total Hours		**48**

Legal Office Professional

This program is no longer offered as of Fall 2022.

Certificate Requirements

Code	Title	Hours
BAT 113	Intro Acct and Acct Software	4
BAT 122	Business Communications	4
BAT 130	Word Processing	4
BAT 140	Document Processing	4
BAT 172	Spreadsheet Management	4
BAT 180	Human Relations	4
BAT 200	Business Law	4
BAT 212	Professional Skills & Ethics	4
BAT 215	Database Management	4
LOP 240	Legal Terminology	5
LOP 250	Legal Office Projects	3
LOP 260	Legal Transcription	4
Total Hours		**48**

Machining & Manufacturing Technology - Cert A

The Machining & Manufacturing Technology Cert - A (previously known as Machine Tool Technology Fast Track) program is an accelerated program and introduces individuals to basic technical knowledge and skills needed to plan, manufacture, assemble, test, and repair parts, mechanisms, and machines. Instruction includes an introduction into technical blueprint reading, sketching, angles, tapers, gearing, and precision measuring. It also includes basic training in the operation of machine tools: engine lathes, milling machines, surface grinders, drill presses, computerized numerical control milling machines, and computerized numerical control lathes. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January; Summer
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: OSHA; NC3 Precision Measurements

Certificate Requirements

Code	Title	Hours
MTT 106	Safety (OSHA 10)	1
MTT 112	Print Reading	3
MTT 114	Machining I	3
MTT 116	Machine Tool Processes	1
MTT 118	Lathe/Mill/Grind I	4
MTT 123	Machining II	3
MTT 131	Quality Control & Inspection	1
MTT 151	Workplace Ethics	2
MTT 218	Metallurgy	1
MTT 221	Bench Work	1
MTT 241	CNC Operations	3
Total Hours		**23**

Machining & Manufacturing Technology - Cert C

The Machining & Manufacturing Technology - Cert C (previously known as Machine Tool Technology) program prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, and machines. Instruction includes technical information in blueprint reading, sketching, angles, tapers, gearing, and precision measuring; it also includes training in the operation of machine tools: engine lathes, milling machines, surface grinders, drill presses, computerized numerical control milling machines, and computerized numerical control lathes. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: OSHA; NC3 Precision Measurements

Certificate Requirements

Code	Title	Hours
MTT 106	Safety (OSHA 10)	1
MTT 112	Print Reading	3
MTT 114	Machining I	3
MTT 116	Machine Tool Processes	1
MTT 118	Lathe/Mill/Grind I	4
MTT 123	Machining II	3
MTT 131	Quality Control & Inspection	1
MTT 151	Workplace Ethics	2
MTT 218	Metallurgy	1
MTT 221	Bench Work	1
MTT 241	CNC Operations	3
MTT 251	CNC Lathe	3
or MTT 252	Lathe/Mill/Grind II	
MTT 255	CAD/CAM I	3
MTT 256	CNC Milling I	3
MTT 261	Machining III	3
MTT 263	Machining IV	3
MTT 267	Machine Tool Special Projects	3
or MTT 270	Machine Tool Internship	
MTT 266	Print Reading II	3
MAT 101	Technical Math I	3
Total Hours		**47**

Medical Office Specialist

This program is no longer offered as of Fall 2022.

Certificate Requirements

Code	Title	Hours
BAT 113	Intro Acct and Acct Software	4
BAT 122	Business Communications	4

BAT 130	Word Processing	4
BAT 140	Document Processing	4
BAT 172	Spreadsheet Management	4
BAT 180	Human Relations	4
BAT 200	Business Law	4
BAT 212	Professional Skills & Ethics	4
BAT 215	Database Management	4
MOS 250	Medical Terminology	5
MOS 255	Medical Records Management	4
MOS 260	Medical Office Procedure	3
Total Hours		**48**

Phlebotomy

The Phlebotomy program is a one-semester program that provides training in venipuncture, sterile technique, patient safety, and documentation through didactic instruction, lab skills and a clinical experience. Students must be 18 years of age and must pass a national exam upon completion of the program to be eligible for certification. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August; January; Summer
- Financial Aid available (for post-secondary students only): No
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: American Medical Technologies Phlebotomy Technician

Certificate Requirements

Code	Title	Hours
HCT 126	Medical Terminology	3
HCT 160	Fundamentals of Phlebotomy	2
HCT 164	Phlebotomy Lab	2
HCT 166	Phlebotomy Clinical Practicum	2
Total Hours		**9**

Plumbing - Cert A

The Plumbing Technology program prepares students for the plumbing field by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waste removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: OSHA 10; NCCER Plumbing Level I

Code	Title	Hours
CHC 105	Introductory Craft Skills	3
CHC 107	Carpentry Basics	2
PLU 100	Introduction to Plumbing Technology	2
PLU 102	Plumbing Blueprint Reading	4
PLU 104	Plumbing Fixtures and Fittings	3
PLU 105	Plumbing Electricity and Gas	1
PLU 108	Plumbing Fixtures I	3
PLU 110	Plumbing Fixtures II	3
IND 105	OSHA - 10 Hr Gen Industry Cert	1
PLU 201	Plumbing Internship	3
or PLU 202	Plumbing Projects	
Total Hours		**25**

Practical Nursing

The Practical Nursing program is designed to provide graduates with the knowledge, skills, attitudes, and abilities needed to practice safely and effectively as an entry level practical nurse and eligibility to take the NCLEX-PN licensure exam.

Entrance requirements include:

- a current healthcare certification or licensure (e.g., CNA/HHA, EMT, RPT, CMA/RMA);
- an approved Anatomy and Physiology course of 6 credit hours, including lab from an accredited college within the last 5 years with a grade of "C" or better; and
- approved courses of Nutrition and Human Development, 3 credit hours each from an accredited college with a "C" or better

  Anatomy & Physiology, Nutrition, and Human Development classes are available at Washburn Tech. Other recommended prior course work to enhance a student's success and ability to articulate include: Psychology, Biology, Pharmacology, English, and Algebra. Taking a Medication Aide course (CMA) helps to prepare applicants for nursing school. Work experience in the health field is highly recommended.

This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Required Math Score: Level 5
- TEAS Test: Minimum score of 55
- Program Start (semesters): August; January; Summer (Prerequisites)
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: Licensed Practical Nurse

Certificate Requirements

Code	Title	Hours
Prerequisite Courses		
HCT 134	Human Growth & Development	3
HCT 136	Human Anatomy & Physiology	4

HCT 137	Human Anatomy & Physiology Lab	2
HCT 141	Nutrition	3
Total Hours		**12**

Code	Title	Hours
Required Courses		
PNS 101	Foundations of Nursing	4
PNS 115	Foundation of Nursing Clinical	2
PNS 121	Strategies for Success	2
PNS 145	KSPN Fund of Pharm&Safe Med Ad	2
PNS 152	KSPN Nursing Care of Adults I	5
PNS 155	KSPN Nursing Care Ad I Clinic	2
PNS 212	KSPN Nursing Care of Adults II	5
PNS 215	KSPN Nursing Care Ad II Clinic	3
PNS 221	Maternal Child Nursing	2
PNS 226	Maternal Child Nrs Clinical	1
PNS 232	KSPN Care of Aging Adults	2
PNS 235	KSPN Mental Health Nursing	2
PNS 242	KSPN Leadership,Roles & Issues	2
PNS 245	NCLEX-PN	1
Total Hours		**35**

Sterile Processing

The Sterile Processing program introduces the primary responsibilities of a central sterile technician and includes practical applications of learned concepts and procedures. Topics include preparation, storage, distribution of instruments, supplies and equipment, quality assurance and inventory management. Upon completion, students should be able to apply the principles of sterilization/disinfection in the workplace, as well as the principles of distribution of instruments/supplies. This program will offer students preparation to test for the industry-recognized credentials listed below.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: CPR; Certified Registered Central Services Technician (CRCST)

Certificate Requirements

Code	Title	Hours
HCT 105	First Aid & CPR	1
HCT 126	Medical Terminology	3
SUR 101	Sterile Processing I	2
SUR 102	Sterile Processing II	2
SUR 111	Sterile Processing Clinical I	2
SUR 112	Sterile Processing Clinical II	7
SUR 208	CRCST Exam Review	1
Total Hours		**18**

Welding - Cert A

The Welding program prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Instruction includes: Shielded Metal Arc Welding (SMAW); Gas Metal Arc Welding (GMAW); Flux Cored Arc Welding (FCAW), and cutting processes. Related technical instruction also includes quality assurance and control, print reading, safety, and workplace skills.

Students entering the Welding program will have on entry point and four possible exit points - Cert A (26 credits), Cert B (38 credits), Cert C (50 credits) or an Associate of Applied Science degree.

Program Information

- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: AWS 1F; AWS 1G; AWS 2F; OSHA

Certificate Requirements

Code	Title	Hours
IND 105	OSHA - 10 Hr Gen Industry Cert	1-2
or IND 109	OSHA - 30 Hour Const Ind Cert	
WEL 105	Welding Blueprint Reading	3
WEL 120	Oxy-Fuel/Cutting Procedures	3
WEL 131	Shielded Metal Arc Welding I	3
WEL 135	Shielded Metal Arc Welding II	3
WEL 141	Gas Metal Arc Welding I	3
WEL 145	Gas Metal Arc Welding II	3
WEL 246	Gas Tungsten Arc Welding I	3
WEL 221	Flux Cored Arc Welding I	3
Total Hours		**25-26**

Welding - Cert B

The Welding program prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Instruction includes: Shielded Metal Arc Welding (SMAW); Gas Metal Arc Welding (GMAW); Flux Cored Arc Welding (FCAW), and cutting processes. Related technical instruction also includes quality assurance and control, print reading, safety, and workplace skills.

Students entering the Welding program will have on entry point and four possible exit points - Cert A (26 credits), Cert B (38 credits), Cert C (50 credits) or an Associate of Applied Science degree.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: AWS 1F; AWS 1G; AWS 2F; OSHA

Certificate Requirements

Code	Title	Hours
IND 105	OSHA - 10 Hr Gen Industry Cert	1-2
or IND 109	OSHA - 30 Hour Const Ind Cert	

WEL 105	Welding Blueprint Reading	3
WEL 120	Oxy-Fuel/Cutting Procedures	3
WEL 131	Shielded Metal Arc Welding I	3
WEL 135	Shielded Metal Arc Welding II	3
WEL 141	Gas Metal Arc Welding I	3
WEL 145	Gas Metal Arc Welding II	3
WEL 246	Gas Tungsten Arc Welding I	3
WEL 221	Flux Cored Arc Welding I	3
MAT 101	Technical Math I	3
WEL 227	Welding Metallurgy	3
WEL 267	Gas Tungsten Arc Welding II	3
WEL 240	Gas Metal Arc Welding- Plate	3
Total Hours		**37-38**

Welding - Cert C

The Welding program prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Instruction includes: Shielded Metal Arc Welding (SMAW); Gas Metal Arc Welding (GMAW); Flux Cored Arc Welding (FCAW), and cutting processes. Related technical instruction also includes quality assurance and control, print reading, safety, and workplace skills.

Students entering the Welding program will have on entry point and four possible exit points - Cert A (26 credits), Cert B (38 credits), Cert C (50 credits) or an Associate of Applied Science degree.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: AWS 1F; AWS 1G; AWS 2F; OSHA

Certificate Requirements

Code	Title	Hours
IND 105	OSHA - 10 Hr Gen Industry Cert	1-2
or IND 109	OSHA - 30 Hour Const Ind Cert	
WEL 105	Welding Blueprint Reading	3
WEL 120	Oxy-Fuel/Cutting Procedures	3
WEL 131	Shielded Metal Arc Welding I	3
WEL 135	Shielded Metal Arc Welding II	3
WEL 141	Gas Metal Arc Welding I	3
WEL 145	Gas Metal Arc Welding II	3
WEL 246	Gas Tungsten Arc Welding I	3
WEL 221	Flux Cored Arc Welding I	3
MAT 101	Technical Math I	3
WEL 227	Welding Metallurgy	3
WEL 267	Gas Tungsten Arc Welding II	3
WEL 240	Gas Metal Arc Welding- Plate	3
GEN 101	Workplace Skills and Safety	3
WEL 295	Welding Layout	3
WEL 170	Fabrication Measuring & Layout	3
WEL 270	Welding Fabrication	3
Total Hours		**49-50**

Associate of Applied Science Degrees

The following Associate of Applied Science degrees are offered by Washburn Tech and are conferred by Washburn University: Surgical Technology.

Requirements for All Associate Degrees

A minimum of 60 hours. Some associate degrees may require additional hours. See specific degree/major.

1. A cumulative grade point average of at least 2.0.
2. A/pass/fail option cannot be taken in courses required by the university (further explained in General Education Requirements) or specific courses required by a program unless written permission is obtained from the head of the major department for that course and filed with the Registrar's Office.
3. At least 15 of the last 30 hours required to complete the degree must be earned from Washburn University. Programs with professional accreditation standards may have more stringent requirements. The academic residency requirement will be waived in the case of formal articulation agreements.
4. Forty-two hours must be graded. Credit hours earned at Washburn University Institute of Technology count as graded. For international students presenting transfer credit from an international tertiary institution accredited by the Ministry of Education (or its equivalent) in that country, a minimum of 30 hours presented for graduation must be on a graded basis since Washburn converts grades earned in these transfer courses to CR, P and NC.
5. A student may be awarded a degree after completing the requirements for that degree in effect when the student first enrolled or, if the student chooses, in effect in any subsequent year except that no degree shall be awarded based upon requirements not in effect within six years of the date of graduation.
6. Other requirements vary by type of degree (associate of science, associate of art, associate of liberal studies, associate of applied science); please see additional requirements for associate degrees below, and general education requirements in the general education section of the catalog.

Additional Requirements Common to Associate of Applied Science (AAS) Degrees

1. At least 30 credit hours in the area of specialized preparation are required, with at least 15 hours in each area of focus.
2. Normally AAS degrees will not require more than 68 credit hours. External accreditation, licensing, or industry standards may make it necessary to exceed this limit.
3. 15 hours of general education courses, further described in General Education Requirements.

General Education Requirements

For associate of applied science degrees, students will complete 15 hours of General Education, consisting of the following:

1. EN 101 Introductory College Writing, and
2. MA 112 Contemporary College Mathematics or higher, and
3. At least 9 hours of additional general education courses from three of the following areas, and from at least three different disciplines:
   a. Communications
   b. Natural Sciences
   c. Social Sciences
   d. Arts and Humanities
   e. Inclusion and Belonging
   f. Scientific Reasoning and Literacy.

Courses in areas 1 and 2 above may not be taken as A/credit/pass/fail and a 'C' or better must be earned.

Students should check with their major department; in some cases, courses required by the major department will also fulfill specific General Education requirements.

Programs

- Surgical Technology, AAS (p. 44)

Surgical Technology, AAS

The Surgical Technology, Associate of Applied Science (AAS) degree prepares students to learn the basic skills necessary to become an integral member of the surgical team. Surgical technologists maintain the operating room by selecting and opening supplies, assembling equipment for surgical procedures and by providing the necessary sterile items to the surgeon in an efficient manner.

Prospective students must have a high school diploma or GED and be 18 years of age.

Prerequisites for program admission include a grade of "C" or better in an approved Anatomy and Physiology course with lab (six credit hours or more) from an HLC-accredited college within the past five years and current CPR certification.

Program Information

- Program Start (semesters): August
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: Certified Surgical Technologist

Degree Requirements

In addition to the requirements stated below, students must complete all requirements for an Associate of Applied Science (p. 44) degree. Completion of the courses below will fulfill the general education requirements for the degree. Please see your advisor for more information. Once earning the AAS degree, students will be eligible to test for the industry-recognized Certified Surgical Technology exam.

Code	Title	Hours
Required Pre-Requisite Courses		
HCT 126	Medical Terminology	3
HCT 135	CPR	0
HCT 136	Human Anatomy & Physiology	4
HCT 137	Human Anatomy & Physiology Lab	2
Subtotal		9
Required General Education Courses		
EN 101	Introductory College Writing	3
MA 112	Contemporary College Mathematics	3

or MA 116	College Algebra	
Three Additional Gen Ed Courses [1]		9
Subtotal		15
Required Surgical Technology Courses		
BIO 204	Microbiology & Lab	4
SUR 105	Introduction to Surgical Tech	4
SUR 135	Principles & Practics of ST	5
SUR 145	Principles & Practices ST Lab	3
SUR 155	Surgical Procedures I	4
SUR 180	ST Clinical I	4
SUR 245	Surgical Procedures II	5
SUR 250	Surgical Pharmacology	2
SUR 266	Surgical Procedures III	4
SUR 274	Clinical II	8
SUR 295	ST Certification Review	1
Subtotal		44
Total Hours		**68**

[1] Courses must be from three of the following distribution areas: communication, social science, natural and physical science, humanities, inclusion and belonging, scientific literacy.

Program Affiliations with Washburn University

Washburn Tech students have a unique opportunity to complete an associate degree through Washburn University (WU). These programs require course work at both WU and Washburn Tech.

- *Washburn Tech:* Advanced Systems Technology (p. 31)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech:* Auto Collision (p. 31)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech:* Auto Service Technician (p. 32)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech: Business Bookkeeping & Accounting**
  - Washburn University: Office Administration, AA (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/office-administration-aa/) (credit hours may vary, see advisor)
- *Washburn Tech:* Cabinet/Millwork (p. 32)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech:* Climate & Energy Control Technologies (p. 38)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech:* Commercial & Heavy Construction (p. 34)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech:* Culinary Arts (p. 34)
  - Washburn University: Culinary Arts, AA (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/culinary-arts-aa/) (credit hours may vary, see advisor)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
- *Washburn Tech:* Diesel Technology (p. 35)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech:* Early Childhood Professional (p. 35)
  - Washburn University: Family & Human Services - Early Childhood Professional, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/human-services-early-childhood-professional-aas/) (credit hours may vary, see advisor)
- *Washburn Tech:* Engineering Drafting & Design (p. 37)**
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Design Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/design-technology-aa-as/) (credit hours may vary, see advisor)
- *Washburn Tech:* Graphics Technology (p. 38)
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Design Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/design-technology-aa-as/) (credit hours may vary, see advisor)
- *Washburn Tech: Heavy Diesel Construction Technology**
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)

- *Washburn Tech:* Information Systems Technology *(p. 39)*
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech: Legal Office Professional**
  - Washburn University: Office Administration, AA (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/office-administration-aa/) (credit hours may vary, see advisor)
- *Washburn Tech: Legal Office Professional**
  - Washburn University: Legal Studies, AA (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/legal-studies-aa/) (credit hours may vary, see advisor)
- *Washburn Tech:* Machine/Tool Technology *(p. 40)*
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)
- *Washburn Tech: Medical Office Specialist**
  - Washburn University: Office Administration, AA (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/office-administration-aa/) (credit hours may vary, see advisor)
- *Washburn Tech:* Welding *(p. 43)*
  - Washburn University: Skilled Trades, AAS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/skilled-trades-aas/) (credit hours may vary, see advisor)
  - Washburn University: Industrial Technology, AS (https://catalog.washburn.edu/undergraduate/school-applied-studies/associate-degree-programs-washburn-institute-technology/industrial-technology/) (credit hours may vary, see advisor)

* Programs no longer offered beginning Fall 2022 **Formerly known as Tech Drafting

Students must have completed one of the programs or be concurrently enrolled in 12 credit hours at Washburn Tech to be eligible for Washburn University tuition reduction. Some WU courses may have prerequisites or require placement scores. For more information, email nicole.vavra@washburn.edu.

Course Descriptions

AUT 111 Engine Overhaul (3)
Engine overhaul introduces the student to the concepts and skills necessary to diagnose and overhaul automotive engines. Areas covered in this class include introduction to specialty tools and their correct use, complete engine disassembly, inspection and measurement of internal components including heads, valve resurfacing, and proper fitting and reassembly of entire "long block". Class time is divided between classroom and lab.

AUT 130 Manual Transmission I (2)
Manual Drive Train & Axles I is a basic introduction to the manual transmission found in the automotive industry. The course includes an introduction to the theory behind manual transmissions, identification of the different types of transmission and their components, and an introduction to the specialized tools used in servicing transmissions, synchromesh transmissions, gear ratios found in different transmissions, an introduction to manual clutches and transfer cases, and drive shaft technology including CV joint and bearing replacement. Students will receive instruction that will assist them in taking the Automotive Service Excellence (ASE) exams after successfully completing the 1st and 2nd levels of the automotive technology program.

AUT 140 Suspension and Steering I (3)
Suspension & Steering I introduces automotive steering and suspension systems. The course includes hydraulic principles, bushing replacement, long and short arm diagnosis and replacement, parallelogram steering geometry diagnosis and repair, McPherson strut strip down and refit, and the effect of damping and rebound on the vehicle handling, spring design measuring, and replacement. Classroom time is divided between lecture, discussion, and individual learning activities.

AUT 145 Suspension and Steering II (3)
Steering & Suspension II is the advanced application of knowledge and hands-on skills learned in AUT140 (Steering & Suspension I). The course includes the use of alignment geometry and computerized alignment equipment to diagnose and repair steering suspension problems and to verify that a vehicle's suspension and steering components are within manufacturer's specifications. It also includes removing and replacing steering and suspension components according to manufacturer's specifications, inspecting, servicing, and repairing wheel and tire assemblies for optimum performance. Prerequisite: AUT140

AUT 150 Brakes I (3)
Brakes I is a basic introduction to automotive brake technology. The emphasis in this course is on diagnosing and maintaining brake systems. It covers identification of brake parts and how they function, the use and types of friction materials and heat dissipation, stripping and refitting disc and drum brakes, rotor diagnosing including measurement and cutting, identification of pad types, hydraulic principles and brake bleeding. The course is closely aligned with NATEF/ASE task list for A5 and will prepare the student to take the Automotive Service Excellence (ASE) exams. Classroom time is divided between lecture, discussion, and individual learning activities.

AUT 155 Brakes II (4)
Brakes II apply the knowledge and hands-on skills acquired in AUT150 (Brakes I). It includes testing troubleshooting, diagnosing, disassembling, and replacing both automotive drum and disc brake systems using manufacturer's specifications, four-wheel and rear wheel anti-lock braking system components, operations, and repairs will also be covered. Prerequisite: AUT150

AUT 161 Electrical I (3)
In this course students will complete service work orders; describe the relationship between voltage, ohms and amperage; perform basic electrical circuit repairs; identify electrical system faults; identify basic wiring diagram symbols, components, and legend information; perform basic electrical circuit measurements using a DVOM; describe basic circuit characteristics of series, parallel and series parallel circuits through a variety of classroom and shop learning assessment activities.

AUT 162 Electricity/Electronics I (2)
Electrical & Electronic Systems I builds on the skills developed in Electrical I. This course emphasizes battery design, starter systems, and the charging system and its components. In addition to these systems, hybrid technology will be explored. Class time is divided between the classroom and lab experiences. Classroom is primarily lecture, discussion, and group or individual learning activities that emphasize troubleshooting and problem-solving skill development.

AUT 165 Engine Mechanical Diagnosis (2)
Engine Mechanical Diagnosis involves diagnostic theory, process, and testing as well as practicing major component replacement. Students will split their time between the classroom and lab.

AUT 170 Heating - Air Conditioning I (2)
Heating & Air Conditioning I is an introductory course that is designed to provide the student with a solid foundation in automotive heating and air conditioning. Class time is divided between the classroom and lab experiences. Classroom time is spent primarily on lecture, discussion, and group or individual learning activities that provide a foundation to encourage troubleshooting skill development.

AUT 181 Engine Performance I (3)
In this learning plan students will complete work order and check history; identify engine mechanical integrity; explore the fundamentals of fuel system theory; identify fuel system concerns; explore the fundamentals of ignition theory; identify ignition system concerns; identify induction system concerns; identify exhaust system concerns; identify engine mechanical integrity through a variety of learning and assessment activities.

AUT 182 Engine Performance II (3)
Engine Performance II builds on the knowledge and skills developed in Engine Performance I. The course continues the study of theory and of power train diagnostics. Students will learn the rudiment of computerized engine controls, ignition systems, fuel, air induction, and exhaust and emission control systems. The course provides extensive hands-on training on the use of the latest diagnostic equipment and tools.

AUT 205 Auto Transmission/Transaxle I (2)
Automatic Transmission/Transaxle I is a basic introduction to automatic transmissions/transaxle systems. The course includes an introduction to hydraulic principles, an introduction to the different types of automatic transmission fluids, automotive measurement, and the identification to the parts of the automatic transmission including planetary gear sets, brake bands, bearings, pumps, boost systems, and valve bodies. It also contains some basic services performed on an automatic transmission including oil filter replacement, air testing of clutch packs, removing and refitting a transaxle and/or transmission. Students will receive instruction that will assist them in taking the Automotive Service Excellence (ASE) Exams after successfully completing the requirements of the 1st and 2nd levels of the automotive technology program.

AUT 215 Auto Transmission/Transaxle II (2)
Automatic Transmission & Transaxles II is the advanced application of knowledge and hands-on skills acquired in Automatic Trans & Transaxles I. The course includes testing, troubleshooting and diagnosing, disassembly, inspection, and assembly of automatic transmissions and transaxles according to manufacturer's specifications. Electronically controlled automatic transmission components and operation are covered along with diagnosing and repair. Students will receive instruction that will assist them in taking the Automotive Service Excellence (ASE) exams after successfully completing the requirements of the 1st and 2nd levels of the automotive technology program.

AUT 230 Manual Transmission II (2)
Manual Drive Train and Axles II contains the advanced application of knowledge and hands on skills acquired in Manual Drive Train & Axles I. Emphasis will be on testing, troubleshooting and diagnosing, disassembling, inspecting and assembling transmissions and trans axles according to manufacturer's specifications. Students will receive instruction that will assist them in taking the automotive excellence (ASE) exams after successfully completing the requirements of the 1st and 2nd levels of the automotive technology program.

AUT 260 Electricity/Electronics II (6)
Electricity/Electronic Systems II is an advanced level course and builds on the knowledge, skills and abilities mastered in Electricity/Electronic Systems I. This class involves the theory and application of automotive electronic circuits and accessories. It includes the construction and servicing of lighting systems, gauges, warning devices, windshield wipers, and solid state devices. The course provides the knowledge to prepare for the Automotive Service Excellence (ASE) Exams. The course is aligned closely with the NATEF/ASE task list for A6 Electrical/Electronic Systems.

AUT 270 Heating - Air Conditioning II (2)
Heating and Air Conditioning II is an advanced level course and builds on the knowledge, skills and abilities mastered in AUT170 Heating & Air Conditioning I. Climate control systems are explained in-depth including theory of refrigeration, servicing procedures, and diagnosis techniques. Compressor service and distribution systems are studied. Laboratory experience is given in testing and servicing a variety of systems and problems. The course provides the knowledge to prepare for the Automotive Service Excellence (ASE) exams. The course is aligned closely with the NATEF/ASE task list for A7 Heating & Air Conditioning.

AUT 281 Engine Performance III (5)
Engine Performance III is an advanced level course and builds on the knowledge, skills, and abilities mastered in Engine Performance I (AUT181) and Engine Performance II (AUT182). This class involves theory and application of automotive engine diagnostics including computerized engine controls, ignition systems, fuel, air induction and exhaust systems, emission control systems, and exhaust gas treatments. The course provides extensive hands-on training on the use of the latest diagnostic equipment and tools. The class provides the knowledge to prepare for the Automotive Service Excellence (ASE) exams. The course is closely aligned with the NATEF/ASE task list for A8 Engine Performance.

BAT 113 Intro Acct and Acct Software (4)
This course develops a foundation for accounting skills and assists students attain an understanding of accounting concepts and the importance of accounting for funds in a business. Students get an introduction to the accounting equation, journal entries, t-accounts, Trial Balances, Financial Statements, adjusting entries, closing entries, and financial statement analysis. Students also use a comprehensive, hands-on training manual for QuickBooks Desktop to learn computer accounting practices through sample companies.

BAT 117 Intro to Acct & Acct Software (4)
This course develops a foundation for accounting skills and assists students attain an understanding of accounting concepts and the importance of accounting for funds in a business. Students get an introduction to the accounting equation, journal entries, t-accounts, Trial Balances, Financial Statements, adjusting entries, closing entries, and financial statement analysis. Students also use a comprehensive, hands-on training manual for QuickBooks Desktop to learn computer accounting practices through sample companies.

BAT 122 Business Communications (4)
A successful and productive member of any office team will write business correspondence, electronic mail and business documents using the correct grammar, style and content. This course is designed to ensure students will have the knowledge to produce effective business communications in written form.

BAT 130 Word Processing (4)
Students will use Microsoft Office Word software to create and edit basic-to-advanced documents, including tables and charts. This is an instructor-guided lab course.

BAT 140 Document Processing (4)
This course continues the development of basic typing skills and emphasizes the formatting of various kinds of business correspondence, reports, tables, electronic forms, and desktop publishing projects from arranged, unarranged, and rough-draft sources.

BAT 172 Spreadsheet Management (4)
This course is designed to familiarize the student with various basic and advanced spreadsheet functions. These include creating and maintaining spreadsheets, displaying information, adding and changing formulas, applying formatting, creating charts and tables, inserting graphics, and customizing the appearance and functions of spreadsheets.

BAT 180 Human Relations (4)
This course is designed for students to learn skills to compete in an increasingly competitive work environment. Skills stressed will be the production of documents and resources needed to obtain employment. Issues addressed will include appropriate communication, conflict resolution, teamwork, accountability, and business ethics.

BAT 200 Business Law (4)
This course provides a basic knowledge of the law and regulations to anyone contemplating a successful career in business. Students will attain knowledge of the nature, concepts and function of the law and the changes technology has brought within the legal system and business law.

BAT 212 Professional Skills & Ethics (4)
Business leaders in our society are faced with daily decisions, involving ethical decisions and professional comportment. Students will learn the basics of negotiation, conflict resolution, and trust building in the office and with clients. Students will demonstrate awareness and effective application of professional skills including teamwork, productivity, and employee retention and client relations. This course introduces students to important elements of moral theory as well as main topics in business ethics, and examines business ethics through case studies.

BAT 215 Database Management (4)
This course covers basic database management skills including creating, maintaining, and editing records, files, and tables and creating queries, forms, and reports. In addition, skills such as modifying database objects, creating advanced types of tables, calculating fields, and importing and exporting data from other software are covered.

BAT 220 Intro Business & Office Mgmt (4)
This course will offer the advanced student knowledge and skills used in business offices, accounting departments and professional firms. The student will learn the necessary skills to manage employees and materials as an office manager. Additionally, the student will become well versed in basic business principals, economic systems, management and organization and management information systems. Additionally, the student will understand business ethics and the importance of good business ethics. Students will gain a general understanding of human resources, marketing, product life cycle, finance and investment.

BAT 252 Payroll Accounting (4)
The course will cover all aspects of payroll accounting and provides an innovative, hands-on approach with unique blend of theory and practical exercises, enabling students to get a thorough understanding of the most widely used payroll accounting functions. This course ends with a comprehensive capstone project. Prerequisites: BAT117

BAT 265 Advanced Accounting Software (4)
This course is a comprehensive survey of QuickBooks Desktop that culminates with sitting for the QuickBooks Desktop certification exam. Prerequisites: BAT117

BDT 117 Carpentry I (4)
The intent of this course is to teach the students the history of the construction trade, building materials, different fasteners and adhesives, hand and power tools and reading plans and elevations. It also describes the apprentice program and career opportunities. The course will follow the NCCER modules for: Orientation to the Trade, Building Materials, Fasteners and Adhesives, Hand and Power Tools, and Reading Plans and Elevations.

BDT 119 Carpentry Basics (4)
The intent of this course is to teach the students the history of the construction trade, building materials, different fasteners and adhesives, hand and power tools and reading plans and elevations. It also describes the apprentice program and career opportunities. The course will follow the NCCER modules for: Orientation to the Trade, Building Materials, Fasteners and Adhesives, Hand and Power Tools, and Reading Plans and Elevations.

BDT 122 Floors, Walls & Ceiling Frames (4)
This course will cover lay out and erecting floor and wall and ceiling sections. The emphasis for this course is the understanding of precise layout of studs, sills, floor joist, and ceiling members. The student will learn how to layout partitions, door, and window openings. The student will perform the entire layout mentioned above, and know the correct symbols and names of all wall, floor, and ceiling components. The student will be introduced to the different methods used for framing buildings and floor framing with an emphasis on the platform, Balloon and post and beam framing method. The tools and materials used for this type of construction will be covered. The course will follow the NCCER modules for: Floor Systems, Wall and Ceiling Framing, and Introduction to Concrete, Reinforcing Materials and Forms.

BDT 127 Windows, Doors & Stairs (3)
This course will introduce the student to methods and procedures used in the selection and installation of residential windows, doors, and stairs. Students will learn the proper components of windows and doors along with basic stair layout. This course will follow the NCCER modules for Windows and Exterior doors and Basic Stair Layout.

BDT 132 Drywall (3)
The course introduces the student to the materials and techniques used in building and finishing residential and commercial buildings, including wood and steel framed structures. The course describes the various types of gypsum drywall, their uses, and the fastening devices and methods used to install them. The materials, tools and methods used to finish, and patch gypsum drywall are also covered.

BDT 136 NCCER Plumbing Level 1 Part 1 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Introduction to the Plumbing Profession, Plumbing Safety, Tools of the Plumbing Trade, Introduction to Plumbing Math, Introduction to Plumbing Drawings, Plastic Pipe and Fittings, Copper Pipe and Fittings, Cast-Iron Pipe and Fittings.

BDT 137 Roof Framing (3)
Students will learn the different types of roofs used in residential and commercial construction. This course is the most demanding of the framing tasks. Unlike floor and wall construction that involve working with straight lines, roofs are sloped requiring the framer to understand and calculate precise angles. The student will learn the names of all the roof parts and how to calculate the angles to achieve a properly constructed roof. This course will follow the NCCER modules for roof framing.

BDT 138 NCCER Plumbing Level 1 Part 2 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Introduction to the Cast-Iron Pipe and Fittings, Carbon Steel Pipe and Fittings, Introduction to Plumbing Fixtures, Introduction to Drain, Waste, and Vent (DWV) Systems, and Introduction to Water Distribution Systems.

BDT 142 Masonry (3)
This course introduces the student to the fundamentals of masonry/concrete work. The student will have the opportunity to gain practical knowledge of masonry as a trade, develop skills in the use of the tools, equipment, materials, and techniques used in construction.

BDT 156 NCCER Plumbing Level 2 Part 1 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Plumbing Math Two, Reading Commercial Drawings, Structural Penetrations, Insulation, and Fire Stopping, Installing and Testing DWV Piping.

BDT 158 NCCER Plumbing Level 2 Part 2 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Installing Roof, Floor, and Area Drains, Installing and Testing Water Supply Piping, Types of Valves, Installing Fixtures and Valves, Installing Water Heaters, Basic Electricity, and Fuel Gas and Fuel Oil Systems.

BDT 212 Carpentry II (4)
Students will learn the techniques of framing and finishing. The students will have the opportunity to become familiar with roofing application, thermal and moisture protection, exterior finishing, commercial drawings, and cold-formed steel framing. This will follow the NCCER modules for Carpentry Level Two.

BDT 217 Construction Electricity (3)
This course introduces the students to the electrical field. It also provides the student with an opportunity to understand the connection between the two construction fields. The student will be introduced to series, parallel, series-parallel circuits, hardware and systems used by electricians. It also provides a navigational road map for use of the National Electrical Code.

BDT 222 Plumbing (4)
The course will familiarize the student with the terminology and basic plumbing principles used in the plumbing profession. A variety of topics will be present such as safety, tools, drawings, fittings, fixtures, and faucets. This course will follow the NCCER modules for Plumbing Level One.

BDT 236 NCCER Plumbing Level 3 Part 1 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Applied Math, Sizing Water Supply Piping, Potable Water Treatment, Backflow Preventers, Types of Venting.

BDT 238 NCCER Plumbing Level 3 Part 2 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Sizing DWV and Storm Systems, Sewage Pumps and Sump Pumps, Corrosive-Resistant Waste Piping, and Compressed Air.

BDT 256 NCCER Plumbing Level 4 Part 1 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Business Principles for Plumbers, Introductory Skills for the Crew Leader, Water Pressure Booster and Recirculation Systems, Indirect and Special Waste.

BDT 258 NCCER Plumbing Level 4 Part 2 (4)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Hydronic and Solar Heating Systems, Codes, Servicing Piping Systems - Fixtures and Appliances, Private Water Supply Well Systems, Private Waste Disposal Systems, Swimming Pools and Hot Tubs, and Plumbing for Mobile Homes and Travel Trailers.

BDT 270 Construction OJT (6)
This course features a is a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of construction work. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.

BDT 280 Building Tech OJT (4)
This course features a is a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of building technology work. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.

BDT 290 Carpentry OJT (6)
This course features a is a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of carpentry. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.

CBM 115 Design, Layout & Safety (6)
Introduces the fundamentals of residential and commercial cabinet construction. Topics include Intro to cabinetmaking, Health and Safety, Career Opportunities, Industry, Cabinetry Styles, Components of Design, Design Decisions, Human Factors, Production decisions, Sketches, Mock-ups and Working Drawings, Measuring, Marking and Laying out materials.

CBM 130 Workplace Skills I (1)
This course utilizes Key Train Software to assist in advancement of knowledge in Applied Math, Reading for Information, and Locating Information Work Keys assessments that are required prior to exiting the program. Students will also be required to attend seminars provided through the Career Resource Center. Seminar topics include interview techniques, developing and preparing a resume, completing job applications, ethics, and teamwork.

CBM 135 Print Reading (1)
Print Reading describes how to read and interpret sets of commercial drawings and specifications. Print Reading describes how to derive cabinetmaking plans from architectural drawings and specifications. This course uses NCCER Craft Module 27201-13 and all students take a certification exam.

CBM 145 Cabinetry Materials & Products (6)
Topics include Wood Characteristics, Lumber and Millwork, Cabinet and Furniture Woods, Manufactured Panel Products, Veneers and Plastic Overlays, Adhesives, Gluing and Clamping, Bending and laminating, Overlaying and Inlaying Veneer, Installing Plastic Laminates, Glass and Plastic Products, Hardware, Fasteners and Ordering Materials and Supplies.

CBM 150 Millwork (5)
This course will utilize NCCER curriculum modules: 27208-13 and 27210-13 to cover the installation of metal doors and related hardware in steel-framed, wood framed, and masonry walls, along with their related hardware, such as locksets and door closers. It also covers the installation of wooden doors, folding doors and pocket doors. Students will learn to recognize different types of trim used in finish work. It focuses on the proper methods for selecting, cutting, and fastening trim to provide a professional finished appearance. Students will be tested for possible certification.

CBM 205 Machining Processes (6)
Machining Processes topics include Sawing with Hand and Portable Power Tools, Sawing with Stationary Machines, Surfacing with Hand and Portable Power Tools, Surfacing with Stationary Machines, Shaping, Drilling and Boring, Computer Numerically Controlled Machinery, Abrasives, Using Abrasives and Sanding Machines, Turning, Joinery, Accessories, Jigs, Special Machines, and Sharpening.

CBM 215 Finishing Techniques (6)
This course introduces the learner to the operation of traditional finishing equipment. Students perform numerous exercises to gain familiarity with finishing tools and industrial finishing equipment while building their skills and familiarity with different finishes. Finishing Units include Finishing Decisions, Preparing Surfaces for Finish, Finishing Tools and Equipment, Stains, Fillers, Sealers, and Decorative Finishes, and Top coatings.

CBM 235 Methods of Construction (6)
Topics include Case Construction, Frame and Panel Components, Cabinet Supports, Doors, Drawers, Cabinet Tops and Tabletops, Kitchen Cabinets, Built-in Cabinetry and Paneling and Furniture.

CBM 237 Crew Leadership (1)
Using NCCER module 46101-11 the student will be introduced to the principles of leadership. Students will learn about the construction industry today, business organization, team building, gender and minority issues, communication, motivation, problem solving, decision making, safety, and project control. Students will be tested for possible certification.

CBM 245 Cabinet Installation (5)
This course will introduce students to the procedures for building and installing various types of residential and commercial cabinetry. Using NCCER module 27211-13 students will receive instruction for the selection and installation of base, wall cabinets and counter-tops and test for possible certification.Using NCCER module 27501-07 students will be introduced to the materials, tools and methods used in cabinetmaking. Practice projects are included to help trainees learn the various joining techniques used by cabinetmakers, while providing practice on stationary power tools. Students will build a cabinet from a set of plans and will be tested for possible certification.

CCC 115 Child Care Curriculum Planning (2)
This course introduces techniques for guiding the following types of experiences: art, storytelling, puppetry, writing, math, science, social studies, music, and field trips. Assessment of the course includes written and assigned activities.

CCC 125 Guidance & Discipline/Family (2)
This course will assist students in developing guidance skills, handling guidance challenges, establishing classroom rules, and involving parents and family. Assessment of the course includes written and assigned activities.

CCC 130 Regs Safety Abuse (2)
This course will address KDHE Licensing Regulations, in-service training on First Aid, CPR, abuse, neglect, and communicable diseases, and promoting children's safety. Assessment of the course includes written and assigned activities.

CCC 140 Collection File I (1)
This course requires assembling a portfolio of various activities that can be used as teaching tools in the center. The method of instruction will utilize the resource library and various web sites. Assessment of the course includes written and assigned activities.

CCC 150 Child Care Lab I (5)
This course involves participation in the licensed child care center under supervision of the unit leader. Students use knowledge and skills expected of professionals new to the early care and education field. Assessment of the course includes preparing lesson plans and implementing activities in the center with evaluation completed by the unit leader.

CCC 215 Intro Early Child (2)
This course introduces students to the fundamentals of early child care. Topics include program orientation, types of early childhood programs, observation and assessment of children, and child development principles and theories. Assessment of the course includes written and assigned activities.

CCC 225 Child Care Program Development (2)
This course will assist students in developing teaching philosophies, developing areas for a balanced curriculum, writing lesson plans, selecting toys, equipment and educational materials, and exhibiting professionalism. The method of instruction will utilize textbook, lecture, and student activity sheets. Assessment of the course includes written and assigned activities.

CCC 230 Inf/Toddler/Exceptional Child (2)
This course introduces students to quality programs for infants and toddlers, school-age children, and children with special needs. Assessment of the course includes written and assigned activities.

CCC 240 Collection File II (1)
This course is the continuation of compiling a teaching portfolio. The method of instruction will utilize the resource library and various web sites. Assessment of the course includes written and assigned activities.

CCC 250 Child Care Lab II (5)
This course involves participation in the licensed child care center under the supervision of the unit leader. Students should demonstrate increased knowledge and skills by assuming a teacher's role. Assessment of the course includes planning, developing, and implementing lesson plans with evaluation done by the unit leader.

CEC 105 Workplace Skills (1)
Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in the field of their choice. Topics included listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, time and resource management, work ethics, career planning and resume building.

CEC 110 Safety Orientation/OSHA 10 (1)
Safety Orientation/OSHA 10 provides the student with an overview of the OSHA standards relevant to the construction industry. Various topics are presented in a 15-hour format. Among the subjects covered in the course are: an introduction to OSHA, electrical safety, fall protection, and excavation and trenching safety.

CEC 115 Electrical Fundamentals (4)
The student will receive instruction in basic electrical theory for DC and Alternating Current systems. The student will have knowledge on the production of electricity and how to apply Ohm's Law and Power Formula. Electrical safety is taught along with skills in how to read and interpret schematic diagrams. This class must be passed with a minimum of a C or 78% for the student to continue to next course.

CEC 116 Electrical Fundamentals II (1)
Students will be introduced to motor theory and explore motor applications. This course builds on previous knowledge gained in Electrical Fundamentals I and requires a firm understanding of magnetism and voltage production. Motor trouble shooting will be introduced. Types of motors covered will be single phase motors, three phase and ECM motors. This class must be passed with a minimum of a C or 78% for the student to continue to next course.

CEC 118 Electrical Fundamentals II (2)
Students will be introduced to motor theory and explore motor applications. This course builds on previous knowledge gained in Electrical Fundamentals I and requires a firm understanding of magnetism and voltage production. Motor trouble shooting will be introduced. Types of motors covered will be single phase motors, three phase and ECM motors. This class must be passed with a minimum of a C or 78% for the student to continue to next course.

CEC 120 Heating System Fundamentals (3)
This course will give students a firm understanding of combustion and how it is applied in the HVAC trade. Residential gas furnaces will be studies in detail in order to gain understanding in how they are installed and serviced. A thorough understanding of Standard, Midrange and High Efficiency furnace service and installation will be earned as a result of this course. This class must be passed with a minimum of a C or 78% for the student to continue to next course.

CEC 121 Heating System Fundamentals II (2)
The heating System Fundamentals II course is designed to walk student thorough the requirements of the Uniform Mechanical Code in relation to Gas Piping and exhaust ventilation. Student will gain a thorough understanding and be able to apply skills in sizing vents and pipe upon completion of this course.

CEC 123 Adv Electrical Theory for HVAC (3)
Advanced Electrical Theory for HVAC is a continuation of Electrical Fundamentals and places an emphasis on developing systematic diagnosis and troubleshooting methods and procedures that will enable the student to become a highly-skilled, professional HVAC-R service technician.

CEC 125 Adv Electrical Theory for HVAC (2)
Advanced Electrical Theory for HVAC is a continuation of Electrical Fundamentals and places an emphasis on developing systematic diagnosis and troubleshooting methods and procedures that will enable the student to become a highly-skilled, professional HVAC-R service technician.

CEC 126 Advanced Heating Systems (3)
This course will introduce students to electric furnaces and hydronic heating with an emphasis on the electrical systems of those units and code requirements for the safe installation of such equipment. Indoor air quality will be discussed in detail as a major factor in human comfort.

CEC 135 Sheet Metal Fabrication I (3)
This course focuses on sheet metal fabrication utilizing various sheet metal tools and techniques. Duct sizing is discussed in addition to code requirements for duct systems.

CEC 202 Environmental HVAC Systems (4)
Environmental HVAC Systems introduces students to the heat transfer systems used in commercial applications to maintain comfort in a space. Students will gain an understanding of heat transfer, system design, commercial equipment and their operations. This course prepares students to enter into commercial work and exposes them to old and new designs they will encounter in the field while helping them understand the practices for energy efficiency in these systems.

CEC 205 HVAC Fundamentals (4)
This course is designed to introduce students to the broader picture that is HVAC. Students will become familiar with trade related organizations, job requirements, gain skills in soldering and brazing, and demonstrate learned skills to service and repair air conditioning systems. Students must earn a C grade or better in this course in order to advance to the next course.

CEC 207 Heating System Installation (3)
The heating System Fundamentals II course is designed to walk student thorough the requirements of the Uniform Mechanical Code in relation to Gas Piping and exhaust ventilation. Student will gain a thorough understanding and be able to apply skills in sizing vents and pipe upon completion of this course.

CEC 210 EPA 608 (1)
Students will be certified in federal regulations of safe refrigerant handling practices. Successful completion of the certification course is required for technicians to work with and purchase refrigerants.

CEC 215 Intro Mechanical Refrigeration (4)
The students will apply knowledge previously learned in HVAC Fundamentals to ice machines, refrigerators and commercial coolers. Students will learn the function of the specialized electrical circuits and how to service and repair these systems.

CEC 225 Heat Pumps (3)
The student will learn the basic functions of various Heat Pump design as well as charging and troubleshooting procedures.

CEC 230 Commercial HVAC (4)
This course will introduce students to the commercial applications of various HVAC systems. A strong foundation in refrigeration theory is required as well as a comprehensive understanding of system airflow and electrical fundamentals. Students who complete this course will be skilled in reading advanced electrical schematics and be able to describe the function and application of various commercial systems and components including Direct Digital Control systems and frequency drives. This is a capstone course.

CEC 235 Commercial HVAC Lab (4)
This course continues the introduction to Commercial HVAC systems through hands-on training. Students will be performing basic maintenance, repairs and troubleshooting on functioning light commercial and commercial equipment.

CHC 105 Introductory Craft Skills (3)
This course introduces the student to basic safety, construction math, hand and power tools of the trade, basic blueprint reading, communication skills, and basic employability skills. Math and reading will be embedded in the curriculum. Introductory Craft Skills is required for all students entering the Carpentry program. The intent of this course is to introduce the students to the construction trades. It is very important for every student to learn the proper way to conduct themselves while in the shop or on-the-job site. This course will cover shop and job site safety, tool safety, personal protective devices, protective railings, proper storage and handling of construction materials, and construction drawings. This course will follow the NCCER modules for: Basic Safety, Introduction to Construction Math, Introduction to Hand Tools, Introduction to Power Tools, Introduction to Blueprints, Basic Rigging, Basic Communication Skills, and Basic Employability Skills.

CHC 107 Carpentry Basics (2)
This course continues instruction utilizing the NCCER Core Curriculum. Topics include construction drawings, basic rigging, communication and employability skills, and materials handling. Successful completion of CHC 105 and CHC 107 will earn students NCCER Core credential.

CHC 110 Field Safety & Orientation (2)
Through a variety of classroom and/or lab activities the student will explore and demonstrate hazard recognition, signs, signals, barricades, work permits, material handling, specialty work, and health issues related to thE industry. In addition, work zone safety, electric and high voltage issues, fall protection, ladders and scaffolding, lock-out/tag-out, safety inspections and meetings, and how to properly investigate and document an accident are discussed and implemented. Math and reading will be embedded in the curriculum.

CHC 120 Site Layout I (1)
This course introduces the student to site layout and how it applies to commercial sites for building pads and site work. Introduction to the equipment used for site layout of these projects, and common math equations encountered will be addressed. Math and reading are embedded in the curriculum.

CHC 122 Site Layout II (4)
The course will include surveying math, metric system, and conversion between English and metric. Concepts in working with formulas and equations will be an essential component of the course. Students will learn proper use and care for site layout equipment. An introduction to reading of blueprints and specifications are relevant to site layout of various projects. Math and reading are embedded in the curriculum.

CHC 130 Safety Certifications (2)
This course instructs and prepares the student for a certificate in trench safety and competent person training, confined space safety certificate; and the OSHA 30-hour safety certificate. Industry has a high priority and focus on these safety certifications. Math and reading are embedded in the curriculum.

CHC 140 Heavy Highway I (6)
In this course the student will be introduced to the heavy highway trade of trucks and heavy equipment. Course content includes procedures and components of trucks, heavy equipment, below grade construction, earthmoving, plant operations, paving, and structures. Math and reading are embedded in the curriculum.

CHC 150 Heavy Equipment I (5)
This course will prepare the student with technical skills to seek employment as a heavy equipment operator in the equipment operations career field. This course includes instructions and practical operation experience in bulldozers, backhoes, track excavators, skid loaders, motor graders, and dump trucks. Students will also have a working understanding of grade reading, laser level operation, engineering stake interpretations, safety procedures, and equipment maintenance. Math and reading will be embedded within the curriculum.

CHC 180 Pipe Laying I (6)
Through classroom and/or lab experiences, instruction will include proper use of hand and power tools in the pipe laying trade, receiving and inspecting pipe upon arrival on the job site, cutting and fabricating the pipe, discussion of concrete, PVC, and ductile iron pipe, proper elevations, foundations and stabilization, bedding and de-watering practices will be discussed. Math and reading will be embedded in the curriculum.

CHC 195 Class A CDL (1)
This course will provide technical knowledge and skills for the student about various trucks in the 54,000 lb. tag weight and used in construction. Dump trucks will be the primary focus and the student will learn the components of the trucks as well as be instructed on safe operation of the vehicle. Math and reading will be embedded in the program. Pre-and post-trip inspections will be taught along with proper paperwork required in such vehicle. Optional: the student may complete the assessment to obtain the Class A CDL.

CHC 250 Heavy Equipment II (7)
This course will focus on the student's choice of heavy equipment. Application of all heavy equipment safety aspects is required. The training will take the student into more extensive operating procedures and will be tailored to an intermediate experience level. The course plan is progressive as the instructor introduces general maneuvers and the student advances their skill towards skills of greater difficulty and complexity. Students will be encouraged to attempt, practice, and perform simulations to demonstrate their skilled achievements. Math and reading will be embedded within the program.

CHC 255 Heavy Equipment II Application (6)
This laboratory/application course will focus on advancing the skills of the student on heavy equipment. Technical knowledge learned in CHC250 will be applied in this course. With practice, it is the intent that applied skills will improve on various pieces of equipment. Equipment used will consist of bulldozers, backhoes, loaders, track hoes, uni-loaders, and off road trucks. As the student completes each task he/she will move to a more challenging task. The instructor will monitor each task and improvement of student. Tasks are pass or fail. Math and reading will be incorporated in each task as it applies in the field.

CLR 121 Non-Structural A&D Repair 1 (4)
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will explore the components of safety pertaining to auto collision and repair, explore the parts and construction of vehicles, explore opportunities in the auto collision industry, identify metal straightening techniques, identify the application and use of body fillers, demonstrate proper use, set-up and storage of welding equipment, distinguish between weld able and non-weld able materials, demonstrate fundamental industry standard recommended welds, identify plastics and adhesives used in automotive industry, explain the general purpose of damage, estimation and repair orders; explore the processes required for outer body panel repairs, replacements and adjustments, and demonstrate fundamental cutting procedures.

CLR 126 Non-Structural A&D Repair 2 (4)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will identify trim and hardware to be protected, examine what to consider when working with movable glass, perform outer body panel repairs, perform outer body replacements and adjustments; perform metal straightening techniques, perform body filling techniques, perform metal finishing techniques, use welding procedures in non-structural damage repair, distinguish between mechanical and electrical components, apply safety standards for the collision repair industry, use cutting procedures in non-structural damage repair, and determine procedures necessary for working with plastics and adhesives.

CLR 131 Structural A&D Repair 1 (2)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will identify measuring procedures, analyze the basic structural damage conditions, identify the safety requirements pertaining to structural damage repair, analyze frame repair methods, analyze unibody inspection and measurement, and identify procedures of welding for structural repair.

CLR 132 Structural A&D Repair 2 (2)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will apply safety requirements pertaining to structural damage repair, analyze frame inspection and repair procedures, determine direct and indirect damage for structural repair, analyze unibody inspection, measurement, and repair procedures, perform welding techniques for structural repair, and identify cutting procedures for structural repair.

CLR 141 Paint & Refinishing 1 (3)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will identify safety and personal health hazards according to OSHA guidelines and the "Right to Know" law, determine the different types of substrates and sanding materials relevant to auto body surface preparation, identify the process to clean and prepare a substrate for paint; distinguish between the properties, uses, and manufacturer specifications of metal treatments and primers, distinguish among the various types of spray guns and equipment; explore various paint codes and specifications for use, identify the various paint systems, explore the types of paint defects, distinguish between damage and non-damage related corrosion, and identify final detail procedures.

CLR 142 Paint & Refinishing 2 (3)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will select proper personal protective equipment, perform proper shop operations according to OSHA guidelines, remove paint coatings, apply corrosion resistant coatings, demonstrate proper spray gun operation and cleaning procedures, select proper painting and substrate materials for projects, analyze paint defects, causes and cures, repair paint defects, measure paint mil thickness, and determine final detail procedures for given projects.

CLR 151 Mechanical & Electrical (3)
Through classroom and/or lab/shop learning and assessment activities, students will determine how to diagnose steering and suspension, diagnose electrical concerns, complete head lamp and fog/driving lamp assemblies and repairs, demonstrate self-grounding procedures for handling electronic components, determine diagnosis, inspection, and service needs for brake system hydraulic components, examine components of heating and air conditioning systems, determine the inspection, service, and repair needs for collision damaged cooling system components, distinguish between the under car components and systems, and determine the diagnosis, inspection, and service requirements of active and passive restraint systems.

CLR 152 Intro to Est & Diagnostic Scan (2)
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: explore the components of analyzing damage pertaining to auto collision and repair; demonstrate basic estimating to identify structural repairs required, part design, construction materials, and manufacturing processes.

CLR 162 Workplace Skills (1)
This course utilizes KeyTrain Software to assist in reinforcing applied math and reading skills in preparation for the WorkKeys assessment, given prior to exiting the program. Students are encouraged to take the Locating Information WorkKeys exam as well, the third test needed to be eligible to earn a WorkReady Certificate. Students may also be required to attend seminars presented on campus dealing with topics such as interview techniques, developing and preparing a resume, completing job applications, ethics, and teamwork.

CLR 221 Non-Structural A&D Repair 3 (4)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will remove and install trim and hardware, determine process and procedures necessary for movable glass repair, repair outer body panel, replace and adjust outer body panels, remove and install mechanical and electrical components, demonstrate safety protocol appropriate for the auto repair setting, perform intermediate welding skills on non-structural damage repairs, and perform plastic and adhesive repairs.

CLR 226 Non-Structural A&D Repair 4 (5)
Through a variety of classroom and lab/shop learning and assessment activities, students in this course will apply safety requirements pertaining to structural damage repair, perform advanced welding and cutting techniques for structural repair, perform inspection and measurement of unibody for structural repair, repair unibody direct and indirect damage, perform frame inspection and measurement procedures, repair frame to industry standards, and remove and install fixed glass.

CLR 241 Adv. Estimating & Blueprinting (2)
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will expand their knowledge and performance to explore the advanced components of analyzing damage pertaining to auto collision and repair; demonstrate a complete estimate to identify structural repairs required, part design, construction materials, and manufacturing processes. Prerequisite: CLR152: Intro to Estimating and Diagnostic Scanning.

CLR 242 Advanced Cutting & Welding (2)
In this course, students will analyze and prepare the vehicle for appropriate cutting and welding procedures, identify the appropriate safety concerns; determine and use the appropriate tools and materials to perform the cutting and welding procedures, and inspect the final product for quality.

CLR 246 Paint & Refinishing 3 (3)
Through a variety of learning and/or lab/shop learning and assessment activities, students in this course will identify safety and personal health hazards according to OSHA guidelines and the "Right to Know" law, determine the different types of substrates and sanding materials relevant to auto body surface preparation, identify the process to clean and prepare a substrate for paint, distinguish between the properties, uses and manufacturer specifications of metal treatments and primers, distinguish among the various types of spray guns and equipment, explore various paint codes and specifications for use, identify the various paint systems, explore the types of paint defects, distinguish between damage and non-damage related corrosion, and identify final detail procedures.

CLR 248 Paint & Refinishing 4 (4)
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will apply exemplary safety procedures in all areas of auto body painting and refinishing, perform proper cleaning procedures for a refinish, prepare adjacent panels for blending, prepare plastic panels for refinishing, protect all non-finished areas of vehicle, operate high and low volume/pressure spray gun operations for painting and refinishing, perform all paint system applications on an automobile, apply appropriate paint color matching and mixing procedures, tint color using formula to achieve a blendable match, explore the causes, effects and correction of buffing related imperfections, explore the causes, effects and correction of pigment flotation, measure mil thickness, apply decals, transfers, tape, wood grain, and pinstripe to an automobile, apply buffing and polishing techniques to remove defects, apply cleaning techniques to automobile interior, exterior, glass and body openings, and remove over spray.

CLR 253 Mechanical & Electrical 2 (3)
Through classroom and/or lab/shop learning and assessment activities, students will advance knowledge and skills to determine how to diagnose steering and suspension, diagnose electrical concerns, complete head lamp and fog/driving lamp assemblies and repairs, demonstrate self-grounding procedures for handling electronic components, determine diagnosis, inspection and service needs for brake system hydraulic components, examine components of heating and air conditioning systems, determine the inspection, service and repair needs for collision damaged cooling system components, distinguish between the under car components and systems, and determine the diagnosis, inspection and service requirements of active and passive restraint systems. Pre-requisite: CLR151 Mechanical & Electrical.

CLR 256 Pulse Technology Welding (2)
In this course, students will identify different methods of attaching structural components (squeeze type resistance spot welding (STRSW), riveting, structural adhesive, MIG bronze, etc)

CLR 262 Plastic Repair Technology (2)
In this course, students will learn about and perform procedures for various types of plastic repair.

CLT 101 Supply Chain Logistics (4)
This course covers a range of industrial safety and material handling topics, including forklift operation, load distribution, and handling different types of materials. Participants will also learn about safety procedures and regulations related to electrical safety, welding safety, and fire safety, and how to effectively utilize safety data sheets. The course is designed to provide participants with the knowledge and competencies to identify and mitigate potential hazards in industrial settings, demonstrate proper safety procedures, and implement material handling practices that improve efficiency, safety, and compliance.

CLT 102 Certified Logistics Technician (3)
This course prepares students for work activities and related skills involved with moving material throughout the supply chain: to and from production sites, to warehouses and distribution centers, to material handlers within the various transportation modes (truck, air, rail, water).

CLT 104 Certified Logistics Technician (4)
This course will provide students with the training, knowledge and skills that mid-level material-handling workers in supply chain logistics will need. Students who successfully complete the course will be eligible to take the assessment to become a certified logistics technician.

CLT 250 Forklift Operation (1)
This course is designed to train entry level workers in the correct use of a forklift to unload, move, stack, and load materials for shipping and distribution.

COS 130 Cosmetology Clinical (1-12)
Cosmetology students who still have contact hours to complete, due to lack of attendance. This is usually after the original contact/credit semesters have ended.

COS 131 Scientific Concepts (1)
This course provides classroom instruction in sanitation, hair and scalp, skin, and nails for as prescribed by the Kansas Board of Cosmetology.

COS 132 Scientific Concepts (2)
This course provides classroom instruction in sanitation, hair and scalp, skin, and nails for as prescribed by the Kansas Board of Cosmetology.

COS 133 Scientific Concepts (3)
This course provides classroom instruction in sanitation, hair and scalp, skin, and nails for as prescribed by the Kansas Board of Cosmetology.

COS 134 Scientific Concepts (4)
This course provides classroom instruction in sanitation, hair and scalp, skin, and nails for as prescribed by the Kansas Board of Cosmetology.

COS 135 Scientific Concepts (5)
This course provides classroom instruction in sanitation, hair and scalp, skin, and nails for as prescribed by the Kansas Board of Cosmetology.

COS 141 Physical Services (1)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 142 Physical Services (2)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 143 Physical Services (3)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 144 Physical Services (4)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 145 Physical Services (5)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 146 Physical Services (6)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 147 Physical Services (7)
This course provides both classroom and clinical instruction in shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements.

COS 151 Design Services (1)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 152 Design Services (2)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 153 Design Services (3)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 154 Design Services (4)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 155 Design Services (5)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 156 Design Services (6)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 157 Design Services (7)
This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques.

COS 161 Chemical Services (1)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 162 Chemical Services (2)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 163 Chemical Services (3)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 164 Chemical Services (4)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 165 Chemical Services (5)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 166 Chemical Services (6)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 167 Chemical Services (7)
This course provides classroom instruction in Chemical Hair care services. Virgin application, retouch application, foiling techniques, free hand techniques, permanent waving, and chemicals services that are for textured hair, relaxing,and curl reformation.

COS 221 Bus Prctice/Std Specific Needs (1)
This course provides classroom instruction in management practices, salon development, insurance, client records and salesmanship.

COS 222 Bus Prctice/Std Specific Needs (2)
This course provides classroom instruction in management practices, salon development, insurance, client records and salesmanship.

COS 223 Bus Prctice/Std Specific Needs (3)
This course provides classroom instruction in management practices, salon development, insurance, client records and salesmanship.

COS 224 Bus Prctice/Std Specific Needs (4)
This course provides classroom instruction in management practices, salon development, insurance, client records and salesmanship.

COS 231 State Law (1)
This course provides classroom instruction in the Kansas Board of Cosmetology General Laws, Rules and Regulations.

COS 232 State Law (2)
This course provides classroom instruction in the Kansas Board of Cosmetology General Laws, Rules and Regulations.

CPT 101 Safety in Manufacturing Produc (3)
It is important to be safe while you work. This course provides you with an overview of the Occupational Safety and Health Administration General Industry Designated Training Topics. The course is intended to provide entry level general industry workers a broad awareness on recognizing and preventing hazards in a general industrial setting. The training covers a variety of safety and health hazards which a worker may encounter at a general industry site.

CPT 102 Quality Practice & Measurement (3)
In order to meet a customer's needs, quality consistent product must be produced. This is accomplished through the knowledge of the equipment operator. Each machine operator determines both the quality and quantity of production from his/her equipment. In this course you will learn basic Quality Practices and Measurements that will enable you to produce high quality products.

CPT 103 Manufacturing Process & Produc (3)
Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career. Topics include listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, and resource management.

CPT 104 Maintenance Training (3)
Preventive maintenance and production housekeeping are very important aspects of equipment operations. In this course the student will learn how to monitor production equipment for both routine and preventive maintenance.

CRN 126 PC Hardware Fundamentals (4)
PC Hardware Fundamentals provides an introduction to the computer hardware skills needed to help meet the requirement for entry-level information and communication technology professionals. The curriculum covers the fundamentals of PC hardware technology, networking, laptop, and printer, operational procedures, and also provides an introduction to advanced concepts in ever growing Computer Technology. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Hands-on labs help students develop critical thinking and complex problem-solving skills.

CRN 136 PC Software Fundamentals (4)
PC Software provides a comprehensive overview of the computer operating system and introduction to advanced concepts. Students who complete this course will be able to install and trouble shoot an operating system using system tools and diagnostic software. Practical application will include connecting computers to the Internet and share resources in a networked environment.

CRN 146 Fund of Computer Networking (4)
This course prepares students with the knowledge and skills to install and configure Windows desktop operating system. The course focus is in four areas: installing, securing, networking, and browsing. At the completion of the course, the student will have installed and configured a Windows 7 desktop OS that is secure, on the network, and ready for browsing.

CRN 156 Network Operating Systems I (4)
This course introduces students to a broad range of Network Operating System (NOS) concepts, including installation and maintenance. The course focus is on Microsoft Windows 2008/2012 operating system concepts, management, maintenance, and the required resources.

CRN 166 Network Operating Systems II (4)
This course introduces students to a broad range of Network Operating System (NOS) concepts, including installation and maintenance. The course focus is on Linux Network Operating System concepts, management, maintenance, and the required resources.

CRN 176 Desktop Operating Systems (4)
This course provides an introduction to operating system basics with the intent of giving a student a deeper understanding of various operating systems. Operating systems covered include Windows 7 through Windows 10 desktop operating systems, Windows Server, UNIX/Linux, and Mac OS X operating systems. Students will learn some networking basics and information involving how to create mixed environments. Advanced configuration and troubleshooting will also be part of this course.

CRN 186 Network Security Fundamentals (4)
This course prepares students to manage security by teaching the fundamentals of cybersecurity.

CRN 221 Intro to Enterprise Networking (2)
These concurrent courses introduce the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of these courses, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

CRN 226 Intro Enterprise Netwrking Lab (3)
These concurrent courses introduce the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of these courses, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

CRN 231 Routing & Switching Essentials (2)
These concurrent courses describe the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with standard access control lists and Network Address Translation for IPv4 and static and dynamic routing, virtual LANs, inter-VLAN routing, and Dynamic Host Configuration Protocol for both IPv4 and IPv6 networks. Prerequisite: Successful completion of CRN221 and CRN 226.

CRN 236 Routing/Switching Essntls Lab (3)
These concurrent courses describe the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with standard access control lists and Network Address Translation for IPv4 and static and dynamic routing, virtual LANs, inter-VLAN routing, and Dynamic Host Configuration Protocol for both IPv4 and IPv6 networks. Prerequisite: Successful completion of CRN221 and CRN 226.

CRN 240 Workplace Skills I (2)
This course prepares students to write and present documents often found in technical settings. Students will create technical summary documents, sets of instructions, technical illustrations, and technical presentations. Students will develop and enhance appropriate workplace appearance and behavior. Prerequisite: Concurrent enrollment in CCNA I and CCNA II.

CRN 241 Scaling Networks (2)
These concurrent courses describe the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, EtherChannel, and HSRP in both IPv4 and IPv6 networks. Prerequisite: Successful completion of CRN231 and CRN 236 or valid CCENT certification.

CRN 246 Scaling Networks Lab (3)
These concurrent courses describe the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, EtherChannel, and HSRP in both IPv4 and IPv6 networks. Prerequisite: Successful completion of CRN231 and CRN 236 or valid CCENT certification.

CRN 251 Connecting Networks (2)
These concurrent courses discuss the WAN technologies and network services required by converged applications in a complex network. The courses enable students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols, extended and IPv6 access control lists, and Quality of Service (QoS). Students will also develop the knowledge and skills needed to implement common security and monitoring techniques in complex networks. Prerequisite: Successful completion of CRN241 and CRN246.

CRN 256 Connecting Networks Lab (3)
These concurrent courses discuss the WAN technologies and network services required by converged applications in a complex network. The courses enable students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols, extended and IPv6 access control lists, and Quality of Service (QoS). Students will also develop the knowledge and skills needed to implement common security and monitoring techniques in complex networks. Prerequisite: Successful completion of CRN241 and CRN246.

CRN 265 Workplace Skills II (2)
This course prepares students for the documents and skills needed to enter the competitive technical field job market. Students will create and enhance their cover letter and résumé. Interview techniques and job application skills will be developed. Students will learn to identify available professional resources and levels of professional certification. Students will develop and enhance appropriate workplace appearance and behavior. Prerequisite: Concurrent enrollment in Enterprise Networking and Network Technology Application.

CUA 100 Culinary Math (4)
This course develops students' math skills that are vital to the food service industry. These skills include working with conversions of weights, measuring and calculating food cost, portion costs, labor control, and portion control which are all vital skills in becoming a great chef.

CUA 110 Sanitation/Safety (3)
This course covers sanitation and food safety by instructing the students on the regulations imposed by the State of Kansas Food Code that must be followed during the production of food for consumption by the public. It is a prerequisite to all other courses in the culinary arts program. Successful completion of the course will provide the student with methods of controlling the spread, growth, and elimination of bacteria and other food borne pathogens, as well as controlling physical contamination threats to foods. The student will also be able to perform safely in all areas of kitchen operations including the lifting and transporting of food and equipment, and have an awareness of safely handling hazardous materials along with knowledge of fire awareness, suppression, and avoidance, as well as avoidance of burns and lacerations. Safe equipment operation, maintenance, and cleaning are explained and no student is allowed to operate any power equipment until having its operation demonstrated by the instructor. Proper knife selection and handling is explained and demonstrated by the instructor. Sanitation and safety are continually brought by and related to current activities throughout the length of the program.

CUA 120 Basic Cooking Principles (5)
This course covers the most basic and some of the most important concepts in culinary arts profession. This course is a prerequisite for all later courses in the program. Upon completion of the student will have full vocabulary of cooking terminology and be able to identify the moist and dry heat methods of heat transfer as well as how equipment and materials provide heat and affect the cooking process. The student will be able to identify the components of recipes as well as how to read, interpret, price, and convert them. The student will be capable of utilizing the various ways product in the kitchen are measured and portioned along with the economic ramifications of proper implementation of these skills. Topics also include menu design and the factors involved in it along with the basic nutritional considerations and terminology that relate to it. Students also will be conversant on kitchen organization, prioritization of tasks, and time management in the face of deadlines. Students will use basic preparation tasks and knife skills. This course includes lecture, demonstration, and lab opportunities to apply knowledge and skills in food preparation.

CUA 128 Food Prep 1-A (3)
This course presents relevant information and training about standard commercial and institutional food preparation as it relates to the preparation of stocks, sauces, and soups. Upon completion, the student will be able to identify the ingredients and methods of production of stocks, reductions, and glazes. They will be capable of classifying and preparing sauces, thickening agents used, sauce families, production methods, finishing techniques, and producing and classifying soups. This course includes lecture, demonstration, and lab opportunities to apply knowledge and skills in food preparation.

CUA 130 Food Prep I (6)
This course presents relevant information and training about standard commercial and institutional food preparation as it relates to the preparation of stocks, sauces, soups, and red meats. Upon completion, the student will be able to identify the ingredients and methods of production of stocks, reductions, and glazes. They will be capable of classifying and preparing sauces, thickening agents used, sauce families, production methods, finishing techniques, and producing and classifying soups. The student will understand the composition, structure, and quality factors involved in utilizing red meats. Topics such as the basic cuts available and carcass structure, as well as selection of the various market forms available and an overview of cooking methods as it relates to tenderness and methods of determining doneness of meats will be explored. This course includes lecture, demonstration, and lab opportunities to apply knowledge and skills in food preparation.

CUA 135 Food Prep II (6)
This course presents relevant information and training about standard commercial and institutional food preparation as it relates to the understanding and preparation of poultry, seafood, and vegetables. Upon completion, the student will conversant in the composition and classification of poultry, seafood, and vegetables. The student will be able to properly handle, butcher, prepare, and determine doneness of these products. This course includes lecture, demonstration, and lab opportunities to apply knowledge and skills in food preparation. This is a 6 credit hour intermediate level course consisting of 45 hours of classroom work and 90 hours of lab experience.

CUA 210 Basic Management Skills (3)
This course introduces the student to the nature of food service management philosophy. It gives the student an overview of management goals in the industry. Cost and sales concepts are discussed along with control processes. Cost, volume, and profit relationships are also examined along with customer service concepts are examined as well. Students will have hands-on experience with scheduling, conducting inventory, along with menu development and costing.

CUA 215 Food Prep III (5)
This course presents relevant information and training relating to commercial and institutional preparation of vegetables, potatoes, legumes, pastas, and other starches, along with salads and dressings. The student will be able to use various preparation methods in order to control changes in the color, flavor, texture, and nutritional content of these products. Topics included are the vegetarian diet as well the preparation of the various types of salads, dressings, and the types of emulsions involved in preparing them. This course includes lecture, demonstration, and lab opportunities to apply knowledge and skills in food preparation.

CUA 220 Workplace Skills (1)
This course utilizes Key Train software to assist in advancement of knowledge. A Level 4 in Applied Math and Reading for Information and a Level 3 in Locating Information Work Keys assessments are required prior to exiting the program. Students will also be required to attend seminars provided through the Career Resource Center. Seminar which includes interview techniques, developing and preparing a resume, completing job applications, ethics, and teamwork.

CUA 230 Food Prep IV (3)
This course presents relevant information and training relating to commercial and institutional preparation of sandwiches, hors d'oeuvres, breakfast preparations, and dairy and cheese products. The student will be able to prepare various common types of sandwiches and canapés, cocktails, relishes, and dips using typical methods. The student will also be able to prepare egg products and custards, dairy and cheese products, and breakfast beverage preparations. This course includes lecture, demonstration, and lab opportunities to apply knowledge and skills in food preparation.

CUA 235 International Cuisine (4)
This course gives students the opportunity to learn about other countries and cuisines from around the world. Students will investigate imports and exports, produce indigenous foods, and apply new cooking techniques from a variety of countries around the world.

CUA 240 Baking Principles I (4)
This course presents relevant information and training relating to commercial preparation of bakery products and ingredients used. This includes discussion of baking formulas and baking percentages. Dough and batter mixing and the information of gluten are covered along with the baking process. Primary ingredients and their use in the bake shop are examined. An initial look at bakery production is made through examining artisan and sour dough breads and the production of lean and rich dough yeast breads.

CUA 245 Baking Principles II (4)
This course presents relevant information and training relating to commercial and institutional preparation of bakery products and ingredients used. This includes the preparation of quick breads, syrups, creams, sauces, pies, pastries, tarts, cakes, cookies, and decorative sugar and chocolate pieces.

DEM 111 Shop Skills & Safety Fundament (1)
The focus of this course is the ability to safely work with shop equipment commonly found in a diesel servicing and repair facility. Emphasis is using, maintain and servicing shop equipment such as hoists, lifts, safety stands, cranes, presses and grinders. The location and usage of personal protective equipment (PPE) and of common hand tools is included.

DEM 113 Electrical/Electronic Systems (5)
Systems studies the principles of electricity through operations and testing procedures and provides an introduction to electronics. Diagnostics and repair of starting and charging electrical systems are covered, in addition to practical applications of the principles of electricity. Electronic management programs are referenced and studied.

DEM 116 Workplace Skills (1)
Overview and practice of general workplace skills including personal effectiveness, time management, teamwork, and critical thinking in the workplace. The course incorporates skill development in the following three units: overview of diesel technology, workplace communication and customer service, and job application.

DEM 123 Hydraulics (5)
Principles of basic hydraulics, introduction to hydraulics systems: open center, closed center, and pressure and flow compensating type systems.

DEM 134 Scanner Diagnostics (1)
Scanner Diagnostics focuses on the hands-on application of aftermarket diagnostic equipment and tools such as the Snap-on Pro-link and Modis as well as OEM systems utilized by Cummins, CASE and others.

DEM 138 Suspension and Steering (3)
Suspension and Steering addresses the theory, operations and troubleshooting of various steering and suspension system components.

DEM 142 Welding for Diesel (3)
Introduction to basic concepts of general welding; hands-on lab activities to apply knowledge and develop skills in the following areas: shop safety, cutting (oxy/acetylene) SMAW (Shielded Metal Arc Welding).

DEM 143 Brakes (3)
Brakes will cover the theory and operations of hydraulic and air brake systems, teaching troubleshooting, disassembly, inspection and adjustments of hydraulic and air brake systems, including ABS.

DEM 144 Brakes for Construction (2)
Brakes will cover the theory and operations of hydraulic and air brake systems, teaching troubleshooting, disassembly, inspection and adjustments of hydraulic and air brake systems, including ABS. Common braking system utilized on construction equipment are highlighted.

DEM 148 Advncd Electrl/Electrnc Systms (5)
Construction machine electrical schematic reading, troubleshooting, diagnosis, and repair of monitoring systems, instrumentation, and other specialized electronic and computer-controlled equipment on CASE Construction machinery and heavy equipment. Students will determine proper use of wiring schematics to troubleshoot electrical systems on light through heavy vehicles.

DEM 150 EST Diagnostics (1)
The CASE EST (Electronics Scan Tool) Diagnostics course on the hands-on application of CASE and aftermarket diagnostic equipment and tools such as the Snap-on Pro-link and Modis as well as OEM systems utilized by Cummins, CASE and others.

DEM 204 Advanced Machine Electrical (4)
Knowledge and skills learned in DEM113 are the foundation for the study of CASE Construction equipment electrical systems such as monitoring systems, instrumentation, lighting and other specialized electronic and computer-controlled systems. Troubleshooting, diagnosis, and repair of these systems is performed utilizing electrical testers, meters, and scan tools such as the CASE EST (Electronic Service Tool). The use of wiring schematics and repair manuals in the diagnosis process is emphasized. Prerequisite: DEM113 Electrical Electronics Systems

DEM 221 Drive Trains (3)
The Drive Trains 1 course will include classroom and/or shop exercises in: characteristics and principles of power trains units. Specific topics include introduction to diesel drive trains, drive shafts, power take-offs, and standard transmissions. Also the procedures in disassembly, wear analysis, and failure analysis. Instruction will be included in these types of transmissions and differentials: Mack, Rockwell Eaton and Dana Spicer. Students will be expected to observe and comply with all safety rules and regulations.

DEM 224 Advanced Hydraulic Systems (3)
Knowledge and skills learned in DEM123 are the foundation for the study of the hydraulic and hydrostatic systems used on CASE construction equipment. Diagnosing and testing to solve system problems; interpretation of fluid hydraulic schematic and diagrams; and electronic and computer-controlled systems are all covered. Prerequisite DEM123 Hydraulics

DEM 231 Diesel Engines I (5)
Diesel Engines I introduces the theory of operation and the use of the engine's mechanical components; disassembling, inspecting, measuring, reassembling and performing maintenance procedures on diesel engines.

DEM 241 Advanced Diesel Engines (5)
Advanced Diesel Engines course will include classroom and/or shop exercises: basic principles of the various engine systems, the disassembly and inspection, reconditioning of component parts to include various fuel systems. In addition, engine diagnosis and maintenance will be discussed and performed in various engine systems. Students will be expected to observe and comply with all safety rules.

DEM 244 Heavy Equipment Operation (2)
Operation and operator-level service and inspection of typical heavy construction equipment such as bulldozers, backhoes, loaders, track hoes, uni-loaders, and off road trucks. Pre-operation inspections, setup, and operational field testing of new and used construction equipment.

DEM 248 Drive Trains II (3)
Drive Trains II builds on the knowledge, skills and abilities obtained in DEM221. Systems utilized in light, medium and heavy truck drive trains including: automatic transmissions, drive axles, procedures in disassembly/assembly, wear analysis, and failure analysis in drive trains, pressure and flow testing of drive train systems, timing of drive train systems, and theory and operation of final drives and shuttles are included. Prerequisite: DEM221 Drive Trains

DEM 250 Engine Performance (2)
Engine Performance covers the engine control and emission control systems such as fuel injection, air induction, exhaust, exhaust gas treatments\filters utilized on light, medium and heavy diesel trucks. Students are introduced to diagnostic equipment and tools such as the Snap-on Pro-link and Modis as well as OEM systems utilized by Cummins, CASE and others.

DEM 252 Power Trains for Construction (3)
Drive trains and components of construction equipment, clutch systems, transaxles, differentials, axles; emphasis on disassembly, reassembly and component identification; pressure and flow testing of powertrains used in construction equipment; calibrations of transmissions, theory and operations of final drives and shuttles. Emphasis: Understanding of operation of mechanical, power shift, power shuttle, S type power shift, and hydrostatic transmissions to include tracking and adjustments.

DEM 265 Diesel Internship I (3)
Students will apply for and secure an internship or other work-based learning experience in the diesel industry. The student will work under the guidance of an assigned industry mentor at their internship location. Instructor may specify areas of specific need based on students needs and previous performance within the diesel department. Prerequisites: Instructor approval.

DEM 268 Aux Power Units/Refrigeration (2)
The function and purpose of Auxiliary Power Units (APUs) that power system when the primary engine is not in use, such as refrigeration units on tractor-trailers, are covered. This course includes basic air conditioning service, diagnostic, and repair on applications used in the diesel field and Section 509 Refrigeration certification by the Mobile Air Condition Society (MACS).

DEM 274 Diesel Preventative Maintenanc (3)
This course is designed to prepare students for entry-level jobs as a preventative maintenance diesel mechanic. Preventative maintenance diesel mechanics perform inspections and maintenance on diesel vehicles and equipment doing minor repairs and keeping maintenance records. The course series covers all the basic systems of a vehicle or equipment with an emphasis on preventative maintenance procedures and shop safety.

DEM 275 Diesel Internship II (3)
Students will apply for and secure an internship or other work-based learning experience in the diesel industry. The student will work under the guidance of an assigned industry mentor at their internship location. Instructor may specify areas of specific need based on students needs and previous performance within the diesel department. Diesel Internship II is a continuation of Diesel Internship I for those students wishing to continue the internship. Prerequisites: Instructor permission and DEM 265 Diesel Internship I.

ECE 100 Introduction to Early Childhood Education (3)
This course introduces students to the fundamentals of early childhood education. It will include an introduction on developmentally appropriate practice, curriculum methods and materials, including technology, and connect to early learning standards.

ECE 112 Preschool Development (3)
The focus of this course is on the development, implementation and assessment of appropriate environments and curricula for young children ages three through five. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments.

ECE 119 Creative Experiences for Young Children (3)
This course is a study of constructing and maintaining a developmentally appropriate environment for young children that fosters aesthetic sensitivity and creativity. It focuses on the selection, construction, use of materials for experiences that encourage the young child's creativity, and development through visual arts, dramatic play, and music.

ECE 127 Child Health, Safety, & Nutrition (3)
This course is the basic study of health, nutrition, and safety management practices for young children. Includes instruction on CPR/ First Aid.

ECE 131 Children with Special Needs (3)
This course will enable the student to develop skills associated with providing quality care and education to young children with disabilities and chronic conditions. The student will explore issues of positioning, feeding, adaptive equipment, family dynamics, inclusion, and invasive procedures.

ECE 135 Infant & Toddler Development & Care (3)
This course focuses on the growth and development of the child from birth through age two. An in-depth look at the unique learning environment required for infants and toddlers will provide an understanding of how to create and maintain safe and healthy environments that promote physical and intellectual competency as well as support social and emotional development. Outcomes will also include the development of programs that include collaborative partnerships with parents and community resources for servicing infant and toddler needs.

ECE 141 Early Language & Literacy Development (3)
This course is designed to teach students how to recognize and implement appropriate environmental strategies that support early literacy development and appropriate early experiences with books and writing. Emphasis is placed on speaking and listening, as well as reading and writing readiness. Upon completion of the course, students will be able to select, plan, implement, and evaluate appropriate early literacy experiences.

ECE 148 Early Childhood Education Lab I (3)
This course involves participation in the licensed early learning center under supervision of the unit leader. Students use knowledge and skills expected of professionals new to the early childhood education field.

ECE 151 Early Childhood Curriculum Development (3)
This course explores the principals involved in planning, implementing and evaluating developmentally appropriate, evidence-based curriculum for young children.

ECE 155 Early Childhood Education Lab II (3)
This course is the second lab course in the program that involves participation in the licensed early learning center under supervision of the unit leader. Students use knowledge and skills expected of professionals new to the early childhood education field.

ECE 200 Developing Family Relationships (3)
This course will assist students in developing guidance skills, handling guidance challenges, establishing classroom rules, and involving parents and family.

ECE 202 Administration in Early Childhood (3)
This course will enable the student to implement the principles of administration and organization of childcare programs. The student will focus on record keeping, budgeting, facility management, family involvement, and the hiring, training, supervision, and evaluation of staff.

ECE 205 Foundation of Education (3)
This course is designed to acquaint students with the education profession and to help them develop a realistic understanding of teaching, learning, and leadership. Students will examine motives for teaching, explore the qualities of effective teachers and leadership, and discuss the various diversities teachers encounter as well as the implications for teachers and learning. Students will begin to identify strategies and options for successful classroom practice.#Ethical, legal, and controversial issues affecting education today will be addressed along with how to become a teacher leader in the profession.

ECE 212 Children's Play and Games (3)
This course is designed to stress the importance of play learning attitudes and environments. Students learn the importance of movement in relation to what children learn, and that play environments should encourage children to explore, imagine, invent, and express feelings.

ECE 227 Early Childhood Education Internship (3)
This course involves students being placed in an early learning center to learn to work with professionals in the field, understand the type of dedication needed, and to observe the working operations of an early learning center. Course will culminate with an early childhood education portfolio.

ELE 120 National Electrical Code I (4)
This is an introductory course on the use and interpretation of the current National Electrical Code. The student will develop a working knowledge of the code which will permit them to apply it to everyday applications. The course will include the requirements for electrical installation, wiring design and protection, methods and materials used, equipment for general use, special occupancies equipment, and condition.

ELE 125 AC/DC Circuits I (4)
This course introduces students to the basic of alternating current and direct current circuits. The student will perform calculations using Ohm's law and the study the construction, operation and purpose of resistors, potentiometer, switches, fuses, relay capacitors, inductors, batteries, alternators, transformers, and series-parallel resonant circuits. Students will build basic AC and DC circuits using multi meter and oscilloscope.

ELE 127 International Res Code I (1)
The IRC (International Residential Code) is the understanding of building of single and two-family dwellings. The student will develop a working knowledge of the code and standards of constructing a dwelling. The electrical student needs the understanding of basic building design to do their work more efficiently. The course will include the requirements for scope and administration, definitions, and building planning.

ELE 132 Print Reading (2)
Print Reading introduces the student to the fundamentals of interpreting construction drawings. Students will learn to interpret plan views, elevation views, sections, details, schedules, specifications, symbols and abbreviations found on most residential, commercial, and industrial construction drawings.

ELE 135 Commercial Wiring I (4)
In Commercial Wiring I, the student will study the theory, practice, and National Electrical Code requirements for commercial wiring. The course consists of definitions, formulas, wiring methods, overcurrent protection, calculation and sample examinations. Wiring projects are also assigned to put the theories learned in the classroom into practice.

ELE 137 International Residential Code (3)
The IRC (International Residential Code) is the understanding of building of single and two-family dwellings. The student will develop a working knowledge of the code and standards of constructing a dwelling. The electrical student needs the understanding of basic building design to do their work more efficiently. The course will include the requirements for scope and administration, definitions, and building planning. The course will also include general requirements, electrical definitions and services, branch circuit and feeder requirements, wiring methods, and power and lighting distribution.

ELE 140 Residential Wiring I (4)
This course is an introduction to residential wiring methods that includes practical application and hands on experience in implementing code requirements. The student will gain the necessary skills to wire a residence to meet the minimum requirements as set forth in the current National Electrical Code for residential occupancies.

ELE 142 National Electrical Code II (4)
This course is a continuation of the National Electrical Code I course on the use and interpretations of the current national electric code (NEC Chapters 5-9).

ELE 147 International Res Code II (1)
The IRC (International Residential Code) is the understanding of building of single and two-family dwellings. The student will develop a working knowledge of the code and standards of constructing a dwelling. The electrical student needs the understanding of basic building design to do their work more efficiently. The course will include general requirements, electrical definitions and services, branch circuit and feeder requirements, wiring methods, and power and lighting distribution.

ELE 220 Electricity II (6)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Alternating Current, Motors: Theory and Application, Electric Lighting, Conduit Bending, Pull and Junction Boxes, Conductor Installations, Cable Tray, Conductor Terminations and Splices, Grounding and Bonding, Circuit Breakers and Fuses, Control Systems and Fundamental Concepts.

ELE 230 Electricity III (6)
This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Load Calculations – Branch and Feeder Circuits, Conductor Selection and Calculations, Practical Applications of Lighting, Hazardous Locations, Overcurrent Protection, Distribution Equipment, Transformers, Commercial Electrical Services, Motor Calculations, Voice, Data, and Video, and Motor Controls.

ELE 250 Electrical OJT (6)
This course features a is a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of electrical work. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.

EMS 105 Emergency Medical Responder (5)
This course is approved by the Kansas Board of Emergency Medical Services (KSBEMS). It is based on current information and techniques considered the responsibility of the EMR according to the National Highway Traffic Safety Administration, National Standard Curriculum, as enriched by the KSBEMS Education Standards. This course exceeds the state and national requirements and consists of 76 hours of didactic and 41 hours of psychomotor skills in the classroom and at least 12 hours of Field Internships. The curriculum covers didactic and practical skills instruction, skills demonstrations, clinical experience and/or orientation to the emergency room and to the ambulance, extrication class, or in contrived experiences of patient care.

EMS 110 EMT: Foundations of EMT (3)
This course is approved by the Kansas Board of Emergency Medical Services (KSBEMS). It is based on current information and techniques considered the responsibility of the EMT according to the National Highway Traffic Safety Administration, National Standard Curriculum, as enriched by the KSBEMS Education Standards. This is the initial course in a series of three courses required to complete the EMT program and sit for the national exam. The focus of the first course includes introduction to EMS systems, medical terminology, the human body and introduction to patient assessment. This course exceeds the state and national requirements and consists of 42 hours of didactic and 32 hours of psychomotor skills in the classroom. The curriculum covers didactic and practical skills instruction, skills demonstrations, clinical experience and/or orientation to the emergency room and to the ambulance, extrication class, or in contrived experiences of patient care.

EMS 120 EMT: Asmt, Trauma & Med Mgmt (3)
This course is approved by the Kansas Board of Emergency Medical Services (KSBEMS). It is based on current information and techniques considered the responsibility of the EMT according to the National Highway Traffic Safety Administration, National Standard Curriculum, as enriched by the KSBEMS Education Standards. This is the second course in a series of three courses required to complete the EMT program and sit for the national exam. The focus of this course includes patient assessment, airway management, pharmacology, systems review, and special populations. This course exceeds the state and national requirements and consists of 42 hours of didactic and 29 hours of psychomotor skills in the classroom. The curriculum covers didactic and practical skills instruction, skills demonstrations, clinical experience and/or orientation to the emergency room and to the ambulance, extrication class, or in contrived experiences of patient care.

EMS 130 EMT:EMS Oper. & Practical Exam (3)
This course is approved by the Kansas Board of Emergency Medical Services (KSBEMS). It is based on current information and techniques considered the responsibility of the EMT according to the National Highway Traffic Safety Administration, National Standard Curriculum, as enriched by the KSBEMS Education Standards. This is the final course in a series of three courses required to complete the EMT program and sit for the national exam. The focus of this course includes EMS operations, incident management, final cognitive review and exam, and final practical review and exam. This course exceeds the state and national requirements and consists of 26 hours of didactic and 31 hours of psychomotor skills in the classroom. The curriculum covers didactic and practical skills instruction, skills demonstrations, clinical experience and/or orientation to the emergency room and to the ambulance, extrication class, or in contrived experiences of patient care.

EMS 200 Advanced Emergency Medical Technician I: Medical Emergencies (5)
This is the initial course required to complete the AEMT program and sit for the national exam. This course addresses current information and techniques considered the responsibility of the AEMT according to the National Highway Traffic Safety Administration, National Standard Curriculum, as enriched by the KSBEMS Education Standards. The focus of the course includes introduction to medical terminology, the human body, advanced patient assessment and advanced pharmacology. Topics include: didactic and practical skills instruction, skills demonstrations, clinical experience and/or orientation to the emergency room and to the ambulance, extrication class, or in contrived experiences of patient care. Prerequisites: Successful completion of EMT certificate.

EMS 205 Advanced Emergency Medical Technician II: Trauma Emergencies (5)
This course is a continuation of EMS 200 with a focus on didactic and practical skills instruction, skills demonstrations, clinical experience and/or orientation to the emergency room and to the ambulance, extrication class, or in contrived experiences of patient care. Prerequisites: Successful completion of EMT certificate. Corequisite: EMS 200

EMS 210 Advanced Emergency Medical Technician: Field Internship I (5)
This course will enable the student to have hands-on experience utilizing the knowledge and skills gained in the previous courses. The student will be supervised and evaluated by an assigned preceptor on the ability to assess and manage traumatic and medical emergencies. The student will be evaluated in the classroom, field, and clinical setting. Prerequisites: Successful completion of EMT certificate. Corequisite: EMS 200 and EMS 205

EMS 215 AEMT Internship II (5)
This course is a continuation of EMS 210. Students will have hands-on experience utilizing the knowledge and skills gained in the previous courses. The student will be supervised and evaluated by an assigned preceptor on the ability to assess and manage traumatic and medical emergencies. The student will be evaluated in the classroom, field, and clinical setting. Prerequisites: Successful completion of EMT certificate. Corequisites: EMS 200, EMS 205, EMS 210

GRP 110 Graphic Design I (4)
The purpose of this course is to summarize the role served by graphic communications in a technological society and to identify the basic functions of the industry. This course also covers the fundamental principles and elements of design and general layout principles used by graphic designers in the production of visual images. This course introduces students to design software such as Adobe InDesign.

GRP 121 Color Composition (4)
This course will introduce the use of color and composition as they relate to imaging rules of creative element placement and design of an image. Students will learn the psychology of color and how color can affect the message of the design. Prerequisite: GRP110.

GRP 133 Page Layout (4)
This course will teach composition techniques and procedures utilizing page layout software such as Adobe Indesign. The student will explore formatting, alignment, spacing, breaks, tabs, tables, lists, drop caps, margins, columns, and become familiar with typographic details. They will also apply page layout techniques to create balanced and professionally designed materials.

GRP 141 Graphic Design II (4)
This course covers the intermediate principles and elements of design and general layout principles used by graphic designers in the production of visual images. This course will give students the opportunity to work within groups and begin development of skills used when working with clients. This course continues with intermediate skills in design software such as Adobe InDesign, Adobe Illustrator and Adobe Photoshop.

GRP 143 Typography (2)
This course will introduce the use of different styles of typography and how to use them more creatively. Students will learn how different styles of typography can affect the message of the design as well as add impact to their designs.

GRP 148 Vector Based Graphics (3)
A study and use of vector graphics for production. Skill development in the use of the tools and transformation options of Adobe Illustrator to create complex vector illustrations for print and web-based media. Mastery in manipulation of both text and graphics with emphasis on the use of the pen tool as well as the correct use and management of different color modes. Focus on software tools and techniques to capture, correct, create and combine images for print and web. Topics include input devices, resolution, tone and color correction, retouching, painting, drawing, image manipulation, compositing, automation, graphic formats, design and reproduction considerations, interview skills with clients to obtain information. This course continues to master skills in design software such as Adobe Indesign, Adobe Illustrator and Adobe Photoshop.

GRP 163 Digital Printing (3)
Principles of digital imaging technology and the different types of equipment and methods involved in electronic image capture are learned in this course. Students also learn how to prepare digital design and imaging files for successful output. This course will teach proper workflow techniques from file generation to print production. Emphasis is placed on troubleshooting and managing files as well as determining proper file structure based on the required output.

GRP 233 Graphic Design III (5)
This course covers the advanced principles and elements of design and layout principles used by graphic designers in the production of visual images. The projects will become directed more toward working with clients and workplace skills. Students learn to evaluate the project and determine appropriate timeline and tools needed to accomplish the task. Students also learn how to manage multiple projects and deadlines successfully. The students will be given the opportunity to begin working with clients either in person or online. This course continues with advanced skills in design software such as Adobe Indesign, Adobe Illustrator and Adobe Photoshop.

GRP 241 Paper & Bindery (3)
This course covers the different types of paper and other substrates used for printing in the graphics industry. The course also covers various finishing methods and binding techniques.

GRP 244 Raster Based Graphics (4)
This course will teach image composition techniques and procedures utilizing raster graphics software such as Adobe Photoshop. Focus on software tools and techniques to capture, correct, create and combine images for print and web. Topics include input devices, resolution, tone and color correction, retouching, painting, drawing, image manipulation, compositing, automation, graphic formats, design and reproduction considerations. Prerequisite: GRP121

GRP 248 Graphic Design IV (5)
Students who have met grade and attendance requirements will work directly with clients. Students will advance the skills learned in Graphic Design III by further mastering the use of a tracer system and interview skills with clients to obtain information. This course continues to master skills in design software such as Adobe Indesign, Adobe Illustrator and Adobe Photoshop.

GRP 254 Production Graphics (4)
This course will provide students with an on-the-job experience in a graphics setting. May include on-campus virtual internship, job shadowing or off-campus internship.

GRP 258 Portfolio Preparation (3)
This course will cover business operations and job management techniques. Students will learn interview techniques, developing and preparing a resume, digital and physical portfolio, completing job applications, ethics, and teamwork. Students will also participate in mock interviews.

HCT 105 First Aid & CPR (1)
This course is an introduction to basic first aid and included CPR certification. The course provides the basic information and skills needed to meet the Amercian Heart Association standards.

HCT 108 Health Occupations I (4)
Students will learn about a wide variety of careers in allied health fields, job settings, and required training/education and they will do so based upon a a body system approach. These careers will be studied utilizing basic disease/illness and wellness/prevention concepts, associated types of patient/disease processes, and the effects of wellness on these processes.

HCT 122 Medical Terminology (2)
The course introduces the student to the language of the medical field. Medical prefixes, suffixes, and combining forms are introduced to the student so they may have a thorough knowledge and understanding of what they are reading and writing in the medical field. An emphasis is placed on terms, pathological conditions, and diagnostic terms.

HCT 126 Medical Terminology (3)
The course introduces the students to the language of the medical field, including commonly used abbreviations. Medical prefixes, suffixes, and combining forms are introduced so they may have a thorough knowledge and understanding of what they encounter in the medical field. An emphasis is placed on body systems, conditions, diagnostic terms and medical specialties.

HCT 128 Nurse Aide (5)
This course provides the student with the knowledge and skills necessary to secure employment as a CNA in the workplace through a combination of classroom instruction, nursing lab skill demonstration/practice, and the opportunity to gain instructor supervised experience in a work setting. This program meets state guidelines for the Kansas Nurse Aide certification testing through Kansas Department of Aging and Disability Services.

HCT 134 Human Growth & Development (3)
This course provides an introduction to physical, cognitive, emotional, and social aspects of human development throughout the life span. It emphasizes developmental processes beginning with conception and continuing throughout childhood, adolescence, adulthood, later life and death. The course focuses on developmental processes, cultural influences, and other factors that make each individual unique. This course takes an inter-disciplinary approach toward human development that is based on science and applied toward the goal of solving important human problems.

HCT 135 CPR (0)
This course is an introduction to basic first aid and included CPR certification The course provides the basic information and skills needed to meet the American Heart Association standards.

HCT 136 Human Anatomy & Physiology (4)
This course is designed to introduce the student to the structure and function of the following body systems: skeletal, muscular, nervous,sensory, circulatory, respiratory, digestive, and urinary systems. This class offers information concerning normal human structures and functions and the developmental changes that occur during an individual's life span. Students will learn specific information about factors associated with expected and abnormal anatomical and physiological changes associated with the body's major organ systems. This course is designed for students who are interested in pursuing a career in a health occupation.

HCT 137 Human Anatomy & Physiology Lab (2)
This course provides opportunities to observe various anatomical parts and to investigate physiological phenomena. The student will relate specimens, models, microscope slides, and whole body information learned in lecture and read about in the textbook. Study of anatomy of major organ systems includes use of anatomical models and selected preserved animals and organs.

HCT 138 Home Health Aide (2)
This course is designed for the person seeking to provide direct care services to clients in their home. Home Health Aides assist other health care professionals in maintaining and restoring the client to optimum levels of physical and emotional well-being while allowing the client to remain at home. Upon completion of the course students are eligible to receive a certificate after passing the Kansas Department of Aging and Disability Services exam. Prerequisites: CNA certification

HCT 141 Nutrition (3)
This introductory course provides a basic knowledge of human nutrition. Students will learn the sources and functions of the various nutrients. They will also explore the interaction of diet, disease, prevention, and treatment. Through the use of computerized nutrition program, students will analyze their diets for nutritional deficiencies and excesses.

HCT 148 Medication Aide (5)
The Certified Medication Aide (CMA) course is designed for the person seeking work in a long-term care facility. The CMA course introduces the student to basic concepts of medication administration including drug classification, drug action, and nursing implications for specific drugs. Student's participation in hands-on experience in a clinical setting is an integral part of the course. Upon completion of the course, students are eligible to receive a Medication Aide certificate after passing the Kansas Department of Aging and Disability Services exam. Prerequisite: CNA certification

HCT 160 Fundamentals of Phlebotomy (2)
This course is designed to train individuals to properly collect and process blood and other clinical specimens for laboratory testing and to interact with health care personnel, clients, and the general public. Presentation includes equipment and additives, basic anatomy, and techniques for safe and effective venipuncture. Emphasis will be placed on collection techniques, specimen processing, Order of Draw, departments in the clinical laboratory, the tests analyzed in each department, and work flow practices.

HCT 164 Phlebotomy Lab (2)
This course provides the student with knowledge and practical application of basic laboratory skills with a focus on patient care. Students learn and practice basic skills in venipuncture, sterile technique, patient safety, and documentation. There is major emphasis on the critical elements of laboratory procedures and the scientific rationale for performing the procedures correctly.

HCT 166 Phlebotomy Clinical Practicum (2)
A health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts; direct supervision is provided by the clinical laboratory professional; course provides opportunities to practice phlebotomy skills in a clinical setting; safety, quality control and interpersonal communications will be stressed.

HCT 168 Phlebotomy National Exam Rev. (1)
This course is designed to prepare the student for the ASCP or NHA National Exam. The course will include practice test questions over the topics covered in the didactic course Fundamentals of Phlebotomy.

IND 103 OSHA 10-Hr Healthcare (1)
Safety Orientation/OSHA 10 provides the student with an overview of the OSHA standards relevant to the construction industry. Various topics are presented in a 15-hour format. Among the subjects covered in the course are: an introduction to OSHA, electrical safety, fall protection, and excavation and trenching safety.

IND 104 Basic Electricity I (3)
This course is an introduction to electricity, basic electrical components and their characteristics, circuit schematics and basic analysis of series and parallel DC circuits. Hands-on labs help guide student learners to assimilate this material.

IND 105 OSHA - 10 Hr Gen Industry Cert (1)
This course is offered in an online or face-to-face format. For the online course, all course activities are completed through an interactive self- paced website. In the face-to-face format, a variety of classroom and/ or lab learning and assessment activities are used to present the material. In both formats students in this course will: explain job/ site safety and precautions for job/site hazards; determine the uses of personal protective equipment (PPE); identify the safety equipment and procedures related to safe work practices and environment; identify fire prevention and protection techniques; explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

IND 107 OSHA - 10 Hour Const Ind Cert (1)
This course provides the student with an overview of the OSHA standards relevant to the construction industry. Various topics are presented in a 10-hour format. Among the subjects covered in the course are: and introduction to OSHA, electrical safety, fall protection, excavation and trenching safety.

IND 109 OSHA - 30 Hour Const Ind Cert (2)
Students will learn basic OSHA regulations and safety. The students will also learn how to read the OSHA manual properly. The course will stress the importance of personal protective equipment; fall protection, hazard recognition and other topics connect to on the job site safety. The course will also provide the student with an understanding of current safety regulation, established safety practices, and the impact of behavior and environment on injury prevention.

IND 111 OSHA - 30 Hour Const Ind Cert (3)
This course provides an overview of the Occupational Safety and Health Administration Construction Training Topics. This course is intended to provide entry level construction workers a broad awareness on recognizing and preventing hazards on a construction site. This course will also address real world challenges that electrical workers face on a daily bases. It will introduce avoiding oversights that could result in shock and arc flash accidents. The material presented will emphasize the rules specified by the National Fire Protection Association (NFPA) using NFPA 70E standards. After taking this course, students will be able to take the arc flash certification test.

IND 112 Fluid Power I (3)
This course provides fundamentals of pneumatics, air compressors, control valves, pneumatic cylinders, and electro-pneumatic controls; and basic pump principles, centrifugal pumps, magnetic drive pumps, diaphragm pumps, metering pumps and pump seals. Students learn how to operate, install, troubleshoot, analyze performance, and design basic pneumatic systems and pump systems. Students will learn how to read basic fluid power schematics.

IND 116 Lathe/Mill/Grind for I.M. (3)
This course covers fundamental manual machine operator skills and basic precision measuring techniques. Specific course topics include machines, tools and measurements to produce an end product. Participants work independently and as small teams in completing the hands-on lab activities. Students will learn how to read basic blueprints.

IND 127 Mechanical Systems (3)
This course provides understanding of mechanical energy transmission concepts along with lab experience to operate, install, analyze performance, and design basic mechanical transmission systems using chains, v-belts and spur gears. Students also learn how to safely move loads of different shapes and sizes using a variety of methods.

IND 146 Industrial Welding Basics (3)
This course introduces basic concepts of Industrial welding. Hands-on lab activities are provided for the participant to apply knowledge and develop skills in the following areas: Shop Safety, basics into GMAW and GTAW welding. Participants will work independently and as small teams in completing the lab activities.

IND 147 Mechanical Systems Reliability (3)
This course provides understanding of mechanical energy transmission concepts along with lab experience to operate, install, analyze performance, and design mechanical drive systems using right angle gears, bearings and couplings. Students learn how to setup and operate laser shaft alignment and apply vibration analysis to various power transmission systems. Prerequisite/Corequisite: Mechanical Systems or consent of instructor.

IND 150 Industrial Pumps (2)

IND 152 Electrical Control Systems I (3)
This course is an introduction to electrical control systems with focus on control devices, electric motors, manual/electric/magnetic motor control and overload/over current protection and monitoring. Lab experience helps develop skills to operate, install, design, and troubleshoot AC electric motor control circuits for various applications. Students will learn to read and draw wiring and ladder drawings. Prerequisite: IND104 Basic Electricity I.

IND 204 Electrical Control Systems II (3)
This course provides an understanding of Reversing Motor Circuits, Solid State Devices and System Integration, Timing and Counting Functions, Relays and Solid State Starters, Sensing Devices and Controls. Hands-on labs help guide student learners to assimilate this material. Prerequisites: IND104 Basic Electricity I; IND152 Electrical Control Systems I.

IND 207 Fluid Power II (2)
This course focuses on understanding of hydrodynamics, hydraulic principles, hydraulic circuitry and diagrams, piping, hydraulic valves and actuators, accumulators, hydraulic circuit maintenance and fluid maintenance. Students learn to operate, install, analyze performance, and design hydraulic and electrohydraulic systems. Prerequisite: Fluid Power I or consent of instructor.

IND 213 Advanced ECS (3)
This course focuses on motion and position control systems; servo motors, servo system feedback devices, and variable frequency drives. Hands-on labs help develop skills to operate, install, tune, and troubleshoot major types of AC and DC drives. Prerequisite: IND104 and IND152; or consent of instructor.

IND 217 Indust Prog Logic Controllers (3)
This course is an introduction to programmable logic controllers (PLCs) and PLC control of analog input and output devices. The course covers basic PLC programming and troubleshooting with live devices and their use in industrial, commercial, and residential applications. Prerequisites/ Corequisites: Electrical Control Systems II, Fluid Power I, or consent of instructor.

IND 223 Commercial & Industrial Wiring (3)
This course covers the routing, labeling, and the installation of wiring and components in an electrical control panel as well as wiring electric motors and external devices. This course also includes basic conduit bending and installation, selecting wire for an application, soldering, running network cables, and learning techniques to keep wiring and control panels tidy and organized. Prerequisites: IND104 and IND152

IND 247 Industrial Process Control (3)
This course provides understanding of different types of process control systems like temperature, flow and level control. The course includes process control principles, thermocouples, RTD's, temperature measurement devices, On/Off temperature controllers, programmable process heat controllers, transmitters, process loop test equipment and final control elements. Using this information students learn to construct, test and operate systems found in industrial applications. Prerequisites: Electrical Control Systems I, Fluid Power II, or consent of instructor.

IND 248 Prog Logic Controllers II (3)
This course builds on the knowledge gained in 'Programmable Logic Controllers I' and focuses on the fundamentals of installing and troubleshooting of industrial communications networks using Control Net ; operation, installation, configuration and troubleshooting of the Device Net field-device network; and Human-to-Machine Interface (HMI) using Allen Bradley and Control Logix PLCs.

IND 252 Robotics I (3)
This course is an introduction to robotics which provides an understanding of basic robotics principles, parts of robots, degrees of freedom, programming methods and languages. Students learn to home a robot, test teach points, construct flow charts and design simple robot programs for different applications.

IND 256 Robotics II (3)
This course builds on the knowledge gained in 'Robotics I' and focuses on sensors, end effectors, control systems and maintenance. Students learn advanced commands and operators, create simulation objects, configure objects and design work cells.

IND 257 Robotics II (4)
This course builds on the knowledge gained in 'Robotics I' and focuses on sensors, end effectors, control systems and maintenance. Students learn advanced commands and operators, create simulation objects, configure objects and design work cells.

LOP 130 Legal Terminology (4)
Students will attain knowledge and understanding of terms commonly used in the legal profession. Students will learn to define the terms, correctly pronounce them, and use them in legal context. Keyboard practice is used to solidify definitions and correct spelling of legal terms and terminology will be used in correspondence and legal pleadings.

LOP 140 Software for Legal Assistants (4)
An essential skill in legal support role is the understanding and proficiency in computer applications commonly used in the legal environment. In this course, the student will become proficient in programs, through instruction and hands on activities. These programs include word processing, spreadsheets and legal billing and timekeeping. Students will also learn applications and procedures for case management, docket control, legal research and litigation support.

LOP 150 Legal Projects (4)
The law office environment is specialized and different from the traditional business world. Legal Office Projects is designed to present an overview of the structure and functions of the law office and provide the student with an opportunity to learn about different specialty areas of the law and to prepare real life documents and pleadings required in this profession. The course is focused on activities necessary to become a valued member of a legal team.

LOP 160 Foundations of Law&Legal Ethic (4)
This course explores various types and classifications of law through explanation, readings and case analysis. An important part of the study of law are the ethics of the legal environment. Lawyers expect their assistants to understand different practice areas. In addition, it is imperative in any legal environment to understand, practice and follow the professional ethics in the practice of law.

LOP 170 Law Office Management (4)
This course is designed to familiarize the student with various management functions essential and specific to the practice of law. Students will learn client management, docketing and scheduling, legal billing and timekeeping and resource management Additionally, students will learn leadership, personnel management and total quality management.

LOP 180 Legal Admin Assistant Capstone (1)
In this capstone course, students will demonstrate the skills learned throughout the program either by working in a law firm or government office or by completing a major research project.

LOP 240 Legal Terminology (5)
Students will attain knowledge and understanding of terms commonly used in the legal profession. Students will learn to define the terms, correctly pronounce them, and use them in legal context. Keyboard practice is used to solidify definitions and correct spelling of legal terms and terminology will be used in correspondence and legal pleadings.

LOP 250 Legal Office Projects (3)
The law office environment is somewhat different from the traditional business world. Legal Office Procedures is designed to present an overview of the structure and functions of the law office and provide the student with an opportunity to learn about different specialty areas of the law and to prepare real life documents and pleadings required in this profession.

LOP 260 Legal Transcription (4)
Legal Transcription teaches students to transcribe from sound common legal pleadings, correspondence, and recorded sessions to reinforce the correct pronunciation of legal terminology. Transcribed dictation is evaluated with written copy to increase rate typing speed in transcription and produce error free documents from sound.

MAT 100 Technical Math (2)
This course will enable the student to gain confidence with the use of basic math, measurements, and signed numbers. The concepts learned in this course will build problem solving skills that are critical in the workplace. These concepts develop a solid foundation for success in the use of technology.

MAT 101 Technical Math I (3)
This course will enable the student to gain confidence with the use of basic math, measurements, and signed numbers. The concepts learned in this course will build problem solving skills that are critical in the workplace. These concepts develop a solid foundation for success in the use of technology.

MAT 102 Technical Math II (3)
This course is a continuation of Technical Mathematics I. The concepts learned in this course will build on problem solving skills using geometry, algebraic expressions and techniques for solving equations. These concepts develop a solid foundation for success in the use of technology.

MOS 150 Medical Terminology (1)
This course familiarizes students to basic medical terminology and medical abbreviations used in a nursing care setting. The course is a component of and incorporated into the semester long program.

MOS 250 Medical Terminology (5)
Designed to give the student a background in basic medical terminology, this course covers prefixes, suffixes, combining forms, and word roots to compose medical terms. The student learns to spell, pronounce, define, and interpret terminology related to body structure, disease, diagnosis, and treatment.

MOS 255 Medical Records Management (4)
This course will acquaint the student with processing, maintaining and filing medical records. Students will also gain hands-on practice in creating, editing and generating medical reports. Emphasis is placed on confidentiality, appropriate documentation, accuracy and comprehension of information within the documents, and will require the use of medical terminology.

MOS 260 Medical Office Procedure (3)
This course provides hands-on practice of front office skills in a medical setting, both on paper and electronically, using medical office software. The student will also practice entry-level diagnosis coding, procedure coding, and medical claims billing.

MTT 106 Safety (OSHA 10) (1)
Through a variety of classroom and/or lab learning and assessment activities, students in this course will explain job/site safety and precautions for job/site hazards; determine the uses of personal protective equipment (PPE); identify the safety equipment and procedures related to safe work practices and environment; identify fire prevention and protection techniques; explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

MTT 112 Print Reading (3)
Students will learn to identify basic lines, views and abbreviations used in blueprints, determine dimensions of features of simple parts, sketch simple parts with dimensional measurements, determine dimensions of multi-feather part, interpret GDT symbols, frame, and datums.

MTT 114 Machining I (3)
Student will learn to conduct job hazard analysis for conventional mills and lathes, develop math skill for machine tool operation, perform preventive maintenance and housekeeping on conventional mills and lathes, select work holding devices for mills, lathes and other machine tools, calculate feed and speeds, remove material using milling and turning processes, align milling head, use a vertical mill to center drill, drill and ream holes, change tools and tool holders on milling machines, and maintain saws and grinders.

MTT 115 Print Reading/Math II (1)
Students learn to perform basic trigonometric functions, and perform other procedures such as I.D. boring and facing operations, planning a sequence for machining operations, aligning work pieces, use work holding devices, jigs and fixtures, performing threading operations on lathes, machining keyways on a vertical mill, inspecting and dressing grinding wheels, performing O.D. & I.D. threading operations, performing O.D. & I.D. tapering operations, machining parts using milling cutters and milling machines, and tapping holes on a vertical mill.

MTT 116 Machine Tool Processes (1)
Students will learn to conduct a job hazard analysis for a machine tool group, analyze blueprints to layout parts and materials, select hand tools and common machine shop mechanical hardware for specific applications, prescribe cutting tools for assigned operations, calculate stock size to minimize drop, machine parts to specification outlined in machine handbooks, summarize preparations for machining operations, and apply precautions to minimize hazards for work with lathes, mills, drills, and grinders.

MTT 118 Lathe/Mill/Grind I (4)
Instruction will be given in the form of lectures, hand-outs, video tapes, shop demonstrations, shop assignment and text book assignments. Students will perform required set-ups and operations of lathes, milling machines, and grinders in a timely manner. Students are required to practice all shop safety rules. Calculate feed and speeds using the math formulas taught. Math will also be used to calculate hole pattern layouts, gear cutting, threading information, inspecting and quality control, and programming. Students will be required to perform machine operations to the satisfaction of the instructor. Students may be required to work in two or three person teams, but all students will be given the opportunity to demonstrate their competency level and ability by means of written test, verbal communications, and demonstrating hands-on.

MTT 123 Machining II (3)
Students learn to perform basic trigonometric functions and perform other procedures such as I.D. boring and facing operations, planning a sequence for machining operations, aligning work pieces, use work holding devices, jigs and fixtures, performing threading operation on lathes, machining key ways on a vertical mill, inspection and dressing grinding wheels, performing O.D. and I.D. threading operations, performing O.D. and I.D. tapering operations, machining parts using milling cutters and milling machines.

MTT 124 Lathe/Mill/Grind II (5)
Instruction will be given in the form of lectures, hands-on video tapes, shop demonstrations, shop assignments, and text book assignments. Students will perform required set-ups and operations of lathes, milling machines, and grinders in a timely manner. Students are required to practice all shop safety rules. Calculate feed and speeds using the math formulas taught. Math will also be used to calculate hole pattern layouts, gear cutting, threading information, inspecting and quality control, and programming. Students will be required to perform machine operations to satisfaction of the instruction. Student may be required to work in two or three person teams, but all students will be given the opportunity to demonstrate their competency level and ability by means of written tests, verbal communications, and demonstrating hands-on abilities.

MTT 131 Quality Control & Inspection (1)
Students are introduced to the science of dimensional metrology and its applications to ensure form and function of machined parts and assemblies using semi-precision and precision measuring instruments.

MTT 151 Workplace Ethics (2)
Students study human relations and professional development that exists in today's rapidly changing world so that they become better prepared for living and working in a complex society. Topics include human relations, job acquisition, job retention, job advancement, and professional image skills.

MTT 210 Print Reading/Math III (1)
Student learn to perform basic trigonometric functions, and perform other procedures such as I.D. boring and facing operations, planning a sequence for machining operations, aligning work pieces, use work holding devices, jigs and fixtures, performing threading operations on lathes, machining keyways on a vertical mill, inspecting and dressing grinding wheels, performing O.D. & I.D. threading operations, performing O.D. & I.D. tapering operations, machining parts using milling cutters and milling machines, and tapping holes on a vertical mill.

MTT 218 Metallurgy (1)
Students learn the metallurgical terms and definitions in an effort to understand the behavior and service of metals in industry. Characteristics during heating, cooling, shaping, forming, and the stress related to their mechanical properties are covered, as well as the theory behind alloys, heat treatment processes and wear resistance.

MTT 219 Lathe/Mill/Grind III (6)
Instruction will be given in the form of lectures, hands-on video tapes, shop demonstrations, shop assignments, and text book assignments. Students will perform required set-ups and operations of lathes, milling machines, and grinders in a timely manner. Students are required to practice all shop safety rules. Calculate feed and speeds using the math formulas taught. Math will also be used to calculate hole pattern layouts, gear cutting, threading information, inspecting and quality control, and programming. Students will be required to perform machine operations to satisfaction of the instruction. Student may be required to work in two or three person teams, but all students will be given the opportunity to demonstrate their competency level and ability by means of written tests, verbal communications, and demonstrating hands-on abilities.

MTT 221 Bench Work (1)
Students will be provided the opportunity to learn and practice bench work skills such as filing, drilling, tapping, deburring and layout for projects. They will gain valuable practical experience in the use of various hand tools by producing basic bench work projects. Topics will include safety, print reading, job planning, and quality control.

MTT 232 Bench/Saw/Drill (3)
Students will learn to conduct job hazard analysis for conventional mills and lathes, develop math skills for machine tool operations, perform preventive maintenance and housekeeping on conventional mills and lathes, select work holding devices for mills, lathes and other machine tools, calculate feeds and speeds, remove material using milling and turning processes, align milling head, use a vertical mill to center drill, drill and ream holes, change tools and tool holders on milling machines, and maintain saws and grinders.

MTT 238 Print Reading/Math IV (2)
Students learn to perform basic trigonometric functions, and perform other procedures such as I.D. boring and facing operations, planning a sequence for machining operations, aligning work pieces, use work holding devices, jigs and fixtures, performing threading operations on lathes, machining keyways on a vertical mill, inspecting and dressing grinding wheels, performing O.D. & I.D. threading operations, performing O.D. & I.D. tapering operations, machining parts using milling cutters and milling machines, and tapping holes on a vertical mill.

MTT 241 CNC Operations (3)
Students will become acquainted with the history of Numerical Control (NC) and Computer Numerical Control (CNC) machines and will be introduced to a CNC machine used in the precision machining trades. They will gain practical experience in the application of "G" codes and "M" codes, writing CNC machine programs, and machine setup and operation.

MTT 244 Lathe/Mill/Grind IV (6)
Instruction will be given in the form of lectures, hands-on video tapes, shop demonstrations, shop assignments, and text book assignments. Students will perform required set-ups and operations of lathes, milling machines, and grinders in a timely manner. Students are required to practice all shop safety rules. Calculate feed and speeds using the math formulas taught. Math will also be used to calculate hole pattern layouts, gear cutting, threading information, inspecting and quality control, and programming. Students will be required to perform machine operations to satisfaction of the instruction. Student may be required to work in two or three person teams, but all students will be given the opportunity to demonstrate their competency level and ability by means of written tests, verbal communications, and demonstrating hands-on abilities.

MTT 250 Workplace Skills II (1)
This course is the final preparation for the exit assessment by using Key Train software for Applied Math, Reading for Information, and Locating Information. A student will be required to attend remaining seminars that were not attended in Workplace Skills I through the Career Resource Center.

MTT 251 CNC Lathe (3)
Introduces students to two axis computer numerical control lathes machining. The theory of operations is developed in the classroom and through interactive on line learning. Students then apply the knowledge in a cutting edge CNC laboratory. Topics include machine set up, coordinates terminology, cutter paths, angel cutting, and linear cutting.

MTT 252 Lathe/Mill/Grind II (3)
Students will perform required set-ups and operations of lathes, milling machines, and grinders in a timely manner. Students are required to practice all shop safety rules. Calculate feed and speeds using the math formulas taught. Math will also be used to calculate hole pattern layouts, gear cutting, threading information, inspecting and quality control, and programming. Students will be required to perform machine operations to satisfaction of the instruction. Prerequisite: MTT118 Lathe/Mill/Grind I

MTT 255 CAD/CAM I (3)
A basic introductory course to Computer-aided Drafting and Computer-aided Manufacturing. Instruction will cover basic graphic construction and basic parts program for the CNC machine.

MTT 256 CNC Milling I (3)
Students will gain practical experience in setting up and performing basic operations on CNC Milling machines.

MTT 261 Machining III (3)
Course is a continuation of Machining II. Students learn to perform basic trigonometric functions and perform other procedures such as I.D. boring and facing operations, planning a sequence for machining operations, aligning work pieces, use work holding devices, jigs and fixtures, performing threading operation on lathes, machining key ways on a vertical mill, inspection and dressing grinding wheels, performing O.D. and I.D. threading operations, performing O.D. and I.D. tapering operations, machining parts using milling cutters and milling machines.

MTT 263 Machining IV (3)
Students are required to practice all shop safety rules. Calculate feed and speeds using the math formulas taught. Math will also be used to calculate hole pattern layouts, gear cutting, threading information, inspecting and quality control, and programming. Students will be required to perform machine operations to satisfaction of the instruction. Student may be required to work in two or three person teams, but all students will be given the opportunity to demonstrate their competency level and ability by means of written tests, verbal communications, and demonstrating hands-on abilities. Prerequisites: Machining III

MTT 265 CAD/CAM II (3)
Students will gain practical experience in setting up and performing basic operations on CNC Milling machines. Prerequisites: CAD/CAM I

MTT 266 Print Reading II (3)
Students will learn to identify and implement lines, views and abbreviations used in blueprints, determine dimensions of features of simple parts, sketch advanced parts with dimensional measurements, determine dimensions of multi-feature parts, interpret common and advanced GDT symbols, frame, and datums and implement them in drawings and practice. Prerequisite: Print Reading I

MTT 267 Machine Tool Special Projects (3)
This course is designed to provide students with the opportunity to apply machining principles in various student projects.

MTT 270 Machine Tool Internship (3)
This internship course offers students opportunities to be employed or selected as an intern in their field with to expand their work experience related to their field of study.

NUS 250 Transition to Professional Nursing (1)
This hybrid course is designed to facilitate the transition from the practical nurse to the professional nurse role including legal, ethical, and regulatory standards. Students will review the role of the professional nurse and nursing concepts including scope of practice, nursing process, communication, collaboration and teamwork, clinical judgement, and evidenced based practice.

NUS 255 Health Assessment with Lab (2)
This course prepares students to perform a comprehensive and focused health assessment including past medical history, assessment skills, and identification and significance of normal and abnormal findings for patients throughout the lifespan. Skills include physiological, psychological, sociological, culture, and spiritual assessments of the patient as a whole person.

NUS 258 Pharmacology for the Professional Nurse (2)
This hybrid course is an introduction to the science of pharmacology. The focus will be on the actions, interactions, adverse effects, and nursing implications for each class of drugs presented. Students will explore the effects of pharmacological treatments on the body as they are used to treat musculoskeletal, integumentary, sensory, immunologic, infectious, and inflammatory disorders.

NUS 260 Adult Medical Surgical Nursing with Practicum (4)
This hybrid course prepares the professional nurse to provide safe, effective care for the adult client. Utilizing principles of diversity, equity, and inclusion to establish a foundation for safe and effective care for all, the professional nurse will examine pathophysiology and nursing care of the most common medical/surgical disease processes and nursing care related to these medical/surgical disease processes. The course will evaluate safe medication administration, nutritional principles, and legal and ethical issues related to the adult client in an acute health care setting. The clinical component will allow the student the opportunity to practice theoretical knowledge in a clinical setting.

NUS 265 Mental Health Nursing with Practicum (3)
This hybrid course prepares the professional nurse to provide safe, effective care for the client experiencing mental illness. Utilizing the principles of diversity, equity, and inclusion to establish a foundation for safe and effective care for all, the professional nurse will examine safe medication administration, nutritional principles, and legal and ethical issues related to the client with a mental health concern or substance use issue. The clinical component will allow the student the opportunity to practice theoretical knowledge in a clinical setting.

NUS 270 Maternal Child Nursing with Practicum (3)
This hybrid course prepares the professional nurse to provide safe, effective care for women, newborns, and children. Utilizing principles of diversity, equity, and inclusion to establish a foundation of safe and effective care for all, the professional nurse will examine safe medication administration, nutritional principles, and legal and ethical issues related to maternal/newborn and pediatric care. The clinical component will allow the student the opportunity to practice theoretical knowledge in a clinical setting.

NUS 280 High Risk Care of the Adult with Practicum (4)
This hybrid course requires the student to integrate concepts from all previous courses into the management of patients with acute and chronic complex or high-risk health alterations. Concepts include health promotion, disease prevention, health maintenance, and decision making for the emergent or critically ill patient within the nursing process, as well as management of family dynamics in those circumstances. The clinical component will allow the student the opportunity to practice theoretical knowledge in the clinical setting.

NUS 285 Leadership for the Professional Nurse (2)
This online course is designed to facilitate the transition of the nursing student into nursing practice. Concepts include issues that face the ADN prepared RN as a leader in the healthcare industry including issues facing the nursing profession today, the nurse role within the microsystem, delegation and collaboration, and patient safety and quality outcomes within a Highly Reliable Organization.

NUS 290 Capstone and NCLEX RN Review (3)
This course allows students to integrate all prior learning in the nursing program and apply those concepts and skills into practice during their final practicum experience and comprehensive review of the NCLEX-RN test plan. Practicum concepts are comprehensive and include coordination, delegation, and delivery of care. NCLEX-RN review concepts include all categories of Client Needs included in the NCLEX, as well as stress management, study skills, and test taking strategies.

PLU 100 Introduction to Plumbing Technology (2)
The course introduces the student to the basic knowledge of the plumbing occupation. Topics include professional opportunities in plumbing, plumbing safety, and tools of the trade. Prerequisites: NCCER Core certification

PLU 101 Intro to Plumbing Technology (3)
The course introduces the student to have the basic knowledge of what it takes to be a plumber. Topics include professional opportunities in plumbing, plumbing safety, tools of the trade, plumbing drawing, plumbing fixtures and reading commercial drawings.

PLU 102 Plumbing Blueprint Reading (4)
Understanding blueprints and the math behind plumbing are essential skills required to advance in the Plumbing profession. This course will expose students to the concepts required to read plans, calculate pipe length, determine fitting allowances, lay out fixtures, and much more. Prerequisite: PLU 100 Introduction to Plumbing Technology

PLU 103 Plumb Sys, Fixtures & Fittings (4)
The course introduces the student to plastic pipe and fittings, copper tube and fittings, cast-iron pipe and fittings, steel pipe and fittings, plumbing fixtures, drain, waste and vent (DWV) systems, and water distribution systems.

PLU 104 Plumbing Fixtures and Fittings (3)
Students will also be introduced to fixtures, faucets, drain assemblies and water supply systems. Students will study and practice safe installation applications of basic residential plumbing devices. Prerequisite: PLU101 Introduction to Plumbing

PLU 105 Plumbing Electricity and Gas (1)
Plumbing systems use devices that contain electrical circuits. In this course, students will learn how to install and service plumbing electrical systems, understand how electrical components work, and learn how to read circuit diagrams and use electrical test equipment. Additionally, this course exposes students on the types of fuel systems and their instillation processes involved in the plumbing industry.

PLU 107 Plumbing Technology II (4)
This course presents students with plumbing installation topics to include penetrations, insulation, and fire stopping. Installing roof, floor and area drains, water heaters and testing water supply piping.

PLU 108 Plumbing Fixtures I (3)
This course introduces students to materials commonly used to make plumbing fixtures. It also exposes students to the Drain, Waste, and Vent system and the water distribution system. Prerequisite: PLU 100 Introduction to Plumbing

PLU 109 Plumbing Systems and Codes (3)
This course is designed to assist students in the understanding and the interpretation of the current International Plumbing Code (IPC) and the International Fuel Gas Code (IFGC) and the minimum requirements for plumbing materials and design. These codes are founded upon the basic principles of safety through properly designed systems, acceptable installation standards and appropriately maintained plumbing systems.

PLU 110 Plumbing Fixtures II (3)
This course provides instruction on installing drains and water distribution systems, identifying types and purposes of different fixtures and valves, installing water heaters, and an overview of electrical safety as it applies to the plumbing profession. Prerequisite: PLU 100 Introduction to Plumbing and PLU 108 Plumbing Fixtures I

PLU 113 Plumbing Water Sys & Distrib. (4)
Upon successful completion of this course, students should understand basic topics pertaining to water pressure boosters, recirculation systems, indirect waste, special waste, private water supply well systems, and private waste disposal systems.

PLU 200 Plumbing Internship & Projects (3)
Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work environment. The internship will provide the students with an on-the-job experience under the supervision of industry professionals. The work will be developed in cooperation with area employers, college staff and each student to provide a variety of actual job experiences directly related to the student's career goals in the plumbing field. Minimum 15 hrs. per week on-the-job training.

PLU 201 Plumbing Internship (3)
Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work environment. The internship will provide the students with an on-the-job experience under the supervision of industry professionals. The work will be developed in cooperation with area employers, college staff and each student to provide a variety of actual job experiences directly related to the student's career goals in the plumbing field. Minimum 15 hrs. per week on-the-job training. Prerequisites: GEN102 and PLU101

PLU 202 Plumbing Projects (3)
Work-based learning course connecting students to plumbing activities and projects within the context of the plumbing laboratory. Prerequisites: PLU101

PNS 101 Foundations of Nursing (4)
This course utilizes the nursing standards of practice based on principles of biology, psychosocial, spiritual, and cultural to meet the needs of clients throughout the lifespan. Emphasis is placed on basic nursing skills, patient safety, and therapeutic communication. Concepts and skills are enhanced in subsequent courses.

PNS 115 Foundation of Nursing Clinical (2)
This course explores the art and science of nursing. In this clinical course emphasis is placed on the nursing process, cultural and spiritual awareness, communication, data collection, performance of basic nursing skills, and documentation. Principles of safe medication administration are introduced.

PNS 121 Strategies for Success (2)
This course is the first in a sequence of practical nursing courses and is designed as an introduction to the many facets of the college experience. Emphasis is placed on affecting student success including orientation to the academic arena, study skills, computer proficiency, skills procedures, and basic mathematic skills.

PNS 145 KSPN Fund of Pharm&Safe Med Ad (2)
This course provides an introduction to the principles of pharmacology. Emphasis is placed on nursing care related to the safe calculation and administration of medications to clients across the life span.

PNS 152 KSPN Nursing Care of Adults I (5)
This course focuses on the care of adult clients experiencing common medical/surgical health alterations with predictable outcomes. Emphasis is placed on the care of clients with alterations in cardiac output and tissue perfusion, oxygenation, regulation and metabolism, and integument. Principles of pre-and post-operative care and IV therapy are also addressed.

PNS 155 KSPN Nursing Care Ad I Clinic (2)
This course focuses on the care of adult clients with common medical/surgical health alterations. The clinical laboratory experience provides the student an opportunity to apply the theoretical concepts from Nursing Care of Adults I and implement safe client care in selected settings.

PNS 212 KSPN Nursing Care of Adults II (5)
This course focuses on the care of adult clients experiencing common medical/surgical health alterations with predictable outcomes. Emphasis is placed on the care of clients with alterations in cognition and sensation, mobility, elimination, immunity and hematology, and reproduction. Principles related to emergency preparedness are also addressed.

PNS 215 KSPN Nursing Care Ad II Clinic (3)
This course focuses on the care of adult clients with common medical/surgical health problems. The clinical laboratory experience provides the student an opportunity to build on the theoretical concepts from Nursing Care of Adults I and II and implement safe client care in selected settings. Students are given the opportunity to practice leadership skills while managing a caseload of clients.

PNS 221 Maternal Child Nursing (2)
This course focuses on pre-and post-natal maternal nursing care, as well as the care of children from infancy to adolescence. Emphasis is given to normal reproduction and frequently occurring biological, cultural, spiritual, and psychosocial needs of the child bearing and child rearing family.

PNS 226 Maternal Child Nrs Clinical (1)
This clinical course applies concepts from Maternal Child I. Emphasis is placed on the nursing process and meeting the basic needs of the maternal child client.

PNS 232 KSPN Care of Aging Adults (2)
This course is designed to explore issues related to the aging adults. Course content addresses the impact of ageism, alterations in physiological and psychosocial functioning, and the role of the practical nurse in caring for older adult clients across a continuum of care.

PNS 235 KSPN Mental Health Nursing (2)
This course explores basic concepts and trends in mental health nursing. Therapeutic modalities and client behavior management are discussed. Emphasis is placed on using the nursing process and meeting the basic human needs of the client with a mental health disorder.

PNS 242 KSPN Leadership,Roles & Issues (2)
This course provides orientation to leadership roles of the LPN and related responsibilities. It will introduce issues to the student they will encounter in the workplace.

PNS 245 NCLEX-PN (1)
This course is designed to provide a structured review of key content in the PN program. Test-taking strategies for NCLEX and requirements for NCLEX exam registration will be covered in this course. Review materials will be focused on foundations of nursing, care of the adult, mental health, pharmacology, maternal-child nursing, and leadership. The course will end with a comprehensive predictor to determine the student's readiness for the NCLEX exam.

SONO 300 Vascular Ultrasound Review (2)
This Vascular Ultrasound Review Course is designed to prepare the sonographer for the ARDMS registry exams. In this course you will cover the entire realm of vascular sonography. It will provide review materials, case studies of imaging pathology (sermonettes), faculty interaction and mock board exams. Along with 2 college credits or submission for CME's.

SONO 301 Ultrasound Physics Review (2)
This Ultrasound Physics Review Course is designed to prepare the sonographer for the ARDMS registry exams. In this course you will cover the entire realm of sonography principles and instrumentation. It will provide review materials, case studies of imaging pathology (sermonettes), faculty interaction and mock board exams. Along with 2 college credits or submission for CME's.

SONO 302 Cardiac Ultrasound Review (2)
This course is structured to provide a comprehensive review to better prepare an individual for the ARDMS® or CCI® registry exams. This course provides cardiac information specific to the content outlines provided by the ARDMS® and CCI®. Information is provided by different instructional methods such as sermonettes, case-studies, videos, and PowerPoints. Unlimited mock exams are available to take at your convenience.

SONO 303 Ob/Gyn Ultrasound Review (2)
This OBGYN ultrasound online review course is designed to prepare the sonographer for the sonography credentialing exams. In this online course you will cover the entire realm of OB/GYN sonography as related to the sections of anatomy & Physiology, Pathology, Integration of Data, Protocols, Physics & Instrumentation, and Treatment. It will provide review materials, case studies of imaging pathology (sermonettes), faculty interaction and mock board exams. 2 college credits will be awarded upon successful completion.

SONO 304 Abdominal Ultrasound Review (2)
This Abdominal ultrasound online review course is designed to prepare the sonographer for the sonography credentialing exams. In this online course you will cover the entire realm of abdominal sonography as related to the sections of anatomy & Physiology, Pathology, Integration of Data, Protocols, Physics & Instrumentation, treatment, managing medical emergencies, and traumatic injury. It will provide review materials, case studies of imaging pathology (sermonettes), faculty interaction and mock board exams. 2 college credits will be awarded upon successful completion.

SUR 101 Sterile Processing I (2)
The first course in sterile processing prepares students to work in a variety of career fields that require training in sterile processing, including the healthcare field. Students will received training and gain skills with decontamination, inspecting, assembling, disassembling, packaging and sterilizing reusable surgical instruments or other devices that are essential for patient or client and consumer safety.

SUR 102 Sterile Processing II (2)
The Second course in sterile processing continues to prepare students to work in a variety of career fields that require training in sterile processing, including the healthcare field. Students will continue developing skills with decontamination, inspecting, assembling, disassembling, packaging and sterilizing reusable surgical instruments or other devices that are essential for patient or client and consumer safety.

SUR 105 Introduction to Surgical Tech (4)
The course introduces the student to professional responsibilities, duties, and general functions of the operating room. It also introduces the student to the rest of the operating room team and their functions, responsibilities for safety of the patient and themselves, organization of the hospital and the operating room, legal and ethical issues, and the importance of communication in the operating room, credentialing, and professionalism. The use of electricity and lasers in the operating room are also covered as are the pre-op routines of the circulator prior to the patient entering the operating room.

SUR 106 Sterile Processing (4)
The course in sterile processing prepares students to work in a variety of career fields that require training in sterile processing, including the healthcare field. Students will received training and gain skills with decontamination, inspecting, assembling, disassembling, packaging and sterilizing reusable surgical instruments or other devices that are essential for patient or client and consumer safety. Students will complete 24 hours of practicum within the six knowledge domains required for the Central Services Registered Technician (CRCST) Certification Exam including; decontamination, preparing and packaging instruments, sterilization and disinfection, storage and distribution, quality assurance processes, and equipment. Upon successful completion of the course students are eligible to sit for the provisional CRCST Certificate Exam.

SUR 107 Sterile Processing Clinical I (3)
The student will start to apply the basic skills they have learned for sterile processing in a clinical facility.

SUR 108 Sterile Processing Clinical II (3)
The student will continue to apply the basic skills they have learned for sterile processing in a clinical facility.

SUR 110 Microbiology (2)
The course introduces the student to basic micro-organisms and how they relate to the operating room and sterile technique.

SUR 111 Sterile Processing Clinical I (2)
The student will start to apply the basic skills they have learned for sterile processing in a clinical facility.

SUR 112 Sterile Processing Clinical II (7)
The student will continue to apply the basic skills they have learned for sterile processing in a clinical facility.

SUR 115 Microbiology (3)

SUR 125 Surgical Medical Terminology (3)
The course introduces the student to the language of the medical field. Medical prefixes, suffixes, and combining forms are introduced to the student so they may have a thorough knowledge and understanding of what they care reading and writing in the medical field. An emphasis is placed on terms, pathological conditions, and diagnostic terms that relate to surgery.

SUR 135 Principles & Practics of ST (5)
The course introduces the student to basic care practices of the operating room and will include aseptic technique and surgical case management. It covers a multitude of duties and concepts of both the scrub and circulating roles of the operating room. This also includes scrubbing, gowning, and gloving; preparing and maintaining the sterile field for surgery; methods of sterilization; all operating room (OR) equipment and its use, sponge, sharp, and instrument counts; specialty instruments and their care; surgical dressings; catheters, tubes and drains; pre-op, intra-op, and post-op duties of the surgical tech and circulating nurse like positioning prepping and draping and more.

SUR 145 Principles & Practices ST Lab (3)
The course allows the student to apply the knowledge that he/she learned in SUR140 (Principles and Practices). Repeated practice is designed to get the student ready for the clinical area to assure proper patient care. The student must pass the lab in order to continue in the program.

SUR 155 Surgical Procedures I (4)
The course instructs the student in the basic general, gynecological, and genitourinary surgical procedures. Besides the procedure itself the student will learn the instrumentation needed, pathology, sutures used, and special considerations.

SUR 175 Clinical I (3)
The student will start to apply the basic skills they have learned for the operating room in the actual operating room of a clinical facility. They will also pick up experience in the instrument room and pre-operative area of the hospital. Clinical proficiency at our facilities prepares the student with a minimum of 120 cases, 80 of which are in the first scrub role and comprise a variety of surgical scrub experiences.

SUR 180 ST Clinical I (4)
The student will start to apply the basic skills they have learned for the operating room in the actual operating room of a clinical facility. They will also pick up experience in the instrument room and pre-operative area of the hospital. Clinical proficiency at our facilities prepares the student with a minimum of 120 cases, 80 of which are in the first scrub role and comprise a variety of surgical scrub experiences.

SUR 208 CRCST Exam Review (1)
Comprehensive review of sterile processing technology concepts and practical preparation for the national certification examination including but not limited to: Cleaning, Decontamination, and disinfection, Preparation and packaging, Sterilization process, Patient care equipment, Sterile storage and inventory management, Documentation and record maintenance, and Customer relations.

SUR 245 Surgical Procedures II (5)
This course will expand ENT, maxillofacial, orthopedic, vascular, plastic surgery, and neuro surgical procedures. Besides the procedure itself, included in this course is pathology involved, surgical instruments needed, positioning of the patient, and special considerations for each surgical procedure.

SUR 250 Surgical Pharmacology (2)
This course begins with weights and measurements using the metric system and its application in the medical field. A review of basic math skills and figuring ratios is included. Medications used in the operating room during surgery both for the surgeon and the anesthesia provider will be discussed. Pre-operative and post-operative medications for anxiety, pain, emergencies, and other operating room (OR) related health issues will be discussed. Anesthetic agents used including IV, inhalation, regional, and local will be presented to the student.

SUR 265 Surgical Procedures III (5)
The course will introduce students to vascular, thoracic, plastic, ophthalmic, pediatric surgical procedures and trauma surgery. Included in this is pathology involved, surgical instruments needed, positioning the patient, and special considerations for each surgical procedure. Students will also learn basic physics and robotics as applied to the operating room.

SUR 266 Surgical Procedures III (4)
The course will introduce students to vascular, thoracic, plastic, ophthalmic, pediatric surgical procedures and trauma surgery. Included in this is pathology involved, surgical instruments needed, positioning the patient, and special considerations for each surgical procedure. Students will also learn basic physics and robotics as applied to the operating room.

SUR 270 Clinical II (4)
In the surgical suite students will apply knowledge and skills learned in Surgical Procedures II and Principles and Practices Lab to the operating room on all surgical procedures. This course is designed to increase the student's self-confidence as a surgical tech and allow them to become more aware of their sterile technique and preparedness for each surgical procedure. Anticipation of the surgeon is critical. Clinical proficiency at our facilities prepares the student with the required 120 surgical cases, 80 of those in the 'first scrub' role.

SUR 272 ST Clinical II (8)
In the surgical suite students will apply knowledge and skills learned in Surgical Procedures II and Principles and Practices Lab to the operating room on all surgical procedures. This course is designed to increase the student's self-confidence as a surgical tech and allow them to become more aware of their sterile technique and preparedness for each surgical procedure. Anticipation of the surgeon is critical. Clinical proficiency at our facilities prepares the student with the required 120 surgical cases, 80 of those in the 'first scrub' role.

SUR 274 Clinical II (8)
In the surgical suite students will apply knowledge and skills learned in Surgical Procedures II and Principles and Practices Lab to the operating room on all surgical procedures. This course is designed to increase the student's self-confidence as a surgical tech and allow them to become more aware of their sterile technique and preparedness for each surgical procedure. Anticipation of the surgeon is critical. Clinical proficiency at our facilities prepares the student with the required 120 surgical cases, 80 of those in the 'first scrub' role.

SUR 285 Clinical III (6)
In the surgical suite students will apply knowledge and skills learned in Surgical Procedures and Principles and Practices to the operating room on more advanced procedures. This course is designed to increase the student's self-confidence and have them know instruments needed and general preparedness for each surgical procedure. Anticipatory skills are enhanced. Clinical proficiency at our facilities prepares the student with the required 120 surgical cases, 80 of these will be in the 'first scrub' role.

SUR 295 ST Certification Review (1)
Comprehensive review of surgical technology concepts and practical preparation for the national certification examination including but not limited to: a. Preoperative preparation of the surgical patient; b. Intra-operative procedures; c. Post-operative procedures; d. Administrative and personnel; e. Equipment sterilization and maintenance; f. Anatomy and physiology; g. Microbiology; and h. Surgical pharmacology.

TED 108 Introduction to Drafting (3)
Introduces the application of fundamental drawing types which includes geometric construction, ortho-graphic views, sections, auxiliary views, and development. Students are instructed in the care and use of the tools and equipment.

TED 115 Technical Math (3)
This course is a math review of practical skill as related to the drafting workplace where the students utilize fractions, decimals, simple equations, powers and roots, ratios and proportion, plane geometry, right triangles, oblique triangles, computation of areas and volumes, and use of charts and graphs. Additionally, Part II of this course students will utilize plane geometry, right triangles, oblique triangles, trigonometric natural and co- functions, solutions of triangles right and oblique, computation of areas and volumes, and use of charts and graphs.

TED 125 Technical Math II (3)
This course is a math review of practical skill as related to the drafting workplace where the students utilize plane geometry, right triangles, oblique triangles, trigonometric natural and co-functions, solutions of triangles right and oblique, computation of areas and volumes, and use of charts and graphs. Prerequisite: Technical Math I

TED 128 Computer Aided Drafting I (3)
First course in a sequence introducing AutoCAD software as a drafting tool. Instruction will be given in file handling, basic commands function, drafting techniques, presentation, and plotting. Architectural and mechanical applications will be used in lab exercises to demonstrate AutoCAD commands. Work will be completed with AutoCAD.

TED 135 Computer Aided Drafting II (3)
Second course in a sequence covering intermediate AutoCAD commands including attribute blocks, dimensioning, external references, object linking/embedding, and advanced drawing set-up, and user coordinate systems. Work will be completed with AutoCAD

TED 138 Machine Design (4)
This course is an introductory to fundamentals, theory, terminology, and practical construction methods in the machine disciplines. Use of actual working drawing used as reference to industry standards. Students will use a combination of drawing board and CAD in this segment. Practical skills refinement in methods, materials identification and labeling, and drafting techniques and standards used in various types of drawings used in for the machine industries are taught.

TED 140 Machine Design (6)
This course is an introductory to fundamentals, theory, terminology, and practical construction methods in the machine disciplines. Use of actual working drawing used as reference to industry standards. Students will use CAD in this segment. Practical skills refinement in methods, materials identification and labeling, and drafting techniques and standards used in various types of drawings used in the machine industries are taught. Recommended prerequisite or co-requisites: TED100 General Drafting; TED135 CADII

TED 145 Computer Aided Drafting III (4)
This course will introduce students to 3D mechanical and industrial design software- solid edge. Developing fundamental knowledge in the areas of part and assembly modeling, using adaptive features, utilizing work groups, surfacing basics, data management, and lay-out presentation.

TED 148 Industrial Design (4)
This course will be using the acquired knowledge from the Machine Design and CAD III courses to produce industrial design projects. Additionally, students will be learning the methods and standards used in various areas including: precision sheet metal design, part design, weldments, assemblies, & mechanisms.

TED 200 Architect Design (5)
Introduces fundamental aspects of architectural drafting. Covers drafting of residential and light commercial buildings, sections and elevations, schedules, design lay-outs, details, and working drawings. Assignments will be completed primarily using Autodesk's Revit software. Recommended prerequisite or co-requisite: TED230 CAD III.

TED 208 Architectural Design I (3)
Students will learn tools and techniques used in industry to create a 3-story commercial building with Revit (3D parametric, BIM software). Featuring tools to make sections, elevations, schedules, design layouts, and details, students will wrap up their project by creating a set of construction documents. The modeling of Mechanical, Electrical, and Plumbing systems will also be introduced

TED 210 Industrial Design (6)
Introduces mechanical drafting utilizing Autodesk's INVENTOR software through parametric 3D-design tools for assembly centered modeling and collaborative engineering. Students develop fundamental knowledge in the areas of part and assembly modeling, using adaptive features, utilizing work groups, surfacing basics, data management, and lay-out presentation. Recommended prerequisites or recommended co-requisites: Machine Design; CAD III

TED 215 Architectural Design II (3)
Introducing the fundamental aspects of architectural drafting and focusing on residential house design, students will plan, design and model a residential house plan. Their projects will include making a construction set of documents including: sections and elevations, schedules, design lay-outs, and details.

TED 220 Civil Design (6)
Introduces civil drafting applications using civil, mapping, and survey products. Drawings will be developed to include plats, related civil infra-structure, public utilities, contours, and roads. Recommended prerequisite or recommended co-requisite: CAD II

TED 228 Civil Design I (3)
First course in a sequence introducing civil drafting applications using civil, mapping, and survey products. Drawings will be developed to include plats, related civil infra-structure, public utilities, contours, and roads utilizing AutoCAD.

TED 230 CAD III (5)
Third course in a three-term sequence covering advanced AutoCAD commands including advanced plotting, plotter, CAD standards, modeling 3-D wire frame, surfaces, solids, and 3-D presentation. Work will be completed with AutoCAD. Recommended prerequisite: CAD II

TED 235 Civil Design II (3)
Second course in a sequence introducing students to the different types of software used in industry. Students will use software such as Civil 3D, ArcGIS, and others to create the same type of projects featured in the TED Civil I course.

TED 238 Structural Design (3)
Introducing the fundamental aspects of structural design, students will learn the methods and standards used in industry. Students will be utilizing Tekla Structures (3D parametric, BIM software) for their projects. Students will also be able to apply this course to the Architectural and Civil design courses.

TED 245 Workplace Skills (3)
Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in the field of their choice. Topics included listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, time and resource management, work ethics, career planning and resume building.

TED 248 Manufact. Design & 3D Printing (3)
Focusing on manufacturing materials and processes, CAD and CAM software, students will create projects using industry methods and standards. Utilizing 3D printing to simulate the design process, students will be able to make protypes of their projects and fix any design flaws before the completion of their projects.

TED 250 Workplace Skills I (2)
Students that have completed all course objectives and criteria plus having an opportunity for employment related to the drafting field may utilize On-the-Job Training (OJT) with instructor and administrative permission.

TED 255 Presentation&Special Projects (3)
During this course students will focus on creating advanced presentations, videos and simulations utilizing previously introduced software such as Inventor, Tekla structures, Revit, etc. Hololens and other technologies related to the industry will be introduced and implemented. Students will have the opportunity to fine tune their skills by working on special projects with a chosen area of focus within the industry.

TED 260 Technical Drafting OJT (3)
Students that have completed all course objectives and criteria plus having an opportunity for employment related to the drafting field may utilize this internship course with instructor and administrative permission.

WEL 101 Welding Safety/OSHA 10 (2)
Through a variety of classroom and/or lab learning and assessment activities, students in this course will explain job/site safety and precautions for job/site hazards, determine the uses of personal protective equipment (PPE), identify the safety equipment and procedures related to safe work practices and environment, identify fire prevention and protection techniques, and explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

WEL 101A Welding Safety/OSHA 10 (1)
Through a variety of classroom and/or lab learning and assessment activities, students in this course will explain job/site safety and precautions for job/site hazards, determine the uses of personal protective equipment (PPE), identify the safety equipment and procedures related to safe work practices and environment, identify fire prevention and protection techniques, and explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

WEL 105 Welding Blueprint Reading (3)
This course focuses on reading, interpreting, and creating blueprints. Students will learn how to sketch out designs by hand and use them to create a print showing multiple views, measurement along with welding symbols, materials needed and their cost.

WEL 110 Print Reading/Math I (1)
This course is designed to teach a basic understanding of welder's math and the symbols used on blueprints. The symbols used on blueprints give the designer a way to relay information to the fitter and welder. The graphic language on blueprints uses various symbols, lines, and notes to convey information. A blueprint is used by a welder to visualize the parts final form, to position and align various members, and to determine the type of joint preparation. It tells the welder what type of filler metal to use, where the weld metal is to be placed, the extent of welding and the size, contour, and finish method for the welds.

WEL 110A Print Reading/Math I (1)

WEL 120 Oxy-Fuel/Cutting Procedures (3)
This course will include cutting of ferrous and non-ferrous materials with manual, motor driven, and oxy-fuel shape cutting equipment. Also included are plasma-arc cutting (PAC) and carbon-arc cutting (CAC-A). Safety, equipment, and the basic fundamentals of cutting processes will be introduced. Student will be expected to produce acceptable oxy-fuel, PAC, and CAC-A cuts. This unit follows ANSI / AWS C4.2-90 an American National Standard.

WEL 131 Shielded Metal Arc Welding I (3)
Through classroom and/or lab/shop learning and assessment activities, students in this course will describe the shielded metal arc welding (SMAW) process, demonstrate the safe and correct set-up of the SMAW work station, associate SMAW electrode classifications with base metals and joint criteria, demonstrate proper electrode selection and use based on metal types and thicknesses, build pads of weld beads with selected electrodes in the flat position, build pads of weld beads with selected electrodes in the horizontal position, perform basic SMAW welds on selected weld joints, and perform visual inspection of welds.

WEL 131A SMAW (2)

WEL 135 Shielded Metal Arc Welding II (3)
This course is a continuation of SMAW. Additional positions, metals, and metal alloys will be introduced providing the student additional experience with Shielded Metal Arc Welding.

WEL 135A SMAW I (2)
This course is a continuation of SMAW. Additional positions, metals, and metal alloys will be introduced providing the student additional experience with Shielded Metal Arc Welding.

WEL 141 Gas Metal Arc Welding I (3)
Through classroom and/or lab/shop learning and assessment activities, students in this course will explain gas metal arc welding (GMAW) process, demonstrate the safe and correct set-up of the GMAW work station, correlate GMAW electrode classifications with base metals and joint criteria, demonstrate proper electrode selection and use based on metal types and thicknesses, building pads of weld beads with selected electrodes in the flat position, build pads of weld beads with selected electrodes in the horizontal position, produce basic GMAW welds on selected weld joints, and conduct visual inspection of GMAW welds.

WEL 141A GMAW (2)

WEL 145 Gas Metal Arc Welding II (3)
This course is a continuation of GMAW. Additional positions, metals, and metal alloys will be introduced providing the student additional experience with gas metal arc welding. Prerequisites: WEL 141 GMAW I

WEL 145A GMAW Welding (2)
The course is a continuation of GMAW. Additional positions and tests will be introduced providing the student additional experience with gas metal arc welding.

WEL 150 Workplace Skills I (2)
This course teaches some of the skills needed to get a job in any field. This course utilizes Work Keys assessments which include Applied Math (basic word problem-solving), Reading for Information, and Locating Information. This course also introduces some of the testing methods used in the welding industry. Destructive and non-destructive testing methods will be discussed.

WEL 160 Oxy-Fuel Welding (4)
This course teaches basic welding using and oxy-fuel welding set-up. A student will learn how to set-up and torch and become proficient in the start-up and shut down procedures. Basic welding skill and understanding of the process is needed in this area. This will lead into gas tungsten arc welding (GTAW) at a later date.

WEL 170 Fabrication Measuring & Layout (3)
This course focuses on understanding proper measurement tools and application along with using mathematics to determine exact locations of required additional items and penetrations associated to each Fabrication job. Using tape measure squares and other tools to layout reference lines and grids to meet specs and tolerances required.

WEL 180 Blueprint & Estimation (3)
This course focuses on reading, interpreting, and creating blueprints. Students will learn how to sketch out designs by hand and use them to create a print showing multiple views, measurement along with welding symbols, materials needed and their cost.

WEL 190 CNC Cutting & Brake Processes (3)
This course introduces Computer Numerical Control (CNC) and will be introduced to a CNC machine used in the precision cutting and bending applications. They will gain practical experience in the application of creating and using CNC programs, and machine setup and operation.

WEL 195 CAD Systems & Drafting (3)
This course introduces CAD software as a Layout and drafting tool. Instruction will be given in file handling, basic commands function, drafting techniques, programming, and plotting. Fabrication applications will be used in lab exercises to demonstrate CAD programs and commands. Work will be completed with CAD systems.

WEL 210 Print Reading/Math II (2)
This course is designed to teach a basic understanding of blueprints. The symbols used on blueprints give the designer a way to relay information to the fitter and welder. The graphic language on blueprints uses various symbols, lines, and notes to convey information. A blueprint is used by a welder to visualize the parts final form, to position and align various members, and to determine the type of joint preparation. It tells the welder what type of filler metal to use, where the weld metal is to be placed, the extent of welding and the size, and the contour and finish method for the welds. Prerequisite: Print Reading/Math I.

WEL 220 FCAW Welding (5)
The Flux Cored Arc Welding Unit (FCAW) is designed to teach the student the correct techniques to weld in all positions. Safety is stressed in the shop. Practice and training in the welding shop will develop the basic skill level necessary to produce quality welds in all positions and in different joint configurations. Prerequisites: Welding Safety/OSHA 10; SMAW I ; GMAW.

WEL 221 Flux Cored Arc Welding I (3)
The Flux Cored Arc Welding Unit (FCAW) is designed to teach the student the correct techniques to weld in flat and horizontal positions along with operational procedures. Practice and training in the welding shop will develop the basic skill level necessary to produce quality welds in flat and horizontal positions and different joint configurations.

WEL 222 FCAW I (2)
The Flux Cored Arc Welding Unit (FCAW) is designed to teach the student the correct techniques to weld in flat and horizontal positions along with operational procedures. Practice and training in the welding shop will develop the basic skill level necessary to produce quality welds in flat and horizontal positions and different joint configurations.

WEL 227 Welding Metallurgy (3)
This course will enable the student to develop basic metallurgy skills with both ferrous and non-ferrous metals. The student will explore properties of metals, hardness testing, heat-treating, quenching, annealing, normalizing, tempering and surface hardening. Prerequisites: Completion of Certificate A courses

WEL 230 SMAW II (5)
The Shielded Metal Arc Welding II (SMAW) unit is designed to teach the student the correct techniques to weld in the vertical up and overhead position. Safety is stressed in the shop. Practice and training in the welding shop will develop the basic skill level necessary to produce quality welds in these positions using lap joints and tee joints.

WEL 240 Gas Metal Arc Welding- Plate (3)
Course will follow requirements identified for SENSE Level II GMAW- Plate processes. Prerequisites: WEL 145 Gas Metal Arc Welding II

WEL 242 GMAW - Aluminum (5)
The Gas Metal Arc Welding Aluminum (GMAW) unit is designed to teach the student the correct techniques to weld in all positions. Safety is stressed in the shop. Practice and training in the welding shop will develop the basic skill level necessary to produce quality welds in all positions and in different joint configurations. Prerequisites: Welding Safety/OSHA 10; GMAW.

WEL 246 Gas Tungsten Arc Welding I (3)
Through classroom and/or lab/shop learning and assessment activities, students in this course will explain the gas tungsten arc welding (GTAW) process, demonstrate the safe and correct set-up of the GTAW work station, relate GTAW electrode and filler metal classifications with base metals and joint build pads of weld beads with selected electrodes and filler material in the flat position, build pads of weld beads with selected electrodes and filler material in the horizontal position, perform basic GTAW welds on selected weld joints, and perform visual inspection of GTAW welds. Prerequisites: WEL 131 Shielded Metal Arc Welding I

WEL 250 Workplace Skills II (2)
Workplace skills include writing a resume and job search technique. This section is at the very end of the program and if a student is going directly into the work force then resumes should be sent to prospective employers. Any job searches and possible job interviews will take place during this section. This is also final preparation for the exit assessment by using Key Train software for Applied Math and Reading for Information.

WEL 267 Gas Tungsten Arc Welding II (3)
This course is a continuation of WEL 246 GTAW I. Additional positions, metals, and metal alloys will be introduced providing the student additional experience with gas tungsten arc welding. Prerequisites: WEL 131 Shielded Metal Arc Welding I and WEL 246 Gas Metal Arc Welding I

WEL 270 Welding Fabrication (3)
This course focuses on identifying and using proper equipment and hand tools used for fixturing and fitting material along with fabricating materials to complete jobs. Students will learn how to use various clamps, guides, and squares along with other measuring tools and power tools from lay-out to completion.

WEL 280 Rigging Lifting & Handling (3)
This course focuses on determining the correct size and type of rigging equipment required to safely perform lifting operation. Proper Rigging Hardware Selections, Weight Calculations, and Handling procedures will be covered to show students how to properly transport and relocate heavy and uneven materials to perform layout task and complete jobs.

WEL 290 Fixturing Fit & Pre-Assembly (3)
This course focuses on fixturing materials into proper position along with securing materials to reduce warpage to meet location tolerances and welding codes. Students will learn how to tack materials in locations required to be ready for inspection so they can be approved for completion.

WEL 295 Welding Layout (3)
This course teaches the fundamentals in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction. Prerequisites: Cert A Level I courses.

INDEX