



 MANHATTAN *TECH*  
**College Catalog**  
and Student Handbook

**2026-2027**



**Hands On. Career Ready.** *get after it.*



## **Dear Students & Friends of Manhattan Tech,**

Welcome to Manhattan Area Technical College. On behalf of the faculty and staff, board members and alumni, we are pleased that you have considered our college to help you prepare for the future. Manhattan Area Technical College has a proud record of providing career and technical education opportunities that change people's lives! You are welcome here! Manhattan Tech is a student-centered institution dedicated to academic endeavors that meet the high standards demanded by employers within our service area and beyond.

Manhattan Tech has many ways to help you, so please let any employee know if you need assistance. We know that learning from your classes and program of study is often enough to challenge you, but we also know that the challenges of life often present themselves while you work on becoming a nurse, technician, etc. We can help you develop options to keep you focused on your educational goals and your timeline for success.

You will find that the sense of family at Manhattan Tech moves beyond the classroom and into the community. Our students are regularly involved in activities, both on and off campus, which benefit Manhattan and the surrounding areas. Students are encouraged to take advantage of leadership opportunities in order to better prepare themselves for similar roles that await them in the future.

Come by and visit, give us the chance to sell you on Manhattan Area Technical College! We provide HIRE education!

A handwritten signature in black ink, reading "James Genandt".

James Genandt  
President and CEO

# Academic & College Calendar 2026-2027

## Fall Semester 2026

### August

- |    |                                             |
|----|---------------------------------------------|
| 7  | College In-Service   CLOSED AT 11AM         |
| 13 | Final Add Day                               |
| 17 | Fall Semester Begins   Tuition and Fees Due |

### September

- |    |                               |
|----|-------------------------------|
| 7  | Labor Day   COLLEGE CLOSED    |
| 14 | Financial obligation deadline |

### November

- |       |                                     |
|-------|-------------------------------------|
| 23-27 | Thanksgiving Break   COLLEGE CLOSED |
| 30    | Classes Resume                      |

### December

- |       |                                |
|-------|--------------------------------|
| 7-11  | Final Exams                    |
| 12    | Commencement                   |
| 19-31 | Holiday Break   COLLEGE CLOSED |

Note: This calendar is accurate at the date of printing. Manhattan Area Technical College reserves the right to modify the calendar as necessary. Students, prospective students, and employees will be notified of changes as soon as possible. For most current dates refer to [calendar on Manhattan Tech website](#).

For tuition refund dates, please refer to the [Drop/Withdrawal Calendar on manhattantech.edu](#) and the Tuition Refund Policy on page 33 of the catalog.

## Spring Semester 2027

### January

- |     |                                               |
|-----|-----------------------------------------------|
| 1-3 | Holiday Break   COLLEGE CLOSED                |
| 4   | College Open                                  |
| 8   | College In-Service   CLOSED AT 11AM           |
| 14  | Final Add Day                                 |
| 18  | Martin Luther King Day   COLLEGE CLOSED       |
| 19  | Spring Semester Begins   Tuition and Fees Due |

### February

- |    |                               |
|----|-------------------------------|
| 15 | Financial obligation deadline |
|----|-------------------------------|

### March

- |       |                           |
|-------|---------------------------|
| 15-19 | Spring Break   NO CLASSES |
| 19    | COLLEGE CLOSED            |
| 22    | Classes Resume            |

### May

- |       |                                |
|-------|--------------------------------|
| 10-14 | Final Exams                    |
| 14    | Nursing Commencement & Pinning |
| 15    | Commencement                   |
| 31    | Memorial Day   COLLEGE CLOSED  |

## Summer Semester 2027

### June

- |    |                                               |
|----|-----------------------------------------------|
| 7  | Summer Semester Begins   Tuition and Fees Due |
| 18 | Juneteenth (observed)   COLLEGE CLOSED        |
| 21 | Financial obligation deadline                 |

### July

- |    |                                              |
|----|----------------------------------------------|
| 5  | Independence Day (observed)   COLLEGE CLOSED |
| 30 | Summer Semester Ends                         |

# Who We Are

## College Mission

Manhattan Area Technical College provides high quality technical, general, and adult education to prepare individuals to pursue technologically advanced careers and lead productive lives in a dynamic and diverse global environment.

## Vision Statement

As a leader in technical education, Manhattan Area Technical College will enhance student-centered learning and service to business, industry, and community members.

## College Values

Providing HIRE Education - Helping Ignite & Revolutionize Education

The values of the College community drives the vision and mission of Manhattan Tech.

HELPING IGNITE the ambition and passion:

- in our students through self-advocacy
- in our faculty and staff by providing student centered support
- of our community by supporting regional workforce needs.

REVOLUTIONIZE EDUCATION through:

- active learning with hands-on instruction from day one
- faculty delivering cutting-edge industry driven expertise
- inspiring innovative lifelong learning.

## College Objectives

The objectives of Manhattan Area Technical College are to:

- Offer Associate of Applied Science degrees and Technical Certificates upon completion of programs and courses in technical fields to meet student, employer, and community needs.
- Complement technical instruction with general education courses emphasizing critical thinking, problem solving, and communication skills.
- Create opportunities in technical education for secondary education students through articulation agreements and concurrent credit.
- Provide student services to include counseling, financial aid, skill enhancement and assessment, employability preparation, and student-directed activities.
- Assess student performance and outcomes to enhance learning.
- Allocate resources to ensure a safe, accessible, and student-friendly learning environment.
- Monitor integrity through interaction with program advisory councils, a general advisory council, and evaluation by approving agencies.
- Serve as a valued community leader and partner in the educational, economic, and workforce development of our service area.

## Employee Directory

For full list of current faculty and staff refer to [manhattantech.edu/directory](http://manhattantech.edu/directory)

## **General Education Philosophy**

General education is an essential element of a student's education. It provides a foundation for lifelong learning and is woven into learning opportunities at MATC.

General education refers to subject matter that is foundational in nature and may be infused into all disciplines of study. Concepts to enhance and support the overall educational experience provided at MATC.

To support the philosophy of general education in the learning experience of our students the College has implemented the MATC Core Abilities Assessment Process that measures Written and Oral Communication, Quantitative Literacy, and Critical Thinking and co-curricular experiences to provide leadership development opportunities. Together, these elements following are designed to foster students' ability to:

- Use the English language effectively to read, write, speak, and listen critically
- Use systematic, critical, and creative processes to identify problems and make decisions
- Develop knowledge of self and a capability for self-direction and self-motivation
- Analyze and assess personal values and life goals that affect decision-making and relationships in a global community
- Perform the mathematical computations necessary to succeed as an employee and as a consumer
- Demonstrate proficiency in gathering, analyzing, and synthesizing information
- Increase an understanding of individual and group differences

Upon graduation, students should be proficient in:

- Communicating effectively in written and oral forms;
- Critical thinking and problem solving to address situations described verbally, graphically, symbolically, or numerically;
- Identifying, accessing, and evaluating information and materials;
- Gaining knowledge of self and demonstrating ability to work with others independently and in teams, and;
- Exhibiting tolerance of and respect for diversity in human abilities, cultures, age, and beliefs.

Within the technical programs, faculty members strive to reinforce and enhance student learning by providing opportunities that require students to apply skills acquired in general education components to "world of work" problems in their classrooms.

## **Philosophy of Assessment**

Manhattan Tech's faculty and staff are committed to a comprehensive institutional assessment program that promotes continuous improvement in all aspects of programs and services critical to the success of the College. Convinced that learning-oriented effectiveness is of primary importance in meeting the institution's mission, the faculty has placed an emphasis on the assessment of student learning.

Manhattan Tech also recognizes the importance of assessment and improvement activities related to organizational structure. These activities, which are designed to complement the assessment of student learning and enhance the planning and implementation of strategic initiatives, as well as the operational functions of the College, are executed as part of a comprehensive plan.

Demonstrating ongoing institutional improvement is necessary to ensure the continuing success of Manhattan Tech. Manhattan Tech is strengthened by its ability to respond quickly and effectively to changing student and stakeholder needs through a systematic and well-practiced methodology involving assessment, evaluation, and action to address the identified opportunities for improvement. This allows the College to compete in an educational arena where prospective students have a myriad of options.

In addition, as legislative bodies and accrediting organizations search for ways to enhance accountability among educational institutions, the documentation produced by this ongoing improvement process facilitates the reporting required for compliance with these regulatory and oversight agencies.

## **Principles of Community**

Manhattan Area Technical College is an environment dedicated to the teaching and learning of professional and technical skills in an increasingly diverse and ever-changing environment. MATC is a place where all people, regardless of age, sex, gender identity, sexual orientation, ability, marital or family status, race, religion, national origin, political affiliation, and military or veteran status may learn a living. Students, staff, faculty, and administration seek to empower all persons to contribute to their families, communities, and societies. In the spirit of creating and maintaining a professional and respectful space for all who come here to learn and teach, we—students, staff, faculty, and administration—acknowledge the following:

- We come to Manhattan Tech with different experiences, expectations, values, and practices
- Some of our differences are visible, others are not
- Our differences may create misunderstandings, fears, and hurt feelings
- We must work together to create mutual understanding
- We strive to overcome the negative consequences of our differences
- We seek to celebrate our shared humanity and shared goals
- We accept responsibility for creating a learning/work environment where our differences are valued and mutually accepted
- We agree to respect everyone's right to have personal beliefs and opinions without fear of public condemnation
- We agree to reject prejudice, discrimination, and intolerance in the Manhattan Tech community

*See Diversity policy 3.7.1 for further details.*

## **Manhattan Tech History**

In 1963 Kansas legislation was passed that provided for vocational-technical education. Senate Bill 438, in conjunction with the National Education Act (SB 4955), approved the establishment of a number of vocational-technical schools and community colleges in the state. The Board of Education of the Manhattan public schools, acting on this newly created opportunity, submitted the appropriate application to the Kansas State Board of Education, which then established the Manhattan Area Vocational-Technical School (MAVTS) in 1965. By 1967, the original building at the current site was completed. In 1992 the school was renamed Manhattan Area Technical Center.

In 1994 legislation was passed (Kansas Senate Bill 586, amended K.S.A. 72-4412) allowing technical schools to apply for conversion to technical colleges. Manhattan Area Technical Center received approval from the state to make this change in 1996 and became Manhattan Area Technical College (MATC).

July 1, 2004, the College's governing structure became autonomous and, for the first time in its history, MATC had its own Board of Directors. Additionally in 2004, MATC received continuing candidacy status from the HLC and obtained full accreditation status in 2006.

MATC expanded its regional access beginning in 2020 with the launch of classes at the Wamego Center. In 2024, the College further broadened its service area by offering courses at Fort Riley. That same year, MATC opened its new Advanced Technology Center, a facility designed to support state-of-the-art workforce training, industry partnerships, and hands-on technical education in emerging and advanced technology fields.

## **Service Territory**

Since its establishment, Manhattan Area Technical College has primarily served an area of Kansas that includes citizens and communities in ten counties including Clay, Dickinson, Geary, Marshall, Morris, Nemaha, Pottawatomie, Riley, Wabaunsee, and Washington. Manhattan Tech provides advanced education and technical preparation to students from communities all over Kansas as well as other states. The College's immediate service area, from which the Board of Directors is drawn, includes Clay, Dickinson, Geary, Marshall, Pottawatomie, and Riley counties.

# Accreditation

Manhattan Area Technical College is accredited by the Higher Learning Commission ([hlcommission.org](http://hlcommission.org)), a historically regional accreditation agency recognized by the U.S. Department of Education.



**Kansas Board of Regents**  
[www.kansasregents.org](http://www.kansasregents.org)



**U.S. Department of Education**  
<http://www.ed.gov>

Other program-specific accrediting/approving/certifying agencies are:



**Accreditation Commission for Education in Nursing**  
[www.acenursing.org](http://www.acenursing.org)



**Kansas State Board of Nursing**  
[www.ksbn.kansas.gov](http://www.ksbn.kansas.gov)



**Kansas Department for Aging and Disability Services**  
[www.kdads.ks.gov](http://www.kdads.ks.gov)



Education Foundation

**ASE Education Foundation**  
[info@ASEducationFoundation.org](mailto:info@ASEducationFoundation.org)



**National Accrediting Agency for Clinical Laboratory Sciences**  
[www.naacls.org](http://www.naacls.org)

# Admissions

## Admission Requirements

To be accepted to Manhattan Tech and placed in a program, students must meet the admissions requirements of the College and the requirements established for each program. College requirements are as follows:

1. Complete an application for admission and submit a non-refundable application fee (found online at [manhattantech.edu](http://manhattantech.edu)).
2. Complete required reading, writing, and math placement/competency testing, regardless of previous coursework or transfer credit.
3. Submit a final, official high school transcript from an accredited or approved institution or an approved official high school equivalency score report prior to admission.

Admission to Manhattan Tech is open to anyone without regard to race, color, ethnicity, creed, religion, age, gender, disability, military status, national origin or ancestry, marital status, pregnancy, actual or perceived sexual orientation, gender identity and expression, status with regard to public assistance, or any other status or condition protected in accordance with federal or state law.

## Selective Admission Requirements

Admission to Manhattan Tech does not guarantee enrollment in any specific course or program. Courses or programs may have size limitations, prerequisite/co-requisite requirements or other rules regulating enrollment. Additionally, Selective Admissions Programs have a limited number of openings each year and have specific entry level admission requirements that must be met prior to selection for admission to the program.

Students should consult the website link provided for specific programs: [manhattantech.edu/Selective-Admissions](http://manhattantech.edu/Selective-Admissions)

## Exceptions

Admission to Manhattan Area Technical College is granted based on the preceding criteria. In cases where special consideration is needed, the ultimate decision regarding the admission of a student rests with the Director of Admissions or designee.

## Admission Status

Students are classified as one of the following upon applying for admission: First-Time Freshman, Returning Student, Transfer Student, High School Dual Enrollment, Non-Degree Seeking, and Visiting Student.

### First-Time Freshmen Students

A first-time freshman is a first-time student who has never attended a regionally accredited institution other than as part of a dual enrollment program. Students under this status will need to meet all the College admission requirements described above.

### Returning Students

A returning student is someone who has previously attended Manhattan Tech, but who has not attended during the most recent semester excluding the summer semester. Returning students are subject to any curriculum, program, assessment score requirements, and/or catalog changes and may be required to reapply to programs with selective admissions requirements.

Returning students must:

- Re-submit any documentation required for a completed application.
- Meet the current admission requirements for the program of application.
- Pay any outstanding balances prior to readmission.

*Nursing students seeking readmittance should refer to the nursing readmission requirements to determine appropriate next steps.*

### Transfer Students

A transfer student is one who has attended another regionally accredited college or university prior to Manhattan Tech. Transfer students are encouraged to submit an official transcript from all previously attended institutions of higher learning so that the College can determine appropriate course placement and degree progress through the awarding of transfer credit.

## High School Dual/Concurrent Enrollment

High school dual/concurrent enrollment is when a high school student attends Manhattan Tech during their sophomore, junior, or senior years of high school and takes courses for which earns them both college and/or high school credits for each course taken.

Admission/Enrollment Guidelines for Concurrent Credit/Dual Credit for High School Students:

- Students must be classified as a sophomore, junior, or senior in high school.
- Students must have a cumulative GPA of 2.0 for Career and Technical Education courses and 3.0 for general education courses.
- Students must take the Accuplacer or submit ACT scores and meet the required placement scores to enroll in English Composition I and/or math courses. To schedule a placement test, visit [manhattantech.edu/proctor](http://manhattantech.edu/proctor)
- Students are required to submit their completed Concurrent Enrollment Form each semester they plan to enroll in courses. Students should check with their guidance counselor or the Manhattan Tech website for specific dates/deadlines, enrollment forms, and payment information.

For additional information refer to [manhattantech.edu/concurrent](http://manhattantech.edu/concurrent)

High school students wishing to enroll in courses held on campus at Manhattan Tech or online who are not obtaining Dual Credit will follow standard entrance specifications. Refer to General Admission Requirements for those guidelines.

Please note: these guidelines also apply to homeschooled students receiving dual credit. Courses that a student fails or withdraws from while enrolled as a high school student may affect a student's GPA or their ability to qualify for financial aid after graduating from high school.

## Non-Degree Seeking Student

A student enrolled at Manhattan Tech with the intention of completing credit-bearing coursework but is not seeking to earn a credential or degree. Non-degree seeking students are not required to pay an application fee. To become a non-degree seeking student, applicants must complete the non-degree seeking (NDS) application for admission. The College may request official transcripts or test scores to meet pre-requisite requirements. For enrollment in subsequent terms, students may complete another NDS application or meet with an academic advisor. Non-degree seeking students are ineligible for certain types of financial assistance.

## Visiting Student

An applicant who is currently attending another college or university but plans to attend Manhattan Tech for one semester/session only and to return to their home institution for the following semester. To become a visiting student, applicants must complete the non-degree seeking application for admission. Visiting students are not required to pay an application fee. The College may request official transcripts to meet pre-requisite requirements. To receive transfer credit at students' respective institution, students must complete the "Request a Manhattan Tech Transcript" process. Visiting students are ineligible for certain types of financial assistance.

## Information for International & Undocumented Students

Manhattan Area Technical College is NOT a Student and Exchange Visitor Program (SEVP) certified institution and does NOT participate in the Student and Exchange Visitor Information System (SEVIS), or the F, J or M visas programs. We are not an I-20 institution.

Any Manhattan Tech student who is not a U.S. Citizen or Lawful Permanent Resident is considered to be an international student. To avoid immigration status violations, you should make sure your status allows you to study in the U.S. You can check here: [Nonimmigrants: Who Can Study?](#)

## International Transcripts & Information

It is the responsibility of the student to have their international high school or collegiate transcript evaluated by an authorized International Transcript Credential Evaluation service for Manhattan Tech to accept and process the transcript. Students are responsible for all costs for this service.

Authorized International Transcript Credential Evaluation Centers include but are not limited to:

- Center for Educational Documentation, Inc. [www.cedevaluations.com](http://www.cedevaluations.com)
- Academic Credentials Evaluations Institute, Inc. [www.acei1.com](http://www.acei1.com)
- World Education Services Telephone [www.wes.org](http://www.wes.org)
- Educational Credential Evaluators, Inc. [www.ece.org](http://www.ece.org)
- Global Credential Evaluators, Inc. [www.gceus.com](http://www.gceus.com)

Manhattan Tech does not have an International Student Office and does not process I-20 Forms for F-1 or M-1 Type 3 Student Visas.

Undocumented Postsecondary Students

Non-U.S. citizens without proper documentation are not eligible for federal financial aid. Undocumented non-U.S. citizens are eligible to apply for admission to Manhattan Tech if they meet the following Kansas state requirements:

- Provide records that they attended an accredited Kansas high school for three or more years and graduated from an accredited Kansas high school or obtained a GED diploma in Kansas.
- File an affidavit with Manhattan Tech stating that they have filed an application to legalize their immigration status or filed for US citizenship or that their parents have filed such an application. Affidavits are available in the Student Services office.
- Fulfill all college and program requirements for admission before admission is granted.

Undocumented High School Students

Undocumented, non-citizen high school juniors and seniors may enroll in Manhattan Tech programs that accept secondary students if they are attending and are lawfully enrolled in a Kansas high school and fulfill all other college entrance requirements.

English Proficiency

We recognize that individuals come from diverse backgrounds and have varying levels of English proficiency. This requirement seeks to provide equitable opportunities for students to succeed academically while also allowing them to pursue technical program courses.

If your first language is not English or if you graduated from a non-English speaking school, applicants must provide evidence of English proficiency by meeting one of the standards below.

Examination

Meet the minimum scores as defined by Manhattan Tech using the TOEFL ([www.ets.org/toefl](http://www.ets.org/toefl)) or IELTS ([www.ielts.org](http://www.ielts.org))

|           | TOEFL | IELTS |
|-----------|-------|-------|
| Reading   | 19    | 6.5   |
| Writing   | 20    | 5.5   |
| Listening | 20    | 6.5   |
| Speaking  | 20    | 6.5   |

*Note: The College recognizes there are a variety of valid English proficiency tests, such as TABE CLAS-E, which will be evaluated on an individual basis. Results should be sent to the Admissions office.*

Prior Education

- Completion of a high school diploma, GED, or its equivalent from an accredited U.S. high school or a secondary school in a country where English is the language of instruction.
- A grade of "C" or better in an intermediate ELL or college-level English course taken at an accredited English-speaking post-secondary institution.
- Graduation from a regionally accredited English-speaking post-secondary institution.

Note: Students who do not meet the above standards are encouraged to meet with our admissions office to explore available options for English Language Learner (ELL) services on our campus, as well as potential dual enrollment opportunities. Special circumstances that fall outside the requirements can be submitted using the English Proficiency Waiver Request Form. The admissions team will review these exceptions along with your detailed explanation and respond within 5-7 business days regarding the waiver decision.

Placement/Competency Testing

All students must complete placement and competency testing in writing, reading, and math as part of the admissions process. Placement is determined through Manhattan Tech's multi-measures assessment criteria, which includes the ACCUPLACER placement test. These assessments are administered throughout the year and can be scheduled through the Teaching & Learning Center at [manhattantech.edu/proctor](http://manhattantech.edu/proctor).

Students taking the ACCUPLACER test for the first time as part of the enrollment process at Manhattan Tech may do so at no cost. A \$10.00 fee will be charged for each section retaken. ACT scores from within three years of the student's intended enrollment date may be used in combination with ACCUPLACER results to help determine course placement; however, they do not exempt students from competency testing. An official copy of ACT scores must be submitted directly to Manhattan Tech to be considered. To schedule a placement test, visit [manhattantech.edu/accuplacer](http://manhattantech.edu/accuplacer).

While equivalent college-level English and math courses (completed with a grade of "C" or higher) from accredited institutions may support placement decisions, **all students are still required to complete the college's placement and competency testing process**, regardless of transfer credit. Additional information on credit transfer and other course credit options can be found in the Student Resources section.

## Acceptance into Manhattan Tech Programs

After completing admission requirements, applicants will receive notification of acceptance into their program of study via email and mail at the address provided on the application. Students should reference programs of study for specific admission criteria. Acceptance is contingent upon the applicant's completion of admission and program requirements, as well as attendance at program orientation. Students who do not attend program orientation risk forfeiting their spot, and seat deposit (if applicable), in their selected program to a student on the stand-by list, who attended program orientation.

Applicants to the nursing program should be aware that certain criminal convictions could deny or restrict access to a Kansas nursing license. Specific information about these convictions is identified in Kansas law (KSA 65-1120). Please contact the Kansas State Board of Nursing with any questions. Manhattan Tech reserves the right to alter or cancel courses and/or programs. This could occur anytime during the pre or post acceptance process and/or during any school term.

An admission decision is considered official upon notification to the student. Manhattan Tech may rescind an admission decision for any of the following reasons:

- Inaccurate information submitted in the application process.
- High school transcripts not submitted, as required.
- Any other required documentation not submitted.
- Significant changes in qualifications after admission is offered, for example, if a student's disciplinary or criminal background changes.

## Additional Requirements and Notices

### Special Licensing Requirements

Students will need to meet additional admission requirements for technical diplomas and associate degrees connected to state or national licensing or governed by specific state regulations. Call Admissions for additional details.

### Social Security Numbers

Each entering student is to provide a Social Security Number upon enrollment. No student may receive financial aid from any federally funded program or be employed by the College without a Social Security Number on file. Social Security Numbers are used for required measures per compliance and identification for tax document purposes only. New students to Manhattan Tech are assigned a computer-generated student ID number that appears on their student ID card.

### Tuberculosis Screening Questionnaire

Tuberculosis, also known as TB, is a bacterial infection that attacks the lungs and, sometimes, other parts of the body. It spreads when someone infected with the disease coughs or sneezes and the bacteria is inhaled by someone nearby. Manhattan Tech requires ALL students to complete a Tuberculosis Screening Questionnaire, per Kansas Statute KSA 2009 Supp. 65-129, to aid in prevention and control of Tuberculosis as required by the State of Kansas Department of Health & Environment.

## Student's Rights to Privacy

The Family Educational Rights and Privacy Act (FERPA) affords you, when you turn 18 years old or enter a post-secondary institution at any age, the following rights with respect to your education records:

- The right to inspect and review their education record within 45 days of the day the College receives a request for access. Students should submit to the Registrar a written request that identifies the record(s) they wish to inspect. The student will be notified of a time and place where the records may be inspected.
- The right to request the amendment of that part of a student's education record that the student believes is inaccurate or misleading. The student should write to the Registrar, clearly identify the part of the record they want changed and specify why it is inaccurate or misleading. If the College decides not to amend the record as requested, the College will notify the student of the decision and advise the student of their right to a hearing regarding the request for amendment.
- The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. Although not required, institutions may release information from a student's record without prior consent, under the following allowable exceptions (outlined below).
- The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA.

## Disclosure of Education Records

Manhattan Tech may disclose non-directory information from a student's education record only with the written consent of the student, or under one of the following exceptions allowed under FERPA:

- To school officials with legitimate educational interest (as defined by institutions within FERPA guidelines).  
*A school official is defined as a person employed by the College in an administrative, supervisory, academic or support staff position; a person or company with whom the college has contracted (such as an attorney, auditor or collection agent); a person serving on the Board; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing their tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill their professional responsibility.*
- Authorized representatives for audit of federal-or state-supported programs.
- College officials carrying out their specifically assigned educational or administrative responsibilities. This includes contractors, consultants, volunteers and other outside providers used by Manhattan Area Technical College, including the Manhattan Area Technical College Foundation and the National Student Clearinghouse.
- Veteran's Administration officials.
- Officials of other institutions at which a student seeks or intends to enroll.
- Persons or organizations providing financial aid to students.
- Organizations conducting studies for, or on behalf of, educational agencies or institutions to develop, validate and administer predictive tests, to administer student aid programs or to improve instruction, provided that individual identity of students is not made.
- Accrediting organizations carrying out their accrediting functions.
- Parents of a student who have established that student's status as a dependent according to Internal Revenue Code of 1954, Section 152; in connection with a health and safety emergency in connection with § 99.36; or the student is under 21 and has violated a federal, state, or local law or a policy of the college related to the use or possession of alcohol or a controlled substance.
- Persons in compliance with a judicial order or a lawfully issued subpoena, provided that the institution makes a reasonable attempt to notify the student in advance of compliance. The institution is not required to notify the student if a federal grand jury subpoena, or any other subpoena issued for a law enforcement purpose, orders the institution not to disclose the existence or contents of the subpoena.
- Persons in an emergency, if the knowledge of information, in fact, is necessary to protect the health or safety of students or other persons.
- An alleged victim of a crime of violence of the results of any institutional disciplinary proceeding against the alleged perpetrator. Information may only be given in respect to the crime committed.
- Outside contractor when identified as a "party acting for" the institution and performing a service which the institution would otherwise have to perform for itself (for example, the National Student Loan Clearinghouse for loan verification).
- The attorney general of the United States or the attorney general's designee in response to an ex parte order in connection with the investigation or prosecution of terrorism crimes, under the US Patriot Act.

## Release of Directory Information

Under the provisions of the Act, Manhattan Tech is allowed to disclose "directory information" without consent. "Directory information" is described as:

- Student name
- Address
- Telephone number
- College Email address
- Major fields of study and classification
- Full- or part-time status
- Degrees, awards, and honors received

"Directory Information" is released at the discretion of the institution.

However, students who do not wish directory information to be released may prevent such release by completing and signing a nondisclosure of directory information request. If at any time you would like to remove this restriction, you may complete the same form filling out the cancellation request section.

**IMPORTANT:** Please consider very carefully the consequences of restricting the disclosure of your directory information. The college will not be able to confirm your existence to any person or organization outside of Manhattan Tech who may be requesting information or attempting to verify your enrollment or degree. Our response to the requester will be "I have no information on this individual." Regardless of the effect upon you, Manhattan Tech assumes no liability for honoring your request that such information be withheld.

You may also complete and return the Consent to Release Information Form, granting access of non-directory information (such as student's account or grades) to parents or other individuals.

## Title IX

Title IX of the Education Amendments of 1972 provides that: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." 20 U.S.C. § 1681 and 34 C.F.R. Part 106 (1972).

Manhattan Tech is committed to protecting the rights and dignity of all students, faculty and staff, and seeks to maintain a safe environment that is free from all forms of assault, harassment and discrimination. Any form of sexual misconduct, harassment or discrimination will not be tolerated by the College. Title IX ensures that no one be denied access to their education program or activity on the basis of sex and includes specific prohibitions against sexual harassment.

All complaints or reports of alleged sexual misconduct/discrimination, sexual harassment, retaliation and other sex-based behaviors will be handed by individuals below to determine if the complaint or report violates either Title IX or the College's institutional prohibitions of conduct on the basis of sex. Every employee of the College who receives a complaint or learns of a possible sexual misconduct must report the incident to the appropriate Title IX official. The College will be prompt, fair and impartial in proceedings to investigate the incident, to take action to eliminate the misconduct, prevent its re-occurrence, and address its effects. In some instances, to protect the safety of the college community, an investigation may still go forward even if the complainant requests that no action be taken. The College respects the victim's privacy but to ensure a complete and fair investigation, some level of disclosure may be necessary.

To report these matters, the student/employee is encouraged to complete the online Civil Rights and Title IX Discrimination Form. The form is automatically submitted to the Title IX officials and can be submitted anonymously. E-mails may also be sent to [titleix@manhattantech.edu](mailto:titleix@manhattantech.edu). Students or employees may also directly contact a member of the Title IX Office. Reports of misconduct, questions regarding Title IX, and concerns about noncompliance should be directed to the appropriate individual below.

### **for student allegations:**

Neil Ross, Dean of Student Services/Title IX/504 Coordinator  
Main Office, Room 101C  
3136 Dickens Ave  
Manhattan, KS 66503  
785-320-4554  
[titleix@manhattantech.edu](mailto:titleix@manhattantech.edu)

### **for employees allegations:**

Peter Vopata, Human Resource Coordinator  
Deputy Title IX Coordinator  
Office 107B  
3136 Dickens Ave, Manhattan, KS 66503  
Phone: 785-320-4574  
[humanresources@manhattantech.edu](mailto:humanresources@manhattantech.edu)

Manhattan Tech's Title IX Coordinator and designees are trained in Title IX regulations and responding to reports of sexual misconduct and harassment.

## Notice of Non-Discrimination

The Manhattan Tech Board of Directors supports and complies with Title VI and Title VII of the Civil Rights Act of 1964 as amended, Section 504 of the Rehabilitation Act of 1973 and Amendments, The Americans with Disabilities Act, Title IX and all requirements imposed by or pursuant to the regulations of the Department of Health and Human Services and the Department of Education. It is the policy of the Board of Directors that no person in the United States (on the grounds of gender, race, color, national origin, disability, sexual orientation, gender identity, religion, age, genetic information, parental status, military status, or veteran status) shall be excluded from participation in, denied the benefit of, or otherwise subjected to discrimination under any program or activity of, or employment with, Manhattan Area Technical College.

# Student Resources

## College Policies

For full list of current college policies and procedures refer to [manhattantech.edu/policies](http://manhattantech.edu/policies)

## Academic Advising and Course Schedules

All students at Manhattan Tech are assigned an academic advisor. Students accepted into the Associate Degree Nursing, Medical Laboratory Technology, or Practical Nursing programs will additionally be advised by the program faculty. It is the student's responsibility to initiate and prepare for advising appointments.

Advisors may assist students in the following areas:

- course placement based on multiple measures (i.e. Accuplacer, ACT, High School GPA, etc.)
- goal setting
- campus and program information
- referrals to campus resources
- interpreting institutional policies, procedures, and requirements

Students share responsibility for a positive and successful college experience and are expected to participate by:

- attending program orientations
- knowing academic policies and procedures
- knowing academic calendar deadlines and degree/program requirements
- consulting with an advisor when necessary and taking action when recommendations are made
- scheduling and keeping appointments with advisors

In planning a class schedule, the student should keep in mind the degree and graduation requirements of Manhattan Tech. The final responsibility for correct course selection lies with the student.

Non-degree seeking students may request an advisor assignment by contacting the Student Services Office.

## Catalog Policy

Enrolling students follow the provisions of the catalog in use at the time of enrollment. When students interrupt their continuous attendance for one semester or change their degree or certificate programs, they will become subject to the provisions of the catalog current with their next enrollment. Manhattan Tech may make changes in the catalog including changes in academic program requirements. Any significant changes will be posted on the Manhattan Tech website after official online publication. This publication should not be considered a contract between Manhattan Area Technical College and any student. Manhattan Tech retains the right to make changes in programs, course offerings, policies, graduation requirements, tuition, fees, and refunds without notice.

## Registration

Enrollment opens at least two months before each term. Classes fill quickly; therefore, students are encouraged to enroll early to select the best class. Students may enroll up to the Final Add Day (FAD), which typically falls on the Thursday before the first day of classes each semester. Any exceptions after FAD must be granted by an administrator and instructor of the courses in which the student is seeking to enroll.

## Student Responsibility

Students are responsible for meeting all requirements for graduation as set forth in this catalog. Advisors assist in the planning for a degree program for each student; however, the final responsibility for meeting requirements for graduation lies with the student.

## Reservation of Rights

Manhattan Area Technical College reserves the right to revise, add, or delete courses and programs; alter the total number of class hours; suspend, cancel, or postpone classes and programs; and/or alter the modality of courses and programs, including by transitioning between in-person and remote learning for any reason including, but not limited to, the following: an epidemic, pandemic, extreme weather, natural or man-made disaster, acts or threatened acts of terrorism or war, government orders or restrictions, low enrollment, other health or safety emergencies, and/or other events beyond the College's control.

## Accessing Canvas

To login to Canvas, Manhattan Tech's Learning Management System (LMS), a valid student Username is required. To obtain this, please check the inbox for the personal email address provided on your admissions application. A welcome message will contain your Username and instructions to set up a password. If you are unable to locate your username or password set up instructions, send an email to [support@manhattantech.edu](mailto:support@manhattantech.edu).

To access your Canvas course(s), navigate to [manhattantech.edu/logins](http://manhattantech.edu/logins) and select Canvas.

To locate your Canvas courses for the present term, select "Dashboard" from the global navigation bar on the left.

**IMPORTANT: Courses will open at 8:00 am on the course start date.**

In preparation for your online course, review the [Canvas Student Guide](#).

### First Day of Class

- Check your email and Canvas course(s) for your instructor's welcome message.
- Read the class syllabus.
- Locate the first assignments in your Canvas course(s).

## College Email

The College relies on Microsoft Office 365 email accounts to maintain secure communication with students. Your student email account serves as the College's primary mode of correspondence. Regularly monitoring your student email is crucial to staying updated on various matters, including financial aid and admission inquiries, upcoming student activities, and other pertinent information. Student email accounts will be terminated one year after the student's last active enrollment date.

## Teaching and Learning Center

The Marilyn Mahan Teaching & Learning Center (TLC) was established in 2017 with funding from the U.S. Department of Education through a Title III Strengthening Institutions Project Grant. The mission of the TLC is to promote innovative, effective teaching practices, facilitate access to online courses and training, and enhance engagement in student learning. To accomplish this mission, the TLC provides consultation, resources, and programs to:

- Prepare students to pursue technologically advanced and highly productive careers in a diverse and global environment.
- Promote a student-centered environment focused on the motivation and engagement of students through individual or group collaboration, learning resources, academic tutoring, and program testing.
- Provide college-wide leadership and coordination of professional activities aimed at supporting excellence in teaching.
- Nurture a culture of commitment to student learning, stimulate dialogue and reflection about teaching, and foster a sense of community among faculty.
- Support instructors in course planning and pedagogical development, including the integration of course and program outcomes to evaluate learner mastery in the content area.

The TLC promotes the expansion of online and hybrid certificate, degree, and transfer options, and provides comprehensive and accessible student services that mutually enhance one another for the benefit of students, faculty, and the community. Students and instructors have access to appropriate devices and staff services in the TLC to reinforce a positive and engaging learning environment.

### Tutoring & Academic Support

Tutoring services are accessed through multiple methods (including online and in person), and are provided based upon individual student's needs, educational goals, and, as applicable, instructor referral. Additional services such as time management, study planning, resume writing, research assistance, math and writing labs, and job interview preparation are offered through various workshops, or upon request. All tutoring and student academic support provided within the TLC are free to currently enrolled students and Manhattan Tech alumni.

Contact [tlc@manhattantech.edu](mailto:tlc@manhattantech.edu) or visit our website at [manhattantech.edu/tlc](http://manhattantech.edu/tlc) for more information.

## MATOnline

MATOnline is the student portal to check course schedules, register for classes, view grade history, locate account login information, view an unofficial transcript, authorize direct deposit of awards, apply for graduation, and much more.

## Accommodation/Support Services

The College provides qualified students with disabilities reasonable accommodations and resources to allow equal opportunities for success. Partnerships between faculty, staff, and students with disabilities provide equity and access to the resources available to all students.

Under the American Disabilities Act (ADA) of 1990, amended as ADAAA in 2008, and Section 504 of the Rehabilitation Act (1973), Manhattan Tech will make every effort to provide qualifying students with reasonable accommodations based on individual needs and a licensed clinician's recommendation. All students seeking academic accommodations must provide the current doctor or licensed clinician documentation. Manhattan Tech is only required to accommodate a disability if the student has disclosed their disability to the College's designated representative and provided the required documentation.

The most effective way to show qualification for reasonable ADA/504 accommodations in the current school term is to obtain a letter from a licensed medical professional/clinician familiar with the student and their disability and who has completed applicable supporting documentation validating the specific disability. The summary letter must outline the disability, test results, limitations to learning, and reasonably recommended academic accommodations to meet the needs of post-secondary coursework.

The documentation must reflect the student's abilities and limitations at the academic post-secondary level when the student requests an accommodation. Please note: The post-secondary school is not required to make changes or adjustments that fundamentally alter the academically prescribed coursework or graduation requirements under the ADA/504.

Under ADA and Section 504, reasonable accommodations or minor academic adjustments may include the following based on required documentation:

- Extended time for tests and quizzes
- Access to a distraction reduced testing environment
- Note-taking assistance
- Assistive reading software
- Dictation software
- The use of a recorder for academic needs

Students are afforded:

- Confidentiality of their records
- Accommodations for which they have been approved
- Permission to request changes to their accommodations
- The choice of which classes they may use all or some of their accommodations

*Additionally, accommodations can be approved and activated throughout the semester but are not retroactive. Untimely requests may result in delay, substitutions, or the inability to fulfill the request(s).*

### PROCESS FOR REQUESTING ACCOMMODATIONS

Disclose your disability

1. Complete and submit the [Accommodations Request Form](#) available at [manhattantech.edu/accommodations](http://manhattantech.edu/accommodations). Submission should include official documentation of your disability to verify your eligibility for accommodations under the ADA and Section 504 of the Rehabilitation Act of 1973.
2. Schedule an Accommodation Planning Meeting. Once your documents are received and accepted by Manhattan Tech, you will be notified to schedule an accommodation plan meeting. Through this process, an individualized accommodation plan will be developed.

Questions can be directed to [accommodations@manhattantech.edu](mailto:accommodations@manhattantech.edu).

## Job Placement Assistance

It is the sole responsibility of individual students to secure employment following graduation. To assist students and graduates in their endeavors, Manhattan Tech representatives pursue relationships with employers in business and industry to identify and coordinate employment opportunities for College graduates. Efforts are made to recruit prospective employers and arrange on-campus and off-campus interviews. Employment opportunities are posted online at Community Job Board: [manhattantech.edu/communityjobs](http://manhattantech.edu/communityjobs)

## Counseling Services

Struggling with stress, study habits, or personal challenges? You're not alone. Our on-campus therapist provides confidential support for:

- » **Career Counseling:** find direction and plan your future.
- » **Addiction Support:** Overcome challenges with guidance and resources.
- » **Emotional Regulation:** Manage stress, anxiety, and emotions effectively.
- » **Study Habits & Motivation:** Develop strategies for academic success.

 [manhattantech.edu/wellbeing](http://manhattantech.edu/wellbeing)

## Student Organizations and Honor Society

### National Technical Honor Society (NTHS)

The National Technical Honor Society is an honor organization for students enrolled in career and technical education. The purpose of the organization is to promote the ideals of honesty, service, leadership, and skill development; to reward excellence in workforce education; to develop self-esteem and pride; to encourage students to reach for higher levels of achievement; to promote business and industry's critical work-place values – honesty, responsibility, initiative, teamwork, productivity, leadership, and citizenship; and to champion a stronger, more positive image for workforce education in America. Membership in the society is awarded on a merit basis.

### Student Voice Council (SVC)

The Student Voice Council plays a very important role at Manhattan Tech. They help share students' ideas, interests, and concerns, as well as assist in improving school climate, and create true communication between the faculty, staff, and administration. Program representatives will attend scheduled and announced meetings, meet with classmates to discuss ideas and concerns, and serve as positive role models to other students.

### SkillsUSA

SkillsUSA is a national nonprofit student organization that serves students enrolled in career and technical education training programs at our nation's public high schools and colleges. SkillsUSA's mission is to empower its members to become world-class workers and responsible American citizens. SkillsUSA is an applied method of learning where students practice skills and build self-confidence while helping their schools and communities. SkillsUSA provides experiences in leadership, teamwork, citizenship and character development. Our program emphasizes high ethical standards, superior work skills, lifelong education, and pride.

## Foster Child Education Assistance Program

### What Benefits Are Available

Senate Bill 85, and the addition of SB 355, provides an opportunity for foster care children in the custody of the Kansas Department of Social & Rehabilitation Services to enroll in Kansas educational institutions without payment of tuition and required fees. Enrollment without payment of tuition and required fees means that an eligible student will be allowed to enroll without payment of tuition and fees required of all students at the time of enrollment. The student will be responsible for other charges associated with the student's academic program costs, such as books and tools. The applicant may be eligible for assistance for other costs of higher education through the Kansas Department for Children and Families. This program provides for undergraduate enrollment of eligible applicants through the semester applicant attains 23 years of age.

### Who is Eligible to Apply

An eligible applicant must meet the following requirements:

Eligible applicant enrolls in a Kansas educational institution on or after July 1, 2006

and:

The applicant was in custody of the Kansas Department for Children and Families and in a foster care placement on the date such applicant reached 18 years of age;

or

prior to age 18 graduated from high school or fulfilled the requirements for a GED while in foster care placement and custody of the Kansas Department for Children and Families

or

adopted from a foster care placement on or after applicant's 16th birthday

or

left a foster care placement subject to a guardianship under chapter 38 or 59 of the K.S.A. on or after applicant's 16th birthday

The Kansas Department for Children and Families Central Office must verify the applicant's eligibility status prior to enrollment.

### Requirements of Eligible Students

Students who have been granted tuition waiver shall remain in good academic standing at Manhattan Tech, and shall make satisfactory progress toward completion of the requirements of the program in which eligible applicants are enrolled.

### How to Apply

Please submit the Department for Children and Families Application for Foster Child Education Assistance Program Form to the Registrar's Office: [www.dcf.ks.gov/services/pps/documents/ppm\\_forms/section\\_7000\\_forms/pps7260.pdf](http://www.dcf.ks.gov/services/pps/documents/ppm_forms/section_7000_forms/pps7260.pdf)

## Campus Safety and Security

Manhattan Tech provides a full-time Security Officer. The Security Officer patrols the campus and ensures student, employee, and guest safety. If you need the assistance of the Security Officer during an emergency, or an escort to your vehicle, call 785.410.3844. For non-emergency and safety related concerns, email [security@manhattantech.edu](mailto:security@manhattantech.edu).

### Inclement Weather (Policy 8.3.1)

It is recognized that severe weather conditions may prevent people from reporting to work or classes, cause some to report late, or require others to depart earlier than scheduled. In an emergency or inclement weather situation, Manhattan Tech may cancel classes, close college, schedule an early release or a late start. If Manhattan Tech should close because of inclement weather, the notice will be available through Rave Wireless (an emergency alert system) to your cell phone and/or email address, on the College website, and local radio and television stations, as well as the campus answering machine. If classes are canceled, dates/times will be scheduled as necessary for make-up of instruction time. Refer to full policies at [manhattantech.edu/policies](http://manhattantech.edu/policies).

### Weapons Concealed Carry (Policy 5.10.3)

Carry Concealed Handgun (CCH) is a handgun that a person who is not prohibited from possessing a firearm under either federal or state law may carry in a concealed fashion, except where prohibited as detailed in state law (KSA 75-7c10). CCH laws refer to firearms defined as handguns by state law.

The display or "open carry" of any handgun is strictly prohibited by college policy except in defense of one's self or an immediate third person. Display is defined as the intentional showing, presenting, exhibiting and/or drawing of a handgun from a position of concealment on one's person. Other than for authorized security and/or law enforcement, no handguns or firearms shall be openly carried on any college property or at college events.

Refer to full policies at [manhattantech.edu/policies](http://manhattantech.edu/policies).

### ACCIDENTS/INJURIES

While stringent precautions will be taken at Manhattan Tech to ensure safety, accidents may occur. All accidents and injuries should be reported immediately to an instructor or the administrative office. It is Manhattan Tech policy that all accidents, regardless of the severity, be reported so an Incident Report can be completed and submitted to the administrative office in response to the situation.

### EMERGENCY MESSAGES

Notification will be sent through the RAVE alert system, and, if applicable, the public website, email, and Facebook.

### CONTACTING EMERGENCY SERVICES

Anyone may notify emergency services by calling 911 and then calling the front desk at 785.587.2800.

### SAFE DEFEND SYSTEM

Manhattan Tech has teamed up with SafeDefend to provide a system that prepares, notifies, and protects, by empowering people to take action in active shooter or other violent situations.

### EMERGENCY

During an emergency, your sole responsibility is to act quickly and in a pre-determined manner to separate yourself from potential harm. The time to provide details, and discuss options and philosophy about procedures is before the need to act arises, and afterward to continually improve processes.

During an emergency, the institution will utilize one of four specific commands:

- |                                                 |                                       |                                         |                                                        |
|-------------------------------------------------|---------------------------------------|-----------------------------------------|--------------------------------------------------------|
| 1. LOCKOUT – Get inside.<br>Lock outside doors. | 2. LOCKDOWN – Locks,<br>lights, HIDE! | 3. EVACUATE – To<br>announced location. | 4. SHELTER – Take shelter<br>in nearest safe location. |
|-------------------------------------------------|---------------------------------------|-----------------------------------------|--------------------------------------------------------|

Manhattan Tech will also practice safety drills periodically. Any drill will be notated with DRILL in the emergency message. The time to become familiar with evacuation routes, shelter areas, or lock-down procedures is today. Notification to initiate any of the procedures listed below will be given via a text message alert or by use of a runner, if safe.

### LOCKDOWN

A crisis situation may arise when it is prudent to lock Manhattan Tech buildings while still occupied. The purpose for this action is to protect students and staff by preventing entrance into building and program areas by a person or persons identified as dangerous. Lockdown procedures may be implemented in an event such as a civil disturbance, hostage situation, or person(s) wielding dangerous weapons.

Anyone witnessing a dangerous person should notify authorities by dialing 911 and then contact an MATC employee if deemed safe to do so. Faculty and staff should follow the building lockdown procedures and utilize the SafeDefend System immediately, or when instructed to do so, in the event of an obvious imminent threat.

While Manhattan Tech has no authority to prevent students from leaving the campus, all students will be asked to stay and report to safe areas in the event of a crisis.

- If you hear gunshots or witness an armed person, isolate yourself and others from the suspect.
- Close, lock and barricade doors, close curtains, turn off lights, move to a wall or corner out of sight from the door or window.
- DO NOT respond to anyone at the door.
- Ignore all bells and alarms unless otherwise instructed.
- If in open space, hide to the maximum extent possible – get behind something solid (a wall, desk, etc.).
- Call 911 if it is safe to do so. Provide as much detail as you know and follow police instructions. Do not expose yourself or others until notified by police that the danger has passed.
- If safe to do so notify a MATC employee and provide as much detail as possible. MATC employees have been trained to manage a crisis event.
- Do not speculate. Depending on circumstances, the responding Security Officers will coordinate efforts with the law enforcement officers.

## **LOCKOUT**

A Lockout recovers all students from outside the building, secures the building perimeter, and locks all outside doors. This would be implemented when there is a threat or hazard outside of the building. Criminal activity, dangerous events in the community, or even a vicious dog on the campus would be examples of a Lockout response. While the Lockout response encourages greater staff situational awareness, it allows for educational practices to continue with little classroom interruption or distraction.

- Everyone gathers inside and maintains business as usual.
- Lock all perimeter doors. No one in or out.
- Increase situational awareness and use common sense.

## **EVACUATION**

When a building on campus must be evacuated, the evacuation must be done quickly and calmly. Special attention should be given those individuals requiring additional assistance to evacuate a building. Ideally, faculty and staff should inform students that the building must be evacuated and should summarize the events to follow as listed here:

- Evacuate immediately if you hear an alarm or are asked to evacuate by a college official.
- Take your personal belongings with you.
- Close, but do not lock, all classroom and office doors.
- Turn off all gas (cylinders, fuels), and other equipment or machines in use that may pose a hazard or may be a source of ignition of fuel in laboratories.
- Follow the evacuation route posted in your building.
- Walk quickly and calmly to the assembly point designated by your Faculty Member and alert others to do the same.
- Reserve elevators for non-ambulatory individuals during non-earthquake or fire evacuations.
- Wait at the designated outdoor assembly point.
- Do not leave the assembly area until you have checked in with the Faculty Member. If the primary assembly point is unsafe, go to an alternate assembly point identified by a college official.
- Notify your Faculty Member if anyone is unaccounted for from your classroom or area.
- After evacuating, DO NOT ENTER A BUILDING FOR ANY REASON until you are told it is safe, or a college official announces an “All Clear”.

## **SHELTERING**

Sheltering may be necessary on campus, depending on the magnitude of an incident. College facilities may be used to “shelter-in-place” staff, faculty, students, and visitors, to provide shelter for displaced individuals during a campus evacuation, or to provide shelter to the community. If public officials send out a message that a major incident has occurred that makes it unsafe for the public to move about outdoors, all Manhattan Tech building occupants in the affected area will be notified via the RAVE Alert app, email (if possible), or runners inside each building. Everyone will be asked to remain in the building for their safety, however, no one will be held against their will. When public officials give the “all clear” to the College Administration, building occupants will be notified through the same emergency communications channels: the RAVE alert system, and, if applicable, the public website, email, and Facebook.

## **VIDEO SURVEILLANCE**

Manhattan Tech uses video monitoring and recording to keep students, employees, and guests safe, and to have accurate reporting available to emergency authorities.



# Academic Information

Nationally, workplace technology has advanced exponentially and has impacted almost every industry. Thus, Manhattan Tech programs are designed to prepare students to enter the workforce in a relatively short period of time with the technical skills needed to gain satisfactory employment in their chosen discipline. Technical education is a time-efficient, cost-effective means of achieving career education. With the education and experience gained, graduates have the potential to open doors of opportunity that otherwise might have been inaccessible. The ultimate goal of each technical program, course, or seminar is successful employment for graduates or transfer to a four-year college or university, as well as the creation of life-long learners.

## Degree Seeking Programs

Manhattan Area Technical College offers degree-seeking program options through Associate of Applied Science (AAS) degrees and technical certificates.

An Associate of Applied Science (AAS) degree is awarded upon satisfactory completion of a program of study consisting of at least 60 credit hours. AAS programs include a minimum of 15 credit hours of general education, including 3 credit hours of mathematics and 3 credit hours of communications. Students must complete all program requirements with a minimum cumulative GPA of 2.0. Students who have completed a technical certificate and wish to continue toward an AAS degree should consult with their Manhattan Tech advisor.

A technical certificate is awarded to students who successfully complete the required program courses and maintain a minimum cumulative GPA of 2.0.

- » Administrative Assistant
- » Automotive Technology
- » Business Accounting
- » Computer Support Specialist
- » Construction Technology
- » Early Childhood Education
- » Electric Power and Distribution
- » Electrical Technology
- » Heating, Ventilation, and Air Conditioning
- » Industrial Maintenance Technology
- » Medical Laboratory Technology
- » Nursing: Associate Degree
- » Nursing: Practical
- » Plumbing Technology
- » Welding Technology

## Certificate of Completion

A certificate of completion is awarded to students who have successfully passed the necessary course requirements.

Manhattan Area Technical College provides a certificate of completion in the following disciplines:

- » Certified Nurse Aide (CNA)
- » Certified Medication Aide (CMA)
- » Phlebotomy

## General & Adult Education

Manhattan Tech offers both general and adult education courses.

- » High School Diploma (GED)
- » English Language Learner (ELL)
- » General Education Courses:  
Math, English/Communications, Sciences, and Social Sciences  
[Refer to page 41 for complete course list and offerings](#)

## Posthumous Degrees and Certificates

If a deceased student was very close to earning a degree or certificate, in special cases the degree may be awarded posthumously. Typically, the student would be within one semester (i.e. within 18 credits for an undergraduate degree) of completing the requirements for the degree at the time of death. A request can be made to the Registrar for a posthumous degree to be awarded and final approval must be attained by the President and CAO.

## Non-Credit with Tech+

At Manhattan Tech, we believe learning should be accessible, flexible, and tailored to the real-world needs of today's workforce. Our Non-Credit Offerings provide individuals and businesses with opportunities to gain critical skills, develop professionally, and stay competitive — all without pursuing a traditional degree.

Through Tech+, individuals and businesses can access open-enrollment, non-credit courses designed to enhance skills across industries. Whether you're seeking professional development, career advancement, or lifelong learning, Tech+ offers resources and training to support learners at every stage.

# College Transfer Policy and Procedures

## Transfer Credit

An evaluation of potential transfer credit will be completed after an admissions application has been filed and official transcripts have been received following guidelines in the “Official Transcripts” section. The Registrar, or their designee, will determine the equivalency of transfer courses. Students must meet with a Manhattan Tech Advisor to discuss obtaining credit for courses not a part of the Kansas Board of Regents Systemwide Transfer (SWT). Only 75% of credit towards a degree or certificate program can be transfer credit. In most cases, the transcript will be evaluated within 30 days of receipt by the Registrar’s Office.

## Transfer Courses for General Education

In the state of Kansas, some general education courses are identified as Systemwide Transfer (SWT) courses approved by the Kansas Board of Regents, for which faculty develop and update learning outcomes. SWT courses transfer to any Kansas public institution offering an equivalent course. The decision of lower division courses to count toward upper division credit hours is at the discretion of the receiving institution.

For a complete listing of the courses approved by the Kansas Board of Regents for transfer as direct equivalents at all public Kansas postsecondary institutions, see [kansasregents.org/transfer\\_articulation](https://kansasregents.org/transfer_articulation).

See course descriptions in the back of the catalog for Manhattan Tech’s SWT general education courses offered. These courses are indicated by: **TP** SWT ####

## Credit for Prior Learning

Students may earn Credit for Prior Learning (CPL) for knowledge and skills gained through previous academic coursework, standardized examinations, military service, industry training, or other approved assessments.

Credit may be awarded through the following methods:

| Method                  | Description                                                      |
|-------------------------|------------------------------------------------------------------|
| Advanced Placement (AP) | Credit earned through qualifying AP exam scores                  |
| CLEP                    | Credit earned through College Level Examination Program tests    |
| DSST                    | Credit earned through the VA National Testing Program (DSST)     |
| Training Programs       | Credit for military or industry training evaluated through ACE   |
| Credit by Examination   | Credit earned by passing a Manhattan Tech faculty-developed exam |

For additional information or to apply for Credit for Prior Learning, refer to Policy 5.1.3 or contact an Academic Advisor.

### Advanced Placement (AP)

Advanced Placement (AP) courses allow academically prepared high school students to complete college-level coursework.

Students who earn a score of 3 or higher on an approved AP examination may receive proficiency credit toward a Manhattan Tech certificate or degree program.

To receive AP credit:

1. The student must be admitted to a certificate or associate degree program at Manhattan Area Technical College.
2. Official AP scores must be sent directly from The College Board.

For a list of accepted AP exams, visit: [manhattantech.edu/transfercrredit](https://manhattantech.edu/transfercrredit)

*Note: Acceptance of AP credit varies by institution and may not transfer to all colleges.*

### College Level Examination Program (CLEP)

The College Level Examination Program (CLEP) allows students to demonstrate knowledge of introductory college-level subjects. The College awards credit to students who earn a minimum score of 50 on approved CLEP examinations. Credit may be awarded as an equivalent course or as elective credit when appropriate. Official CLEP scores must be sent directly from The College Board.

### VA National Testing Program (DSST)

Credit may also be awarded through the VA National Testing Program (DSST), formerly known as DANTES. DSST credits are evaluated according to recommendations from the American Council on Education (ACE).

### Military and Training Program Credit

Credit may be awarded for approved military or industry training programs. Military training is evaluated using the ACE Guide to the Evaluation of Experiences in the Armed Forces. Students should submit official military transcripts such as the Joint Services Transcript (JST). Industry training programs may be evaluated using the ACE College Credit Recommendation Service.

## Credit by Examination

Students who have knowledge or experience equivalent to a Manhattan Tech course may request Credit by Examination.

- A maximum of nine (9) credit hours may be earned through Credit by Examination.
- The examination will be developed and administered by Manhattan Tech faculty or administrators.
- Credit by Examination is not available for courses a student has previously attempted.

## Evaluation of Prior Learning Credit

Manhattan Area Technical College follows the recommendations outlined in the Joint Statement on the Transfer and Award of Credit when evaluating and awarding credit for prior learning. Additional information is available at: [www.acenet.edu](http://www.acenet.edu)

# Official Transcripts

## What is an official transcript?

A transcript is an official certified report of a student's permanent student record. In accordance with the Public Information Act and FERPA, as amended, student academic records are classified as confidential and may be released only with the student's written authorization and signature. No one else, including but not limited to spouses, parents, etc., can request transcripts, as student written permission is required by law.

Official transcripts or reproductions of official transcripts from other institutions cannot be released to any individual or institution. Visit [manhattantech.edu](http://manhattantech.edu) or MATCOnline for additional information.

## Requesting a Manhattan Tech Transcript

Official transcripts must be requested through the National Student Clearinghouse, more info at [manhattantech.edu/transcripts](http://manhattantech.edu/transcripts). Transcripts are available for continuing education students as of Fall 1994, and for all workforce development students as of Spring 2004. Course credit earned prior to 2006 is non-accredited course achievement. All official transcript requests are verified and approved by the Registrar's Office. The transfer of Manhattan Tech credit to other colleges is entirely up to the receiving institution. Manhattan Tech does not guarantee transfer of its credit.

## Sending Transcripts to Manhattan Tech

Undergraduate students may transfer credit from other institutions of higher education that are accredited by a regional accrediting agency recognized by the U.S. Department of Education. An official transcript sent directly from the issuing institution to Manhattan Tech is required for transfer credit. Faxed transcripts will not be accepted as official transcripts. Only course work with a grade of C or higher may be considered for transfer.

## Reverse Transfer

Reverse Transfer is the process of retroactively conferring an associates degree or certificate to students who have not previously completed graduation requirements.

Eligible students must have completed 45 credit hours at one or more public technical colleges in Kansas and must consent to the release of their academic records. Academic records will be evaluated for degree or certificate completion and will be conferred based upon a satisfactory evaluation. Contact the Registrar's Office at [registrar@manhattantech.edu](mailto:registrar@manhattantech.edu) for more information.

## Articulation Agreements

Students may seek award of credit received from a secondary or post-secondary institution that has in place a current Articulation Agreement with Manhattan Tech in the students' intended program of study.

An articulation agreement is a formal arrangement that facilitates the transfer of a specific set of academic credits from one institution to another. This is commonly seen between two-year post-secondary institutions and baccalaureate degree-granting colleges or universities. Additionally, there are articulation agreements between high schools and post-secondary institutions. For more information, consult an academic advisor.

Students must meet all qualifying requirements of the Articulation Agreement.

See website for more information: [manhattantech.edu/articulation](http://manhattantech.edu/articulation)

## Transcripted Credits

Students may go to [matcnet.matc.net](https://matcnet.matc.net) to view their final grades for a course. If an official copy is required, students may make an official request.

If an error is suspected in the reported grades, students must notify the faculty member. Failure to initiate and complete processing within the specified time will disqualify students from further consideration of a grade change.

A GPA is obtained by dividing the number of grade points by the hours graded:

| Calculated in GPA |                                         |                | Not Calculated in GPA |                            |
|-------------------|-----------------------------------------|----------------|-----------------------|----------------------------|
| A                 | Excellent                               | 4 grade points | AC                    | Articulation Credit        |
| B                 | Good                                    | 3 grade points | AU                    | Audit                      |
| C                 | Fair                                    | 2 grade points | AW                    | Administratively Withdrawn |
| D                 | Poor                                    | 1 grade points | I                     | Incomplete                 |
| F                 | Failure                                 | 0 grade points | PLA                   | Prior Learning Assessment  |
| P                 | Pass                                    | 0 grade points | TO                    | Credit by Examination      |
| XF                | Failure<br>academic integrity violation | 0 grade points | TR                    | Transfer Credit            |
|                   |                                         |                | W                     | Withdrew                   |
|                   |                                         |                | WIP                   | Work in Progress           |

## Incomplete Grades

An Incomplete ("I") may be given at the request of the student and indicates the student has not met the requirements for course completion due to extenuating circumstances but has been granted additional time to meet those requirements. The student and the instructor must discuss an Incomplete before it is awarded. This grade is given at the instructor's discretion if the following conditions are met:

- The student is currently passing the class
- Circumstances requiring the request for an "I" are beyond the student's control
- Unfinished work is limited

The Incomplete Grade Contract is documentation of that discussion and is meant to provide a clear statement of mutually understood remaining assignments. Faculty must submit Incomplete Grade Contracts to the Registrar before the last day of the semester. Upon completion of the work within the assigned time period, the instructor will report the new grade by submitting a "Grade Change Report" form to the Registrar.

*Any "I" grade that has not been removed from the transcript by the instructor on or before 9 weeks from the start of the subsequent term (FA, SP, SU) automatically converts to a letter grade.*

## Repeat Course

An "R" that appears in the repeat column indicates that the course is a repeat and an asterisk (\*) appears by the earlier course that was repeated. The original grade and points are no longer calculated in the GPA.

# Methods of Instruction

## Methods of Instruction/Delivery Method

All courses at Manhattan Tech are required to utilize the online learning management system, Canvas. To ensure all courses offered are well designed, expertly taught, and adhere to practical considerations, all learning at Manhattan Tech will:

- Align with our values of excellence, integrity and student-centeredness, and our mission to provide quality performance-based education
- Engage our students in meaningful, active learning to address the needs of a variety of learning styles
- Hold our students and instructors to a high level of accountability and performance standards
- Use our assessment and evaluation processes to assure quality of course design and instruction to improve student learning
- Provide our instructors with support, resources, and training in current pedagogies for high-quality face-to-face, online, and blended instruction

### Face-to-Face Delivery Format

- In a face-to-face course, one hundred percent of instruction will occur in-person. Canvas may be used to provide additional resources, supplemental course information, and may be utilized to submit coursework.
- Students may have readings and assignments to complete outside of class time.

### Blended Delivery Format

- Blended courses will convene face-to-face (or synchronous) and have additional course requirements online
- Most blended courses will have 50 percent of face-to-face instruction and 50 percent course requirements online
- Requires compliance with the online attendance policy
- May require proctored events such as finals and quizzes

### Online Delivery Format

- Online courses replace traditional face-to-face instruction and interaction with web-based, online learning, and collaboration.
- All learning and interaction are asynchronous
- Requires compliance with the online attendance policy
- May require proctored events such as finals and quizzes

### Hybrid-Flexible (HyFlex)

- The Higher Learning Commission (HLC) recognizes hybrid learning as a model that blends face-to-face and online instruction, while HyFlex courses extend this flexibility by allowing students to attend in-person, participate online, or switch between modes throughout the course. This approach requires careful course design to ensure that all students, regardless of participation mode, have equitable access to content, interaction, and assessment.

### Definitions

**Synchronous Learning:** All types of learning where the student(s) and instructor(s) are in the same place at the same time. (i.e. in-person classes, live online lectures, remote lecture)

**Asynchronous Learning:** Allows students to learn on their own schedule, within a specific time frame. (i.e. recorded lectures, online readings/homework)

## Consider the following about online and blended learning:

### Policies

- Students are responsible to schedule proctored, in-person events as required by instructor.
- A unique attendance policy is applied to online/blended courses.

### Time Commitment

- Online learning should be viewed in the same light as a face-to-face class. It will not be an “easier” course, nor will it take less time or energy.
- Participants must be responsible and self-disciplined to keep up with the course. Time management is extremely important.
- Although you may feel you are working through the course on your own schedule, it is mandatory to meet deadlines established by the College and its instructors.
- The TLC staff is available to assist students in developing the time management skills and study habits necessary for online

learning.

### **Communication**

- Most content and interaction happens through writing in an online or blended course. You should know how to express yourself professionally in writing and be comfortable using electronic communication.
- It is important to know your instructor, how to contact them, to communicate regularly, and to maintain a course presence

### **Digital Access**

- You should be familiar with the Internet, email use, downloading, uploading, and saving files.
- An accessible and reliable internet connection is required.
- Assignments should be in a format approved by the instructor and supported by Manhattan Tech. The College provides a free installation of Microsoft Office suite with a valid student email account. See <https://matonline.matc.net>.
- Minimum hardware and software are also required.\*

### **Hardware**

There are system guidelines for student devices, hardware, and software the College supports.

Please keep in mind each department might have additional requirements. It might also be possible to use something not listed but it may require you installing additional software and we will not support it.

\* For full up to date system requirements, please refer to the website: [manhattantech.edu/systemrequirements](http://manhattantech.edu/systemrequirements)

*If you are unsure as to whether or not your computer meets these requirements, or if you require any technical assistance, please contact the IT Help Desk. Your program or instructor may require specific hardware, software, or apps.*

## **Auditing a Course**

Students who wish to enroll in a course, but want to avoid receiving college credit, may audit the course. Students choosing to audit a course must obtain written permission from the course instructor and appropriate administrator. Enrollment is conditional based on availability of open seats in the class, with credit-seeking students having priority for entry into the course. Students will pay the currently approved tuition rate and any applicable course fees. Tuition and fees are not refundable. Any exceptions to the payment of tuition and fees are at the discretion of the CFO. The student's transcript will reflect "AU" as the form of grade provided. Audited course credit hours may not be applied toward enrollment for federal financial aid or any other financial assistance offered at Manhattan Tech. Audited courses are not applicable for Credit for Prior Learning.

# Academic Expectations

## Degree/Certificate Timeline for Completion

Students have five years to complete their Associate of Applied Science Degree or Certificate requirements under the Manhattan Tech catalog in use at the time of their first date of attendance. After five years, a returning student will be placed under the current catalog year.

Students can follow the degree requirement of any subsequent catalog in place after they begin their studies at Manhattan Tech. Submitting a Change of Degree/Major form will change the students record, which may impact which courses they are required to complete. For assistance in determining how a change of major will affect the student's progress toward a degree or certificate, or for information on determining the current catalog of record for graduation, schedule an appointment to meet with an advisor prior to submitting a Change of Degree/Major form.

## Attendance/Roster Verification

Faculty verify rosters during the first week of the semester. Students who are not in attendance are reported to the Registrar's office for administrative drop. As a result, the course will not appear on the student's transcript, and the associated tuition and fees will be unapplied from the student's account.

### Face-to-Face Courses

Manhattan Tech faculty are committed to preparing students for job skills and employment, understanding that poor attendance can hinder knowledge and skill development. Therefore, department instructors outline attendance guidelines for their programs in course syllabi or program handbooks.

### Attendance for Online/Blended Courses

The full online attendance policy will be stated in your syllabus.

Within the first five business days of the course, students will be asked by the instructor to verify their attendance by completing the following steps:

1. Log in regularly, as your instructor can track your online activity and login frequency.
2. Read the syllabus and all related policies.
3. Successfully complete assignments specified by the instructor.

## Academic Honesty and Misconduct (Policy 4.3.2)

Academic honesty at Manhattan Tech is an important part of student success. Manhattan Tech views academic honesty as an integral part of student development and learning. All Manhattan Tech students are expected to understand the College's policy on academic honesty, as well as how the College defines academic dishonesty.

Academic dishonesty is an action taken by a student that violates the College's Policy 4.3.2 Academic Honesty.

For full policy details refer to current version on [MATCOnline](https://manhattantech.edu/policy). ([manhattantech.edu/policy](https://manhattantech.edu/policy))

## Graduation Requirements

Students intending to graduate with a Technical Certificate and/or Associate of Applied Science degree must complete the following requirements to graduate and/or participate in commencement exercises:

- Submit the Intent to Graduate form on MATC Online and pay \$25 program completion verification fee.
- Satisfactorily complete all course work for technical certificate/degree.
- Achieve a cumulative GPA of 2.0 or higher.
- Have no more than 6 credit hours of course requirements\* remaining to complete the Certificate/Degree.  
\* End of year program internships must be in-progress or scheduled to be completed during the following term.
- Fulfill all financial obligations to Manhattan Tech as well as Financial Aid Exit Counseling, if applicable.

The program completion verification fee is non-refundable and assessed to all graduating students.

Students are responsible for meeting, in full, all requirements for graduation as outlined in this catalog. Advisors assist in the planning for a degree program for each student; however, the final responsibility for meeting requirements for graduation rests with the student. If a student does not complete the requirements for graduation, re-application and fee payment for graduation is required.

Alumni requiring a re-printed diploma should contact the Registrar's Office at [registrar@manhattantech.edu](mailto:registrar@manhattantech.edu).

## Drop or Withdrawal Policy

Students may adjust their course schedule by submitting the online Drop/Add or Withdrawal Form. The official drop or withdrawal date is the date the completed form is received by the Registrar's Office. Students who are considering dropping or withdrawing from a course are encouraged to consult with an Academic Advisor or instructor to review academic and financial implications. Stopping attendance does not constitute an official drop or withdrawal. Students who stop attending a course without completing the required form remain enrolled and may receive a failing grade.

### Drop and Withdrawal Deadlines

Dropping a course during the drop period removes the course from the student's schedule without transcript notation. After the drop period ends, students may withdraw from a course until 75% of the course has been completed, resulting in a "W" grade on the transcript. Students attempting to withdraw after 75% of the course has been completed will receive the grade earned based on work completed, unless an approved administrative exception applies.

### Financial Aid Considerations

Dropping or withdrawing from courses may affect financial aid eligibility, including Grant and loan eligibility, Satisfactory Academic Progress (SAP), and Return of Title IV federal aid calculations. Students receiving financial aid are encouraged to consult with the Financial Aid Office before dropping or withdrawing from courses.

### Late Cancellation and Failure to Attend

For short-term healthcare or workforce certification courses, including courses meeting for one day or only a few days, students who cancel after the published refund deadline or fail to attend the scheduled course will remain responsible for the full cost of the course, as instructional staffing, materials, and course space have already been reserved. Exceptions may be considered in documented circumstances such as serious illness, emergency, or military deployment and must be approved through the appropriate administrative process.

### Administrative/Hardship Withdrawals

The College reserves the right to administratively withdraw or drop students from courses in certain circumstances, including but not limited to:

- Failure to meet financial obligations to the College
- Failure to meet prerequisites or program requirements
- Failure to attend or participate in a course as required
- Disciplinary action in accordance with college policies

Administrative withdrawals may affect tuition charges, financial aid eligibility, and academic standing. Students remain responsible for any financial obligations associated with the course, as outlined in the Tuition Refund Policy.

### Faculty Administrative Withdrawal

If a student is absent for five consecutive class periods during the official Drop or Withdrawal period and has not contacted a Manhattan Tech faculty or staff member, the instructor may complete a request for an Administrative Withdrawal during the sixth class period.

To initiate this process, the instructor must submit an online withdrawal form with an explanation which will be submitted to the appropriate Dean for review. Upon approval, an Administrative Withdrawal (AW) will be recorded on the student's transcript for the applicable course(s). The official withdrawal date will be the date the request is received.

If excessive absences occur after the official Withdrawal period ends, the instructor will assign the student the earned grade based on work completed.

### Hardship Withdrawal

A Hardship Withdrawal may be considered when a student experiences serious and unforeseen circumstances beyond their control that prevent them from completing coursework for the semester.

Examples of circumstances that may qualify include, but are not limited to:

- Serious medical or psychological conditions
- Death or serious illness of an immediate family member
- Significant personal or family emergencies
- Other extraordinary situations that substantially interfere with the student's ability to complete coursework

In most cases, a hardship withdrawal applies to all courses taken during the affected term, although partial withdrawals may be considered when documentation supports the request.

Students requesting a hardship withdrawal must provide appropriate supporting documentation related to the term for which the withdrawal is requested. Documentation may include medical verification from a licensed healthcare provider or other credible documentation verifying the circumstances.

To begin the process, students should consult with an Academic Advisor and submit the required documentation through the Course Withdrawal Request Form. Requests are reviewed by the appropriate college office to determine eligibility and the effective withdrawal date.

Students should be aware that approval of a hardship withdrawal does not guarantee a tuition refund and may affect financial aid eligibility. Students are encouraged to consult with the Financial Aid Office regarding potential financial aid implications. Approved hardship withdrawals will be recorded on the student's academic record in accordance with College transcript policies.

## Academic Clemency

Academic clemency is a policy allowing students to eliminate poor academic records within specific parameters. The student must also make a complete curriculum change or wait an interim of two years from the date of the grades prior to filing for academic clemency. This policy refers to Manhattan Tech only. A student transferring to another institution will have to follow that institution's policy. Students must meet the following requirements:

- The student must be currently enrolled at Manhattan Tech and must have completed at least 12 consecutive credit hours at this institution with a 2.5 GPA.
- The student must also make a complete curriculum change or wait an interim of two years from the date of the grades prior to filing for academic clemency.

Steps for applying for academic clemency:

1. Students must meet with their academic advisor to determine eligibility for academic clemency.
2. Once an academic advisor has determined a student is eligible, the student will be provided a link to complete an online request for clemency form. Within the form the student will need to:
  - Identify up to 9-12 semester credit hours, or no more than 3 courses, of specific "F" and/or "D" grades to petition for exclusion from the computation of the student's GPA.
  - Explain in detail the request for academic clemency.
3. Upon receipt of the petition, the appropriate designee will review the student's transcript and current enrollment, and recommend clemency, if appropriate.

If academic clemency is granted, the student understands that:

- Academic clemency can be granted only once.
- Up to 9-12 semester credit hours, or no more than 3 courses, of specific "F" and/or "D" grades may be petitioned for exclusion from the computation of the student's GPA.
- Grades excluded from the computation of the GPA will not be counted for graduation but will remain on the student's transcript. While credits removed from the computation of the GPA as a result of academic clemency will not be used to meet course or program requirements, they will be used to determine eligibility for financial aid awards.
- Courses on which academic clemency is granted will not be used in the computation of the cumulative grade-point average. Grades excluded from the computation of the GPA will be identified on the student's transcript by an ampersand (&).
- Students granted academic clemency may not receive honors at graduation. (i.e. National Technical Honors Society (NTHS) or other college honors)
- Federal and state financial aid regulations and requirements for veterans' benefits will prevail over institutional academic clemency policy if there is a conflict.
- Policies related to academic clemency pertain only to Manhattan Area Technical College and may not be honored by other institutions.

## Academic Fresh Start

Academic fresh start is a policy that provides students with poor or marginal academic college records the opportunity to resume work toward their degree without the burden of a poor GPA due to past academic performance. Academic Fresh Start removes all prior college grades from the student's transcript, while academic clemency is limited to removal of 9-12 semester credit hours, or no more than 3 courses. This procedure refers to Manhattan Tech only. A student transferring to another institution will follow that institution's policy.

Students must meet the following requirements:

- Students must be separated from all institutions of higher education for at least four years.

Steps for applying for academic fresh start:

1. Students must meet with their academic advisor to determine eligibility for academic clemency.
2. Once an academic advisor has determined a student is eligible, the student will be provided a link to complete an online request for fresh start form. Within the form, the student will need to explain in detail the reason for request for academic fresh start and a plan for academic success in the future.
3. Upon receipt of the petition, the appropriate designee will review the student's transcript and current enrollment, and recommend academic fresh start, if appropriate.

If academic fresh start is granted, the student understands that:

1. Academic fresh start at Manhattan Tech may be granted only once.
2. The student's permanent record will remain a record of all work, regardless of the institution at which that work was completed; however, the returning student will forfeit the use of all credit hours toward a degree earned prior to the four-year separation period.
3. The student's record will carry a notation designating when the academic fresh start was granted and noting that the calculation of GPA and credit totals for degree purposes begins with that date.
4. The student agrees that the calculation of the GPA and credit hour totals will be based solely on work completed after this point. The student will forfeit use of all credit hours toward a degree earned prior to being granted academic fresh start.
5. Students must be separated from all institutions of higher education for at least four years.
6. Students applying for admission under academic fresh start must meet admission requirements established by Manhattan Tech.
7. Federal and state financial aid regulations and requirements for veterans' benefits will prevail over institutional academic fresh start policy if there is a conflict.
8. Policies related to academic fresh start pertain only to Manhattan Area Technical College and may not be honored by other institutions.

# Financial Services

## Tuition and Fees

Tuition and Fees should be paid by the first day of each semester, the amount of which is determined by the number of credit hours in which a student is enrolled, as well as additional costs such as tools, uniforms, etc. Students who have not paid or arranged for payment through the Financial Services by the payment due date may be dropped from their courses and assessed a late fee. Late fees of \$25 per month will be applied until the balance is paid (maximum amount of total late fees applied not to exceed \$250 per semester.) This does not apply to financial aid and VA education benefit recipients that have completed the entire financial aid or VA certification process within the 10 business days. For students who have completed the Financial Aid/VA process in its entirety, payment will be deducted from the first financial aid disbursement. If financial aid or VA education benefits are not sufficient to cover the full tuition and fee balance, the student is immediately responsible for the remaining balance owed. Students should contact Financial Services to determine their status in this process. Students whose courses have been dropped due to non-payment may re-enroll if the courses are still available and payment arrangements are made at the time of enrollment.

| Payment due dates for each semester are as follows: |                    |
|-----------------------------------------------------|--------------------|
| Fall 2026                                           | September 14, 2026 |
| Spring 2027                                         | February 15, 2027  |
| Summer 2027                                         | Jun 21, 2027       |

Students may pay account balances using a credit or debit card via <https://matconline.matc.net>, by logging in to their student portal, accessing account information from the student tab, and following the links. Direct questions regarding online payments to Financial Services at 785.320.4512 or [StudentAccounts@manhattantech.edu](mailto:StudentAccounts@manhattantech.edu).

## Payment Plan

Manhattan Tech offers an online Self-Service Payment Plan via an AirSlate Form located on the website, as an option for paying tuition and fees in monthly installments when enrolled in courses for fall, spring, and/or summer.

No interest or finance charges are assessed; however, a \$10 non-refundable set-up fee is due with a 25% down payment. The College accepts cash, check, money order, credit, and debit card. The balance will be divided into monthly payments over the current semester, due by the fifteenth of each month.

Once approved, students eligible for Self-Service Payment Plans will be able to access and select from available plans via their student portal on MATC Online.

### What Students Need to Know about Manhattan Tech's Payment Plan:

- A business hold will be placed on the student's account. Once the balance has been paid in full, the hold will be lifted. A business hold prevents a student from enrolling in additional courses in the current and upcoming semesters and obtaining official transcript and/or receiving their diploma.
- Final payments are due prior to the last day of the class in that semester.
- For any changes, students must contact Financial Services at 785-320-4512 or [studentaccounts@manhattantech.edu](mailto:studentaccounts@manhattantech.edu).
- Payments not received by the due date will be assessed a \$25 late fee per month
- Accounts 60 days past due become immediately due in full, accounts 90 days past due will be turned over to collections.
- Payment plans should be set up by the stated semester payment due date.
- Payment plans must be paid in full before students can begin their next semester.

More information: [manhattantech.edu/paymentplans](https://manhattantech.edu/paymentplans)

## Returned Checks Policy

Checks made payable to Manhattan Tech returned for any reason, will be assessed a \$20 returned check fee for each instance. The student will be notified at their Manhattan Tech email address if a check is returned. If payment is not remitted to the College within ten (10) days of the date of notification, the matter may be referred to a collection agency. Once a student has a returned check, the College will accept only cash, money order, credit, or debit as payment.

Additionally, account payments requiring resubmission for deposit due to non-sufficient funds will be assessed a \$5 charge per occurrence.

## Tuition Refund Policy

The Registrar's Office serves as the official office for drop and withdrawal notifications. Refunds are calculated based on the date the student's Drop/Add or Withdrawal Form is received by the Registrar's Office.

Students who have registered for a class and wish to drop one or more courses must submit the appropriate form within the required timeframe to be eligible for a refund. Days listed in the refund schedule include weekends, holidays, and the first day of class. It is the student's responsibility to submit the form by the applicable drop deadline.

## Refund Schedule by Course Length

Refund eligibility is determined by the official drop date, defined as the date the Drop/Add or Withdrawal Form is received by the Registrar's Office.

| Course Length                         | Drop Deadline (No Transcript) | 100% Refund                  | 50% Refund     |
|---------------------------------------|-------------------------------|------------------------------|----------------|
| 9 weeks or longer                     | Within 7 days of course start | Within 7 days                | Within 14 days |
| 8 weeks or less                       | Within 2 days of course start | Within 2 days                | Within 4 days  |
| 1–3 day courses or workforce training | 4 days prior to course start  | 4 days prior to course start | Not applicable |

After the applicable refund period, no refunds will be issued without administrative approval. Specific refund deadlines for each semester are published in the Drop/Withdrawal Calendar. If Manhattan Tech cancels a course, students will receive a full refund of tuition and applicable refundable fees.

**Important Note:** Certain fees are not eligible for refund, including but not limited to: Seat deposits, Application fees, Fees associated with materials, equipment, or supplies that have already been issued or purchased.

Students receiving financial aid are encouraged to consult with the Financial Aid Office before dropping or withdrawing from courses.

## Financial Aid

The Financial Aid staff at Manhattan Area Technical College is dedicated to assisting students with the process of applying for and receiving their financial aid.

The first step in determining eligibility for Title IV Federal Financial Aid (Pell Grant, FSEOG Grant, Work Study and Federal Student Loans) is to complete the Free Application for Federal Student Aid (FAFSA). Students can complete the FAFSA electronically at <https://studentaid.gov/h/apply-for-aid/fafsa>.

Manhattan Tech recommends completing the FAFSA and all required paperwork prior to July 1st for the Fall semester and December 1st for the Spring semester in order to have financial aid available at the first disbursement date. Documents received after July 1st may not be processed until after the semester begins. Completing the FAFSA is a separate process from applying for admission to the College.

### Title IV Federal Aid

**Federal Pell Grant** – A need-based grant program for students who have not earned a Bachelor's degree. A student's eligibility is determined by their Student Aid Index (SAI), cost of attendance, and status as a full-time or part-time student. The SAI is determined by the completion of the FAFSA. 2026-2027 awards range up to \$7,395 per academic year.

**Federal Supplemental Educational Opportunity Grant (FSEOG)** – A need based grant program for students with exceptional financial need. Priority is given to students eligible for Federal Pell Grant. Awards at Manhattan Tech range between \$100-\$300 and are first-come first-serve until funds are depleted.

**Federal Work Study (FWS)** – A program that provides jobs for students with financial need. Students are placed in specific jobs on campus. Students typically work no more than 20 hours per week. Students are paid according to Manhattan Tech payroll procedures.

**Direct Student Loans** – A loan program available to students who are enrolled at least half-time. A dependent student may be eligible to borrow up to \$5,500 as a freshman and \$6,500 as a sophomore. An independent student may be eligible to borrow up to \$9,500 as a freshman and \$10,500 as a sophomore per academic year. For the purpose of Title IV Federal financial aid, a student is considered dependent if their parent(s) were required to include their information on the FAFSA. Whether the loan is subsidized or unsubsidized is determined by the Manhattan Tech Financial Aid office based on the results of the FAFSA, the program cost of attendance, and other aid the student is receiving.

Subsidized Loans – A need based loan where the interest is paid by the federal government while the student is enrolled at least half-time. Repayment on this loan begins six months after the student leaves school or drops below half-time enrollment status.

Unsubsidized Loans – A non-need based loan where the interest is the responsibility of the student from the time the loan is disbursed until it is paid in full. The student has the option of paying the interest as it accrues or capitalizing it on the loan. Repayment of the loan generally begins six months after the student leaves school or drops below half time.

Parent PLUS Loan – A non-need based loan available to parents and/or step-parents with a good credit history to assist with educational expenses of a dependent student. (For the purpose of Title IV Federal financial aid a student is considered dependent if their parent(s) were required to include their information on the FAFSA.) The interest begins to accrue at the time the loan is disbursed. Repayment of the loan may be deferred until six months after the student leaves school or drops below half time. Repayment is the responsibility of the parent who took out the loan. A parent can apply by completing an application online at: <https://studentaid.gov/plus-app/>

## Title IV Aid Eligibility Requirements

For students to be eligible for Title IV aid at Manhattan Tech they must be:

- Enrolled in a Technical Certificate or Associate of Applied Science degree program
- Enrolled in courses that are required for the declared certificate or degree
- Enrolled at least half-time (six credit hours) in order to be eligible for Federal loan funds
- A high school graduate or have a GED
- A U.S. citizen or eligible non-citizen (please see [studentaid.gov/understand-aid/eligibility/requirements/non-us-citizens](https://studentaid.gov/understand-aid/eligibility/requirements/non-us-citizens) for information regarding criteria to be considered an eligible non-citizen)
- In good standing with previous student loans (students cannot be in default on a federal education loan, or owe repayment on a federal grant)
- Maintain Satisfactory Academic Progress (2.0 GPA or higher in all coursework taken at Manhattan Tech; complete 75% of attempted credit hours; and not exceed 150% of published credit hours for degree program). Refer to Academic Eligibility for Financial Aid section for more information.

All financial aid, with the exception of Federal Work Study, is applied directly to a student's account on a semester basis. After tuition and fees are paid, any remaining credit balance will be refunded to the student.

### Disbursement and 30-Day Delay

Disbursement of financial aid is a process in which fund sources (grants, scholarships, loans, etc.) are posted to your account. Federal aid is split into payments over the course of an academic year and/or final period of study, as indicated on your funding offer. As this process takes place, students may see changes to their anticipated aid and balance. After you have begun attendance in the term, timing of disbursements is contingent upon meeting all financial aid eligibility requirements and confirmation of attendance and enrollment status.

- All financial aid funds will begin disbursing approximately 30 days after the start of class. All financial aid refunds will be processed after disbursement. The 30 days begin on the first day of the semester.
- Students who do not attend all registered courses may have their financial aid reduced or canceled due to not meeting the minimum required hours for eligibility.

Note: You should be prepared for this delay, including arrangements for living expenses. If your finalized financial aid offers equal or exceed your balance due and you have no remaining requirements for the financial aid process, your tuition and fees will be deferred, and your enrollment will be exempt from cancellation due to nonpayment.

### Implication of Drop/Withdraws

If you withdraw or stop attending before the semester is completed, you may be required to repay "unearned" financial aid. The percentage of unearned aid is equal to the number of calendar days remaining in the term divided by the number of calendar days in the term.

Any unearned funds returned to the Federal Student Aid program on your behalf will show as a balance owed on your Manhattan Tech account statement. Failure to repay balances owed will prevent future enrollment at Manhattan Tech and may result in your account being sent to collection.

### Academic Eligibility for Financial Aid

Federal regulations require that financial aid recipients maintain Satisfactory Academic Progress (SAP) toward an eligible degree or certificate in order to remain eligible for Title IV Federal Financial Aid (this includes Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal College Work Study, Federal Direct Student Loans and Federal Direct Parent PLUS Loans).

Satisfactory Academic Progress standards are evaluated by the following criteria:

**Cumulative SAP Grade Point Average (GPA)** An undergraduate student must attain a minimum cumulative GPA of 2.00 (on a 4.00 scale) or higher for all coursework taken at Manhattan Tech (including all general education courses and repeats).

**Pace (Percentage of Completion)** Completion of 75% of attempted credit hours. This includes all enrollment periods whether or not financial aid was requested or received. For example: If a student attempts 15 credit hours but only completes 9 credit hours, they will have only completed 60% of the attempted hours and will not meet SAP requirements.

**Maximum Time Frame** The maximum time frame for students to complete their academic program (including general education courses and repeats) may not exceed 150% of the published length of the student's program. For example: Students enrolled in a 40-credit hour technical certificate program may be eligible for Title IV Federal Aid for a maximum of 60 credit hours. Students enrolled in a 62-credit hour associate degree program may be eligible for Title IV Federal Aid for a maximum of 93 credit hours. After 150% of the published length of the program has been attempted, students are no longer eligible for federal financial aid.

At the end of each enrolled semester, including summer, grades are submitted to the Registrar and Satisfactory Academic Progress is determined by the Office of Financial Aid in an automated process once grades are official. Students not meeting

SAP are notified in writing that they are either on warning or are no longer eligible for Title IV Federal Aid for future semesters. A student may be placed on warning following the first term that they do not meet SAP requirements. While on warning the student may receive financial aid for one semester. A student loses financial aid eligibility the semester following the warning semester if they fail to come into compliance.

Title IV Federal Aid may be reinstated when SAP requirements (listed above) are met, or by appeal. In order to appeal, a student must complete the Satisfactory Academic Progress Appeal Form and submit it with appropriate documentation. Once an appeal is reviewed by the SAP appeal committee, the decision is final, and the student will be notified. Students changing majors or seeking additional degrees must complete an appeal form if the change or additional degree results in the student not meeting eligibility requirements.

A student who has lost Title IV Federal Aid eligibility may still enroll and pay tuition and fee charges from their own resources, unless academic policies prohibit it.

*Note: Once a student submits a request to the SAP appeals committee and a decision has been reached, the student is ineligible to resubmit an appeal for the same term.*

## **Military Education Benefits**

### GI Bill ®

If you served on Active Duty, you might be eligible for education benefits offered by the Department of Veterans Affairs. For example, the Post 9/11 GI Bill® provides financial support for educational and housing expenses to individuals with at least 90 days of aggregate service after September 10, 2001, or individuals discharged with a service-connected disability after 30 days. You must have received an honorable discharge to be eligible for the Post 9/11 GI Bill®.

If you are the spouse or child of a service member, you may be eligible for transfer of the service member's Post 9/11 GI Bill® benefits to you. The service member must officially transfer months of benefits to you while still serving on Active Duty.

For more information regarding this benefit contact the Department of Veterans Affairs at 800.827.1000, or online at [www.gibill.va.gov](http://www.gibill.va.gov) or [www.vets.gov](http://www.vets.gov).

Note: Students receiving Veteran's Education Benefits must submit the Manhattan Tech Veteran Enrollment Certification Form each semester prior to the Office of Financial Aid certifying courses.

### Tuition Assistance (TA)

If you are currently active duty, National Guard or a Reservist, you may be eligible for funding offered through the Department of Defense Tuition Assistance (TA) program. National Guardsmen or Reservists eligible for educational benefits should contact the Office of Financial Aid to obtain necessary school documentation. These branches of service offer Tuition Assistance:

- Air Force and Air Force Reserve
- Army and Army Reserve
- Army National Guard
- Marine Corps
- Navy
- Coast Guard
- State Tuition Assistance for Kansas Army and Air National Guard

### My Career Advancement Account Scholarship (MyCAA)

MyCAA is available to spouses of service members on active duty. If you are the spouse of a service member who is serving on active duty Title 10 orders in the paygrades of E1-E9, O1-O3, W1-W3, you may be eligible for financial assistance from the Department of Defense for education, training, and/or the occupational license and credentials necessary for a high demand, high growth portable career. Spouses married to members of the National Guard and reserve components in these same pay grades may also be eligible. For more information or to apply go to My CAA Website or call 800-342-9647.

## **Scholarships**

### Manhattan Tech Foundation Scholarships

The Manhattan Tech Foundation encourages all students to apply for the various scholarships available. Academic excellence, financial need, displayed leadership abilities, and participation in extracurricular activities are taken into consideration during the award process.

Manhattan Tech Foundation scholarship applications will be matched with the individual scholarship criteria. Students are required to submit only ONE application to be considered for every scholarship.

- Applications are released at <https://manhattantech.edu/scholarships>. Students must ensure they fill out the complete application, as incomplete/ late submissions will not be considered.
- All personal contact information and optional details must be completed to be eligible for all scholarships.

More information on scholarships and priority date deadlines can be found at: [manhattantech.edu/scholarships](http://manhattantech.edu/scholarships)

### External Scholarships and Resources

Information on external scholarships and public assistance can be found at: [manhattantech.edu/scholarships](http://manhattantech.edu/scholarships)

Note: Manhattan Tech does not determine the recipient of these awards nor determine the awarding criteria. Questions regarding these awards should be directed to the organization providing the scholarship. The Financial Aid Office will only post scholarships which it believes to be legitimate to protect you from any scams. Please use your personal judgment before applying for any scholarships.

# Academic Programs

The following programs of study are provided to assist students in planning their academic careers. Those courses listed as major specialization courses are required for completion of a technical certificate program as well as an Associate of Applied Science degree. Additionally, students pursuing an Associate of Applied Science degree must complete the general education and elective course requirements as outlined in the AAS Program of Study.

The following programs of study are available to provide students the foundation for success in a dynamic and diverse global environment.

- Adult Education
- Administrative Assistant
- Automotive Technology
- Business Accounting
- Computer Support Specialist
- Construction Technology
- Early Childhood Education
- Electric Power and Distribution
- Electrical Technology
- Heating, Ventilation, and Air Conditioning
- Industrial Maintenance Technology
- Medical Laboratory Technology
- Nursing: Associate Degree
- Nursing: Practical
- Plumbing Technology
- Welding Technology

Each program offers focused preparation in specific skills aimed at preparing graduates to pursue technologically advanced careers in the changing workplace. Successful completion of a program of study is recognized by the granting of a Technical Certificate or an Associate of Applied Science degree.

Degrees and technical certificates will be conferred in the name of the Manhattan Area Technical College Board of Directors to students successfully completing the required curriculum. Students finishing short-term courses will be granted written evidence of successful completion. Students not finishing a program of study may, upon written request, be issued a transcript of courses completed.

## General Education Courses - 15 Credit Hours

Manhattan Tech provides general education courses that fulfill the AAS degree and certificate requirements for the College's own programs. In addition, the Kansas Board of Regents approves certain general education courses to be accepted by Kansas public post-secondary institutions. These include many of Manhattan Tech's general education courses.

See [https://kansasregents.org/academic\\_affairs/transfers-articulation](https://kansasregents.org/academic_affairs/transfers-articulation)

| English (3 credit hours)       |  |  | Math (3 credit hours)            |                               |
|--------------------------------|--|--|----------------------------------|-------------------------------|
| COM 105 English Composition I  |  |  | MAT 109 Technical Mathematics II | MAT 145 Elementary Statistics |
| COM 106 English Composition II |  |  | MAT 111 Contemporary Math        | MAT 155 Trigonometry          |
| COM 110 Technical Writing      |  |  | MAT 135 College Algebra          |                               |

| General Education Electives (9 credit hours) |                                     |  |                                      |  |  |
|----------------------------------------------|-------------------------------------|--|--------------------------------------|--|--|
| BSC 110 Biology                              | COM 116 Interpersonal Communication |  | PSY 100 General Psychology           |  |  |
| BSC 125 Anatomy and Physiology               | HIS 105 US History to 1877          |  | PSY 125 Human Growth and Development |  |  |
| BSC 205 Microbiology                         | HIS 106 US History since 1877       |  | SOC 100 Introduction to Sociology    |  |  |
| CHM 105 Introduction to Chemistry            | MAT 101 Technical Mathematics I     |  | SOC 150 Social Problems              |  |  |
| CHM 110 Chemistry I                          | NTR 105 Nutrition                   |  | SOC 200 Marriage and Family          |  |  |
| CIS 100 Software Applications                | PHY 100 General Physics             |  |                                      |  |  |
| COM 101 Composition Workshop                 | POL 105 American Government         |  |                                      |  |  |
| COM 115 Public Speaking                      |                                     |  |                                      |  |  |

For more information on general education courses, contact an advisor, [advising@manhattantech.edu](mailto:advising@manhattantech.edu)

View full general education course offerings online: [manhattantech.edu/general-education-courses](http://manhattantech.edu/general-education-courses)



# Associate of Applied Science in Applied Technologies

The Associate of Applied Science in Applied Technologies degree option allows students to design an individualized program of study in order to fulfill a unique career goal that cannot be met through any single technology program offered by the College.

## Associate of Applied Science in Applied Technologies

The Associate of Applied Science in Applied Technologies degree will be awarded upon satisfactory completion of:

- » 45 Technical Program credit hours from at least 2 different disciplines
- » 15 general education credits

An Associate of Applied Science in Applied Technologies degree enables a student to design an individualized program of study to fulfill a unique career goal that cannot be met through the completion of any single technology program offered by a college.

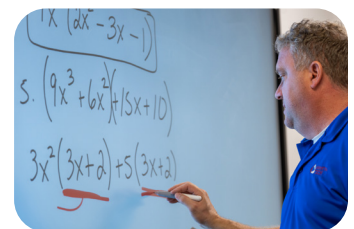
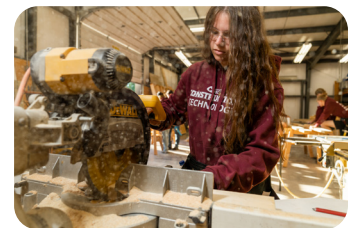
Students choosing the AAS in Applied Technologies degree option will work with their respective advisor to explore the various options of pursuing this degree.

Completion of specific technical courses could lead to industry recognized credentials.

## Example Student

Student takes select HVAC, plumbing, business, and additional required general education and elective courses.

- » Plumbing Courses - 18 credit hours
- » HVAC Courses - 18 credit hours
- » Business Courses - 10 credit hours
- » General Education Courses - 16 credit hours



# Applied Technology Degree Map

## AAS Associate of Applied Science

62 Credit Hours

### Year 1

35 Credit Hours

#### Fall Semester

| Course Code   | Course Title                        | Certificate | Credits |
|---------------|-------------------------------------|-------------|---------|
| OSA 100       | OSHA 10                             |             | 1       |
| PLM 105       | Introductory Craft Skills           |             | 3       |
| PLM 110       | Introduction to Plumbing Technology |             | 3       |
| PLM 115       | Plumbing Fixtures and Fittings      |             | 4       |
| PLM 120       | Plumbing Basics                     |             | 3       |
| PLM 125       | Plumbing Blueprint Reading          |             | 3       |
| PLM 130       | Occupational Work Experience I      |             | 2       |
| Gen Ed Option | Suggested: Math Option              |             | 3       |

#### Spring Semester

| Course Code   | Course Title                | Certificate | Credits |
|---------------|-----------------------------|-------------|---------|
| ACC 100       | Business Accounting         |             | 3       |
| BUS 125       | Business Communication      |             | 3       |
| BUS 126       | Introduction to Business    |             | 3       |
| EMP 1901      | Global Employment Standards |             | 1       |
| Gen Ed Option | Suggested: English Option   |             | 3       |

### Year 2

27 Credit Hours

#### Fall Semester

| Course Code | Course Title                   | Certificate | Credits |
|-------------|--------------------------------|-------------|---------|
| HVA 1044    | HVAC Fundamentals              |             | 4       |
| HVA 1104    | Electrical Fundamentals        |             | 4       |
| HVA 120     | Domestic Refrigeration         |             | 3       |
| HVA 135     | Occupational Work Experience I |             | 1       |
| HVA 140     | Heating System Fundamentals    |             | 3       |
| HVA 170     | Design and Blueprint Reading   |             | 3       |

#### Spring Semester

| Course Code     | Course Title | Certificate | Credits |
|-----------------|--------------|-------------|---------|
| Gen Ed Elective |              |             | 3       |
| Gen Ed Elective |              |             | 3       |
| Gen Ed Elective |              |             | 3       |

### Elective Options

#### Math Option

|         |                          |   |
|---------|--------------------------|---|
| MAT 109 | Technical Mathematics II | 3 |
| MAT 111 | Contemporary Math        | 3 |
| MAT 135 | College Algebra          | 3 |

#### English Option

|         |                        |   |
|---------|------------------------|---|
| COM 105 | English Composition I  | 3 |
| COM 106 | English Composition II | 3 |
| COM 110 | Technical Writing      | 3 |

#### Gen Ed Elective Options

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)



# Administrative Assistant

## Program Description

The Administrative Assistant program provides students with course options for their chosen career field. Students earning a certificate or AAS degree will enter the workforce ready to meet the needs of the workplace.

Classroom activities and projects simulate actual office situations encountered in today's global workplace. Students complete courses designed to develop critical and creative thinking, computation, communication, lifelong-learning, technical, time-management, problem solving, teamwork, and organizational skills. Students use up-to-date computer hardware and software currently used in business and industry.

**Administrative Assistant** Equips office professionals with the skills necessary to respond to the requirements of today's workplace. Students will complete courses designed to develop proficiency in the use of integrated software, analysis and coordination of office duties and systems, business operations, basic accounting, and other courses specific to an office environment.



## Program Outcomes

- » Exhibit interpersonal skills in a team setting.
- » Create professional employment documents.
- » Demonstrate knowledge of operations of a business.
- » Utilize the internet research methods to obtain credible information.
- » Utilize industry-specific software to develop professional documents, presentations, workbooks, and databases and to enhance productivity.
- » Demonstrate knowledge of the ethical frameworks of business.
- » Identify and correct common communication problems including awareness of diversity issues which affect the workplace.
- » Exhibit ability to effectively communicate, both through oral and written communications.
- » Understand and apply principles associated with maintaining good mental and physical health, professionalism in the workplace, work ethic, and personal grooming.
- » Create and organize work to be included in a professional portfolio.

## Certifications:

- » Office Proficiency Assessment and Certification
- » Microsoft Office Specialist Certifications

 [manhattantech.edu/adminassistant](http://manhattantech.edu/adminassistant)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Administrative Assistant Degree Map

AAS

## Associate of Applied Science

63 Credit Hours

### Year 1

33 Credit Hours

#### Fall Semester

| Course Code     | Course Title                             | Certificate | Credits |
|-----------------|------------------------------------------|-------------|---------|
| ACC 100         | Business Accounting                      | <b>B</b>    | 3       |
| BUS 111         | Personal Finance                         | <b>B</b>    | 3       |
| BUS 255         | Principles of Management                 | <b>B</b>    | 3       |
| BUS 120         | Business English                         | <b>B</b>    | 3       |
| BUS 126         | Introduction to Business                 |             | 3       |
| Gen Ed Elective | Suggested: CIS 100 Software Applications | <b>B</b>    | 3       |

#### Spring Semester

| Course Code   | Course Title                        | Certificate | Credits |
|---------------|-------------------------------------|-------------|---------|
| BUS 125       | Business Communication              | <b>B</b>    | 3       |
| BUS 185       | Business Ethics and Human Relations | <b>B</b>    | 3       |
| BUS 220       | Administrative Procedures           | <b>B</b>    | 3       |
| Gen Ed Option | Suggested: Math Option              | <b>B</b>    | 3       |
| Gen Ed Option | Suggested: English Option           |             | 3       |

### Year 2

30 Credit Hours

#### Fall Semester

| Course Code        | Course Title                       | Certificate | Credits |
|--------------------|------------------------------------|-------------|---------|
| BUS 130            | Records and Information Management | <b>B</b>    | 3       |
| BUS 210            | Workstation Management             |             | 3       |
| CIS 116            | Spreadsheet Management             | <b>B</b>    | 2       |
| CIS 121            | Word Processing                    | <b>B</b>    | 2       |
| Gen Ed Elective    |                                    |             | 3       |
| Gen Ed Elective    |                                    |             | 3       |
| Technical Elective |                                    |             | 3       |

#### Spring Semester

| Course Code        | Course Title                | Certificate | Credits |
|--------------------|-----------------------------|-------------|---------|
| BUS 290            | Business Capstone           |             | 1       |
| CIS 126            | Database Management         | <b>B</b>    | 2       |
| CIS 155            | Integrated Applications     |             | 2       |
| EMP 1901           | Global Employment Standards |             | 1       |
| Technical Elective |                             |             | 3       |
| Technical Elective |                             |             | 2       |

### Elective Options

#### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title            | Credits |
|-------------|-------------------------|---------|
| ACC 120     | Financial Accounting    | 3       |
| ACC 125     | Computerized Accounting | 3       |
| ACC 130     | Payroll Accounting      | 3       |
| ACC 140     | Managerial Accounting   | 3       |
| BUS 199     | Business Internship     | 1-3     |
| CIS 150     | Web Page Applications   | 3       |

#### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Gen Ed Elective Options

|                                                                                                                                                                 |                       |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|
| CIS 100                                                                                                                                                         | Software Applications | 3 |
| 6 additional Gen Ed credits.<br>Full general education elective list is located online:<br><a href="http://manhattantech.edu/gened">manhattantech.edu/gened</a> |                       |   |

Cert. B

## Certificate B Requirements

36 Credit Hours

|                           |                                   |    |
|---------------------------|-----------------------------------|----|
| Courses marked - <b>B</b> |                                   | 30 |
| CIS 100                   | Software Applications             | 3  |
| MAT 101                   | Technical Mathematics I or higher | 3  |



## Program Description

Manhattan Area Technical College Automotive Technology program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 47.0604

**CIP Name:** Automobile/Automotive Mechanics Technology/Technician

**Definition:** A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.

## Program Outcomes

- » Possess skills for entry-level placement utilizing the laboratory/shop requirements identified by ASE.
- » Successfully complete the ASE certification examination.
- » Develop skills in automotive diagnosis and repair.
- » Develop effective communication and interpersonal skills and future education.
- » Demonstrate knowledge of automotive repair processes, activities and organization of work flow, direct communication flow in the work place, and maintain information accuracy throughout a project.
- » Apply knowledge of the industry expectation of a quality employee, as related to timelines and cleanliness.

## Certifications:

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| » Brakes                             | » Electrical/Electronic Systems |
| » Suspension & Steering              | » Engine Performance            |
| » Automatic Transmission & Transaxle | » Engine Repair                 |
| » Manual Drive Train & Axles         | » Heating & Air Conditioning    |



## Accreditation:



Education Foundation

**ASE Education Foundation**

1503 Edwards Ferry Rd., NE Ste 401  
Leesburg, VA 20176  
703.669.6650

[info@ASEducationFoundation.org](mailto:info@ASEducationFoundation.org)



Program is aligned with the  
Kansas Board of Regents  
Curriculum.

 [manhattantech.edu/autotech](http://manhattantech.edu/autotech)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Automotive Technology Degree Map

AAS

## Associate of Applied Science

66 Credit Hours

### Year 1

33 Credit Hours

#### Fall Semester

| Course Code   | Course Title                   | Certificate |   | Credits |
|---------------|--------------------------------|-------------|---|---------|
| AMT 109       | Intro to Automotive Technology | C           |   | 2       |
| AMT 111       | Electrical I                   | A           | C | 3       |
| AMT 116       | Electrical II                  | C           |   | 2       |
| AMT 121       | Engine Performance I           | A           | C | 3       |
| AMT 125       | Engine Performance II          | C           |   | 4       |
| Gen Ed Option | Suggested: Math Option         |             |   | 3       |

#### Spring Semester

| Course Code   | Course Title              | Certificate |   | Credits |
|---------------|---------------------------|-------------|---|---------|
| AMT 149       | Suspension & Steering I   | A           | C | 3       |
| AMT 152       | Suspension & Steering II  | C           |   | 2       |
| AMT 170       | Brakes I                  | A           | C | 3       |
| AMT 171       | Brakes II                 | C           |   | 2       |
| AMT 180       | Electrical III            | C           |   | 3       |
| Gen Ed Option | Suggested: English Option |             |   | 3       |

### Year 2

33 Credit Hours

#### Fall Semester

| Course Code   | Course Title                            | Certificate |   | Credits |
|---------------|-----------------------------------------|-------------|---|---------|
| AMT 200       | Automatic Transmissions & Transaxles I  | A           | C | 3       |
| AMT 201       | Automatic Transmissions & Transaxles II | C           |   | 3       |
| AMT 205       | Manual Transmissions & Transaxles       | C           |   | 4       |
| AMT 221       | Engine Repair I                         | C           |   | 2       |
| Gen Ed Option | Elective                                |             |   | 3       |
| Gen Ed Option | Elective                                |             |   | 3       |

#### Spring Semester

| Course Code   | Course Title               | Certificate |   | Credits |
|---------------|----------------------------|-------------|---|---------|
| AMT 250       | Engine Repair II           | C           |   | 3       |
| AMT 265       | Engine Performance III     | C           |   | 3       |
| AMT 270       | Electrical IV              | C           |   | 2       |
| AMT 275       | Heating & Air Conditioning | A           | C | 4       |
| Gen Ed Option | Elective                   |             |   | 3       |

### Elective Options

#### Math Option

|         |                          |   |
|---------|--------------------------|---|
| MAT 109 | Technical Mathematics II | 3 |
| MAT 111 | Contemporary Math        | 3 |

or higher Math course

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Elective Options

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

Cert. A

## Certificate A Requirements

19 Credit Hours

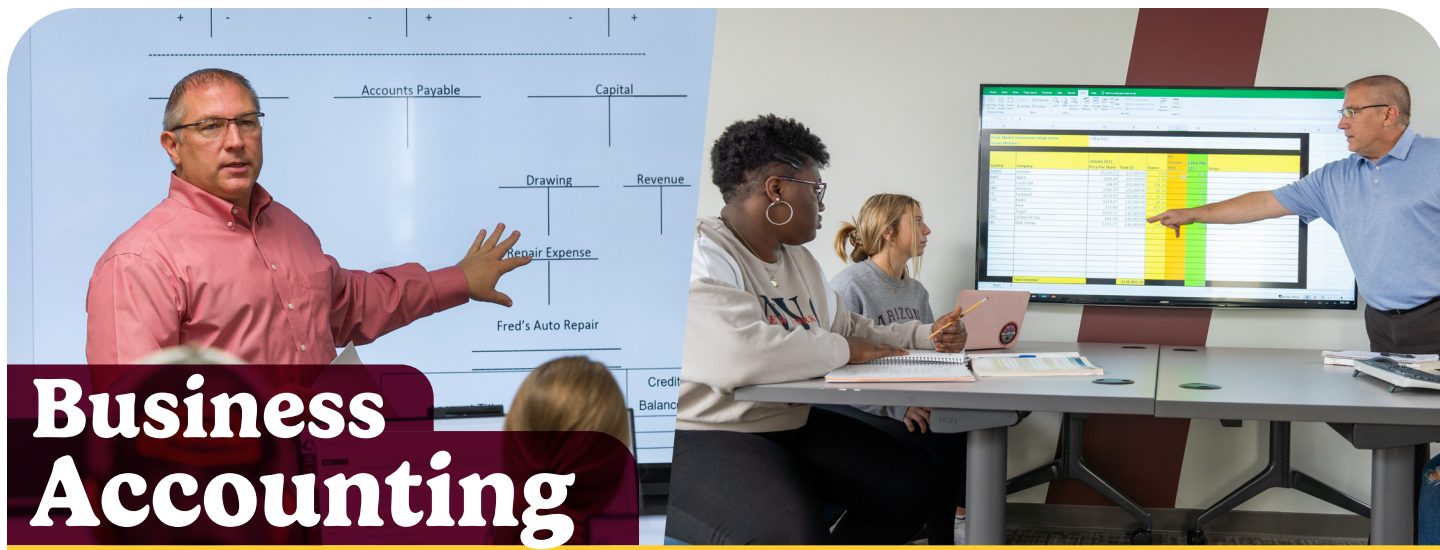
AMT courses marked with - **A** For students already employed in the automotive technology field who are seeking ASE certification.

Cert. C

## Certificate C Requirements

51 Credit Hours

AMT courses marked with - **C**



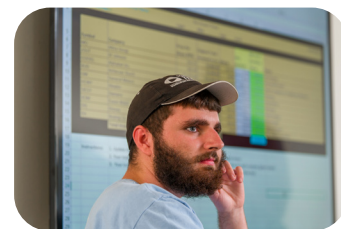
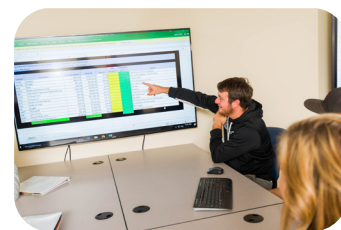
# Business Accounting

## Program Description

The Business Accounting program provides students with course options for their chosen career field. Students earning a certificate or AAS degree will enter the workforce ready to meet the needs of the workplace.

Classroom activities and projects simulate actual office situations encountered in today's global workplace. Students complete courses designed to develop critical and creative thinking, computation, communication, lifelong-learning, technical, time-management, problem solving, teamwork, and organizational skills. Students use up-to-date computer hardware and software currently used in business and industry.

**Business Accounting** Prepares students for entry-level careers as bookkeepers, payroll clerks, accounting clerks, accounting assistants, and other office support positions. As the number of organizations increases and financial regulations become stricter, there will be greater demand for these workers to maintain books and provide accounting services.



## Program Outcomes

- » Exhibit interpersonal skills in a team setting.
- » Create professional employment documents.
- » Demonstrate knowledge of operations of a business.
- » Utilize the internet research methods to obtain credible information.
- » Utilize industry-specific software to develop professional documents, presentations, workbooks, and databases and to enhance productivity.
- » Demonstrate knowledge of the ethical frameworks of business.
- » Identify and correct common communication problems including awareness of diversity issues which affect the workplace.
- » Exhibit ability to effectively communicate, both through oral and written communications.
- » Understand and apply principles associated with maintaining good mental and physical health, professionalism in the workplace, work ethic, and personal grooming.
- » Create and organize work to be included in a professional portfolio.

### Certifications:

- » Office Proficiency Assessment and Certification
- » Microsoft Office Specialist Certifications

 [manhattantech.edu/accounting](http://manhattantech.edu/accounting)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Business Accounting Degree Map

AAS

## Associate of Applied Science

62 Credit Hours

### Year 1

36 Credit Hours

#### Fall Semester

| Course Code   | Course Title                                                   | Certificate | Credits |
|---------------|----------------------------------------------------------------|-------------|---------|
| ACC 100       | Business Accounting                                            | <b>B</b>    | 3       |
| BUS 120       | Business English                                               | <b>B</b>    | 3       |
| BUS 126       | Introduction to Business                                       |             | 3       |
| BUS 185       | Business Ethics & Human Relations<br>or Leadership Development | <b>B</b>    | 3       |
| BUS 190       |                                                                |             |         |
| BUS 255       | Principles of Management                                       | <b>B</b>    | 3       |
| Gen Ed Option | Suggested: Math Option                                         | <b>B</b>    | 3       |

#### Spring Semester

| Course Code     | Course Title                             | Certificate | Credits |
|-----------------|------------------------------------------|-------------|---------|
| ACC 125         | Computerized Accounting                  | <b>B</b>    | 3       |
| ACC 140         | Managerial Accounting                    | <b>B</b>    | 3       |
| ACC 270         | Tax Accounting                           | <b>B</b>    | 3       |
| BUS 125         | Business Communication                   | <b>B</b>    | 3       |
| Gen Ed Option   | Suggested: English Option                |             | 3       |
| Gen Ed Elective | Suggested: CIS 100 Software Applications | <b>B</b>    | 3       |

### Year 2

26 Credit Hours

#### Fall Semester

| Course Code     | Course Title           | Certificate | Credits |
|-----------------|------------------------|-------------|---------|
| ACC 120         | Financial Accounting   |             | 3       |
| ACC 130         | Payroll Accounting     | <b>B</b>    | 3       |
| BUS 111         | Personal Finance       | <b>B</b>    | 3       |
| CIS 116         | Spreadsheet Management |             | 2       |
| CIS 121         | Word Processing        |             | 2       |
| Gen Ed Elective |                        |             | 3       |

#### Spring Semester

| Course Code        | Course Title                | Certificate | Credits |
|--------------------|-----------------------------|-------------|---------|
| BUS 290            | Business Capstone           |             | 1       |
| EMP 1901           | Global Employment Standards |             | 1       |
| Gen Ed Elective    |                             |             | 3       |
| Technical Elective |                             |             | 2       |
| Technical Elective |                             |             | 3       |

### Elective Options

#### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title                       | Credits |
|-------------|------------------------------------|---------|
| BUS 130     | Records and Information Management | 3       |
| BUS 199     | Business Internship                | 1-3     |
| BUS 210     | Workstation Management             | 3       |
| BUS 220     | Administrative Procedures          | 3       |
| CIS 126     | Database Management                | 2       |
| CIS 150     | Web Page Applications              | 3       |
| CIS 155     | Integrated Applications            | 2       |

#### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Gen Ed Elective Options

|                                                                                                                                                                 |                       |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|
| CIS 100                                                                                                                                                         | Software Applications | 3 |
| 6 additional Gen Ed credits.<br>Full general education elective list is located online:<br><a href="http://manhattantech.edu/gened">manhattantech.edu/gened</a> |                       |   |

Cert. B

## Certificate B Requirements

36 Credit Hours

|                           |                                   |    |
|---------------------------|-----------------------------------|----|
| Courses marked - <b>B</b> |                                   | 30 |
| CIS 100                   | Software Applications             | 3  |
| MAT 101                   | Technical Mathematics I or higher | 3  |



## Program Description

Manhattan Area Technical College Computer Support Specialist Technology program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 11.1006

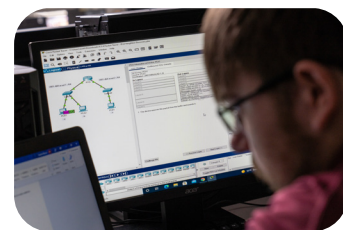
**CIP Name:** Computer Support Specialist

**Definition:** A program that prepares individuals to provide technical assistance, support, and advice to computer users to help troubleshoot software and hardware problems. Includes instruction in computer concepts, information systems, networking, operating systems, security, cloud computing, computer hardware, the Internet, software applications, help desk concepts and problem solving, and principles of customer service.

## Program Outcomes

- » Design, implement, and secure SMB network architectures, integrating firewalls, intrusion detection systems, and encryption protocols to ensure robust cybersecurity and operational efficiency.
- » Install, configure, and manage virtualized computing environments (e.g., VMware, Hyper-V) with a focus on optimizing resource allocation, securing virtual machines, and ensuring high availability.
- » Deploy, configure, and manage cloud-based infrastructure (e.g., AWS, Azure, Google Cloud), implementing security best practices such as identity access management (IAM), data encryption, and compliance with industry standards.
- » Deploy, configure, and maintain physical computing infrastructure, including servers, workstations, and peripherals, while applying hardening techniques to mitigate physical and cyber threats.
- » Leverage scripting (e.g., PowerShell, Python, Bash) and programming languages to automate routine security tasks (e.g., log analysis, patch management) and enhance system administration efficiency.
- » Demonstrate proficiency in using AI-driven tools (e.g., threat detection platforms, anomaly recognition systems) to proactively strengthen cybersecurity defenses and optimize IT support workflows.
- » Diagnose and resolve complex issues across hardware, operating systems (e.g., Windows, Linux), and network systems, using advanced troubleshooting methodologies and tools like packet analyzers and diagnostic software.
- » Exhibit strong interpersonal skills, including active listening, empathy, and clear communication, to effectively support end-users and collaborate with stakeholders in a service-driven IT environment.
- » Contribute effectively to multidisciplinary IT teams, demonstrating collaboration, conflict resolution, and shared accountability in achieving cybersecurity and support objectives.
- » Evaluate and recommend cost-effective technology solutions, balancing performance, security, and scalability with budget constraints, and justifying decisions with data-driven analysis.
- » Produce detailed, user-friendly technical documentation (e.g., network diagrams, security policies, incident reports) that meets industry standards and supports operational continuity.
- » Conduct thorough research on emerging cybersecurity threats and technologies, and deliver clear, persuasive verbal presentations to technical and non-technical audiences.
- » Propose actionable security solutions tailored to SMB needs, integrating risk assessments, threat intelligence, and cost-benefit analyses to enhance system resilience.
- » Identify, analyze, and mitigate cyber threats (e.g., malware, phishing, DDoS) using incident response frameworks (e.g., NIST, SANS) and real-time monitoring tools.
- » Apply ethical and secure practices when using internet-connected devices, ensuring compliance with privacy regulations and safeguarding sensitive data across platforms.
- » Assess and remediate prevalent security risks in SMB environments (e.g., weak passwords, unpatched systems, insider threats), implementing layered defenses and employee training initiatives.

 [manhattantech.edu/css](https://manhattantech.edu/css)



Program is aligned with the Kansas Board of Regents Curriculum.

## Certifications:

- » CompTIA A+
- » CompTIA Network+
- » CompTIA Security+
- » CompTIA Server+

For program admission requirements see: [manhattantech.edu/checklists](https://manhattantech.edu/checklists)



# Computer Support Specialist Degree Map

AAS

## Associate of Applied Science

62 Credit Hours

### Year 1

32 Credit Hours

#### Fall Semester

| Course Code | Course Title                               | Certificate | Credits |
|-------------|--------------------------------------------|-------------|---------|
| CSS 100     | Introduction to Computers and Applications | A B         | 3       |
| CSS 105     | CompTIA A+ Core 1                          | A B         | 3       |
| CSS 110     | CompTIA A+ Core 2                          | A B         | 3       |
| CSS 115     | CompTIA Network+                           | A B         | 6       |
| CSS 120     | Computer Helpdesk Fundamentals             | A B         | 2       |

#### Spring Semester

| Course Code | Course Title                       | Certificate | Credits |
|-------------|------------------------------------|-------------|---------|
| CSS 125     | Computer Programming and Scripting | B           | 3       |
| CSS 130     | CompTIA Security+                  | B           | 3       |
| CSS 135     | CompTIA Server+                    | B           | 6       |
| CSS 140     | Internet of Things (IoT)           | B           | 3       |

### Year 2

30 Credit Hours

#### Fall Semester

| Course Code        | Course Title              | Certificate | Credits |
|--------------------|---------------------------|-------------|---------|
| Gen Ed Elective    | Suggested: English Option |             | 3       |
| Gen Ed Option      | Suggested: Math Option    |             | 3       |
| Gen Ed Option      | Suggested: Comm. Option   |             | 3       |
| Technical Elective |                           |             | 3       |
| Technical Elective |                           |             | 3       |

#### Spring Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

### Elective Options

#### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Communications Option

|         |                              |   |
|---------|------------------------------|---|
| COM 115 | Public Speaking              | 3 |
| COM 116 | Interpersonal Communications | 3 |

#### Gen Ed Elective Options

6 additional Gen Ed credits.  
Full general education elective list is located online: [manhattantech.edu/gened](http://manhattantech.edu/gened)

Cert. A

## Certificate A Requirements

17 Credit Hours

Courses marked with - A

Cert. B

## Certificate B Requirements

32 Credit Hours

Courses marked with - B



## Program Description

Manhattan Area Technical College Construction Technology program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 46.0201

**CIP Name:** Carpentry/Carpenter

**Definition:** A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.

## Program Outcomes

- » Have the knowledge and skills to operate manual and power tools used in commercial and residential construction including skill, reciprocating, table and concrete saws, hammer drills, drills, and air guns.
- » Be familiar with and have practiced job site safety requirements.
- » Be introduced to basic blueprint reading.
- » Be introduced to international and local building codes, understanding how these standards apply to commercial and residential construction, while also being made aware that building codes may change over time and that these changes must be monitored and adhered to.
- » Apply problem-solving skills creatively and critically when faced with unforeseen construction dilemmas.
- » Be able to use math skills and how to apply them to commercial and residential construction.
- » Be able to use proper workplace communication with supervisors, suppliers, architects, and other job site personnel.

## Certifications:

- » NCCER; craft skills, carpentry level 1 & 2
- » OSHA-10 Hour Construction Industry Certification

 [manhattantech.edu/construction](http://manhattantech.edu/construction)



### Accreditation:



**National Center for Construction  
Education & Research (NCCER)**  
13614 Progress Blvd.  
Alachua, FL 32615 386-518-6500



Program is aligned with the  
Kansas Board of Regents  
Curriculum.

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Construction Technology Degree Map

AAS

## Associate of Applied Science

61 Credit Hours

### Year 1

37 Credit Hours

#### Fall Semester

| Course Code   | Course Title                   | Certificate       | Credits |
|---------------|--------------------------------|-------------------|---------|
| OSA 100       | OSHA 10                        | <b>A</b> <b>B</b> | 1       |
| CST 105       | Introductory Craft Skills      | <b>A</b> <b>B</b> | 3       |
| CST 110       | Construction Basics            | <b>A</b> <b>B</b> | 3       |
| CST 115       | Concrete                       | <b>A</b> <b>B</b> | 4       |
| CST 120       | Carpentry I                    | <b>A</b> <b>B</b> | 3       |
| CST 125       | Occupational Work Experience I | <b>A</b> <b>B</b> | 2       |
| Gen Ed Option | Suggested: Math Option         | <b>B</b>          | 3       |

#### Spring Semester

| Course Code   | Course Title                              | Certificate | Credits |
|---------------|-------------------------------------------|-------------|---------|
| CST 130       | Carpentry II                              | <b>B</b>    | 6       |
| CST 135       | NCCER Advanced Carpentry Frame and Finish | <b>B</b>    | 3       |
| CST 140       | Interior Systems                          | <b>B</b>    | 4       |
| CST 145       | Occupational Work Experience II           | <b>B</b>    | 2       |
| Gen Ed Option | Suggested: English Option                 |             | 3       |

### Year 2

24 Credit Hours

#### Fall Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

#### Spring Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

### Elective Options

#### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title                      | Credits |
|-------------|-----------------------------------|---------|
| ACC 100     | Business Accounting               | 3       |
| BUS 111     | Personal Finance                  | 3       |
| BUS 126     | Introduction to Business          | 3       |
| BUS 185     | Business Ethics & Human Relations | 3       |
| BUS 255     | Principles of Management          | 3       |

#### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Gen Ed Elective Options

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

#### Cert. A Certificate A

16 Credit Hours

|                    |    |
|--------------------|----|
| Courses marked - A | 16 |
|--------------------|----|

#### Cert. B Certificate B

34 Credit Hours

|                           |                                          |    |
|---------------------------|------------------------------------------|----|
| Courses marked - <b>B</b> |                                          | 31 |
| MAT 101                   | Technical Mathematics I <i>or higher</i> | 3  |



# Early Childhood Education

## Program Description

The Early Childhood Education program offers students flexible course options to prepare for careers in early care and education. Through classroom assignments, discussions, and projects, students develop skills in developmentally appropriate practice, inclusive education, health and nutrition, and lesson planning based on the Kansas Early Learning Standards. Graduates are equipped for entry-level roles such as center-based caregivers, home-based providers, and paraeducators. With the growing demand for childcare, skilled professionals will play a crucial role in ensuring high-quality early education for all children.



## Program Outcomes

- » Promote child development and learning with healthy, respectful, encouraging, and enriched environments
- » Build and create family and community partnerships to foster belonging
- » Identify observation tools, document, and assess to guide program planning for young children
- » Articulate and apply ethical guidelines and standards of professionalism in the field of early care and education that fosters diversity, equity and inclusion
- » Evaluate learning opportunities and activities based on developmentally appropriate practice and the Kansas Early Learning Standards to build meaningful curriculum for young children's growth and development
- » Demonstrate and apply knowledge of early care and education in early care and education field experiences

 [manhattantech.edu/childcare](https://manhattantech.edu/childcare)

For program admission requirements see: [manhattantech.edu/checklists](https://manhattantech.edu/checklists)



# Early Childhood Education Degree Map

AAS Associate of Applied Science

60 Credit Hours

## Year 1

36 Credit Hours

### Fall Semester

| Course Code | Course Title                                    | Certificate |   | Credits |
|-------------|-------------------------------------------------|-------------|---|---------|
| ECE 100     | Principles of Early Childhood Education         | A           | B | 3       |
| ECE 105     | Early Childhood Program and Curriculum Planning | A           | B | 3       |
| ECE 110     | Child Health, Safety and Nutrition              | A           | B | 3       |
| ECE 115     | Infant and Toddler Care and Education           | A           | B | 3       |
| ECE 120     | Observing and Interacting with Young Children   | A           | B | 3       |
| ECE 125     | Child Care Practicum I                          | A           | B | 3       |

### Spring Semester

| Course Code | Course Title                               | Certificate |   | Credits |
|-------------|--------------------------------------------|-------------|---|---------|
| ECE 130     | Teaching Young Children with Special Needs |             | B | 3       |
| ECE 135     | Building Family and Community Relations    |             | B | 3       |
| ECE 140     | Early Childhood Language and Literacy      |             | B | 3       |
| ECE 145     | Creative Experiences for Young Children    |             | B | 3       |
| ECE 150     | Child Care Administration                  |             |   | 3       |
| ECE 155     | Child Care Practicum II                    |             |   | 3       |

## Year 2

24 Credit Hours

### Fall Semester

| Course Code        | Course Title | Certificate |  | Credits |
|--------------------|--------------|-------------|--|---------|
| Gen Ed Option      | Math Option  |             |  | 3       |
| Gen Ed Elective    |              |             |  | 3       |
| Technical Elective |              |             |  | 3       |
| Technical Elective |              |             |  | 3       |

### Spring Semester

| Course Code        | Course Title   | Certificate |  | Credits |
|--------------------|----------------|-------------|--|---------|
| Gen Ed Option      | English Option |             |  | 3       |
| Gen Ed Elective    |                |             |  | 3       |
| Gen Ed Elective    |                |             |  | 3       |
| Technical Elective |                |             |  | 3       |

## Elective Options

### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title                      | Credits |
|-------------|-----------------------------------|---------|
| ACC 100     | Business Accounting               | 3       |
| BUS 111     | Personal Finance                  | 3       |
| BUS 120     | Business English                  | 3       |
| BUS 126     | Introduction to Business          | 3       |
| BUS 185     | Business Ethics & Human Relations | 3       |
| BUS 190     | Leadership Development            | 3       |

### Math Option

|         |                          |   |
|---------|--------------------------|---|
| MAT 109 | Technical Mathematics II | 3 |
| MAT 111 | Contemporary Math        | 3 |

or higher Math course

### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

### Gen Ed Elective Options

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

### Cert. A Certificate A

18 Credit Hours

### Cert. B Certificate B

30 Credit Hours

ECE courses marked A 18

ECE courses marked B 30



# Electric Power & Distribution

## Program Description

The Electric Power and Distribution program enhances students' knowledge and technical skills required to succeed in the electrical distribution industry. Graduates of the Electric Power and Distribution program will be able to successfully install, maintain, and operate electrical systems to supply electrical energy to residential, commercial, and industrial customers and to join gas and electrical underground generation facilities.

The EPD program provides the training needed to construct, operate, and maintain power line equipment. This program is one of only a handful in the United States that has open admission to the public. The program begins in January of each year and a summer internship is required.



## Program Outcomes

- » Develop the necessary skills to gain entry-level employment in the electrical field. Perform operational and maintenance duties within critical environment facilities.
- » Demonstrate the ability to: operate line equipment, build and maintain overhead and underground power lines, install transformers, capacitors, and KWH meters, tie rope knots, operate hydraulic equipment such as aerial lift trucks, digger/derrick trucks, and trencher, successfully complete an internship in the electric power and distribution field.
- » Develop industry-wide safe work practices per American Public Power guidelines.
- » Attain certification in both CPR and First Aid courses
- » Understand Occupational Safety and Health Act requirements and rules
- » Master climbing wood pole structures with and without the use of a pole safety strap
- » Use protective equipment such as fuses, circuit breakers, and lightening arrestors
- » Effectively communicate both verbally and in writing.
- » Demonstrate oral communication skills by participating in a simulated job interview and receiving an acceptable rating from the interviewer
- » Prepare a résumé
- » Adapt behaviors to function productively as a team member in the workplace
- » Develop the mathematical skills necessary to calculate electrical loads, weights, and measures.
- » Know and apply appropriate mathematical functions for the field (e.g., Ohm's Law, Pythagorean Theorem).

## Certifications:

- » OSHA 10
- » AHA First Aid/CPR/AED

 [manhattantech.edu/epd](http://manhattantech.edu/epd)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Electric Power and Distribution Degree Map

## AAS Associate of Applied Science

63 Credit Hours

### Pre-Requisites

Students must have a valid, unrestricted Class A Commercial Driver's License (CDL) with manual certification before they are eligible to place a seat deposit.

### Year 1

48 Credit Hours

#### Spring Semester

| Course Code | Course Title                                          | Certificate | Credits |
|-------------|-------------------------------------------------------|-------------|---------|
| OSA 100     | OSHA 10                                               | C           | 1       |
| EPD 103     | Basic Electricity                                     | C           | 1       |
| EPD 105     | Climbing Skills                                       | C           | 4       |
| EPD 110     | Pole Framing & Construction Specifications            | C           | 4       |
| EPD 120     | Equipment Operation                                   | C           | 3       |
| EPD 125     | Setting and Replacing Poles                           | C           | 1       |
| EPD 1376    | Basic Transformer Theory and Transformer Installation | C           | 6       |
| EMP 1901    | Global Employment Standards                           | C           | 1       |

#### Summer Semester

| Course Code | Course Title       | Certificate | Credits |
|-------------|--------------------|-------------|---------|
| EPD 199     | Utility Internship | C           | 8       |

#### Fall Semester

| Course Code | Course Title                         | Certificate | Credits |
|-------------|--------------------------------------|-------------|---------|
| EPD 140     | Service Installation and Metering    | C           | 4       |
| EPD 145     | Conductor Installation and Repair    | C           | 4       |
| EPD 150     | Rubber Gloving and Hot Stick Methods | C           | 3       |
| EPD 160     | Underground Distribution             | C           | 3       |
| EPD 170     | Fusing and System Coordination       | C           | 1       |
| EPD 180     | Substations and Voltage Regulation   | C           | 4       |

### Year 2

15 Credit Hours

#### Spring Semester

| Course Code     | Course Title   | Certificate | Credits |
|-----------------|----------------|-------------|---------|
| Gen Ed Option   | Math Option    | C           | 3       |
| Gen Ed Option   | English Option |             | 3       |
| Gen Ed Elective |                |             | 3       |
| Gen Ed Elective |                |             | 3       |
| Gen Ed Elective |                |             | 3       |

### Elective Options

Meet with an Advisor or Admissions Coordinator to explore opportunities for taking elective courses through Concurrent or Dual Credit programs while in high school.

#### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Gen Ed Electives

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

### Cert. C

## Certificate C Requirements

51 Credit Hours

| Course Code        | Course Title                      | Credits |
|--------------------|-----------------------------------|---------|
| Courses marked - C |                                   | 48      |
| MAT 101            | Technical Mathematics I or higher | 3       |



# Electrical Technology

## Program Description

Manhattan Area Technical College Electrical Technology program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 46.0302

**CIP Name:** Electrician

**Definition:** A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.

## Program Outcomes

- » Demonstrate safety while working with electrical equipment: Students are trained to prioritize safety in all electrical work environments.
  - » Analyze schematics and blueprints: Students learn to interpret and work with detailed electrical schematics and blueprints.
  - » Perform installation of electrical equipment and materials in residential, industrial, and commercial settings: The program covers installation techniques across various settings.
  - » Apply the theory of electrical technology to specific jobs using critical thinking/reasoning: Students are taught to apply theoretical knowledge practically, using critical thinking and reasoning.
  - » Diagnose and install motor control centers: The curriculum includes diagnosing issues and installing motor control centers.
  - » Utilize troubleshooting techniques: Students develop skills in troubleshooting electrical problems effectively.
  - » Demonstrate knowledge of the National Electrical Code (NEC): The program ensures students are knowledgeable about NEC standards and regulations.
- These outcomes aim to equip students with the necessary skills and knowledge to succeed in various electrical technology roles.



Program is aligned with the Kansas Board of Regents Curriculum.

## Certifications:

- » OSHA 10
- » Journey Worker Licensure Exam

 [manhattantech.edu/electrical](https://manhattantech.edu/electrical)

For program admission requirements see: [manhattantech.edu/checklists](https://manhattantech.edu/checklists)



# Electrical Technology Degree Map

AAS

## Associate of Applied Science

61 Credit Hours

### Year 1

34 Credit Hours

#### Fall Semester

| Course Code   | Course Title                   | Certificate | Credits |
|---------------|--------------------------------|-------------|---------|
| OSA 100       | OSHA 10                        | <b>B</b>    | 1       |
| ELT 105       | AC/DC Circuits I               | <b>B</b>    | 4       |
| ELT 110       | National Electrical Code I     | <b>B</b>    | 4       |
| ELT 115       | Residential Wiring I           | <b>B</b>    | 4       |
| ELT 120       | Occupational Work Experience I | <b>B</b>    | 2       |
| Gen Ed Option | Suggested: Math Option         | <b>B</b>    | 3       |

#### Spring Semester

| Course Code | Course Title                    | Certificate | Credits |
|-------------|---------------------------------|-------------|---------|
| ELT 125     | Print Reading                   | <b>B</b>    | 2       |
| ELT 130     | National Electrical Code II     | <b>B</b>    | 4       |
| ELT 135     | Commercial Wiring I             | <b>B</b>    | 4       |
| ELT 140     | Journeyman's Exam Preparation   | <b>B</b>    | 4       |
| ELT 145     | Occupational Work Experience II | <b>B</b>    | 2       |

### Year 2

27 Credit Hours

#### Fall Semester

| Course Code        | Course Title              | Certificate | Credits |
|--------------------|---------------------------|-------------|---------|
| Technical Elective |                           |             | 3       |
| Technical Elective |                           |             | 3       |
| Technical Elective |                           |             | 3       |
| Gen Ed Option      | Suggested: English Option |             | 3       |
| Gen Ed Option      |                           |             | 3       |

#### Spring Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |
| Gen Ed Elective    |              |             | 3       |
| Gen Ed Elective    |              |             | 3       |

### Elective Options

#### Math Option

|                              |                          |   |
|------------------------------|--------------------------|---|
| MAT 109                      | Technical Mathematics II | 3 |
| MAT 111                      | Contemporary Math        | 3 |
| <i>or higher Math course</i> |                          |   |

#### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

#### Gen Ed Elective Options

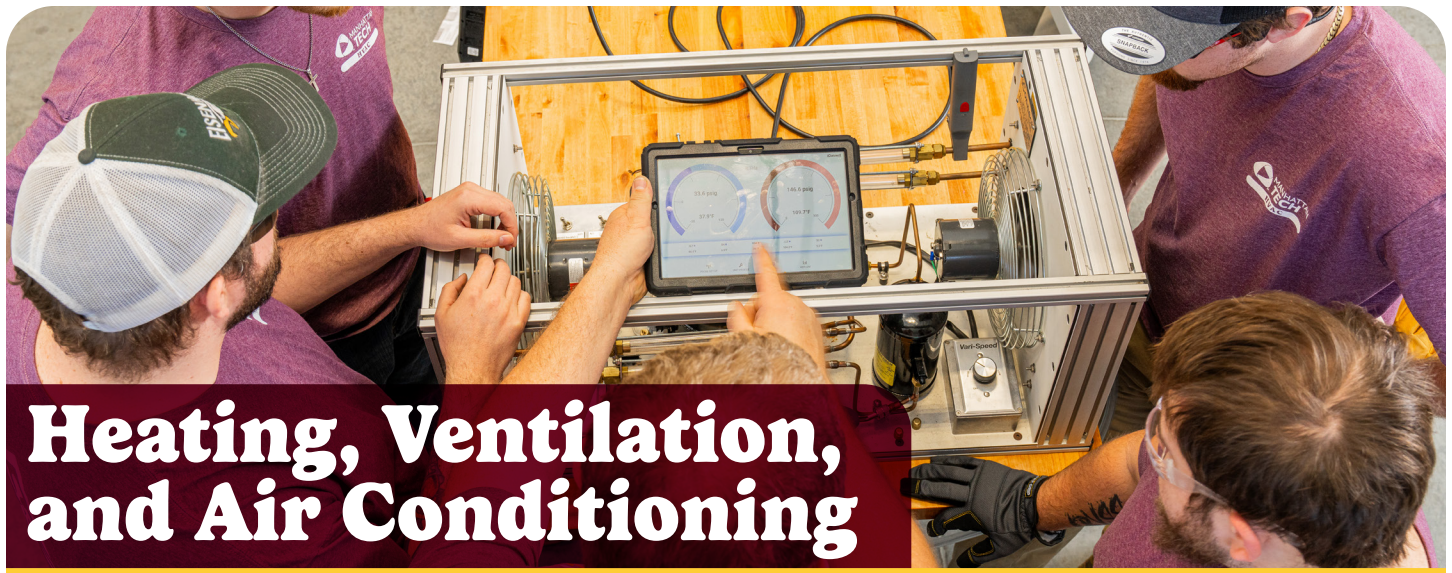
9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

Cert. B

## Certificate B Requirements

34 Credit Hours

| Course Code               | Course Title                             | Credits |
|---------------------------|------------------------------------------|---------|
| Courses marked - <b>B</b> |                                          | 31      |
| MAT 101                   | Technical Mathematics I <i>or higher</i> | 3       |



# Heating, Ventilation, and Air Conditioning

## Program Description

Manhattan Area Technical College Heating, Ventilation, and Air Conditioning program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 47.0201

**CIP Name:** Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician

**Definition:** A program that prepares individuals to apply technical knowledge and skills to repair, install, service and maintain the operating condition of heating, air conditioning, and refrigeration systems. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of heating, air conditioning and refrigeration systems.

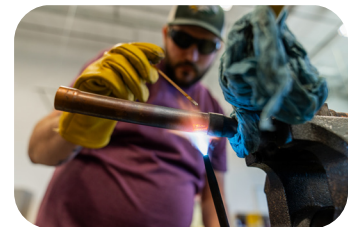
## Program Outcomes

- » Diagnose and repair electrical and mechanical problems in heating and cooling systems.
- » Design residential heating and air conditioning systems.
- » Operate heating and air conditioning equipment properly.
- » Maintain a professional appearance in the workplace.
- » Demonstrate interpersonal skills in greeting customers, explaining repairs and discussing the approximate cost of the service.
- » Inspect work areas and correct safety hazards.
- » Work cautiously and safely.
- » Demonstrate safe removal procedures from electrical and mechanical components.

## Certifications:

- » OSHA 10
- » EPA 608

 [manhattantech.edu/hvac](http://manhattantech.edu/hvac)



Program follows NATE (North American Technician Excellence) Training Academy through Interplay Learning



Program is aligned with the Kansas Board of Regents Curriculum.

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)

# Heating, Ventilation, & Air Conditioning Degree Map

AAS Associate of Applied Science

61 Credit Hours

## Year 1

40 Credit Hours

### Fall Semester

| Course Code   | Course Title                   | Certificate | Credits |
|---------------|--------------------------------|-------------|---------|
| OSA 100       | OSHA10                         | B           | 1       |
| HVA 1044      | HVAC Fundamentals              | B           | 4       |
| HVA 1104      | Electrical Fundamentals        | B           | 4       |
| HVA 120       | Domestic Refrigeration         | B           | 3       |
| HVA 140       | Heating System Fundamentals    | B           | 3       |
| HVA 170       | Design and Blueprint Reading   | B           | 3       |
| HVA 135       | Occupational Work Experience I | B           | 1       |
| Gen Ed Option | Suggested: Math Option         | B           | 3       |

### Spring Semester

| Course Code   | Course Title                    | Certificate | Credits |
|---------------|---------------------------------|-------------|---------|
| HVA 130       | Controls and Motors             | B           | 3       |
| HVA 150       | Cooling                         | B           | 3       |
| HVA 151       | Advanced Refrigeration          | B           | 3       |
| HVA 161       | EPA608                          | B           | 1       |
| HVA 181       | Commercial Refrigeration        | B           | 3       |
| HVA 185       | Workplace Skills                | B           | 1       |
| HVA 198       | Occupational Work Experience II | B           | 1       |
| Gen Ed Option | Suggested: English Option       | B           | 3       |

## Year 2

21 Credit Hours

### Fall Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |

### Spring Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

## Elective Options

### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title                      | Credits |
|-------------|-----------------------------------|---------|
| ACC 100     | Business Accounting               | 3       |
| BUS 111     | Personal Finance                  | 3       |
| BUS 126     | Introduction to Business          | 3       |
| BUS 185     | Business Ethics & Human Relations | 3       |
| BUS 255     | Principles of Management          | 3       |

### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

### Gen Ed Elective Options

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattanotech.edu/gened](http://manhattanotech.edu/gened)

## Cert. B Certificate B Requirements

40 Credit Hours

| Course Code        | Course Title                      | Credits |
|--------------------|-----------------------------------|---------|
| Courses marked - B |                                   | 34      |
| MAT 101            | Technical Mathematics I or higher | 3       |
| Gen Ed Option      | English Option                    | 3       |



# Industrial Maintenance Technology

## Program Description

Manhattan Area Technical College Industrial Maintenance Technology program is in alignment with the National Center for Education Statistics (NCES)

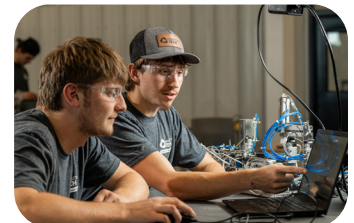
**CIP Code:** 47.0303

**CIP Name:** Industrial Mechanics and Maintenance Technology

**Definition:** A program that prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.

## Program Outcomes

- » Perform maintenance and repairs electrical systems and mechanical systems ensuring their proper operation.
- » Read and interpret blueprints, technical diagrams, and schematics to guide equipment installation, troubleshooting, and repair of industrial systems.
- » Configure, program, and troubleshoot programmable logic controllers (PLCs) to maintain automation systems.
- » Select the most suitable process sensors (optical, temperature, pressure, level, flow) based on proper application requirements for designed range, and accuracy.
- » Implement and maintain motor control circuits in automated systems, ensuring efficient operation of machinery.
- » Install, test, and repair electrical wiring in control circuits in accordance with application of industry standards.
- » Diagnose faulty equipment and troubleshoot mechanical drives systems to ensure quick and accurate adjustments of equipment.
- » Service and repair hydraulic, pneumatic, and mechanical drive components to ensure optimal functionality of industrial machinery.
- » Adhere to safety policies and procedures to carry out workplace safety requirements while ensuring a safe working environment.



Program is aligned with the Kansas Board of Regents Curriculum.

## Nc3 Certification Opportunities

- » Fundamentals of Industry 4.0
- » Fundamentals of Electricity - AC
- » Fundamentals of Electricity - DC
- » Introduction to Mechatronics

 [manhattantech.edu/imt](http://manhattantech.edu/imt)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)

# **Industrial Maintenance Technology Degree Map**

AAS
**Associate of Applied Science**
60 Credit Hours

## Year 1 42 Credit Hours

### Fall Semester

| Course Code     | Course Title                   | Certificate |          | Credits |
|-----------------|--------------------------------|-------------|----------|---------|
| OSA 100         | OSHA 10                        | <b>A</b>    | <b>B</b> | 1       |
| IMT 105         | AC/DC Circuits                 | <b>A</b>    | <b>B</b> | 4       |
| IMT 110         | Mechanical Systems             | <b>A</b>    | <b>B</b> | 3       |
| IMT 115         | Mechanical Systems Reliability | <b>A</b>    | <b>B</b> | 3       |
| IMT 120         | Introduction to Mechatronics   | <b>A</b>    | <b>B</b> | 3       |
| Gen Ed Option   | Suggested: Math Option         | <b>A</b>    | <b>B</b> | 3       |
| Gen Ed Elective | Suggested: COM 116             | <b>A</b>    | <b>B</b> | 3       |

### Spring Semester

| Course Code | Course Title                         | Certificate | Credits |
|-------------|--------------------------------------|-------------|---------|
| IMT 125     | Programmable Logic Controllers (PLC) | <b>B</b>    | 3       |
| IMT 130     | Fluid Power I                        | <b>B</b>    | 3       |
| IMT 135     | Fluid Power II                       | <b>B</b>    | 3       |
| IMT 140     | Fundamentals of Motor Control        | <b>B</b>    | 3       |
| IMT 145     | Variable Speed Motor Control         | <b>B</b>    | 3       |
| IMT 150     | Industrial Process Control           | <b>B</b>    | 3       |

### Summer Semester

| Course Code | Course Title                 | Certificate | Credits |
|-------------|------------------------------|-------------|---------|
| IMT 155     | Occupational Work Experience |             | 4       |

## Year 2 18 Credit Hours

### Fall Semester

| Course Code        | Course Title              | Certificate | Credits |
|--------------------|---------------------------|-------------|---------|
| Gen Ed Option      | Suggested: English Option |             | 3       |
| Gen Ed Elective    | Suggested: CIS 100        |             | 3       |
| Technical Elective |                           |             | 3       |

### Spring Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

## Elective Options

### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title                                | Credits |
|-------------|---------------------------------------------|---------|
| ACC 100     | Business Accounting                         | 3       |
| BTR 104     | OSHA 30 Construction Industry Certification | 2       |
| BUS 111     | Personal Finance                            | 3       |
| BUS 126     | Introduction to Business                    | 3       |
| BUS 185     | Business Ethics & Human Relations           | 3       |
| BUS 255     | Principles of Management                    | 3       |

### Math Option

|         |                          |   |
|---------|--------------------------|---|
| MAT 109 | Technical Mathematics II | 3 |
| MAT 111 | Contemporary Math        | 3 |

or higher Math course

### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

### Gen Ed Electives

|         |                       |   |
|---------|-----------------------|---|
| CIS 100 | Software Applications | 3 |
| COM 116 | Interpersonal Comm.   | 3 |

3 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

## Cert. A **Certificate A Requirements** 20 Credit Hours

|                           |                                   |  |    |
|---------------------------|-----------------------------------|--|----|
| Courses marked - <b>A</b> |                                   |  | 14 |
| COM 116                   | Interpersonal Communications      |  | 3  |
| MAT 101                   | Technical Mathematics I or higher |  | 3  |

## Cert. B **Certificate B Requirements** 38 Credit Hours

|                           |                                   |  |    |
|---------------------------|-----------------------------------|--|----|
| Courses marked - <b>B</b> |                                   |  | 32 |
| COM 116                   | Interpersonal Communications      |  | 3  |
| MAT 101                   | Technical Mathematics I or higher |  | 3  |



## Program Description

Manhattan Area Technical College Medical Laboratory Technology program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 51.1004

**CIP Name:** Medical Laboratory Technology

**Definition:** A program that prepares individuals, under the supervision of clinical laboratory scientists/medical technologists, to perform routine medical laboratory procedures and tests and to apply preset strategies to record and analyze data. Includes instruction in general laboratory procedures and skills; laboratory mathematics; medical computer applications; interpersonal and communications skills; and the basic principles of hematology, medical microbiology, immunohematology, immunology, clinical chemistry, and urinalysis.

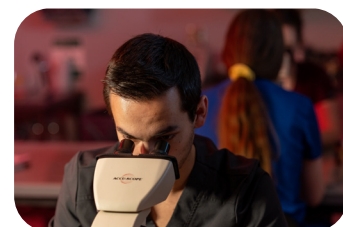
## Program Outcomes

- » MLT graduates will demonstrate entry level knowledge and competency in all areas of the clinical laboratory.
- » MLT graduates will demonstrate an average of at least 75% on the Board of Certification exam as calculated by the most recent three year period.
- » At least 70% of students who have begun the final half of the MLT program will successfully graduate from the program as calculated by the most recent three year period.
- » MLT graduates will demonstrate an average of at least 70% employment rate either through employment in the field or a closely related field or continue their education within one year of graduation as calculated by the most recent three-year period.

## Certifications

- » MLT ASCP Certification

 [manhattantech.edu/mlt](http://manhattantech.edu/mlt)



### Accreditation:

**NAACLS**

National Accrediting Agency  
for Clinical Laboratory Sciences

**National Accrediting Agency for  
Clinical Laboratory Sciences**

5600 N River Rd  
Des Plaines, IL 60018  
773.714.8880



Program is aligned with the  
Kansas Board of Regents  
Curriculum.

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Medical Laboratory Technology Degree Map

AAS

## Associate of Applied Science

68 Credit Hours

### Pre-Requisites

| Course Code   | Course Title           |         | Credits |
|---------------|------------------------|---------|---------|
| BSC 125       | Anatomy and Physiology | •       | 5       |
| BSC 205       | Microbiology           | •    •• | 5       |
| CHM 110       | Chemistry I            | •       | 5       |
| COM 105       | English Composition I  |         | 3       |
| Gen Ed Option | Math Option            |         | 3       |
| Gen Ed Option | Communications Option  |         | 3       |

• Must have been taken within 5 years of acceptance into program or approved by program coordinator      •• Lab Required

### Year 1

44 Credit Hours

#### Fall Semester

| Course Code | Course Title                           |     | Credits |
|-------------|----------------------------------------|-----|---------|
| MLT 1213    | Introduction to the Laboratory for MLT | ••• | 3       |
| MLT 2216    | MLT Hematology/Coagulation             |     | 6       |
| MLT 2416    | MLT Clinical Chemistry                 |     | 6       |
| MLT 2503    | MLT Immunology                         |     | 3       |

#### Spring Semester

| Course Code | Course Title                 |     | Credits |
|-------------|------------------------------|-----|---------|
| ALH 101     | Phlebotomy                   | ••• | 3       |
| MLT 2303    | MLT Urinalysis & Body Fluids |     | 3       |
| MLT 2706    | MLT Pathogenic Microbiology  |     | 6       |
| MLT 2806    | MLT Immunohematology         |     | 6       |

#### Summer Semester

| Course Code | Course Title                |  | Credits |
|-------------|-----------------------------|--|---------|
| MLT 2988    | Clinical Internship for MLT |  | 8       |

••• Encouraged to be taken prior to admission to the program

### Elective Options

#### Math Option

|                       |                 |   |
|-----------------------|-----------------|---|
| MAT 135               | College Algebra | 3 |
| or higher Math course |                 |   |

#### Communications Option

|         |                              |   |
|---------|------------------------------|---|
| COM 115 | Public Speaking              | 3 |
| COM 116 | Interpersonal Communications | 3 |

**Note:** Applicants must complete online MLT selective admission application (separate from college application) prior to beginning Year 1 of the program.



## Program Description

Manhattan Area Technical College Associate Degree Nursing program is in alignment with the National Center for Education Statistics (NCES)

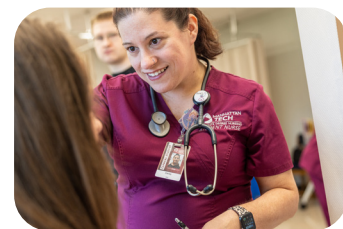
**CIP Code:** 51.3801

**CIP Name:** Registered Nursing/Registered Nurse

**Definition:** A program that generally prepares individuals in the knowledge, techniques, and procedures for promoting health, providing care for sick, disabled, infirmed, or other individuals or groups. Includes instruction in the administration of medication and treatments, assisting a physician during treatments and examinations, referring patients to physicians and other health care specialists, and planning education for health maintenance.

## Program Outcomes

- » Integrate caring behaviors in practicing the art and science of nursing within a diverse population.
- » Implement professional standards & scope of practice within legal, ethical, & regulatory frame works.
- » Collaborate with clients & members of the inter-professional health care team to optimize client outcomes.
- » Formulate safe and effective clinical judgments guided by the nursing process, clinical reasoning, and evidence-based practice.
- » Provide leadership in the management of care to meet client needs using available resources and current technology.
- » Generate teaching and learning processes to promote and maintain health and reduce risks for a global population.
- » Demonstrate effective communication methods to manage client needs and to interact with other health care team members.



### Accreditation:



**Accreditation Commission for  
Education in Nursing**  
3390 Peachtree Road NE, Ste 1400  
Atlanta, GA 30326  
404-975-5000 [www.acenursing.org](http://www.acenursing.org)



Program is aligned with the  
Kansas Board of Regents  
Curriculum.

 [manhattantech.edu/adn](http://manhattantech.edu/adn)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Associate Degree Nursing Degree Map

AAS

## Associate of Applied Science

62 Credit Hours

### Pre-Requisites

| Course Code   | Course Title                 | Credits |
|---------------|------------------------------|---------|
| BSC 125       | Anatomy and Physiology •     | 5       |
| BSC 205       | Microbiology •               | 5       |
| COM 105       | English Composition I        | 3       |
| NTR 105       | Nutrition                    | 3       |
| PSY 100       | General Psychology           | 3       |
| PSY 125       | Human Growth and Development | 3       |
| NUR 199       | Practical Nursing License •• | 10      |
| Gen Ed Option | Math Option                  | 3       |
| Gen Ed Option | Communications Option        | 3       |

• Lab Required      •• [Nurse Practice Act pg 67 KSA 60-1-104\(u\)](#)      Must be completed with a C or higher

### Year 1

24 Credit Hours

#### Semester 1

| Course Code | Course Title                | Credits |
|-------------|-----------------------------|---------|
| NUR 221     | Nursing Across the Lifespan | 12      |

#### Semester 2

| Course Code | Course Title               | Credits |
|-------------|----------------------------|---------|
| NUR 230     | Management of Patient Care | 12      |

### Elective Options

#### Math Option

|         |                          |   |
|---------|--------------------------|---|
| MAT 109 | Technical Mathematics II | 3 |
| MAT 135 | College Algebra          | 3 |

or higher Math course

#### Communications Option

|         |                              |   |
|---------|------------------------------|---|
| COM 115 | Public Speaking              | 3 |
| COM 116 | Interpersonal Communications | 3 |

Note: All requirements for the ADN program are listed in the Associate Degree Nursing Admissions Packet, available on the [website](#).



# Nursing: Practical

## Program Description

Manhattan Area Technical College Practical Nursing program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 51.3901

**CIP Name:** Licensed Practical/Vocational Nurse Training

**Definition:** A program that prepares individuals to assist in providing general nursing care under the direction of a registered nurse, physician, or dentist. Includes instruction in taking patient vital signs, applying sterile dressings, patient health education, and assistance with examinations and treatment.



## Program Outcomes

- » Relationship-centered care: provide nursing care that is relationship-centered, caring, culturally sensitive and based on the physiological, psychosocial and spiritual needs of clients with commonly occurring health alterations that have predictable outcomes.
- » Teamwork and Collaboration: collaborate with the client and members of the interprofessional health care team to promote continuity of client care and shared decision-making.
- » Evidence based practice: use current evidence as a basis for nursing practice.
- » Informatics: use information and client care technology to support the delivery of safe, quality client care.
- » Quality Improvement: participate in quality improvement activities assessing their effect on client outcomes.
- » Safety: provide an environment that is safe and reduces risk of harm for clients, self, and others.
- » Professionalism: demonstrate accountability for client care that incorporates legal and ethical principles, regulatory guidelines, and standards of nursing practice.
- » Leadership: use leadership skills that support the provision and coordination of client care.

Upon completion of the program students are prepared to take the NCLEX-PN exam



Program is aligned with the Kansas Board of Regents Curriculum.

 [manhattantech.edu/practicalnursing](https://manhattantech.edu/practicalnursing)

For program admission requirements see: [manhattantech.edu/checklists](https://manhattantech.edu/checklists)

# Practical Nursing Degree Map

## **Cert. C** Certificate C Requirements

46 Credit Hours

### Pre-Requisites - 2.0 cumulative GPA required

| Course Code | Course Title                 | Credits |
|-------------|------------------------------|---------|
| BSC 125     | Anatomy and Physiology       | 5       |
| MAT 109     | Technical Mathematics II     | 3       |
| NTR 105     | Nutrition                    | 3       |
| PSY 125     | Human Growth and Development | 3       |

Must be completed with a C or higher

## Year 1

32 Credit Hours

### Fall Semester

| Course Code | Course Title                                                    | Credits |
|-------------|-----------------------------------------------------------------|---------|
| NUR 107     | Foundations of Nursing                                          | 4       |
| NUR 108     | Foundations of Nursing Clinical                                 | 2       |
| NUR 1112    | Fundamentals of Pharmacology and Safe Medication Administration | 2       |
| NUR 1175    | Nursing Care of Adults I                                        | 5       |
| NUR 118     | Nursing Care of Adults I Clinical                               | 3       |

### Spring Semester

| Course Code | Course Title                       | Credits |
|-------------|------------------------------------|---------|
| NUR 133     | Leadership, Roles, and Issues      | 1       |
| NUR 134     | Mental Health Nursing              | 2       |
| NUR 136     | Care of Aging Adults               | 2       |
| NUR 1375    | Nursing Care of Adults II          | 5       |
| NUR 138     | Nursing Care of Adults II Clinical | 3       |
| NUR 170     | Maternal Child Nursing             | 2       |
| NUR 171     | Maternal Child Clinical            | 1       |

All PN program requirements are listed in the Practical Nursing Admissions Packet available [online](https://manhattantech.edu/practicalnursing). (manhattantech.edu/practicalnursing)



## Program Description

The Manhattan Tech Plumbing Technology program provides students with the practical skills and theoretical knowledge required for a successful career in plumbing. The program covers essential topics such as pipe installation, maintenance, system design, and code compliance. Through hands-on training and classroom instruction, students are prepared for entry-level roles in residential, commercial, and industrial plumbing. Graduates of the program are equipped to meet industry standards and address the needs of modern plumbing systems.



## Program Outcomes

- » Demonstrate proper procedures and techniques for constructing plumbing systems using appropriate tools.
- » Perform industry-standard calculations and measurements to design basic plumbing systems.
- » Identify and apply current plumbing codes, regulations, and standards to construct operable systems following the Uniform Plumbing Code (UPC) or International Plumbing Code (IPC).
- » Explain the principles of blueprint reading, layout, estimating, and installing piping systems and fixtures.
- » Demonstrate the ability to repair supply and wastewater systems in residential, commercial, and industrial settings.
- » Show readiness for entry-level employment in plumbing service, repair, or construction.



## Certifications

- » OSHA 10

 [manhattantech.edu/plumbing](https://manhattantech.edu/plumbing)

For program admission requirements see: [manhattantech.edu/checklists](https://manhattantech.edu/checklists)



# Plumbing Technology Degree Map

AAS Associate of Applied Science

62 Credit Hours

## Year 1

38 Credit Hours

### Fall Semester

| Course Code | Course Title                        | Certificate       | Credits |
|-------------|-------------------------------------|-------------------|---------|
| OSA 100     | OSHA 10                             | <b>A</b> <b>B</b> | 1       |
| PLM 105     | Introductory Craft Skills           | <b>A</b> <b>B</b> | 3       |
| PLM 110     | Introduction to Plumbing Technology | <b>A</b> <b>B</b> | 3       |
| PLM 115     | Plumbing Fixtures and Fittings      | <b>A</b> <b>B</b> | 4       |
| PLM 120     | Plumbing Basics                     | <b>A</b> <b>B</b> | 3       |
| PLM 125     | Plumbing Blueprint Reading          | <b>A</b> <b>B</b> | 3       |
| PLM 130     | Occupational Work Experience I      | <b>A</b> <b>B</b> | 2       |

### Spring Semester

| Course Code   | Course Title                    | Certificate | Credits |
|---------------|---------------------------------|-------------|---------|
| PLM 135       | Codes and Special Systems       | <b>B</b>    | 3       |
| PLM 140       | Plumbing Electricity and Gas    | <b>B</b>    | 4       |
| PLM 145       | Advanced Plumbing Fixtures      | <b>B</b>    | 3       |
| PLM 150       | Workplace Skills                | <b>B</b>    | 1       |
| PLM 155       | Occupational Work Experience II | <b>B</b>    | 2       |
| Gen Ed Option | Suggested: English Option       | <b>B</b>    | 3       |
| Gen Ed Option | Suggested: Math Option          | <b>B</b>    | 3       |

## Year 2

24 Credit Hours

### Fall Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

### Spring Semester

| Course Code        | Course Title | Certificate | Credits |
|--------------------|--------------|-------------|---------|
| Gen Ed Elective    |              |             | 3       |
| Gen Ed Elective    |              |             | 3       |
| Technical Elective |              |             | 3       |
| Technical Elective |              |             | 3       |

## Elective Options

### Technical Elective Options

† Additional Technical Elective options are available; see an advisor

| Course Code | Course Title                      | Credits |
|-------------|-----------------------------------|---------|
| ACC 100     | Business Accounting               | 3       |
| BUS 111     | Personal Finance                  | 3       |
| BUS 126     | Introduction to Business          | 3       |
| BUS 185     | Business Ethics & Human Relations | 3       |
| BUS 255     | Principles of Management          | 3       |

### Math Option

|                       |                          |   |
|-----------------------|--------------------------|---|
| MAT 109               | Technical Mathematics II | 3 |
| MAT 111               | Contemporary Math        | 3 |
| or higher Math course |                          |   |

### English Option

|         |                       |   |
|---------|-----------------------|---|
| COM 105 | English Composition I | 3 |
| COM 110 | Technical Writing     | 3 |

### Gen Ed Elective Options

9 additional Gen Ed credits.  
Full general education elective list is located online:  
[manhattantech.edu/gened](http://manhattantech.edu/gened)

Cert. A

## Certificate A Requirements

19 Credit Hours

| Course Code               | Course Title | Credits |
|---------------------------|--------------|---------|
| Courses marked - <b>A</b> |              | 19      |

Cert. B

## Certificate B Requirements

38 Credit Hours

| Course Code               | Course Title                      | Credits |
|---------------------------|-----------------------------------|---------|
| Courses marked - <b>B</b> |                                   | 32      |
| MAT 101                   | Technical Mathematics I or higher | 3       |
| Gen Ed                    | English Option                    | 3       |



# Welding Technology

## Program Description

Manhattan Area Technical College Welding Technology program is in alignment with the National Center for Education Statistics (NCES)

**CIP Code:** 48.0508

**CIP Name:** Welding Technology/Welder

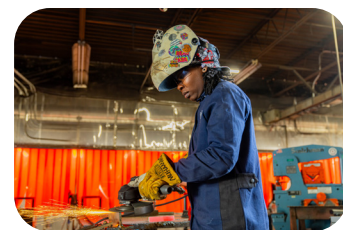
**Definition:** A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.

## Program Outcomes

- » Demonstrate the skill and knowledge to pass an all-position weld tests on plate to AWS D.1.1 code
- » Use current guidelines and safety precautions in all welding laboratory activities
- » Demonstrate the ability to follow safety procedures and demonstrate ethical work habits consistent with industry standards
- » Apply appropriate safe work habits when operating oxy-fuel and arc-based welding equipment
- » Apply welding shop safety procedures in an industrial setting
- » Contribute to achieving team goals
- » Apply communication skills in an industrial setting
- » Use terminology associated with welding to communicate effectively with co-workers, supervisors, customers, inspectors, engineers and vendors
- » Demonstrate production-welding skills consistent with industry standards
- » Read blueprints, layout, and fabricate a weld to industry standards
- » Demonstrate the ability to reason and be creative
- » Demonstrate the ability to problem solve and think critically

## Certifications

- » OSHA10
- » AWS Weld Procedure Qualification Tests Cert A: 1F/2F/3F/4F GMAW, 1F/2F GTAW, 1F/2F/3F/4F SMAW
- » AWS Weld Procedure Qualification Tests Cert B: 1F/1G/2G/2F/3F/3G/4F/4G FCAW, 1G/2G/3G/4G GMAW, 1G GTAW, 1G/2G/3G/4G SMAW



Program is aligned with the Kansas Board of Regents Curriculum.

 [manhattantech.edu/welding](http://manhattantech.edu/welding)

For program admission requirements see: [manhattantech.edu/checklists](http://manhattantech.edu/checklists)



# Welding Technology Degree Map

AAS

## Associate of Applied Science

63 Credit Hours

Year 1

42 Credit Hours

| Fall Semester |                                   |             |   |         | Spring Semester |                                   |             |  |         |
|---------------|-----------------------------------|-------------|---|---------|-----------------|-----------------------------------|-------------|--|---------|
| Course Code   | Course Title                      | Certificate |   | Credits | Course Code     | Course Title                      | Certificate |  | Credits |
| OSA 100       | OSHA 10                           | A           | B | 1       | WLD 116         | Fabrication                       | B           |  | 1       |
| WLD 1001      | Welding Safety                    | A           | B | 1       | WLD 145         | SMAW Advanced Structural          | B           |  | 4       |
| WLD 1303      | Cutting Processes                 | A           | B | 3       | WLD 155         | GMAW Advanced                     | B           |  | 4       |
| WLD 140       | Shielded Metal Arc Welding (SMAW) | A           | B | 3       | WLD 1604        | Flux Cored Arc Welding Structural | B           |  | 4       |
| WLD 118       | Discontinuities and Defects       | A           | B | 1       | WLD 165         | SMAW/GTAW Pipe Welding            | B           |  | 3       |
| WLD 110       | Welding Metallurgy                | A           | B | 1       | WLD 1764        | GTAW Advanced                     | B           |  | 4       |
| WLD 1153      | Blueprint Reading                 | A           | B | 3       | WLD 199         | Occupational Work Experience      | B           |  | 2       |
| WLD 150       | Gas Metal Arc Welding (GMAW)      | A           | B | 3       |                 |                                   |             |  |         |
| WLD 171       | Gas Tungsten Arc Welding (GTAW)   | A           | B | 3       |                 |                                   |             |  |         |
| EMP 1901      | Global Employment Standards       |             | B | 1       |                 |                                   |             |  |         |

Year 2

21 Credit Hours

| Fall Semester      |              |             |  |         | Spring Semester |                |             |  |         |
|--------------------|--------------|-------------|--|---------|-----------------|----------------|-------------|--|---------|
| Course Code        | Course Title | Certificate |  | Credits | Course Code     | Course Title   | Certificate |  | Credits |
| Gen Ed Option      | Math Option  |             |  | 3       | Gen Ed Option   | English Option |             |  | 3       |
| Gen Ed Elective    |              |             |  | 3       | Gen Ed Elective |                |             |  | 3       |
| Technical Elective |              |             |  | 3       | Gen Ed Elective |                |             |  | 3       |
| Technical Elective |              |             |  | 3       |                 |                |             |  |         |

## Elective Options

| Technical Elective Options |                          |         | Additional Technical Elective options are available; see an advisor |
|----------------------------|--------------------------|---------|---------------------------------------------------------------------|
| Course Code                | Course Title             | Credits |                                                                     |
| ACC 100                    | Business Accounting      | 3       |                                                                     |
| ACC 120                    | Financial Accounting     | 3       |                                                                     |
| BUS 111                    | Personal Finance         | 3       |                                                                     |
| BUS 126                    | Introduction to Business | 3       |                                                                     |

| Math Option           |                          |   | English Option |                       |   | Gen Ed Elective Options                                                                                                                                         |  |  |
|-----------------------|--------------------------|---|----------------|-----------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| MAT 109               | Technical Mathematics II | 3 | COM 105        | English Composition I | 3 | 9 additional Gen Ed credits.<br>Full general education elective list is located online:<br><a href="http://manhattantech.edu/gened">manhattantech.edu/gened</a> |  |  |
| MAT 111               | Contemporary Math        | 3 | COM 110        | Technical Writing     | 3 |                                                                                                                                                                 |  |  |
| or higher Math course |                          |   |                |                       |   |                                                                                                                                                                 |  |  |

Cert. A

Certificate A Requirements

19 Credit Hours

|                    |    |
|--------------------|----|
| Courses marked - A | 19 |
|--------------------|----|

Cert. B

Certificate B Requirements

42 Credit Hours

|                    |    |
|--------------------|----|
| Courses marked - B | 42 |
|--------------------|----|

# Course Descriptions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |               |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------|-------|
| <b>ACC 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Business Accounting</b>           |               | 3 SCH |
| <p>Business Accounting includes the theory and practice associated with double entry accounting. Special emphasis is placed on the preparation of the documents necessary to complete the accounting cycle. Topics include: transactions, journals, financial statements, schedules, adjustments/closing entries, accounting cycle, cash control, bank reconciliation, and payroll.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                  |                                      |               |       |
| <b>ACC 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Financial Accounting</b>          | ↳ SWT ACC1010 | 3 SCH |
| <p>Emphasis is on working with financial reporting and analysis, accounting information systems, internal control, depreciation, inventories, current and long-term assets, current and long-term liabilities, and equity for a merchandising business. Commercial and specialized accounting software is used to solve most problems.</p> <p><b>Prerequisite(s):</b> ACC 100 Business Accounting or successful completion of a basic accounting course at the high school or college level with a grade of C or better.</p> |                                      |               |       |
| <b>ACC 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Computerized Accounting</b>       |               | 3 SCH |
| <p>This course covers small business accounting using QuickBooks software. Topics include printing reports, creating a chart of accounts, recording customer and vendor transactions, processing payrolls, creating new companies, working with budgets, exporting to other software, and using the audit trail.</p> <p><b>Prerequisite(s):</b> ACC 100 or higher with a grade of C or higher.</p>                                                                                                                           |                                      |               |       |
| <b>ACC 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Payroll Accounting</b>            |               | 3 SCH |
| <p>Development of skills in preparing time cards, payroll registers, individual employee earnings records, payroll checks, governmental reports, and journal entries both manually and electronically. Included are the study of government regulations that affect payroll and controls needed in a payroll system.</p> <p><b>Prerequisite(s):</b> ACC 100 or higher with a grade of C or higher.</p>                                                                                                                       |                                      |               |       |
| <b>ACC 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Managerial Accounting</b>         | ↳ SWT ACC2010 | 3 SCH |
| <p>Emphasis on accounting for corporations, cash flow and financial statement analysis; departmental and manufacturing accounting; and spreadsheet and commercial accounting software are used to solve problems.</p> <p><b>Prerequisite(s):</b> ACC100 Business Accounting or successful completion of a basic accounting course at the high school or college level with a grade of C or higher.</p>                                                                                                                       |                                      |               |       |
| <b>ACC 270</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Tax Accounting</b>                |               | 3 SCH |
| <p>This course is a study and preparation of income tax returns and a study of tax regulations and forms.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                            |                                      |               |       |
| <b>ALH 005</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Heart Saver First Aid/CPR/AED</b> |               |       |
| <p>American Heart Association Heartsaver First Aid CPR AED is geared towards anyone with little or no medical training who needs a course completion card for their job, regulatory (e.g., OSHA), or other requirements or anyone who wants to be prepared for an emergency in any setting. Upon successful completion of the course, students receive a course completion card, valid for two years.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                |                                      |               |       |
| <b>ALH 006</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Basic Life Support CPR</b>        |               |       |
| <p>The course trains participants to promptly recognize several life-threatening emergencies, give high-quality chest compressions, deliver appropriate ventilations and provide early use of an AED as approved with the American Heart Association. BLS Provider Course Completion Certification Card valid for two years earned upon successful completion.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                       |                                      |               |       |

↳ This course is approved by the Kansas Board of Regents for System Wide Transfer (SWT) among all Kansas public postsecondary institutions offering an equivalent course. Additional courses may also be eligible for transfer. Please visit the [institution name] Registrar to learn more.

**ALH 051      Certified Nurse Aide Update**

Designed for CNAs who have held the Kansas CNA certificate but is now inactive (lapsed) and desire to reactivate their CNA status. The update may include assessment of written and oral knowledge as well as discussion and demonstration of CNA skills. The instructor notifies Kansas Department of Aging and Disability Services (KDADS) of successful completion; the certification is reactivated.

**Prerequisite(s):** Kansas CNA license, inactive status.

**ALH 060      Certified Medication Aide****3 SCH**

The course is designed around the Kansas State Medication Aide Curriculum, which trains the student to administer medications safely & effectively within the long-term care environment. Students must be 18 years or older to enroll in this course. Following successful completion of this course, the student will be eligible to take the Kansas Certified Medication Aide test, which is required for work as a Certified Medication Aide.

**Prerequisite(s):** ALH 100 or equivalent, 18 years of age and be current on the Kansas CNA Registry

**ALH 061      CMA Update**

This course follows guidelines specified by the Kansas Department of Aging and Disability Services (KDADS) for required continuing education and recertification for certified medication aides.

**Prerequisite(s):** CMA credential

**† ALH 100      Certified Nursing Assistant****5 SCH**

The course is designed to provide the student with the knowledge and skills necessary to perform basic health care services in the role of nurse assistant under the supervision of a Registered Nurse or a Licensed Practical Nurse. This course follows the curriculum requirements of the Kansas Department for Aging and Disability Services (KDADS). Upon satisfactory completion of the course, the student is eligible to take the Kansas CNA certification examination. Persons planning entry to a variety of health care careers find this course valuable for developing basic nursing care skills.

**Prerequisite(s):** None

**† ALH 101      Phlebotomy****3 SCH**

This course will enable the student to correctly and safely perform phlebotomy.

**Prerequisite(s):** None

**† ALH 1202      Phlebotomy Clinical****2 SCH**

This internship allows students to gain real job experience as a phlebotomist and complete requirements for American Society of Clinical Pathology Certification. The student will be placed at a regional hospital or clinic which agrees to provide supervision and experience opportunities.

**Prerequisite(s):** ALH 101

**† ALH 150      OSHA Healthcare****1 SCH**

This course provides training for entry-level workers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces, as well as information regarding workers' rights and employer responsibilities.

**Prerequisite(s):** None

**† AMT 109      Introduction to Automotive Technology****2 SCH**

This course is an introduction to automotive technology as it relates to safety, tools, and history. Topics covered include safety and pollution training, proper tool usage, lift safety, chemical safety, decoding VIN numbers, brief history of the automobile, and using service information.

**Prerequisite(s):** None

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------|
| <b>† AMT 111</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Electrical I</b>                 | 3 SCH |
| 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 circuits through a variety of classroom and shop learning and assessment activities. |                                     |       |
| <b>Prerequisite(s):</b> AMT 109 with a grade of “C” or higher                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |       |
| <b>† AMT 116</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Electrical II</b>                | 2 SCH |
| This advanced course builds on the material learned in AMT 111 Electrical Systems I. Subjects include charging and systems lighting, along with testing, diagnosis and unit repair for each circuit.                                                                                                                                                                                                                                                                                         |                                     |       |
| <b>Prerequisite(s):</b> AMT111 with a grade of C or better                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |       |
| <b>† AMT 121</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Engine Performance I</b>         | 3 SCH |
| 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.                                         |                                     |       |
| <b>Prerequisite(s):</b> AMT 116 with a grade of C or higher                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |       |
| <b>† AMT 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Engine Performance II</b>        | 4 SCH |
| This course builds on the material learned in AMT121 Engine Performance I. The areas of automotive electronics including microprocessors, sensors and actuators as related to ignition, fuel and emission control systems are studied. The operation and diagnosis/testing of these systems are also covered.                                                                                                                                                                                |                                     |       |
| <b>Prerequisite(s):</b> AMT 121 with a grade of C or higher, or permission of instructor                                                                                                                                                                                                                                                                                                                                                                                                     |                                     |       |
| <b>† AMT 149</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Suspension &amp; Steering I</b>  | 3 SCH |
| In this course students will: document fundamental suspension systems concern; perform fundamental diagnostics of steering systems; perform fundamental repairs of suspension systems.                                                                                                                                                                                                                                                                                                       |                                     |       |
| <b>Prerequisite(s):</b> Complete AMT 111 with a grade of “C” or better                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |       |
| <b>† AMT 152</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Suspension &amp; Steering II</b> | 2 SCH |
| This course builds upon the material learned in AMT 149 Steering & Suspension I. Areas taught are steering and suspension geometry, diagnosis of tire wear, wheel alignment, and tire replacement/ repair/balancing.                                                                                                                                                                                                                                                                         |                                     |       |
| <b>Prerequisite(s):</b> AMT 149 with a grade of C or higher                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |       |
| <b>† AMT 170</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Brakes I</b>                     | 3 SCH |
| This course is a thorough and detailed study of brake system theory and functional operation and principles of hydraulic systems as it applies to braking system operation. Practical applications of all phases of brake work including complete system service of disc and drum brake systems, parking brake systems, power assist devices, and machining of brake disc and drum.                                                                                                          |                                     |       |
| <b>Prerequisite(s):</b> AMT 111 with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                     |       |
| <b>† AMT 171</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Brakes II</b>                    | 2 SCH |
| This course builds upon the material learned in AMT170 Brakes I. Subject areas taught include electronic controls – anti-lock brake systems, traction and stability control, and hybrid braking systems                                                                                                                                                                                                                                                                                      |                                     |       |
| <b>Prerequisite(s):</b> AMT170 with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |       |

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|                                                                                                                                                                                                                                                                                                                                            |                                                    |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------|
| <b>† AMT 180</b>                                                                                                                                                                                                                                                                                                                           | <b>Electrical III</b>                              | 3 SCH |
| This course builds on the material learned in AMT 116 Electrical Systems II. Subjects include instrumentation, accessory, and restraint systems. Testing, diagnosis and unit repair are taught for each subject area.                                                                                                                      |                                                    |       |
| <b>Prerequisite(s):</b> AMT116 with a grade of C or higher.                                                                                                                                                                                                                                                                                |                                                    |       |
| <b>† AMT 200</b>                                                                                                                                                                                                                                                                                                                           | <b>Automatic Transmissions &amp; Transaxles I</b>  | 3 SCH |
| Areas studied are automotive transmission/transaxle theory, design and service. The course introduces the basic concepts, and then proceeds from the simple to the more complex units. Areas included are power flow, hydraulic operation, electronic control, diagnosis and service.                                                      |                                                    |       |
| <b>Prerequisite(s):</b> Complete AMT 180 with a grade of "C" or better.                                                                                                                                                                                                                                                                    |                                                    |       |
| <b>† AMT 201</b>                                                                                                                                                                                                                                                                                                                           | <b>Automatic Transmissions &amp; Transaxles II</b> | 3 SCH |
| This course builds upon the material learned in AMT 200 Automatic Transmissions and Transaxles I. Areas studied include automotive transmission/transaxle diagnosis, repair and overhaul.                                                                                                                                                  |                                                    |       |
| <b>Prerequisite(s):</b> AMT200 with a grade of C or higher.                                                                                                                                                                                                                                                                                |                                                    |       |
| <b>† AMT 205</b>                                                                                                                                                                                                                                                                                                                           | <b>Manual Transmissions &amp; Transaxles</b>       | 4 SCH |
| Addressed are areas of modern automotive manual drive-train and axle theory, design, maintenance, service and repair. The course will include flywheel and clutch design, manual transmissions, transfer cases, driveshafts and universal joints, constant velocity joints, differentials (conventional and limited-slip) and drive axles. |                                                    |       |
| <b>Prerequisite(s):</b> AMT180 with a grade of C or higher, or permission of instructor                                                                                                                                                                                                                                                    |                                                    |       |
| <b>† AMT 221</b>                                                                                                                                                                                                                                                                                                                           | <b>Engine Repair I</b>                             | 2 SCH |
| This class consists of the study of the basic theory, design and service of automotive/light truck engines. The class covers engine removal/replacement and in-vehicle repairs.                                                                                                                                                            |                                                    |       |
| <b>Prerequisite(s):</b> AMT125 and AMT180 with a grade of C or higher.                                                                                                                                                                                                                                                                     |                                                    |       |
| <b>† AMT 250</b>                                                                                                                                                                                                                                                                                                                           | <b>Engine Repair II</b>                            | 3 SCH |
| This course builds upon material learned in AMT 221 Engine Repair I. Subjects taught are diagnosis, inspection, measurement and repair of automotive/light truck engines.                                                                                                                                                                  |                                                    |       |
| <b>Prerequisite(s):</b> AMT221 with a grade of C or higher, or permission of instructor                                                                                                                                                                                                                                                    |                                                    |       |
| <b>† AMT 265</b>                                                                                                                                                                                                                                                                                                                           | <b>Engine Performance III</b>                      | 3 SCH |
| This course builds on the material learned in AMT125 Engine Performance II. The course begins with a review of ignition, fuel and emission control systems. Diagnostic concepts as applied to Asian and advanced General Motors, Ford and Chrysler systems are studied. The course ends with a section on alternative power sources.       |                                                    |       |
| <b>Prerequisite(s):</b> AMT125 with a grade of C or higher.                                                                                                                                                                                                                                                                                |                                                    |       |
| <b>† AMT 270</b>                                                                                                                                                                                                                                                                                                                           | <b>Electrical IV</b>                               | 2 SCH |
| This advanced course builds on the material learned in AMT 111, 116, and 180. Areas of study are body control modules, anti-theft/security systems and automotive networking/multiplexing systems. An introduction to hybrid vehicles is also included in the course.                                                                      |                                                    |       |
| <b>Prerequisite(s):</b> AMT180 with a grade of C or higher, or permission of instructor                                                                                                                                                                                                                                                    |                                                    |       |
| <b>† AMT 275</b>                                                                                                                                                                                                                                                                                                                           | <b>Heating &amp; Air Conditioning</b>              | 4 SCH |
| Areas studied are the theory, design and service/repair of automotive climate control systems. Safety practices and troubleshooting of heating, ventilation, and air conditioning (HVAC) systems used on cars and light trucks are taught.                                                                                                 |                                                    |       |
| <b>Prerequisite(s):</b> Complete AMT 125 and AMT 180 with a grade of "C" or better.                                                                                                                                                                                                                                                        |                                                    |       |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                 |               |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------|-------|
| <b>BSC 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Biology</b>                  | ↳ SWT BIO1010 | 5 SCH |
| <p>This course will cover the most basic elements of biology, exposing students to a diverse set of issues which will prepare them for future biology coursework. The student will apply the scientific process to problem solving and deductive reasoning to analyze and interpret observations.</p> <p><i>BSC110A and BSC110B are equivalent to SWT BIO1010</i></p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                         |                                 |               |       |
| <b>BSC 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Anatomy and Physiology</b>   | ↳ SWT BIO2020 | 5 SCH |
| <p>This course will enable the student to develop an understanding of the principles in structure and function of the human body systems. This course is an intermediate study designed primarily for pre-professional students in health-related fields. The student will participate in three hours of lecture and four hours of laboratory per week.</p> <p><i>BSC125A and BSC125B are equivalent to SWT BIO2020</i></p> <p><b>Prerequisite(s):</b> CIS100 and BUS120 with a grade of C or higher, or permission of instructor.</p>                                                                                                                                                                                                                                                                                            |                                 |               |       |
| <b>BSC 205</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Microbiology</b>             | ↳ SWT BIO2040 | 5 SCH |
| <p>This course will enable the student to identify disease causing microorganisms or agents and their role in the disease process, including principles of microbial cell structure, genetics, metabolism, immunity, and control. The student will also be able to demonstrate proficiency in standard laboratory techniques used in inoculation, isolation, incubation, inspection, and identification of bacteria. These techniques also include the examination of fungi, protists, and parasitic worms. In addition, the course will enable the student to demonstrate mechanisms in the prevention and treatment of infectious disease. Three hours of lecture/discussion and four hours of laboratory per week.</p> <p><b>Prerequisite(s):</b> BSC 110 or BSC 125 with a "C" or higher or permission of the instructor.</p> |                                 |               |       |
| <b>BUS 111</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Personal Finance</b>         | ↳ SWT BUS1010 | 3 SCH |
| <p>This course focuses on basic skills in the management of money with an emphasis on the viewpoint of the individual. Topics covered include budgeting, bank accounts, credit cards, borrowing, real estate and housing, transportation, savings, investments, insurance, taxation, retirement, and estate planning.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                 |               |       |
| <b>BUS 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Business English</b>         |               | 3 SCH |
| <p>This course will enable the student to master language principles for the information age. The student will develop language skills while gaining computer experience. The student will gain expertise in basic rules of English grammar, punctuation, capitalization, and number style.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 |               |       |
| <b>BUS 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Business Communication</b>   | ↳ SWT BUS2040 | 3 SCH |
| <p>This course covers the role of communication in the business environment and focuses on the most effective methods for creating, sending, and receiving messages. This involves the use of effective oral and written communication skills and writing and evaluating business documents using the principles of correct style, organization, and format.</p> <p><b>Prerequisite(s):</b> CIS 100 and BUS 120 with a grade of C or higher, or permission of instructor</p>                                                                                                                                                                                                                                                                                                                                                      |                                 |               |       |
| <b>† BUS 126</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Introduction to Business</b> | ↳ SWT BUS1020 | 3 SCH |
| <p>This course is a foundation course on business and its importance in a free market economy and includes a study of types of business ownership and operations. Business terminology is used to understand and interpret business news and information.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                 |               |       |

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| <b>ℱ BUS 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Records &amp; Information Management</b>  |               | 3 SCH   |
| <p>Instruction in the creation, maintenance, protection, and disposition of records stored in a variety of media forms. Instruction will include the ARMA (Association for Records Managers and Administrators, Inc.) rules for filing, retrieving documents, and specialized functions such as micrographics and optical disc technology. Also included are laws relating to records management.</p> <p><b>Prerequisite(s):</b> CIS100 with a grade of C or higher</p>                                                                             |                                              |               |         |
| <b>ℱ BUS 159</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Principles of Marketing</b>               |               | 3 SCH   |
| <p>This course provides an introduction to marketing and examines the importance of marketing within the field of business with an emphasis on consumer buying behavior, marketing research, market segmentation, targeting strategies, positioning products, the marketing mix, the external environment, legal and ethical issues, and the strategic marketing planning process.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                          |                                              |               |         |
| <b>BUS 185</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Business Ethics &amp; Human Relations</b> |               | 3 SCH   |
| <p>This course introduces contemporary and controversial ethical issues facing the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. The course emphasizes employability skills such as communication, work habits and attitudes, ethics, conflict management, motivation and problem solving, self-concept, perception, self-awareness, personality, values, and communications.</p> <p><b>Prerequisite(s):</b> None</p>               |                                              |               |         |
| <b>BUS 190</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Leadership Development</b>                | ℳ SWT BUS2010 | 3 SCH   |
| <p>Students will analyze personal strengths, styles, and preferences that contribute to leadership as well as explore, apply, and reflect on the basic concepts of leadership. Topics include ethics, diversity, inclusion, and leadership in business and community settings. The course emphasizes employability skills such as work habits and attitudes, ethics, conflict management, motivation and problem solving, self-concept, perception, self-awareness, personality, values, and communication.</p> <p><b>Prerequisite(s):</b> None</p> |                                              |               |         |
| <b>ℱ BUS 199</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Business Internship</b>                   |               | 1-3 SCH |
| <p>Business Internship will give students an opportunity to work in a business or governmental agency to apply competencies achieved in previous courses to current office conditions. Each student will be evaluated by the instructor and the supervisor in the office.</p> <p><b>Prerequisite(s):</b> Completion of 20 program credit hours with 3.0 or higher GPA and permission of advisor</p>                                                                                                                                                 |                                              |               |         |
| <b>ℱ BUS 210</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Workstation Management</b>                |               | 3 SCH   |
| <p>This course is a study of computer components, software, and usage. Instruction will include troubleshooting software problems, preparing proposals for system purchases, performing Internet research, and safeguarding integrity of system components.</p> <p><b>Prerequisite(s):</b> CIS100 with a grade of C or higher</p>                                                                                                                                                                                                                   |                                              |               |         |
| <b>ℱ BUS 220</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Administrative Procedures</b>             |               | 3 SCH   |
| <p>Study of current office procedures including the work environment, workplace technologies, written communication, and customer service skills.</p> <p><b>Prerequisite(s):</b> CIS100 with a grade of C or higher</p>                                                                                                                                                                                                                                                                                                                             |                                              |               |         |
| <b>ℱ BUS 255</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Principles of Management</b>              | ℳ SWT BUS2020 | 3 SCH   |
| <p>This course teaches the basic components of management: planning, organizing, leading, and controlling. The course will focus on the fundamentals of management as they are practiced today.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                             |                                              |               |         |

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| <b>BUS 290</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Business Capstone</b>                         |               | 1 SCH |
| <p>This course is designed for student reflection of workplace skills relevant to a student's chosen area of study. Student evaluation of the skills used and enhanced through the completion of course projects will be presented through the development of a professional portfolio used for their personal marketing. The portfolio is comprised of a letter of introduction, resume, and samples of student work. Course topics also include work ethic, attitude, and communication skills. These topics are presented through in-class exercises, guest speakers, and business tours. End-of-program certification is earned through a third-party certification program: Office Proficiency Assessment Certification (OPAC).</p> <p><b>Prerequisite(s):</b> EMP 1901, or concurrent</p> |                                                  |               |       |
| <b>CC 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Introduction to Computing</b>                 |               | 3 SCH |
| <p>An overview of the history of computers and programming. Famous historical figures and their impact in modern computing. Introduction to major topics in computer science such as artificial intelligence, high performance computing, cryptography, big data, cybersecurity, robotics, and more. Brief experience with computer programming concepts.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                               |                                                  |               |       |
| <b>CC 210</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Fundamental Computer Programming Concepts</b> |               | 4 SCH |
| <p>Basic concepts in developing computer programs: program structure and syntax, primitive data types, variables, control flow, iteration, simple algorithms, debugging, and good software development practices. Introduction to object-oriented programming.</p> <p><b>Prerequisite/Co-requisite:</b> CC 110 Introduction to Computing</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                  |               |       |
| <b>CHM 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Introduction to Chemistry</b>                 | ↳ SWT CHM1030 | 5 SCH |
| <p>This course will enable students to understand the scientific method, improve knowledge of basic math skills, work with scientific materials, and apply scientific reasoning to real world problems. Application will be made by relating structure and behavior of matter to its function in health and life.</p> <p><b>Prerequisite(s):</b> High school Algebra with "C" or higher</p>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |               |       |
| <b>CHM 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Chemistry I</b>                               | ↳ SWT CHM1010 | 5 SCH |
| <p>Chemistry 1 is a five-credit hour course that covers topics including scientific measurement, the scientific method, atomic theory, properties of matter, stoichiometry, reactions in aqueous solution, chemical bonding, acids, bases, and pH, thermochemistry, gases, introductory nuclear chemistry, and introductory organic and biochemistry. An emphasis will be made on relating chemistry to health and life. Lab is included with the course.</p> <p><i>CHM110A and CHM110B are equivalent to SWT CHM1010</i></p> <p><b>Prerequisite(s):</b> Secondary Chemistry or Introduction to Chemistry (CHM105); and Secondary Algebra or Beginning Algebra (MAT 108) within five years with a C or better, or permission of the instructor.</p>                                             |                                                  |               |       |
| <b>CHM 230</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Chemistry II</b>                              | ↳ SWT CHM1020 | 5 SCH |
| <p>This course will enable students to understand the scientific method, improve knowledge of basic math skills, work with scientific materials and apply scientific reasoning to real world problems. Application will be made by relating structure and behavior of matter to its function in health and life. Topics covered will include colligative properties, chemical kinetics, equilibrium, thermodynamics, electrochemistry, coordination chemistry, organic chemistry, biochemistry, and nuclear and radiochemistry.</p> <p><b>Prerequisite(s):</b> CHM 110 Chemistry I</p>                                                                                                                                                                                                          |                                                  |               |       |
| <b>CIS 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Software Applications</b>                     | ↳ SWT CSC1010 | 3 SCH |
| <p>This course will enable students to work with application software in a career setting or for personal use. Using a project-based approach, students develop an introductory-level competency in word processing, spreadsheet, database, and presentation software. Computer concepts are covered as well.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                  |               |       |

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| <b>CIS 104</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Graphic Design</b>          | 3 SCH |
| <p>This course introduces students to the principles and practices of graphic design, combining creativity with technology to communicate ideas visually. Students will explore elements of design such as color, typography, layout, and composition while learning to use industry-standard software like Adobe Illustrator and Photoshop to develop quality products. Students will gain an understanding of design in real-world contexts, including marketing, advertising, and digital media.</p> <p><b>Prerequisite(s):</b> None</p> |                                |       |
| <b>CIS 116</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Spreadsheet Management</b>  | 2 SCH |
| <p>This course covers intermediate-level concepts of spreadsheet software. Using typical business scenarios, the student will perform “what-if” analyses, manage data in worksheets with tables and database functions, and use multiple worksheets to build consolidated statements. The applications and principles learned in this course are relevant to any career field.</p> <p><b>Prerequisite(s):</b> CIS100 Software Applications with a grade of C or higher</p>                                                                  |                                |       |
| <b>CIS 121</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Word Processing</b>         | 2 SCH |
| <p>This course covers intermediate-level concepts of word processing software. Using typical business scenarios, the student will create documents containing graphical elements such as tables, columns, and SmartArt. Automated features such as merge applications and use of building blocks will be used. The applications and principles learned in this course are relevant to any career field.</p> <p><b>Prerequisite(s):</b> CIS100 Software Applications with a grade of C or higher</p>                                         |                                |       |
| <b>† CIS 126</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Database Management</b>     | 2 SCH |
| <p>Database Management includes designing and creating a database; changing and deleting records; creating forms and reports, including custom forms and reports; changing structures; building relationships and lookup fields; using query wizards and advanced query techniques; and macros.</p> <p><b>Prerequisite(s):</b> CIS100 Software Applications with a grade of C or higher</p>                                                                                                                                                 |                                |       |
| <b>† CIS 150</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Web Page Applications</b>   | 3 SCH |
| <p>Web Page Applications includes planning and designing a web page, using both HTML and specialized software, working with templates, editing features, creating forms, using frames, and providing knowledge in the maintenance of web sites.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                     |                                |       |
| <b>CIS 155</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Integrated Applications</b> | 2 SCH |
| <p>Integrated Applications takes students’ baseline software skills to increased proficiency. Word processing, spreadsheet, database, presentation, and desktop publishing software will be integrated to complete real-world projects. Cloud computing will be utilized.</p> <p><b>Prerequisite(s):</b> CIS 116 Spreadsheet Management, CIS 121 Word Processing, and CIS 126 Database Management, each with a grade of C or higher</p>                                                                                                     |                                |       |
| <b>COM 101</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Composition Workshop</b>    | 1 SCH |
| <p>This class will review writing skills to include punctuation, capitalization, and grammar. It also focuses on preparing students for success in college classes with activities like learning styles, note-taking, time management and more.</p> <p><b>Prerequisite(s):</b> Co-requisite: English Composition I (COM 105) or Technical Writing (COM 110) based on placement guidelines or permission of instructor.</p>                                                                                                                  |                                |       |

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| <b>COM 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>English Composition I</b>                      | ▸ SWT ENG1010 | 3 SCH |
| English Composition I is an introduction to expository writing emphasizing expression of ideas, structure, organization, development, and grammatical correctness. The course offers practice in researching, revising, and editing.                                                                                                                                                                                                                                               |                                                   |               |       |
| <b>Prerequisite(s):</b> Meet placement guidelines; Co requisite: COM 101 Composition Workshop if placement guidelines not met                                                                                                                                                                                                                                                                                                                                                      |                                                   |               |       |
| <b>COM 106</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>English Composition II</b>                     | ▸ SWT ENG1020 | 3 SCH |
| This course provides the students opportunities to practice organizing and writing research-based papers highlighting critical thinking. Library and research skills will be emphasized.                                                                                                                                                                                                                                                                                           |                                                   |               |       |
| <b>Prerequisite(s):</b> COM 105 with a grade of C or higher                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                   |               |       |
| <b>COM 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Technical Writing</b>                          |               | 3 SCH |
| This course is an introduction to professional and technical writing used in the workplace. The class offers practice in document design and editing. The types of correspondence include memos, letters, e-mail, reports, and instructional manuals. The course will focus on clarity, conciseness, document design, organization, audience recognition, audience involvement and accuracy. Collaboration and teamwork is stressed. Presentations will be practiced during class. |                                                   |               |       |
| <b>Prerequisite(s):</b> Meet placement guidelines                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                   |               |       |
| <b>COM 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Public Speaking</b>                            | ▸ SWT COM1010 | 3 SCH |
| This course is an elementary course in the study and practice of the basic principles of speech and interpersonal communication with emphasis on critical thinking, the creative and intelligent selection of material, organization and oral presentation.                                                                                                                                                                                                                        |                                                   |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   |               |       |
| <b>COM 116</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Interpersonal Communications</b>               | ▸ SWT COM1020 | 3 SCH |
| Interpersonal Communications is a course that emphasis verbal and non-verbal communication between and among individuals and small groups. Both personal and professional communication will be studied.                                                                                                                                                                                                                                                                           |                                                   |               |       |
| <b>Prerequisite(s):</b> Meet placement guidelines                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                   |               |       |
| <b>CSS 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Introduction to Computers and Applications</b> |               | 3 SCH |
| This course serves as an introduction to computer concepts and will teach students to use computers for basic tasks. This course will also introduce students to information technology concepts to prepare students for the CompTIA Tech+ exam.                                                                                                                                                                                                                                   |                                                   |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   |               |       |
| <b>CSS 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>CompTIA A+ Core 1</b>                          |               | 3 SCH |
| This course offers training in essential hardware and networking technology concepts necessary for supporting computer systems. Students will develop a foundational understanding of mobile devices, networking basics, computer hardware components, cloud computing and virtualization, and hardware troubleshooting methodology.                                                                                                                                               |                                                   |               |       |
| <b>Prerequisite(s):</b> CSS 100                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |               |       |
| <b>CSS 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>CompTIA A+ Core 2</b>                          |               | 3 SCH |
| This course offers training in computer software, operating systems, security, and operational procedures. Building on A+ Core 1 concepts (hardware and networking), students will develop a complete foundation for computer support competencies.                                                                                                                                                                                                                                |                                                   |               |       |
| <b>Prerequisite(s):</b> CSS 100, 105                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                   |               |       |

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| <b>CSS 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>CompTIA Network+</b>                   | 6 SCH |
| <p>This course provides training covering networking competencies required for success in the computer support field. Students will be equipped with the knowledge and hands-on skills required to design, implement, manage, and troubleshoot wired and wireless networks. Students will explore core networking concepts, enabling them to configure network devices, implement security measures, and successfully and systematically troubleshoot network problems.</p> <p><b>Prerequisite(s):</b> CSS 100, 105, 110</p>                                                                                                                                                                              |                                           |       |
| <b>CSS 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Computer Helpdesk Fundamentals</b>     | 2 SCH |
| <p>This course will equip students with essential service and support skills for customer support IT roles, emphasizing effective communication and problem solving. Students will hone their skills to troubleshoot technical issues, assess user needs, and communicate clearly. Students will be prepared to deliver professional user support in a variety of computer support environments.</p> <p><b>Prerequisite(s):</b> CSS 100, 105, 110, 115</p>                                                                                                                                                                                                                                                |                                           |       |
| <b>CSS 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Computer Programming and Scripting</b> | 3 SCH |
| <p>This course will build foundational skills in students in the areas of computer programming and scripting, with a focus on practical problem-solving. Students will learn to write, test, and debug basic programs, while also exploring scripting techniques for task automation and system interaction. Through hands-on projects and real-world scenarios, learners will gain experience designing solutions and selecting appropriate tools for various computing tasks.</p> <p><b>Prerequisite(s):</b> CSS 100, 105, 110, 115, 120</p>                                                                                                                                                            |                                           |       |
| <b>CSS 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>CompTIA Security+</b>                  | 3 SCH |
| <p>This course introduces students to foundational and advanced cybersecurity principles through applicable hands-on learning. This course covers threat identification, risk management, and the implementation of security controls across networks and systems. Students will gain practical experience in configuring firewalls, responding to incidents, and designing resilient security schemes.</p> <p><b>Prerequisite(s):</b> CSS 100, 105, 110, 115, 120, 125</p>                                                                                                                                                                                                                               |                                           |       |
| <b>CSS 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>CompTIA Server+</b>                    | 6 SCH |
| <p>This course teaches students the essential skills required to install, manage, secure, and troubleshoot physical and virtual servers in modern IT environments. Students will work hands-on with server hardware, operating systems, virtualization, and disaster recovery strategies. Real world scenarios will be taught, involving on premise, hybrid, and cloud infrastructures.</p> <p><b>Prerequisite(s):</b> CSS 100, 105, 110, 115, 120, 125, 130</p>                                                                                                                                                                                                                                          |                                           |       |
| <b>CSS 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Internet of Things (IoT)</b>           | 3 SCH |
| <p>This course introduces students to the foundational concepts and technologies of the Internet of Things (IoT), emphasizing both practical implementation and security. Students will explore how IoT connects devices, data, and people. Students will gain experience configuring devices, analyzing data, and applying security protocols. Through real-world scenarios students will develop the skills to design, deploy, and protect various IoT systems.</p> <p><b>Prerequisite(s):</b> CSS 100, 105, 110, 115, 120, 125, 130, 135</p>                                                                                                                                                           |                                           |       |
| <b>† CST 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Introductory Craft Skills</b>          | 3 SCH |
| <p>The Introductory Craft Skills course provides instruction on basic construction skills through NCCER Core: Introduction to Basic Construction Skills curriculum. The included NCCER Core modules prepare individuals for entry-level positions on project sites by providing a basic understanding of a career in the construction industry, safety, construction math, and hand and power tools. Students taking this course, combined with the Construction Basics course, will be prepared to take and pass the Core: Introduction to Basic Construction Skills exam to earn the NCCER Core credential. All content is from NCCER Core 6th edition modules.</p> <p><b>Prerequisite(s):</b> None</p> |                                           |       |

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| <b>† CST 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Construction Basics</b>                       | 3 SCH |
| <p>The Construction Basics course provides instruction on basic construction skills through NCCER Core: Introduction to Basic Construction Skills curriculum. The included NCCER Core modules prepare individuals for entry-level positions on project sites by providing the basic instruction and hands-on training in construction drawings, basic rigging, communication skills, employability skills, and materials handling. Students taking this course, combined with the Introductory Craft Skills course, will be prepared to take and pass the Core: Introduction to Basic Construction Skills exam to earn the NCCER Core credential.</p> <p><b>Prerequisite(s):</b> None</p>                            |                                                  |       |
| <b>† CST 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Concrete</b>                                  | 4 SCH |
| <p>This course introduces students to the fundamental principles and practices of concrete construction. The course covers a wide range of topics, including: Concrete Materials, Mix Design, Formwork, Placement and Finishing, Curing, Reinforcement, Safety Practices.</p> <p><b>Prerequisite(s):</b> CST 100; CST 105 and CST 110 both with a grade of "C" or higher</p>                                                                                                                                                                                                                                                                                                                                         |                                                  |       |
| <b>† CST 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Carpentry I</b>                               | 3 SCH |
| <p>The Carpentry I course helps learners to build general carpentry skills through NCCER General Carpentry curriculum. The included NCCER General Carpentry modules prepare individuals for entry-level positions on project sites by providing instruction and hands-on training for an orientation to the carpentry trade, building materials and fasteners, construction plans &amp; documents, and site and building layout. Students taking this course, combined with the Carpentry II course, will be prepared to take and pass the General Carpentry exam to earn the NCCER General Carpentry credential.</p> <p><b>Prerequisite(s):</b> CST 100; CST 105 and CST 110 both with a grade of "C" or higher</p> |                                                  |       |
| <b>† CST 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Occupational Work Experience I</b>            | 2 SCH |
| <p>This course will provide students with practical experience in a workplace setting.</p> <p><b>Prerequisite(s):</b> CST 100; CST 105 and CST 110 both with a grade of "C" or higher</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                  |       |
| <b>† CST 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Carpentry II</b>                              | 6 SCH |
| <p>The Carpentry II course helps learners to build general carpentry skills through NCCER General Carpentry curriculum. The included NCCER General Carpentry modules prepare individuals for positions on project sites by providing instruction and hands-on training on the components and construction systems for floors, walls, roof framing, stairs, and building envelope. Students taking this course, combined with the Carpentry I course, will be prepared to take and pass the General Carpentry exam to earn the NCCER General Carpentry credential.</p> <p><b>Prerequisite(s):</b> CST 115, CST 120, CST 125 all with a grade of "C" or higher</p>                                                     |                                                  |       |
| <b>† CST 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>NCCER Advanced Carpentry Frame and Finish</b> | 3 SCH |
| <p>This course is designed to provide the student with an advanced knowledge of construction techniques and procedures. It is designed with 4 modules, with written and performance testing of each. Closer attention is given to the envelopment of a structure and the installation of interior products.</p> <p><b>Prerequisite(s):</b> CST 115, CST 120, CST 125 all with a grade of "C" or higher</p>                                                                                                                                                                                                                                                                                                           |                                                  |       |
| <b>† CST 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Interior Systems</b>                          | 4 SCH |
| <p>This class will cover interior wall and ceiling systems in commercial construction.</p> <p><b>Prerequisite(s):</b> CST 130, CST 135 both with a grade of "C" or higher</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                  |       |
| <b>† CST 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Occupational Work Experience II</b>           | 2 SCH |
| <p>This course will provide students with practical experience in a workplace setting.</p> <p><b>Prerequisite(s):</b> CST 115, CST 120, CST 125 all with a grade of "C" or higher</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |       |

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| <b>† DFT 103</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Fundamentals of Drafting</b>                        | 3 SCH |
| <p>Basic concepts and skills of mechanical drawing using conventional, computer-aided drafting, and use and knowledge of tool, supplies, and equipment. Mechanical drafting fundamentals, using conventional drafting, will be presented, along with an explanation of standard drafting practices. Topics covered will include drafting equipment, media, sketching, lettering and lines, geometric construction, multi-views, auxiliary views, sections, pictorials, and dimensioning. Practical and realistic math problems associated with drafting topics will also be covered. <b>Course only offered at secondary (High School) level.</b></p> <p><b>Prerequisite(s):</b> Articulated credit from high school, or students with CAD experience by instructor permission, or taken concurrently with first semester coursework.</p> |                                                        |       |
| <b>ECE 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Principles of Early Childhood Education</b>         | 3 SCH |
| <p>This course is an introductory course grounded in child development knowledge and the current and historical importance of early childhood education. This course is centered around the NAEYC Professional Preparation Standards.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                        |       |
| <b>ECE 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Early Childhood Program and Curriculum Planning</b> | 3 SCH |
| <p>This course presents an overview of observations and curriculum planning in early childhood development and education. Emphasis will be placed on appropriate objective methods for observing and recording children's behavior in group setting. Strategies for observing while fulfilling the role of the teacher will be addressed. This course will also discuss skills necessary to plan a developmentally appropriate curriculum, including organizing space and time, facilitating daily routines and transitions, creating structured group time experiences, and planning for diverse early childhood classrooms. Students will be introduced to the Kansas Early Learning Standards and the Kansas Core Competencies.</p> <p><b>Prerequisite(s):</b> None</p>                                                                |                                                        |       |
| <b>ECE 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Child Health, Safety and Nutrition</b>              | 3 SCH |
| <p>This course will enable the student to demonstrate an understanding of the basic factors which affect the health, safety and nutrition of young children. Current state regulations and national standards will be examined.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                        |       |
| <b>ECE 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Infant and Toddler Care and Education</b>           | 3 SCH |
| <p>This course includes the study of infant and toddler development with emphasis on how to create and maintain developmentally appropriate environments for children aged birth through thirty-six months. Supporting and engaging families and communities through respectful, reciprocal relationships will be an integral part of the course.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                        |       |
| <b>ECE 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Observing and Interacting with Young Children</b>   | 3 SCH |
| <p>This course is a study of the role of observation to assess and monitor the development and learning of, and the appropriate techniques for interacting with, young children.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                        |       |
| <b>ECE 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Child Care Practicum I</b>                          | 3 SCH |
| <p>This course is designed to provide students with the opportunity to use concepts of observation and evaluation. Students will demonstrate knowledge of Kansas Statutes and Regulations for licensing family childcare homes. Students will create lesson plans based on developmentally appropriate curriculum for children in a family childcare setting.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                        |       |

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| <b>ECE 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Teaching Young Children with Special Needs</b> | 3 SCH |
| <p>Young Children with Special Needs defines an inclusive approach to early education. It defines inclusive programs for young children, focusing on research-based, family-centered and multicultural practices. Students focus on the educator's role in designing and accessing educational resources for exceptional children within the context of collaboration and inclusion. Students will learn the importance of respecting the inherent worth and dignity of the child and the family. The course prepares students for the process of assessment of young children and the importance of early identification of disabilities. Students are introduced to the Individualized Family Service Plan (IFSP), the Individualized Education Program (IEP) and requirements for a 504 Plan.</p> <p><b>Prerequisite(s):</b> ECE 100</p> |                                                   |       |
| <b>ECE 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Building Family and Community Relations</b>    | 3 SCH |
| <p>This course will distinguish and discuss the complex characteristics of children's families and communities in a diverse society. Students will understand and create respectful, reciprocal relationships that support, value, and empower all families to be involved in their children's development and learning.</p> <p><b>Prerequisite(s):</b> ECE 100</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |       |
| <b>ECE 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Early Childhood Language and Literacy</b>      | 3 SCH |
| <p>In this course, students will be introduced to language and literacy development in young children. Students will explore the beginnings of communication and its influence on development from infancy to preschool. The course will offer opportunities for students to be introduced to strategies for working with second-language learners, partnering with families, and recognizing types of communication delays. Students will gain knowledge and skills in achieving language and literacy goals through program planning. The course will allow students the opportunity to learn about children's literature and how to select books for a variety of language and literacy learning activities for young children.</p> <p><b>Prerequisite(s):</b> ECE 100</p>                                                               |                                                   |       |
| <b>ECE 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Creative Experiences for Young Children</b>    | 3 SCH |
| <p>This course is a study of constructing and maintaining an environment for young children that fosters aesthetic sensitivity and creativity. Creative activities include visual arts, dance, music, and dramatic play. The course will focus on the selection, construction, and use of materials, activities, and experiences that encourage the young child's creativity encompassing all developmental domains and curricular areas.</p> <p><b>Prerequisite(s):</b> ECE 100</p>                                                                                                                                                                                                                                                                                                                                                        |                                                   |       |
| <b>ECE 150</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Child Care Administration</b>                  | 3 SCH |
| <p>This course is designed to give the student knowledge of the operations and management of early childhood care and education programs. The course will enable students to maintain budgets, implement the administration and organization of early childhood care and education programs.</p> <p><b>Prerequisite(s):</b> ECE 100</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                   |       |
| <b>ECE 155</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Child Care Practicum 2</b>                     | 3 SCH |
| <p>This course is designed to provide students with the opportunity to use concepts of observation and evaluation. Students will demonstrate knowledge of Kansas Statutes and Regulations for licensing family childcare facilities. Students will create lesson plans based on developmentally appropriate curriculum for children in childcare classroom settings.</p> <p><b>Prerequisite(s):</b> ECE 100, ECE 125</p>                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |       |
| <b>ELT 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>AC/DC Circuits I</b>                           | 4 SCH |
| <p>AC/DC circuits address the basics of direct and alternating current circuits.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |       |

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| <b>ELT 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>National Electrical Code I</b>      | 4 SCH |
| An introductory course on the use of and interpretation of the current national electric code (NEC chapters 1-4).                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                        |       |
| <b>ELT 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Residential Wiring I</b>            | 4 SCH |
| An introductory course on residential wiring methods that includes practical applications and hands-on experience in implementing code requirements.                                                                                                                                                                                                                                                                                                                                                                                  |                                        |       |
| <b>Prerequisite(s):</b> OSA 100, ELT 105, ELT 110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |       |
| <b>ELT 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Occupational Work Experience I</b>  | 2 SCH |
| Occupational Work Experience is a hands-on, field-based course designed to provide students with real-world experience in the electrical trade. Students will engage in a variety of tasks related to electrical installation, maintenance, troubleshooting, and safety protocols, and gain exposure to industry-specific tools, equipment, and procedures. This course allows students to develop their professional skills, work ethic, and communication abilities in preparation for a successful career in the electrical field. |                                        |       |
| <b>Prerequisite(s):</b> OSA 100, ELT 105                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |       |
| <b>ELT 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Print Reading</b>                   | 2 SCH |
| Students learn to read specification manuals and prints as applied to residential, commercial, and industrial buildings.                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |       |
| <b>Prerequisite(s):</b> ELT 115, ELT 120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |       |
| <b>ELT 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>National Electrical Code II</b>     | 4 SCH |
| A continuation of the National Electrical Code I course on the use and interpretation of the current national electrical code (NEC Chapters 5-9).                                                                                                                                                                                                                                                                                                                                                                                     |                                        |       |
| <b>Prerequisite(s):</b> ELT 115, ELT 120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |       |
| <b>ELT 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Commercial Wiring I</b>             | 4 SCH |
| An introductory course on commercial wiring methods that includes practical applications and hands-on experience in implementing code requirements.                                                                                                                                                                                                                                                                                                                                                                                   |                                        |       |
| <b>Prerequisite(s):</b> ELT 125, ELT 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |       |
| <b>ELT 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Journeyman's Exam Preparation</b>   | 4 SCH |
| Journeyman's Exam Prep is a comprehensive course designed to prepare students for the National Electrical Code (NEC) Journeyman's Exam. This course provides in-depth coverage of the critical aspects of the NEC that are essential for electrical professionals seeking certification as journeymen. The course will focus on applying the NEC in practical, real-world scenarios, reviewing key articles, sections, and concepts that will be tested on the exam.                                                                  |                                        |       |
| <b>Prerequisite(s):</b> ELT 125, ELT 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |       |
| <b>ELT 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Occupational Work Experience II</b> | 2 SCH |
| Occupational Work Experience is a hands-on, field-based course designed to provide students with real-world experience in the electrical trade. Students will engage in a variety of tasks related to electrical installation, maintenance, troubleshooting, and safety protocols, and gain exposure to industry-specific tools, equipment, and procedures. This course allows students to develop their professional skills, work ethic, and communication abilities in preparation for a successful career in the electrical field. |                                        |       |
| <b>Prerequisite(s):</b> ELT 120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |       |

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| <b>EMP 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>mikeroweWorks Work Ethic Certification</b>         | 1 SCH |
| <p>The mikeroweWorks Work Ethic Certification course is designed to instill and reinforce the core values of a strong work ethic, personal responsibility, delayed gratification, and a positive attitude as described by Mike Rowe. These principles are encapsulated in the S.W.E.A.T. Pledge, which stands for "Skill &amp; Work Ethic Aren't Taboo." This certification is currently administered through NC3 (National Coalition of Certification Centers). Students who successfully complete the program will receive an industry-recognized NC3 certificate.</p> <p><b>Prerequisite(s):</b> None</p> |                                                       |       |
| <b>EMP 1901</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Global Employment Standards</b>                    | 1 SCH |
| <p>This course is a study of professional workplace behavior; development of personal, educational, and professional career goals; and understanding of effective job-seeking skills. Also included is an overview of laws relating to labor relations, contracts, and personnel matters. Students completing a certificate or an AAS degree will complete this course near the end of their program of study.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                       |                                                       |       |
| <b>† EPD 103</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Basic Electricity</b>                              | 1 SCH |
| <p>This course is a self-paced training course with interactive audiovisual content, including animations, and product simulations. These animations and simulations create a user-friendly way to gain knowledge about basic concepts, materials, and terms related to electricity.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                 |                                                       |       |
| <b>† EPD 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Climbing Skills</b>                                | 4 SCH |
| <p>The student must master climbing wood pole structures with the use of a pole safety strap. Upon successful completion of this course, the student will be qualified in two methods of pole top rescue.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                            |                                                       |       |
| <b>† EPD 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Pole Framing &amp; Construction Specifications</b> | 4 SCH |
| <p>Introduction to Rural Electric Association line construction specifications and knowledge of pole framing on the ground and aerial framing. The student will gain a working knowledge of 7200 volt, 14,400 volt and 34,500 volt primary distribution systems. The student will also be introduced to copper and aluminum primary conductors and line staking.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                     |                                                       |       |
| <b>† EPD 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Equipment Operation</b>                            | 3 SCH |
| <p>Mastery of safe operation of various digger/derrick trucks, bucket/basket aerial platforms and trenchers commonly used in overhead and underground electric distribution work. The student will safely operate and perform routine maintenance and inspection on all units.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                       |                                                       |       |
| <b>† EPD 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Setting &amp; Replacing Poles</b>                  | 1 SCH |
| <p>Theory in pole setting and change-out techniques. Emphasis is placed on setting and replacing poles in energized lines with digger/derrick trucks. The student will also gain a working knowledge of the proper use of cover-up material, both hard shell and rubber goods; vehicle grounding practices; manual pole setting; temporary pole supports; and worksite hazard analysis.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                              |                                                       |       |

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|-----------------|--------------------------------------------|-------|
| <b>EPD 1376</b> | <b>Transformer Theory and Installation</b> | 6 SCH |
|-----------------|--------------------------------------------|-------|

This course is an introduction to basic electricity, related math, and transformer theory with hands-on experience in the installation and connection of single transformers and various three-phase transformer banks. This course will also provide the student with experience in installation and connection of single phase and three-phase banks. Other topics addressed are transformer over voltage current protection; equipment grounding; cutout and lightning arrestor installation; current transformer applications; use of Voltage Ohm Meter (VOM); and basic troubleshooting techniques are also practiced.

**Prerequisite(s):** None

|                |                                            |       |
|----------------|--------------------------------------------|-------|
| <b>EPD 140</b> | <b>Service Installation &amp; Metering</b> | 4 SCH |
|----------------|--------------------------------------------|-------|

Working knowledge of single- and three-phase watt hour meter applications with practical experience in the installation and sizing of service conductors, construction and installation of meter loops and poles, instrument metering, and temporary service installations. Tampering and power theft, grounding and safe work practices are also covered.

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

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|----------------|--------------------------------------------|-------|
| <b>EPD 145</b> | <b>Conductor Installation &amp; Repair</b> | 4 SCH |
|----------------|--------------------------------------------|-------|

Working knowledge of single- and three-phase watt hour meter applications with practical experience in the installation and sizing of service conductors, construction and installation of meter loops and poles, instrument metering, and temporary service installations. Tampering and power theft, grounding and safe work practices are also covered.

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

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|----------------|------------------------------------------------|-------|
| <b>EPD 150</b> | <b>Rubber Gloving and Hot Sticking Methods</b> | 3 SCH |
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This course introduces students to methods of working on energized distribution lines and equipment with rubber gloves, sleeves, and hot sticks from off the pole and insulated aerial platforms. Students will gain a working knowledge of the application, care and use of hard shell covers, rubber line hoses and blankets, personal protective equipment, hot-line tools, and live-line maintenance. The course also reviews operation of bucket/basket aerial platforms and pole top and bucket rescue techniques.

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

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|----------------|---------------------------------|-------|
| <b>EPD 160</b> | <b>Underground Distribution</b> | 3 SCH |
|----------------|---------------------------------|-------|

Working knowledge of Underground Residential Distribution (URD) with practical experience in the direct burial of primary and secondary cables; installation of 200 and 600 amp elbows, splices, lightning arrestors, and overhead terminations; installation of single-phase and three-phase padmount and transclosure transformer installations; methods of shoring and sloping trenches and excavations; troubleshooting of primary and secondary cables; and fault location. The student will also review the operation of trencher digging equipment and safe work practices and procedures, proper grounding techniques of padmount transformers and translosures.

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

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|----------------|-----------------------------------------|-------|
| <b>EPD 170</b> | <b>Fusing &amp; System Coordination</b> | 1 SCH |
|----------------|-----------------------------------------|-------|

This course is a study of various methods of system coordination, knowledge of oil circuit reclosures, sectionalizing, and the application of fuses where students will learn to install and operate single-phase and three-phase pole mount reclosures, substation fuses and reclosures, and gang operated air-break and load-break switches.

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

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|----------------|---------------------------------------------|-------|
| <b>EPD 180</b> | <b>Substations &amp; Voltage Regulation</b> | 4 SCH |
|----------------|---------------------------------------------|-------|

This course is a study of substations, capacitors, voltage regulators, auto-boosters; practical experience in substation grounding, inspections, substation maintenance; operation and installation of high side fuses, power transformers, substation buswork, and transfer switches; methods of voltage regulation, and Supervisory Control and Data Acquisition (SCADA).

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

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This course provides practical work experience as an apprentice lineman with an operating utility and is completed between the first and second semesters. The student must spend at least eight clock hours in the computer learning center to develop his/her résumé prior to interviewing for internship placement.

**Prerequisite(s):** EPD 103, 105, 110, 120, 125, 1376

**ESL 101****Beginning ESL Levels 7-8**

This course is for students who achieve NRS EFL 7, or 8 on the TABE CLAS-E assessment. This course helps develop basic skills for English language acquisition. This course is a pre-requisite for ESL 201. (NRS EFL – national reporting system; educational functioning level, TABE CLAS-E – test of adult basic education; complete language assessment system-English)

**Prerequisite(s):** None

**ESL 201****Beginning ESL Levels 9-10**

This course is for students who achieve NRS EFL 9, or 10 on the TABE CLAS-E assessment. This course helps develop intermediate skills for English language acquisition. This course is a pre-requisite for ESL 301. (NRS EFL – national reporting system; educational functioning level, TABE CLAS-E – test of adult basic education; complete language assessment system-English)

**Prerequisite(s):** None

**ESL 301****Advanced ESL Levels 11-12**

This course is for students who achieve NRS EFL 11, or 12 on the TABE CLAS-E Assessment. This course helps develop advanced skills for English language acquisition. This course is a pre-requisite for ESL 401. (NRS EFL – National Reporting System; Educational Functioning Level, TABE CLAS-E – Test of Adult Basic Education; Complete Language Assessment System-English)

**Prerequisite(s):** None

**ESL 401****ESL Transitions**

This course is for students who achieve higher than NRS EFL 12 on the TABE CLAS-E Assessment. This course helps students with advanced conversational skills for English Language acquisition. (NRS EFL – National Reporting System; Educational Functioning Level, TABE CLAS-E – Test of Adult Basic Education; Complete Language Assessment System-English)

**Prerequisite(s):** None

**GED 101****Adult Basic Education Levels 1-4**

This course is for students who achieve NRS EFL 1, 2, 3, or 4 on the TABE assessment; also known as adult basic education. This course prepares students to complete pre-GED coursework in preparation of the GED exams. This course is a pre-requisite for GED 201. (NRS EFL – national reporting system; educational functioning level, TABE – test of adult basic education, GED – general equivalency development/diploma)

**Prerequisite(s):** None

**GED 201****Adult Secondary Education Levels 5-6**

This course is for students who achieve NRS EFL 5, or 6 on the TABE Assessment: Also Known as Adult Secondary Education. This course prepares students to complete GED preparation coursework to assist a student achieve a higher score on all four GED Modules. (NRS EFL – National Reporting System; Educational Functioning Level, TABE – Test of Adult Basic Education, GED – General Equivalency Development/Diploma)

**Prerequisite(s):** None

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| <b>HIS 105</b>                                                                                                                                                                                                                                                                                                                                                   | <b>U.S. History to 1877</b>           | ↳ SWT HIS1010 | 3 SCH |
| This course will enable the student to gain knowledge of American History from the pre-Columbian era up to the Reconstruction period following the Civil War. Topics will include social, intellectual, political, and economic issues up to 1877.                                                                                                               |                                       |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                     |                                       |               |       |
| <b>HIS 106</b>                                                                                                                                                                                                                                                                                                                                                   | <b>U.S. History since 1877</b>        | ↳ SWT HIS1020 | 3 SCH |
| This course will enable the student to gain knowledge of American History from the end of the Reconstruction Period to present day. Topics will include social, political, and economic developments of the Reconstruction era, industrialization, immigration, reform movements, World Wars I and II, foreign policy, and social and cultural trends.           |                                       |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                     |                                       |               |       |
| <b>¶ HVA 1044</b>                                                                                                                                                                                                                                                                                                                                                | <b>HVAC Fundamentals</b>              |               | 4 SCH |
| This course in refrigeration is designed to include how mechanical refrigerators operate, heat and flow, temperature measurement, pressure, and states of matter, as well as the laws of refrigeration. Safety procedures will also be taught.                                                                                                                   |                                       |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                     |                                       |               |       |
| <b>¶ HVA 1104</b>                                                                                                                                                                                                                                                                                                                                                | <b>Electrical Fundamentals</b>        |               | 4 SCH |
| This course is an introduction to generation of electricity, types of electricity, direct and alternating current circuit fundamentals, magnetism, and electrical components.                                                                                                                                                                                    |                                       |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                     |                                       |               |       |
| <b>¶ HVA 120</b>                                                                                                                                                                                                                                                                                                                                                 | <b>Domestic Refrigeration</b>         |               | 3 SCH |
| This course includes terminology associated with domestic refrigeration, identification of types of domestic refrigeration, location of data plates and their purpose. Also covered will be sealed system components, what their function is and how they operate, as well as locating and solving problems in a domestic refrigerating system in a safe manner. |                                       |               |       |
| <b>Prerequisite(s):</b> HVA 103; HVA 1044 and HVA 1104 both with a grade of "C" or higher.                                                                                                                                                                                                                                                                       |                                       |               |       |
| <b>¶ HVA 130</b>                                                                                                                                                                                                                                                                                                                                                 | <b>Controls &amp; Motors</b>          |               | 3 SCH |
| This course includes terminology associated with motors. Student will learn the components of a motor. Students will apply the concept of start relays, start capacitors, and run capacitors. Students will be able to identify different types of motors and wire them.                                                                                         |                                       |               |       |
| <b>Prerequisite(s):</b> HVA 120, HVA 140, HVA 170 all with a grade of "C" or higher.                                                                                                                                                                                                                                                                             |                                       |               |       |
| <b>¶ HVA 135</b>                                                                                                                                                                                                                                                                                                                                                 | <b>Occupational Work Experience I</b> |               | 1 SCH |
| 120 clock hours (0 lecture/120 lab). This course integrates classroom study with paid-planned work experience in the public and private sector.                                                                                                                                                                                                                  |                                       |               |       |
| <b>Prerequisite(s):</b> HVA 103                                                                                                                                                                                                                                                                                                                                  |                                       |               |       |
| <b>¶ HVA 140</b>                                                                                                                                                                                                                                                                                                                                                 | <b>Heating System Fundamentals</b>    |               | 3 SCH |
| This course covers terminology associated with heating and humidification. Heating equipment covered will include, gas heating systems, hydronic heating, electric heating and oil heating. Also covered in this course will be humidification.                                                                                                                  |                                       |               |       |
| <b>Prerequisite(s):</b> HVA 103; HVA 1044 and HVA 1104 both with a grade of "C" or higher.                                                                                                                                                                                                                                                                       |                                       |               |       |

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| <b>† HVA 150</b>                                                                                                                                                                                                                                                                                                                                              | <b>Cooling</b>                         | 3 SCH |
| This course in cooling is designed to focus on operation, installation, and service procedures to complete air conditioning and heat pump systems. Safety procedures will also be taught.                                                                                                                                                                     |                                        |       |
| <b>Prerequisite(s):</b> HVA 120, HVA 140, HVA 170 all with a grade of "C" or higher.                                                                                                                                                                                                                                                                          |                                        |       |
| <b>† HVA 151</b>                                                                                                                                                                                                                                                                                                                                              | <b>Advanced Refrigeration</b>          | 3 SCH |
| Students will gain the knowledge of special refrigeration application systems, commercial ice machines, and the ability to troubleshoot and understand the sequence of operation and commercial systems.                                                                                                                                                      |                                        |       |
| <b>Prerequisite(s):</b> HVA 130, HVA 150 both with a grade of "C" or higher.                                                                                                                                                                                                                                                                                  |                                        |       |
| <b>HVA 161</b>                                                                                                                                                                                                                                                                                                                                                | <b>EPA 608</b>                         | 1 SCH |
| Students will gain the knowledge of refrigerant and oil chemistry and management, understand the recovery, recycling, reclaiming, and retrofitting methods that are required by EPA. Students will become 608 Universal certified in handling and purchasing refrigerants.                                                                                    |                                        |       |
| <b>Prerequisite(s):</b> HVA 120, 140, 170, all with a grade of "C" or higher                                                                                                                                                                                                                                                                                  |                                        |       |
| <b>† HVA 170</b>                                                                                                                                                                                                                                                                                                                                              | <b>Design &amp; Blueprint Reading</b>  | 3 SCH |
| This course in design and blueprint reading will enable students to learn to read plans and blueprints for new construction and be able to calculate loads for heating and cooling systems. Safety procedures will also be taught.                                                                                                                            |                                        |       |
| <b>Prerequisite(s):</b> HVA 103; HVA 1044 and HVA 1104 both with a grade of "C" or higher.                                                                                                                                                                                                                                                                    |                                        |       |
| <b>† HVA 181</b>                                                                                                                                                                                                                                                                                                                                              | <b>Commercial Refrigeration</b>        | 3 SCH |
| This course is the study of condensing units, condensers, refrigerant controls, evaporators, and other components used in commercial refrigeration systems as well as diagnosing, testing, servicing and repair of commercial equipment. Safety for the technician, customer, and equipment are also covered.                                                 |                                        |       |
| <b>Prerequisite(s):</b> HVA 130, HVA 150 both with a grade of "C" or higher.                                                                                                                                                                                                                                                                                  |                                        |       |
| <b>HVA 185</b>                                                                                                                                                                                                                                                                                                                                                | <b>Workplace Skills</b>                | 1 SCH |
| Students will develop good customer relations including problem solving, time management, and work ethic. They will learn to complete retail sales orders and will calculate sales tax and mark ups.                                                                                                                                                          |                                        |       |
| <b>Prerequisite(s):</b> HVA 130, HVA 150 both with a grade of "C" or higher.                                                                                                                                                                                                                                                                                  |                                        |       |
| <b>† HVA 198</b>                                                                                                                                                                                                                                                                                                                                              | <b>Occupational Work Experience II</b> | 1 SCH |
| Supervised work experience in the public and private sector.                                                                                                                                                                                                                                                                                                  |                                        |       |
| <b>Prerequisite(s):</b> HVA 135 with a grade of "C" or higher.                                                                                                                                                                                                                                                                                                |                                        |       |
| <b>† IMT 105</b>                                                                                                                                                                                                                                                                                                                                              | <b>AC/DC Circuits</b>                  | 4 SCH |
| AC/DC circuits address the basics of direct and alternating current circuits.                                                                                                                                                                                                                                                                                 |                                        |       |
| <b>Prerequisite(s):</b> OSA 100 OSHA 10 with a grade of C or higher.                                                                                                                                                                                                                                                                                          |                                        |       |
| <b>† IMT 110</b>                                                                                                                                                                                                                                                                                                                                              | <b>Mechanical Systems</b>              | 3 SCH |
| This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment, teaches basic industrial application of mechanical principles with emphasis on power transmission and specific mechanical components. Students will also design basic mechanical transmission systems using chains, v-belts and gears. |                                        |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                  |                                        |       |

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| <b>✦ IMT 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Mechanical Systems Reliability</b>       | 3 SCH |
| <p>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.</p> <p><b>Prerequisite(s):</b> IMT 100, IMT 105, IMT 110 all with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |       |
| <b>✦ IMT 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Introduction to Mechatronics</b>         | 3 SCH |
| <p>As an Introduction to Mechatronics, this course aims to relay foundational information and develop hands-on skills in the areas of Mechanical, Electrical, and Control Technology. Students will develop competencies to operate and maintain pneumatics, electricity, sensors, actuators, and controls. Utilizing real-world automation devices students will also gain additional skills in STEM (Science, Technology, Engineering, and Math). These skills that are at the core of automation, production, and manufacturing are in high demand. At the conclusion of the course, students will be prepared to enter into high levels of Mechatronics and Industry 4.0 training, as well as filling much needed career positions such as certified production technicians and/or operators.</p> <p><b>Prerequisite(s):</b> IMT 100, IMT 105, &amp; IMT 110 all with a grade of C or higher.</p> |                                             |       |
| <b>✦ IMT 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Programmable Logic Controllers (PLC)</b> | 3 SCH |
| <p>This course examines types, installation and troubleshooting of programmable logic controllers (PLC). Hardware and programming aspects, as well as ladder logic symbols and operations necessary to develop a PLC program are covered in this course.</p> <p><b>Prerequisite(s):</b> IMT 115, IMT 120 both with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                             |       |
| <b>✦ IMT 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Fluid Power I</b>                        | 3 SCH |
| <p>This course examines theory, applications and operation of industrial hydraulic and pneumatic systems. The inspection, maintenance and repair of the various components are covered in this course. Interpretation of the various schematic symbols used in hydraulic and pneumatic circuit diagrams will be discussed.</p> <p><b>Prerequisite(s):</b> IMT 115, IMT 120 both with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                             |       |
| <b>✦ IMT 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Fluid Power II</b>                       | 3 SCH |
| <p>"Pneumatics" course provides an in-depth understanding of pneumatic systems used in industrial applications. This course covers the fundamental principles of pneumatics, the design and operation of pneumatic systems, and the application of pneumatic technology in various industrial settings. Students will gain both theoretical knowledge and practical skills necessary to work with pneumatic systems effectively.</p> <p><b>Prerequisite(s):</b> IMT 115, IMT 120 both with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                                |                                             |       |
| <b>✦ IMT 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Fundamentals of Motor Control</b>        | 3 SCH |
| <p>This course introduces the fundamental principles and applications of motor controls. Students will learn about various types of motors, control systems, and practical techniques for designing and implementing motor control systems. Emphasis is placed on understanding the operation, control, and maintenance of different motor types.</p> <p><b>Prerequisite(s):</b> IMT 125, IMT 130, IMT 135 all with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                             |       |
| <b>✦ IMT 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Variable Speed Motor Control</b>         | 3 SCH |
| <p>This course provides a comprehensive introduction to variable speed motor control systems, focusing on the principles, configuration, and implementation of Variable Frequency Drives (VFDs), servo drives, and other speed control technologies. Students will learn how to design and apply variable speed control solutions to enhance motor performance, improve energy efficiency, and optimize system operation.</p> <p><b>Prerequisite(s):</b> IMT 125, IMT 130, IMT 135 all with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                               |                                             |       |

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| <b>IMT 150</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Industrial Process Control</b>   |                | 3 SCH |
| <p>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 controlled, programmable process heat controllers, transmitters, process loop test and operate system found in industrial application.</p> <p><b>Prerequisite(s):</b> IMT 115, IMT 120 all with a grade of C or higher</p>                                                                                                                                                                                                                                                  |                                     |                |       |
| <b>IMT 155</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Occupational Work Experience</b> |                | 4 SCH |
| <p>Occupational Work experience will give students an opportunity to work in a business, nonprofit or governmental employment setting and apply competencies achieved in previous courses. Students will acquire a sense of what the expectations are in the professional setting. Each student will be evaluated by the instructor and the supervisor in the employment setting.</p> <p><b>Prerequisite(s):</b> IMT 140, IMT 145, IMT 150 all with a grade of C or higher.</p>                                                                                                                                                                                                                                                     |                                     |                |       |
| <b>MAT 101</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Technical Mathematics I</b>      |                | 3 SCH |
| <p>This is an overview of mathematics course that focuses on technical applications. Topics include basic quantitative problem solving, algebra with technical applications, measurement, proportions, and geometry. This course is designed to provide students with the mathematical background necessary for entering technical career fields.</p> <p><b>Prerequisite(s):</b> Meet Placement Guidelines</p>                                                                                                                                                                                                                                                                                                                      |                                     |                |       |
| <b>MAT 109</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Technical Mathematics II</b>     |                | 3 SCH |
| <p>This is an algebra-based mathematics course that focuses on technical applications. Topics include graphing linear equations, systems of linear equations, polynomials, factoring polynomials, quadratic equations, right triangle trigonometry and trigonometry with any angle. This course is designed to provide students with the critical thinking needed for solving complex technical problems.</p> <p><b>Prerequisite(s):</b> Meet placement guidelines OR MAT 101 with a grade of "C" or higher OR MAT 108 with a grade of "C" or higher</p>                                                                                                                                                                            |                                     |                |       |
| <b>MAT 111</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Contemporary Math</b>            | ↳ SWT MAT 1040 | 3 SCH |
| <p>This course offers a survey of various mathematical topics for the non-math/science major. In addition to the study of the mathematical topics, the skills will be studied with an emphasis on real-world application spanning many disciplines to support the concept that math impacts much of our everyday lives. Topics may include algebra, geometry, probability and statistics, the real number system, and logic.</p> <p><b>Prerequisite(s):</b> Meet Placement Guidelines</p>                                                                                                                                                                                                                                           |                                     |                |       |
| <b>MAT 112</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Contemporary Math Recitation</b> |                | 2 SCH |
| <p>This course offers a corequisite survey of various mathematical topics for the non-math/science major. In addition to the study of the mathematical topics, the skills will be studied with an emphasis on real-world application spanning many disciplines to support the concept that math impacts much of our everyday lives. Topics may include algebra, geometry, probability and statistics, the real number system, and logic.</p> <p><b>Prerequisite(s):</b> Meet placement guidelines, Corequisite with MAT 111</p>                                                                                                                                                                                                     |                                     |                |       |
| <b>MAT 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>College Algebra</b>              | ↳ SWT MAT1010  | 3 SCH |
| <p>College Algebra is a comprehensive overview of the fundamental concepts of algebra. Topics include analyzing graphs of functions and equations (including symmetry, intercepts, left- and right- hand behavior, asymptotes and transformations); utilizing functional notation; determining the domain and range of a function; writing an equation that describes a function or a circle given its description; using graphs of functions for analysis; performing arithmetic combinations and compositions of functions; finding the inverse of a function; and solving equations, inequalities and systems of equations by various methods (including matrices).</p> <p><b>Prerequisite(s):</b> Meet Placement Guidelines</p> |                                     |                |       |

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| <b>MAT 136</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>College Algebra Recitation</b>             |               | 2 SCH |
| College Algebra is a comprehensive overview of the fundamental concepts of algebra. Topics include analyzing graphs of functions and equations (including symmetry, intercepts, left- and right- hand behavior, asymptotes and transformations); utilizing functional notation; determining the domain and range of a function; writing an equation that describes a function or a circle given its description; using graphs of functions for analysis; performing arithmetic combinations and compositions of functions; finding the inverse of a function; and solving equations, inequalities and systems of equations by various methods (including matrices). |                                               |               |       |
| <b>Prerequisite(s):</b> Meet Placement Guidelines. Corequisite with MAT 135                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               |               |       |
| <b>MAT 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Elementary Statistics</b>                  | ↳ SWT MAT1020 | 3 SCH |
| Elementary Statistics is an introductory study of the fundamentals of modern statistics and probability. The main topics covered include descriptive methods, inductive statistics, probability, estimation and tests of hypotheses, along with other topics as time allows.                                                                                                                                                                                                                                                                                                                                                                                        |                                               |               |       |
| <b>Prerequisite(s):</b> Meet Placement Guidelines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |               |       |
| <b>MAT 146</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Elementary Statistics Recitation</b>       |               | 2 SCH |
| Elementary Statistics is an introductory study of the fundamentals of modern statistics and probability. The main topics covered include descriptive methods, inductive statistics, probability, estimation and tests of hypotheses, along with other topics as time allows.                                                                                                                                                                                                                                                                                                                                                                                        |                                               |               |       |
| <b>Prerequisite(s):</b> Meet Placement Guidelines. Corequisite with MAT 145                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               |               |       |
| <b>MAT 155</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Trigonometry</b>                           | ↳ SWT MAT1030 | 3 SCH |
| Trigonometry courses prepare students for eventual work in calculus and typically include the following topics: trigonometric and circular functions; their inverses and graphs; relations among the parts of a triangle; trigonometric identities and equations; solutions of right and oblique triangles; and complex numbers.                                                                                                                                                                                                                                                                                                                                    |                                               |               |       |
| <b>Prerequisite(s):</b> MAT 135 College Algebra with a grade of "C" or higher                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                               |               |       |
| <b>MLT 1213</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Introduction to the Laboratory for MLT</b> |               | 3 SCH |
| This course covers organization of the medical laboratory, educational requirements of laboratory scientist and their duties, and awareness of the professional and accrediting agencies associated with the field of laboratory medicine. The course also presents the principles behind the practice of laboratory safety, operation of laboratory equipment, specimen collection through venipuncture and capillary puncture. Quality control/quality assurance, laboratory mathematics, instrumentation and microscopy are also addressed.                                                                                                                      |                                               |               |       |
| <b>Prerequisite(s):</b> None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |               |       |
| <b>MLT 2216</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>MLT Hematology/Coagulation</b>             |               | 6 SCH |
| This course presents the theory behind hematologic principles including the formation of blood cells, identification of normal and abnormal blood cells as they correlate to disease. Also included is the study of coagulation, the clotting and fibrinolytic mechanisms of the blood. Students will learn the theory and skills required to perform medical laboratory testing in Hematology and Coagulation.                                                                                                                                                                                                                                                     |                                               |               |       |
| <b>Prerequisite(s):</b> Admission to the MLT program or instructor approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               |               |       |
| <b>MLT 2303</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>MLT Urinalysis &amp; Body Fluids</b>       |               | 3 SCH |
| This course will provide the student with in-depth knowledge of the function of the kidney, urine formation, and the procedures utilized in performing a routine urinalysis and body fluid analysis. Correlation of abnormal findings and disease states will be discussed. Other body fluids included in this course are feces, seminal, amniotic, cerebrospinal, pleural, pericardial, and peritoneal. Discrimination between normal and abnormal findings and correlation of this knowledge to disease states will be included in the course material.                                                                                                           |                                               |               |       |
| <b>Prerequisite(s):</b> Admission to the MLT program or instructor approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               |               |       |

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| <b>MLT 2416</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>MLT Clinical Chemistry</b>      | 6 SCH                        |
| <p>This course will cover the physiology of the body and the biochemical reactions that are necessary for a healthy existence. The human condition is evaluated by biochemical shifts in different systems that maintain homeostasis during healthful periods. Basic interpretations of biochemistry and the concentration of enzymes, carbohydrates, lipids, proteins, electrolytes, blood gases, and therapeutic drug monitoring will be discussed. The student will perform routine clinical tests on biological fluids, maintain quality assurance records, and perform preventative maintenance on instrumentation.</p> <p><b>Prerequisite(s):</b> Admission to the MLT program or instructor approval</p>                                                                                                                                        |                                    |                              |
| <b>MLT 2503</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>MLT Immunology</b>              | 3 SCH                        |
| <p>This course presents the theory, practice, and clinical applications in the fields of immunology and serology. The student will perform routine serological tests and apply them to disease processes.</p> <p><b>Prerequisite(s):</b> Admission to the MLT program or instructor approval</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                    |                              |
| <b>MLT 2706</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>MLT Pathogenic Microbiology</b> | 6 SCH                        |
| <p>This course will survey microbiology as it is applicable to a clinical laboratory. Procedures for routine specimen collection will be discussed and practiced. Normal flora and pathogenic bacteria will be identified by morphology, staining characteristics, growth on selective media, biochemical testing and serological methods. Basic theory in antimicrobial susceptibility testing will be covered. Principles of all tests will be studied. Study of viruses and chlamydia will be limited to the processing and handling of specimens for consultant referral and principles of serological testing. Normal and pathogenic parasites and fungal elements will be identified and procedures utilized for proper identification will be discussed.</p> <p><b>Prerequisite(s):</b> Admission to the MLT program or instructor approval</p> |                                    |                              |
| <b>MLT 2806</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>MLT Immunohematology</b>        | 6 SCH                        |
| <p>A study of the immunology of blood, including those principles and practices that are known collectively as blood banking. An overview of blood component collection and component preparation is presented. Basic concepts of genetics, immunology and antiglobulin testing are included as a foundation for the understanding of the blood group systems and antibody detection and identification. Current transfusion practices are discussed. The student will gain experience in performance of techniques in immunohematology.</p> <p><b>Prerequisite(s):</b> Admission to the MLT program or instructor approval</p>                                                                                                                                                                                                                        |                                    |                              |
| <b>MLT 2988</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Clinical Internship for MLT</b> | 8 SCH                        |
| <p>This course will offer students one-on-one work experience with clinical instructors to refine clinical laboratory skills within a designated clinical affiliate laboratory. This clinical internship will include 240 hours of clinical experience. This course will integrate knowledge gained in all MLT courses with practical experience in hematology, coagulation, chemistry, immunology, Immunohematology, microbiology, urinalysis, and serology.</p> <p><b>Prerequisite(s):</b> Successful completion of all technical courses</p>                                                                                                                                                                                                                                                                                                        |                                    |                              |
| <b>NTR 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Nutrition</b>                   | <b>SWT HSC 1010</b><br>3 SCH |
| <p>This course provides students with an understanding of the basic nutritional principles that can affect everyday lifestyles. Topics to be covered include: food selection, macronutrients &amp; micronutrients and their function within the body, digestion and absorption of nutrients, energy balance, and water and electrolyte balance. Possible topics to be covered include: use and function of supplements, alcohol metabolism, food safety, sports nutrition, eating disorders, pregnancy and nutritional concerns, and geriatric nutrition.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                      |                                    |                              |
| <b>NUR 107</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Foundations of Nursing</b>      | 4 SCH                        |
| <p>This course provides an introduction to practical nursing and roles of the practical nurse as well as profession- and client-related care concepts. Emphasis is placed on the knowledge and skills needed to provide safe, quality care. The theoretical foundation for basic data collection and nursing skills is presented and an introduction to the nursing process provides the student with a framework for decision making.</p> <p><b>Prerequisite(s):</b> Admission to the PN program, and concurrent enrollment in NUR108</p>                                                                                                                                                                                                                                                                                                             |                                    |                              |

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| <b>† NUR 108</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>Foundations of Nursing Clinical</b>                                 | 2 SCH |
| This course provides an introduction to the skills required to practice nursing. The theoretical foundation for basic data collection and nursing skills is presented and the student is given an opportunity to demonstrate these skills in a clinical laboratory setting. Students are also given an opportunity to practice application of the nursing process to client-related situations. |                                                                        |       |
| <b>Prerequisite(s):</b> Admission to the PN program, and concurrent enrollment in NUR107                                                                                                                                                                                                                                                                                                        |                                                                        |       |
| <b>† NUR 112</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>Fundamentals of Pharmacology and Safe Medication Administration</b> | 2 SCH |
| This course introduces the principles of pharmacology, drug classifications, and the effects of selected medications on the human body. The nursing process is used as the framework for ensuring safe and effective nursing care for clients across the lifespan.                                                                                                                              |                                                                        |       |
| <b>Prerequisite(s):</b> Admission to the PN program and concurrent enrollment in NUR 1175 and NUR 118                                                                                                                                                                                                                                                                                           |                                                                        |       |
| <b>† NUR 1175</b>                                                                                                                                                                                                                                                                                                                                                                               | <b>Nursing Care of Adults I</b>                                        | 5 SCH |
| 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.                     |                                                                        |       |
| <b>Prerequisite(s):</b> NUR107 and NUR108 with a "C" or higher; concurrent enrollment in NUR118 and NUR 1112                                                                                                                                                                                                                                                                                    |                                                                        |       |
| <b>† NUR 118</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>Nursing Care of Adults I Clinical</b>                               | 3 SCH |
| 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.                                                                                                   |                                                                        |       |
| <b>Prerequisite(s):</b> NUR 107 and NUR 108 with a "C" or higher; concurrent enrollment in NUR 1175 and NUR 1112                                                                                                                                                                                                                                                                                |                                                                        |       |
| <b>NUR 133</b>                                                                                                                                                                                                                                                                                                                                                                                  | <b>Leadership, Roles, and Issues</b>                                   | 1 SCH |
| 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.                                                                                                                                                                                                                     |                                                                        |       |
| <b>Prerequisite(s):</b> NUR 1112, NUR 107, NUR 108, NUR 1175, NUR 118, and NUR 134 with "C" or higher. Concurrent enrollment in NUR 136, NUR 1375, NUR 138                                                                                                                                                                                                                                      |                                                                        |       |
| <b>† NUR 134</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>Mental Health Nursing</b>                                           | 2 SCH |
| 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 mental health client.                                                                                                                                    |                                                                        |       |
| <b>Prerequisite(s):</b> NUR 1112, NUR 107, NUR 108, NUR 1175 and NUR 118 with "C" or higher. Concurrent enrollment in NUR 136, NUR 1375, and NUR 138                                                                                                                                                                                                                                            |                                                                        |       |
| <b>† NUR 136</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>Care of Aging Adults</b>                                            | 2 SCH |
| 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.                                                                                                              |                                                                        |       |
| <b>Prerequisite(s):</b> NUR 1112, NUR 1175, and NUR 118 with a grade of "C" or better. Concurrent enrollment in NUR 133, NUR 134, NUR 1375, and NUR 138                                                                                                                                                                                                                                         |                                                                        |       |

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| <b>† NUR 1375</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Nursing Care of Adults II</b>          | 5 SCH  |
| <p>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.</p> <p><b>Prerequisite(s):</b> NUR 1112, NUR 107, NUR 108, NUR 1175, NUR 118 and NUR 134 with “C” or higher. Concurrent enrollment in NUR 133, NUR 136, NUR 1375 and NUR138</p>                                                                                                                                                                                                                                                                                                                                                                                             |                                           |        |
| <b>† NUR 138</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Nursing Care of Adults II Clinical</b> | 3 SCH  |
| <p>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.</p> <p><b>Prerequisite(s):</b> NUR 1112, NUR 107, NUR 108, NUR 1175 and NUR 118 with “C” or higher. Concurrent enrollment in NUR 133, NUR 134, NUR 136, and NUR 1375.</p>                                                                                                                                                                                                                                                                                                                                                     |                                           |        |
| <b>† NUR 170</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Maternal Child Nursing</b>             | 2 SCH  |
| <p>This course provides an integrative, family-centered approach to the care of childbearing women, newborns, and children. Emphasis is placed on care of the pregnant woman and newborn, normal growth and development, and common pediatric disorders.</p> <p><b>Prerequisite(s):</b> NUR 1112, NUR 107, NUR 108, NUR 1175, NUR 118, NUR 133, NUR 134, NUR 136, NUR 1375, and NUR 138 with a grade of “C” or better. Concurrent enrollment in NUR 171</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |        |
| <b>† NUR 171</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Maternal Child Nursing Clinical</b>    | 1 SCH  |
| <p>This course provides an integrative, family-centered approach to the care of childbearing women, newborns, and children. Students are given the opportunity to observe the uncomplicated birth process and practice postpartum care as well as care of the newborn in the clinical laboratory setting. Common pediatric diseases and the growth and development process is the focus of child-related clinical laboratory experiences.</p> <p><b>Prerequisite(s):</b> NUR 1112, NUR 107, NUR 108, NUR 1175, NUR 118, NUR 133, NUR 134, NUR 136, NUR 1375, and NUR 138 with a grade of “C” or better. Concurrent enrollment in NUR 170</p>                                                                                                                                                                                                                                                                                                 |                                           |        |
| <b>NUR 199</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Practical Nursing License</b>          | 10 SCH |
| Per Nurse Practice Act pg 67 KSA 60-1-104(u), students enrolling in ADN program must have an active PN License.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |        |
| <b>† NUR 221</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Nursing Across the Lifespan</b>        | 12 SCH |
| <p>This course focuses on the transition from the LPN to RN roles with an emphasis on therapeutic communication, health promotion, critical thinking, clinical judgment, and the utilization of the nursing process. Emphasis will be placed on IV therapy principles and practices, maintenance and care of individuals across the lifespan with acute or chronic conditions experiencing psychological/psychiatric, maternal/child, and medical/surgical complications. Critical thinking differentiates client needs based on age, health status, and acuity of condition, ethnic origins, and prognosis. The client’s role within the family, their occupation, and society are considered. The student’s responsibility for learning, self-evaluation, and collaboration is also emphasized. Clinical experiences are focused on obstetrics and medical-surgical units.</p> <p><b>Prerequisite(s):</b> Admission to the ADN Program</p> |                                           |        |
| <b>† NUR 230</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Management of Patient Care</b>         | 12 SCH |
| <p>This course focuses on the management of patient care for larger groups. Health promotion and other treatment modalities are explored. Critical thinking is emphasized in the organization, coordination, and delegation of client care. Clinical experience is provided in the care of patients with more acute or complex conditions in areas such as medical, surgical, critical care, emergency room, and perioperative services. Leadership and management issues are explored as they relate to nursing practice.</p> <p><b>Prerequisite(s):</b> NUR 221 Nursing Across the Lifespan with a grade of “C” or higher.</p>                                                                                                                                                                                                                                                                                                             |                                           |        |

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| <b>OSA 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>OSHA 10</b>                             |               | 1 SCH |
| <p>This safety training course introduces students to recognition, avoidance, prevention, and control of workplace hazards across both General Industry and Construction environments. Students will explore common safety and health risks found in a variety of workplaces, including manufacturing, maintenance, warehousing, and construction job sites.</p> <p>Completion of this course prepares students to work safely in entry-level positions and provides the foundation for either the OSHA 10-Hour General Industry card or OSHA 10-Hour Construction card, depending on the selected training track.</p> <p><b>Prerequisite(s):</b> None</p> |                                            |               |       |
| <b>PHY 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>General Physics</b>                     | † SWT PHY1010 | 5 SCH |
| <p>Physics is the study of translational and rotational motion, force, work, mechanical and thermal energy, linear and angular momentum, fluid mechanics, electricity and magnetism in industrial applications.</p> <p><i>PHY100A and PHY100B are equivalent to SWT PHY1010</i></p> <p><b>Prerequisite(s):</b> Intermediate Algebra</p>                                                                                                                                                                                                                                                                                                                    |                                            |               |       |
| <b>PHY 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Applied Physics</b>                     |               | 3 SCH |
| <p>Applied physics is a general education science course geared towards introducing and utilizing physics principles in various tech fields such as HVAC, plumbing, construction, electrical, and industrial engineering. Concepts such as motion, force, simple machines, fluid dynamics, thermodynamics, electricity, magnetism, optics, and sound will be included.</p> <p><b>Prerequisite(s):</b> Intermediate Algebra</p>                                                                                                                                                                                                                             |                                            |               |       |
| † <b>PLM 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Introductory Craft Skills</b>           |               | 3 SCH |
| <p>This course covers shop and job site safety, tool safety, personal protective devices, protective railings, proper storage and handling of construction materials and construction drawings.</p> <p><b>Co-requisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                    |                                            |               |       |
| † <b>PLM 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Introduction to Plumbing Technology</b> |               | 3 SCH |
| <p>Covers the basic information of residential plumbing which includes safety, tools, plumbing drawing, fixtures, and installation.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |               |       |
| † <b>PLM 115</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Plumbing Fixtures and Fittings</b>      |               | 4 SCH |
| <p>This course provides students with an understanding of the current International Plumbing Code (IPC) and the minimum requirements for plumbing materials and design. Students will explore various piping materials and their applications in plumbing systems.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                                                 |                                            |               |       |
| † <b>PLM 120</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Plumbing Basics</b>                     |               | 3 SCH |
| <p>This course covers the fundamental principles of plumbing systems, construction drawings, basic rigging, communication, employability skills, and materials handling.</p> <p><b>Prerequisite(s):</b> PLM 100, PLM 105, PLM 110, PLM 115 all with a grade of C or higher.</p>                                                                                                                                                                                                                                                                                                                                                                            |                                            |               |       |
| † <b>PLM 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Plumbing Blueprint Reading</b>          |               | 3 SCH |
| <p>This course explores how to read and interpret construction drawings, including plan, elevation, and isometric views. Students will learn to develop piping sketches, size drain, waste, and vent piping, and plan plumbing installations. Basic sketching and plumbing design techniques on construction prints will also be covered.</p> <p><b>Prerequisite(s):</b> PLM 100, PLM 105, PLM 110, PLM 115 all with a grade of C or higher.</p>                                                                                                                                                                                                           |                                            |               |       |

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| <b>PLM 130</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Occupational Work Experience I</b>  | 2 SCH                  |
| Occupational Work Experience is a hands-on, field-based course designed to provide students with real-world experience in the plumbing trade. Students will engage in a variety of tasks related to plumbing, maintenance, troubleshooting, and safety protocols, and gain exposure to industry-specific tools, equipment, and procedures. This course allows students to develop their professional skills, work ethic, and communication abilities in preparation for a successful career in the plumbing field. |                                        |                        |
| Prerequisite(s): OSA 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                        |                        |
| <b>PLM 135</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Codes and Special Systems</b>       | 3 SCH                  |
| This course provides an in-depth exploration of the various codes, standards and special systems that govern plumbing practices. Designed for aspiring plumbers and industry professionals, the course covers the essential regulations set forth by the national, state, and local plumbing codes, emphasizing compliance and safety in all plumbing installations.                                                                                                                                               |                                        |                        |
| Prerequisite(s): PLM 120, PLM 125, PLM 130 all with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                        |
| <b>PLM 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Plumbing Electricity and Gas</b>    | 4 SCH                  |
| This course will cover how to install and service plumbing electrical systems and learn how to read circuit diagrams and use electrical test equipment. This course also exposes students on the types of fuel systems and their installation processes involved in the plumbing industry.                                                                                                                                                                                                                         |                                        |                        |
| Prerequisite(s): PLM 120, PLM 125, PLM 130 all with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                        |
| <b>PLM 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Advanced Plumbing Fixtures</b>      | 3 SCH                  |
| This course provides a comprehensive study of advanced plumbing fixtures and their applications in modern plumbing systems. The course delves into the latest technologies, design considerations, and installation practices for a variety of fixtures used in residential and commercial settings.                                                                                                                                                                                                               |                                        |                        |
| Prerequisite(s): PLM 120, PLM 125, PLM 130 all with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                        |
| <b>PLM 150</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Workplace Skills</b>                | 1 SCH                  |
| Students will develop good customer relations including problem solving, time management, and work ethic. They will learn to complete retail sales orders and will calculate sales tax and mark ups.                                                                                                                                                                                                                                                                                                               |                                        |                        |
| Prerequisite(s): PLM 135, PLM 140, PLM 145 all with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                        |
| <b>PLM 155</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Occupational Work Experience II</b> | 2 SCH                  |
| Occupational Work Experience is a hands-on, field-based course designed to provide students with real-world experience in the plumbing trade. Students will engage in a variety of tasks related to plumbing, maintenance, troubleshooting, and safety protocols, and gain exposure to industry-specific tools, equipment, and procedures. This course allows students to develop their professional skills, work ethic, and communication abilities in preparation for a successful career in the plumbing field. |                                        |                        |
| Prerequisite(s): PLM 135, PLM 140, PLM 145 all with a grade of C or higher.                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                        |
| <b>POL 105</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>American Government</b>             | ↳ SWT POL1020<br>3 SCH |
| This course will enable the student to gain knowledge of American politics through the United States Constitution, civil liberties, political socialization, the media, political parties, the three branches of government, and foreign policy.                                                                                                                                                                                                                                                                   |                                        |                        |
| Prerequisite(s): None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                        |
| <b>PSY 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>General Psychology</b>              | ↳ SWT PSY1010<br>3 SCH |
| This course will serve as an overview of the major fields within psychology with an emphasis on developing an understanding of psychology as the science of human thought and behavior. The learning outcomes and competencies meet or exceed the outcomes and competencies specified by the Kansas Core Outcomes project for this course, as sanctioned by the Kansas Board of Regents.                                                                                                                           |                                        |                        |
| Prerequisite(s): None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                        |

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| <b>PSY 125</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Human Growth and Development</b> | ▸ SWT PSY2020 | 3 SCH |
| <p>This course offers information concerning normal physical, psychological, and social development changes that occur in a person from birth to death. Specific information identifying factors which influence human development and changes in family structure and living during the life cycle are covered.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                 |                                     |               |       |
| <b>SOC 100</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Introduction to Sociology</b>    | ▸ SWT SOC1010 | 3 SCH |
| <p>This course is an introduction to the study of the structure and function of human groupings, particularly those which occur in contemporary industrialized cultures. The relationships between the individual and his/ her society, culture and society, and the social dynamics of institutions are investigated.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                           |                                     |               |       |
| <b>SOC 200</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Marriage and Family</b>          | ▸ SWT SOC2020 | 3 SCH |
| <p>This course explores broad social issues related to marriage and family in contemporary society. Content includes nature of relationships and intimacy; gender roles, communication, love, dating, marriage and its alternatives, sexuality, and parenting, and crisis faced in intimate relationships such as divorce, poverty, and family violence.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                         |                                     |               |       |
| <b>WLD 1001</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Welding Safety</b>               |               | 1 SCH |
| <p>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).</p> <p><b>Prerequisite(s):</b> None</p> |                                     |               |       |
| <b>WLD 110</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Welding Metallurgy</b>           |               | 1 SCH |
| <p>This course covers metallurgical principles applied to welding including mechanisms of strengthening, phase equilibria, and microstructure of the weld zone.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                                                                                                  |                                     |               |       |
| <b>WLD 116</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Fabrication</b>                  |               | 1 SCH |
| <p>To provide knowledge for the welder and fitter to become familiar with the types of set-up tools and their use and to locate and align parts according to design specifications for the completed weldment.</p> <p><b>Prerequisite(s):</b> WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171</p>                                                                                                                                                                                    |                                     |               |       |
| <b>WLD 118</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Discontinuities and Defects</b>  |               | 1 SCH |
| <p>As a welder you have the responsibility to evaluate your weldments, identify and classify discontinuities and defects and the conditions that exist when evaluating discontinuities in order to decide whether they are acceptable or not.</p> <p><b>Prerequisite(s):</b> None</p>                                                                                                                                                                                                                                    |                                     |               |       |
| <b>WLD 1153</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Blueprint Reading</b>            |               | 3 SCH |
| <p>In this course students will be provided exposure to blueprint reading beginning with identification of specific lines, views, abbreviations, symbols, joints and shapes specific to the welding industry. Students will interpret basic 3D sketches using orthographic projection and blueprints and solve mathematic equations and interpret scale ratios. Use of measuring tools and interpreting a Bill of Materials are also components of this course.</p> <p><b>Prerequisite(s):</b> None</p>                  |                                     |               |       |

▸ This course is approved by the Kansas Board of Regents for System Wide Transfer (SWT) among all Kansas public postsecondary institutions offering an equivalent course. Additional courses may also be eligible for transfer. Please visit the [institution name] Registrar to learn more.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------|
| <b>WLD 1303</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Cutting Processes</b>                              | 3 SCH |
| This course will include the cutting of ferrous metals with manual motor-driven and automatic oxy-acetylene shape cutting equipment, and high-energy plasma arch.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |       |
| Prerequisite(s): None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                       |       |
| <b>WLD 140</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Shielded Metal Arc Welding (SMAW)</b>              | 3 SCH |
| Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; 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. |                                                       |       |
| Prerequisite(s): OSA 100 OSHA 10 and WLD 1001 Welding Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |       |
| <b>WLD 145</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Shielded Metal Arc Welding Advanced Structural</b> | 4 SCH |
| This course will provide advanced instruction in shielded metal arc welding safety, theory, and the skills used for all positions of shielded metal arc welding.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |       |
| Prerequisite(s): WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |       |
| <b>WLD 150</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Gas Metal Arc Welding (GMAW)</b>                   | 3 SCH |
| Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW 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; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds.     |                                                       |       |
| Prerequisite(s): OSA 100 OSHA 10 and WLD 1001 Welding Safety or WLD 100 Welding Safety/OSHA 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                       |       |
| <b>WLD 155</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Gas Metal Arc Welding Advanced</b>                 | 4 SCH |
| Students will receive instruction in proper setup and operation of MIG welding equipment to weld in all positions on aluminum and mild steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                       |       |
| Prerequisite(s): WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |       |
| <b>WLD 1604</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Flux Core Arc Welding Structural</b>               | 4 SCH |
| Students will receive instruction on the proper setup and use of flux cored arc welding equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |       |
| Prerequisite(s): WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |       |
| <b>WLD 165</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>SMAW/GTAW Pipe Welding</b>                         | 3 SCH |
| Through classroom and/or lab/shop learning and assessment activities, students in this course will: demonstrate practical applications of pipe joint preparation and design to AWS (American Welding Society) welding codes specifications for pipe and pipe fittings, geometric curve design for branched joint of piping systems, wire and electrodes selections, SMAW, GMAW, and GTAW of pipe joints, welding discontinuities and defects, and methods of inspection and testing.                                                                                                                                                            |                                                       |       |
| Prerequisite(s): WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |       |

|                |                                 |       |
|----------------|---------------------------------|-------|
| <b>WLD 171</b> | <b>Gas Tungsten Arc Welding</b> | 3 SCH |
|----------------|---------------------------------|-------|

Through classroom and/or lab/shop learning and assessment activities, students in this course will explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the vertical position; build pads of weld beads with selected electrodes and filler material in the overhead position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds.

**Prerequisite(s):** OSA 100 OSHA 10 and WLD 1001 Welding Safety or WLD 100 Welding Safety/OSHA 10

|                 |                                          |       |
|-----------------|------------------------------------------|-------|
| <b>WLD 1764</b> | <b>Gas Tungsten Arc Welding Advanced</b> | 4 SCH |
|-----------------|------------------------------------------|-------|

This course covers advanced topics in GTAW welding, including welding in Aluminum and Stainless Steel in all positions. The students will identify causes and sources for weld pool contaminates.

**Prerequisite(s):** WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171

|                |                                     |       |
|----------------|-------------------------------------|-------|
| <b>WLD 199</b> | <b>Occupational Work Experience</b> | 2 SCH |
|----------------|-------------------------------------|-------|

This course is a planned work experience in the welding work force that is supervised by the welding professional and monitored by the welding instructor.

**Prerequisite(s):** WLD 1001, WLD 1010, WLD 110, WLD 1153, WLD 118, WLD 1303, WLD 140, WLD 150, WLD 171



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