FORT HAYS TECH
NORTH CENTRAL

Course Catalog 2024-2025

Mission Statement

Fort Hays Tech | North Central delivers applied, innovative and personalized education to empower learners, enrich lives, develop skilled professionals and strengthen economic systems.

Vision Statement

Fort Hays Tech | North Central is dedicated to being a leader in workforce development by maximizing value for students, employers, and communities through educational excellence.

Core Values

Achieving EXCELLENCE with INTEGRITY through

DEDICATION

INNOVATION

COLLABORATION

COMMUNICATION

This catalog is for informational purposes only and does not constitute a contract. Every effort was made to ensure that all information is accurate. North Central Kansas Technical College reserves the right to change the catalog without notice. The college has authority to cancel classes and change class times, dates and instructors. Classes may be added or combined. Information about changes is available from college counselors and advisors. ***NCK Tech Board of Trustee's Policy language supersedes NCK Tech handbook language.***

ACADEMIC CALENDAR

2024-2025

August 19, 2024 ..... Classes Begin

September 2, 2024 ..... Labor Day/College Closed

November 25-29, 2024 ..... Fall Break/College Closed

December 13, 2024 ..... End of Fall Semester

January 6-20, 2025 ..... College Open/No Classes

January 21, 2025 ..... Spring Semester Begins

March 17-21, 2025 ..... Spring Break/College Closed

May 15, 2025 ..... Graduation Hays

May 16, 2025 ..... Graduation Beloit

Campus Locations:

Fort Hays Tech | North Central has campuses located in Beloit and Hays, Kansas. The college provides instruction in general and technical education. Online courses extend opportunities to those outside the immediate region.

History of the College:

In 1963, Kansas legislation was passed, which provided vocational-technical education. Senate Bill 438, in conjunction with the National Education Act (SB 4955), approved the establishment of sixteen vocational-technical schools and nineteen community colleges in the state.

Classes began in the fall of 1964 with five programs being offered. Six instructors and one placement officer/counselor made up the staff utilizing rented facilities in the community; North Central Kansas Area Vocational Technical School became a reality.

In 1975, a campus was established at Hays with nursing as its first program. In 1992, the Business and Occupations Center was dedicated to the memory of its benefactors, Leo and Albina Dreiling.

On July 1, 1996, North Central Kansas Area Vocational Technical School ceased to exist. In its place, North Central Kansas Technical College (NCK Tech) was created. The same locations, the same quality education, but a new name with new directions was designed to enhance the educational opportunities for the region.

On July 9, 2024, the affiliation between North Central Kansas Technical College, Fort Hays State University, and Northwest Kansas Technical College was approved by the Higher Learning Commission. The name change was made official through the affiliation approval, and NCK Tech became Fort Hays Tech | North Central.

Accreditation:

Fort Hays Tech | North Central is accredited by:

Higher Learning Commission

30 LaSalle Street, Suite 2400

Chicago, IL 60602

(312) 263-0456 or 1-800-621-7440

National Automotive Technicians Education Foundation

101 Blue Seal Drive, Suite 101, Leesburg, VA 20175

(703) 669-6650

National Center for Construction Education and Research

13614 Progress Boulevard, Alachua, FL 32615

386-518-6500 or 1-888-622-3720

Accreditation Commission for Education in Nursing, Inc.

3343 Peachtree Rd NE, Suite 850, Atlanta, GA 30326

1-404-975-5000

Kansas State Board of Nursing

900 SW Jackson St., Suite 1051, Topeka, KS 66612

(785) 296-4929

American Society of Health Systems Pharmacists

7272 Wisconsin Ave, Bethesda, MD 20814

(301) 664-8645

Non-Discrimination

Applicants for admission and employment, students, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with Fort Hays Tech | North Central are hereby notified that this college is committed to nondiscrimination on the basis of race, color, gender, ethnic or national origin, sex, sexual orientation, gender identity, marital status, religion, age, ancestry, disability, military status, or veteran status in admission or access to, or treatment or employment in, its

programs and activities. Further, it is the policy of the college to prohibit harassment (including sexual harassment and sexual violence) of students and employees.

Any person having inquiries concerning the college's compliance with the regulations implementing Title VI, Title VII, Title IX, Section 504, and the Americans with Disabilities Act Amendments Act is directed to contact the person identified below who has been designated to coordinate the Institution's efforts to comply with the regulations implementing these laws.

- The Section 504/ADA Compliance Officer can be reached at section504@fhtechnc.edu, (785) 738-2276, or by mail at Attn: Section 504 Officer, PO BOX 507, 3033 US Hwy 24, Beloit, KS 67420 (785) 738-9055 or by mail at Fort Hays Tech | North Central, Attn: Vice President of Student and Instructional Services, PO Box 507, 3033 US Hwy 24, Beloit, KS 67420.

- The Title IX Compliance Officer can be reached at titleix@fhtechnc.edu, (785) 738-2276, or by mail at Attn: Title IX Officer, PO BOX 507, 3033 US Hwy 24, Beloit, KS 67420 (785) 738-9055 or by mail at Fort Hays Tech | North Central, Attn: Vice President of Student and Instructional Services, PO Box 507, 3033 US Hwy 24, Beloit, KS 67420.

Title VI, Title IX and Section 504 complaints may also be field with the Regional Office for Civil Rights. Address correspondence to:

US Department of Education, Region VII
Office for Civil Rights
10220 N Executive Hills Blvd
Kansas City, MO 64153

Where discrimination is found to have occurred, Fort Hays Tech | North Central will act to stop the discrimination, to prevent its recurrence, to remedy its effects, and to hold accountable the responsible individual(s). Additional details regarding the investigation process can be found in the Faculty/Staff Handbook and the Student Handbook as approved by the Fort Hays Tech | North Central Board of Trustees.

For further information on notice of non-discrimination, you may contact the U.S. Department of Education, Office for Civil Rights at 1-800-421-3481 or visit https://www2.ed.gov/about/offices/list/ocr/index.html.

APPLICATION PROCESS

All students applying to Fort Hays Tech | North Central must:

1. Complete an Application (providing all requested information) at www.fhtechnc.edu.

2. Pay the $50 non-refundable application fee.

Applicants will be notified in writing of their acceptance into the College.

Additional admissions requirements for Fort Hays Tech | North Central's Nursing and Respiratory Care programs and short-term programs are listed below.

Practical Nursing

- Practical nurse applications will be accepted during the period of September 1st to January 31st for those applying for the following fall semester.
- Applications submitted after January 31st will be considered if spots in the program remain open. If no spots remain open, the applicant may be added to the wait list.
- The applicant must have an application on file for the year that the class is being selected.
- The applicant must be a high school graduate or have a GED certificate upon entering the program.
- The applicant must submit official transcripts from all secondary and post-secondary institutions for completed courses to be considered for class selection.

- The practical nurse applicant must take the Test of Essential Academic Skills (TEAS) entrance examination for purposes of placement in the program.
- A minimum score of 58.7% or higher on the total score is required.
- The TEAS may be repeated a total of 4 times.
- A minimum of 28 days between each attempt is required.
- If the applicant achieves the required score and has not used all the attempts allowed, they may retake the exam to attempt a higher score.
- The applicant must pay each time the test is taken.
- All applicants must have a "C" or better in completed general education courses required for the program. The actual grade will be considered only in the case of a "tie" in the scores.
- All applicants must have an active, unrestricted Certified Nursing Assistant (CNA) certification in Kansas. Admission points will be awarded to applicants who have an active, unrestricted Certified Medication Aides (CMA) certification in Kansas.
- All required information must be in the official file maintained by the nursing program secretary/director before the application is reviewed. Responsibility for completing the information rests entirely with the applicant.
- Criminal conviction may jeopardize eligibility for licensure.

Class Selection
The following table indicates the scoring criteria that will be used for the selection process.
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Since the Practical Nursing program is a selective admission program, the scoring rubric (located below) will be used to determine the applicants selected. The completion of the online PN application does not guarantee a position in the program. Any tiebreaker will be based on the TEAS overall test score. If an applicant does not have a score in the Part A section, then the student does not qualify for admission. Students who do not qualify for admission are encouraged to follow up with an academic advisor to see how they can improve their scores.						
Part A – Pre-Requisites and TEAS Score						
	1	**2**	**3**	**4**	**Max Score**	**Required Documentation**
Letter Grade for: Anatomy and Physiology	N/A	C	B	A	4	Copy of official transcript from accredited college or university.
Letter Grade for: Human Growth and Development	N/A	C	B	A	4	Copy of official transcript from accredited college or university.
Letter Grade for: Intermediate Algebra OR College Algebra	N/A	C	B	A	4	Copy of official transcript from accredited college or university.
Letter Grade for: Nutrition	N/A	C	B	A	4	Copy of official transcript from accredited college or university.
TEAS Academic Preparedness Level	Basic 50	Proficient 58.7-79.3	Advanced 80-91.3	Exemplary 92-100	4	ATI TEAS Transcript
Total of Section A					20	
Part B – Additional Points						
	1	**2**	**3**	**4**	**Score**	**Required Documentation**
Veteran	Yes	N/A	N/A	N/A	1	Copy of DD214
Healthcare Worker Certificates (Emergency Medical Technician (EMT), Certified Medication Aid (CMA))	Yes	N/A	N/A	N/A	1	Copy of current certificate and proof of employment within the last **two** years.

Healthcare Worker Non-certifications (Medical Assistant, School Health Aid, Pharm Tech, Psych Tech, Phlebotomist)	Yes	N/A	N/A	N/A	1	Proof of employment within the last **two** years.
Certified Nurses Aid Years of Experience *Less than one year of experience receives no extra points	1-3 years	3-5 years	5-10 years	>10 years	4	Proof of employment must be within the last **two** years and be provided in an official document from the institution(s) human resource department.
Total of Section B					7	
Total of Sections A and B					27	

1. The classes will be selected by choosing the highest-ranking applicants. The process will continue to be used to select applicants for a wait list. If selected applicants either decline the opportunity or do not meet their obligations for admission, the spot will be filled with the next applicant on the waiting list.
2. Class selection will be finalized and those selected will be notified in February.
3. Following the class selection, the application file will be purged, and the process will begin again.
4. If the class is not full, the admission process will continue past January until the required enrollment is met.

Applicant Obligations

1. The applicant must have satisfactory physical and mental health. A physical examination and health history is required. All required immunizations must be current. The physical form will be mailed following class selection with a deadline for submission of the completed document prior to any clinical experiences.
2. Applicants must provide evidence of current CPR certification through American Heart Association prior to any clinical experiences. The student is responsible for maintaining certification throughout the nursing program. Online Courses are not accepted.
3. All first-year nursing students must maintain an active, unrestricted Certified Nursing Assistant (CNA) certification in Kansas.
4. Applicants must obtain a drug screen within 30 days of the 1st day of the program. These results must be sent directly to the Director of Nursing from the laboratory/ testing center. If a result is positive, the student must provide a statement from the prescribing provider of expected positive result/ prescribed medication. If unable to provide this, the applicant is no longer eligible for the current academic year and may apply for the following academic year.

Associate Degree Nursing

- Second year applications will be accepted during the period of September 1st to March 31st for those anticipating admission the following fall semester.
- Applications submitted after March 31st will be considered if there is availability in the program. If no availability, the applicant may be added to the wait list if qualified.
- The applicant must have an application on file for the year that the class is being selected.
- The applicant must be a high school graduate or have a GED certificate upon entering the program.
- The applicant must submit official transcripts from all secondary and post-secondary institutions for completed courses to be considered for class selection.
- All applicants must have a “C” or better in completed general education courses required for the program. The actual grade of nursing courses will be considered only in the case of a “tie” in the scores.
- Applicant must have current, unencumbered LPN/ LVN license recognized by the state of Kansas.
- Applicant must have completed training for intravenous (IV) therapy and be authorized to practice IV therapy within the scope of an LPN/LVN in Kansas.
- All applicants must provide an official transcript proving completion of a course of study equivalent to the first year of this program. In addition to providing an official transcript, applicants must provide the following according to the practical nursing program completed and year of graduation:
- For applicants who have graduated from a **Kansas** practical nurse program:
    - PN graduation date to ADN program start date: 0-5 years:
        - No validation of nursing credits is required.
        - No work experience is required
    - PN graduation date to ADN program start date: 6-10 years:

        - No validation of nursing credits is required.
        - Applicant must provide validation of 1,000 hours of work experience as an LPN/ LVN within the last three years.
    - PN graduation date to ADN program start date: More than 10 years:
        - Validation of nursing credits is required.
        - Applicant must provide validation of 1,000 hours of work experience as an LPN/ LVN within the last three years.
- For applicants who have graduated from an **out-of-state** practical nursing program:
    - Nursing credits will be evaluated individually by the nursing director.
    - If the ADN program start date is more than 5 years after the applicant's graduation date from a PN program, then the applicant must provide validation of 1,000 hours of work experience as an LPN/LVN within the last three years.
- All required information must be in the official file maintained by the nursing program secretary/director before the application is reviewed. Responsibility for completing the information rests entirely with the applicant.
- Criminal conviction may jeopardize eligibility for licensure.
- Current Fort Hays Tech | North Central practical nurse students seeking a position at the associate degree year must refer to "Advanced Standing Applicants" below.

- Advanced Standing Applicants
- Identifying advanced standing applicants ensures a pathway of progression for current practical nursing students into second year.
- Applicants seeking advanced standing into the second year must fulfil all requirements for admission to the Technical College and the Nursing Program.
- Applicants seeking advanced standing must be a current Fort Hays Tech | North Central practical nursing student.
- Applicants will be ranked depending on 1st year nursing course grades with a cut off level of 90% in each course. Grades will not be rounded.
- Points are not used for ranking advanced standing applicants.
- Class Selection
- The following table indicates the scoring criteria that will be used for the selection process.

• **Second Year**	• **Points Possible**
• 1st Year General Education Courses (C or better)	• Required
• Human Anatomy & Physiology	•
• General Psychology	•
• Principles of Nutrition	•
• Human Growth & Development	•
• Intermediate Algebra or College Algebra	•
• IV Therapy Certification	• Required
• Cumulative GPA – on courses taken at FH Tech | NC & transferred in	• 4.0
• 2nd Year General Education Courses (C or better)	•
• English Composition	• 1
• Microbiology	• 1
• Past FH Tech | NC PN Student	• 1
• **Total Points Possible**	• **7**

- The classes will be selected by choosing the highest-ranking applicants. If applicable, the process will continue to select applicants for a wait list. If selected applicants either decline the opportunity or do not meet their obligations for admission, the spot will be filled with the next applicant on the waiting list.
- Grade point average (GPA) used in selection is the cumulative GPA of Fort Hays Tech | North Central courses and transferred courses.

- Second year class selection will be notified by the end of April. If applications are submitted after March 31st, the applicant will be notified in 4-6 weeks after submission.
- Following the class selection, the application file will be purged, and the process will begin again.
- If the class is not full, the admission process will continue past March until the required enrollment is met.
- Second year applicants will be selected in the following order:
- Advanced standing applicants (ASA) with an "A" (90% and above) in all 1st year nursing courses.
- Applicants with ≥6.5 points.
- Repeat applicants with ≥6.0 points.
- Repeat applicants include any applicant who had officially applied for the 2nd year but either was not accepted or was accepted but declined the spot in the previous application period.
- ASA with a grade of "A" in all 1st year nursing courses except 1.
- 2nd year applicants with ≥6.0 points.
- ASA with a grade of "A" in all 1st year nursing courses except 2.
- Remaining openings will be filled by qualified applicants according to points.
- Student Obligations for Admission
- The applicant must have satisfactory physical and mental health. A physical examination and health history is required. All immunizations must be current. The physical form will be mailed following class selection with a deadline for submission of the completed document prior to any clinical experiences.
- Applicants must provide evidence of current CPR certification through American Heart Association prior to any clinical experiences. The student is responsible for maintaining certification throughout the nursing program.
- Current Fort Hays Tech | North Central practical nurse students who have been selected into the second year must maintain the grade requirement for incomplete nursing courses.
- Applicants must obtain an LPN/LVN license recognized by the state of Kansas by July 31st prior to the start of the academic year.
- Must maintain current, unencumbered LPN/LVN license recognized by the state of Kansas throughout program.
- Applicants must obtain a drug screen within 30 days of the 1st day of the program. These results must be sent directly to the Director of Nursing from the laboratory/ testing center. If a result is positive, the student must provide a statement from the prescribing provider of expected positive result/ prescribed medication. If unable to provide this, the applicant is no longer eligible for the current academic year and may reapply for the next year.
- Re-Entry Students
- Applicants who exit in good standing during the program will be given consideration for re-entry upon approval of the director of nursing, site coordinator, and space availability.
- Re-entry must be done in the academic year immediately following the withdrawal.
- If a student does not complete the admission process for the following academic year, the student must complete the entire second year nursing program of study. This is regardless of any courses completed.
- If a student must retake a clinical course or the associated theoretical course, then the student is required to retake both the theoretical and clinical courses. The connected courses are as follows:
- First year: NUR-101/ NUR-102 NUR-104/ NUR-106 NUR-110/ NUR-111
- Second year: NUR-204/ NUR-206 NUR-205/ NUR-206 NUR-210/ NUR-211

Respiratory Care

Fort Hays Tech | North Central selects a maximum of ten (10) students for the Respiratory Care Program each year. Acceptance of students into the Respiratory Care Program is dependent upon available openings. Applicants should apply as early as possible; however, the program will continue accepting applicants until maximum capacity for the program is filled. Students that turn in their applications prior to November 1st are eligible for early admission. If the student meets all the required criteria (listed below) and has applied with all of the necessary completed documents, they will be admitted into the program. Late submission is any application received after November 1st Late submission students must meet the required criteria and will be subject to the point system scale if more than 10 students apply. Students are accepted annually into the program with courses beginning in August

1. The applicant must take the Test of Essential Academic Skills (TEAS) entrance examination for purposes of placement in the program if.
    a. A minimum score of 58.7% or higher on the total score is required.
    b. The applicant must pay each time the test is taken.

2. All applicants must have a 2.5 GPA or better in completed general education courses required for the program. All required information must be in the official file maintained by the Respiratory program Director before the application is reviewed. Responsibility for completing the information rests entirely with the applicant.

3. Criminal conviction may jeopardize eligibility for licensure.

Class Selection

The following table indicates the scoring criteria that will be used for the selection process.

Since the Respiratory Care program is a selective admission program, the scoring rubric (located below) will be used to determine the applicants selected. The completion of the online Respiratory Care application does not guarantee a position in the program. Any tiebreaker will be based on the TEAS overall test score. If an applicant does not have a score in the Part A section, then the student does not qualify for admission. Students who do not qualify for admission are encouraged to follow up with an academic advisor to see how they can improve their scores.

Part A – Pre-Requisites and TEAS Score

	1	2	3	4	Score	Required Documentation
Letter Grade for: Anatomy and Physiology	N/A	C	B	A		Copy of official transcript from accredited college or university.
Letter Grade for: Microbiology	N/A	C	B	A		Copy of official transcript from accredited college or university.
Letter Grade for: College Algebra	N/A	C	B	A		Copy of official transcript from accredited college or university.
Letter Grade for: English Comp I	N/A	C	B	A		Copy of official transcript from accredited college or university.
TEAS Academic Preparedness Level	Basic 40.7-58	Proficient 58.7-79.3	Advanced 80-91.3	Exemplary 92-100		ATI TEAS Transcript
				Total of Section A		

Part B – Additional Points

	1	2	3	4	Score	Required Documentation
Veteran	Yes	N/A	N/A	N/A		Copy of DD214
Healthcare Worker Certificates (Emergency Medical Technician (EMT), Certified Medication Aid (CMA))	Yes	N/A	N/A	N/A		Copy of current certificate and proof of employment within the last **two** years.
Healthcare Worker Non-certifications (Medical Assistant, School Health Aid, Pharm Tech, Phlebotomist)	Yes	N/A	N/A	N/A		Proof of employment within the last **two** years.
Certified Nurses Aid Years of Experience *Less than one year of experience receives no extra points	1-3 years	3-5 years	5-10 years	>10 years		Proof of employment must be within the last **two** years and be provided in an official document from the institution(s) human resource department.
				Total of Section B		
				Total of Sections A and B		

1. Classes will be selected by the highest-ranking applicants. The process also used to select applicants for the wait list.
1. Class selection will be finalized and those selected will be notified in February.
2. If the class is not full, the admission process will continue past January until the required enrollment is met.

Applicant Obligations

1. A physical examination and health history is required. All required immunizations must be current. The **physical form** will be emailed following class selection with a deadline for submission of the completed document prior to any clinical experiences.
2. Applicants must provide **evidence of current CPR certification** through American Heart Association prior to any clinical experiences. The student is responsible for maintaining certification throughout the respiratory program.
3. Applicants must obtain a **drug screen**. These results must be sent directly to the Director of Respiratory Care from the laboratory/ testing center. If a result is positive, the student must provide a statement from the prescribing provider of expected positive result/ prescribed medication. If unable to provide this, the applicant is no longer eligible for the current academic year and may apply for the following academic year.

1. Online Fort Hays Tech | NC Admission Application and TB Questionnaire
2. Online Application
   As you contemplate applying for admission to the Respiratory program, please be aware that Fort Hays Tech | NC partners with multiple health systems and healthcare providers to provide clinical experiences. These clinical partners may require all students to have received the COVID-19 vaccine before being allowed to begin their on-site experiences. As a result, unvaccinated students could be precluded from participating in such experiences, which could impact their completion of program requirements.
3. Background check form.
4. Online signed Technical Standards Policy: will add to website
5. Online Completion of Scholarship and Grant Applications
6. Submission of Vaccination Records

In addition, the student should do the following:

1. Completion of designated prerequisite courses.
2. Request a transfer of official college transcript(s). All transcripts from other colleges must be requested by the student and sent directly to the Fort Hays Tech | NC Registrar's Office.
3. Interview with a Program Faculty member. The interview will be scheduled by a Respiratory Care Program Director.

It is the responsibility of the applicant to make sure all application materials are received in the Respiratory Care department in a timely manner by following up with their faculty advisor.

Short-Term Programs: All short-term programs require full payment prior to the start of the program.

Commercial Driving License (CDL)

- Be 18 years of age in order to participate in the drive portion
- Valid Kansas Driver's License

CNA

- Be 16 years of age by the completion of the course
- Negative TB skin test current within one year of the start of the course

CMA

- Be 18 years of age
- Submit a qualifying reading test score – 8th grade reading equivalency or higher
- Negative TB skin test current within one year of the start of the course

Fort Hays Tech | North Central is a first come, first admitted institution (with the exception of Nursing). Students are encouraged to get all required admissions materials submitted as soon as possible to secure a spot in their desired program of study.

International Student Requirements:

International students must adhere to all Fort Hays Tech | North Central admissions policies as stated below:

- Application for Admission (*All International students will be charged a one-time non-refundable application/enrollment fee of $50.00)*
- Copy of ID Page and Passport
- A completed sponsor financial agreement
- School Transcripts – High School/College – Must be official (*All students are required to submit official high school and college transcripts. The transcripts must be translated in English and must include a graduation date and be properly certified. Faxed or copies will not be accepted as official).*
- English Proficiency (*A minimum TOEFL score of 500-paper/173-computer is required. Students from an English speaking country are not required to take the TOEFL. A conditional admission may be allowed for a TOEFL score under 500/173. Enrollment will be restricted under this conditional admission. Students may be required to enroll in appropriate English as a Second Language course(s).*
- Transfer Authorization if transferring from another American Educational Institution
- Proof of Health Insurance (*All international students are required to have adequate medical insurance. Students wishing to purchase insurance may do so from* ***Student Assurance Services, 800-245-0486.***
- All application materials must be mailed or hand delivered to Fort Hays Tech | North Central. We will not accept imaged documents for admission. Please mail the original copy of documents to:

  Registrar's Office
  Fort Hays Tech | North Central
  PO Box 507
  Beloit KS 67420

For international college credit transfer, Fort Hays Tech | North Central accepts transcript evaluations from any member of the National Association of Credential Evaluation Services (NACES).

Select the course-by-course evaluation and have the evaluating company send an official report of its evaluation for each international transcript. Fort Hays Tech | North Central will then use the evaluation to determine which course will be accepted to fulfill degree requirements. College credit transfer will not be considered prior to students obtaining admission. NOTE: World Educational Services (WES) course-by-course evaluations are preferred, but we will accept any NACES approved member.

Mailing address for transcript report:

Fort Hays Tech | North Central
Registrar's Office
PO Box 507
Beloit, KS 67420

Associate Degree Nursing English as a Second Language Admissions Policy:

Any student for whom English is not the primary language must follow the below procedure to ensure adequate proficiency in written and spoken English in the clinical setting.

- The nursing applicant informs the Director of Nursing that English is not his/her primary language for written or oral communication.
- All nursing applicants must show proficiency in oral and written English if their primary language is not English.
- Applicants must complete the TOEFL or IELTS exams.
- Kansas State Board of Nursing guidelines for TOEFL/IELTS scores will be followed:
  1. TOEFL – Test of English as a Foreign Language
  2. IELTS – Test for Spoken English
- The following are the minimum scores that will be required for all ESL nursing applicants.
  1. Test of English as a Foreign Language (TOEFL)
     550 minimum score – Paper/pencil version
     213 minimum score – Computer version
  2. Test for Spoken English (TSE)

50 minimum score

Registration for testing may be obtained from:

University of Kansas
Testing Service
Watkins Health Center Rm 2150
Lawrence, KS 66045
www.ukans.edu
785-864-2768

Pittsburg State University
1701 South Broadway
206B Whitesitt Hall
University Testing Services
Pittsburg, KS 66762
620-235-4267

Kansas State University
Testing Programs and Services
2323 Anderson Ave, Suite 102
Manhattan, KS 66506
785-532-7324

Fort Hays State University
701 Park Street
Picken Hall Room 117A
Hays, KS 67601

Prometric Testing Center
2800 SW Wanamaker Road
Suite 150
Topeka, KS 66614
785-272-7500

Sylvan Learning Center
2020 North Woodlawn St
Suite 620
Wichita, KS 67208
316-651-5350

Further information can be found on the website: www.ets.org Educational Testing Service (ets)

TOEFL Publications

PO Box 6154

Princeton, New Jersey 08541-6154

609-771-7760

http://www.toefl.org

There are no special accommodations with NCLEX®. There is a time limit of 5 hours for the NCLEX-PN® and the Kansas State Board of Nursing feels that this is sufficient time for ESL applicants to complete the exam.

Criminal conviction may jeopardize eligibility of licensure. (Any previous involvement with the judicial system may negatively impact clinical experiences or the NCLEX PN process)

Application Fee Policy:

The $50 Application Fee will be waived for students that have graduated from a full-time program with a certificate or AAS Degree from Fort Hays Tech | North Central previously. For students that have paid the Application Fee but did not graduate, Fort Hays Tech | North Central will waive the application fee for up to 5 years.

Academic Transcripts:

Official academic transcripts must be on file in the Registrar's Office. This includes:

- Official High School transcript reflecting graduation date and school official signature, it's equivalent or a GED
- Official college transcripts from all institutions attended are required.

Faxed and/or emailed transcripts are <u>NOT</u> considered official unless using a secure site such as Parchment or National Student Clearinghouse.

Tuition and Fee Payment

Students Not Receiving Financial Aid:

Student account balances will be available prior to the beginning of each semester on the student's Tech-Know portal. Payment in full, a payment plan via Nelnet in place, and/or completed financial aid to cover all student account balances must be established by the close of business on the Friday of add/drop week of each semester. Extenuating circumstances preventing these payment arrangements from taking place must be appealed to the Vice President of Finance and Operations by the close of business on the Friday of add/drop week of the semester. If these arrangements have not been made by the close of business on the Friday of add/drop week of the semester, the student will not be allowed to attend class. Students enrolling in courses after the start of a semester will be required to have payment arrangements finalized at the time of registration. If Chapter 31 or 33 benefits have a delayed disbursement by the U.S. Department of Veterans Affairs, students who receive these benefits will not be charged the late fee, will not be dropped from classes or be required to borrow additional funds to cover their tuition as long as they have paid the remaining balance not covered by the Chapter 31 or 33 benefits by the first day of the semester.

If at the end of add/drop week, the student still owes $100 or less, the student will be assessed at $50 late fee. Students will maintain their enrollment status but a hold will be placed on their account.

Short term programs:
Students must have balances paid in full prior to being enrolled in short term programs. There are no refunds for short term programs.

High School students:
Students enrolled in high school CEP courses NOT covered by Excel in CTE must be paid in full or in a payment plan as outlined in the Concurrent Enrollment Partnership with each school district.

Personal checks, VISA, MasterCard, and Discover are accepted for payment.

ACADEMIC REGULATIONS

Fort Hays Tech | North Central is a two-year institution offering the student an opportunity to pursue a Certificate A, Certificate B or an Associate of Applied Science degree.

Certificate A Programs:

•Business Office Management

•Pharmacy Technician

•Welding

Certificate B Programs:

- •Business Office Management
- •Business Technology
- •Carpentry/Cabinetmaking
- •Culinary Arts
- •Welding
- •Heavy Equipment Operation
- •Plumbing, Heating & Air Conditioning
- •Practical Nursing
- •Powersports Technology

Associate of Applied Science Degree:

- •Agricultural Equipment Technology
- •Automotive Collision Technology
- •Automotive Technology
- •Building Construction Technology
- •Diesel Technology
- •Telecommunication and Networking Technology
- •Welding Engineering Technology/Technician
- •Electrical Technology
- •General Business
- •Information Technology
- •Nursing
- •Applied Technologies
- •Respiratory Care

Attendance Policy:

Class attendance is necessary for students to learn and succeed. The College intends to establish expectations that resemble those of a workplace environment. Students are expected to attend class every session. Students should be punctual in their attendance and participate fully in all class-related activities to include: labs, shop, and field trips. Students are accountable for their absences and responsible for providing instructors with advance notice of any absence.

Due to the diversity of programs offered and the various formats in which they are delivered, Fort Hays Tech | North Central allows each department to develop its own approved attendance policy, which best suits their program. The attendance policy will be outlined in the course syllabus and may be factored into the student's final grade. Students are advised to meet with their instructor regarding the attendance policy for each class/program.

If a student's absences exceed the limits of the program's attendance policy, instructors may recommend a student be dismissed from the class or program. The final decision on the recommendation will then be made by the administration. The decision will then be communicated to the student and the instructor.

Academic Honesty:

Membership in the Fort Hays Tech | North Central learning community imposes upon the student a variety of commitments, obligations and responsibilities. It is the policy of this college to impose sanctions on students who misrepresent their academic work. Appropriate classroom instructors or other designated persons will select these sanctions consistent with the seriousness of the violation and related considerations.

Examples of scholastic dishonesty include but are not limited to:

1.) Plagiarism: *i.e.*, taking someone else's intellectual work and presenting it as one's own. Each department sets standards of attribution. Faculty will include disciplinary or class-specific definitions in course syllabi.

2.) Cheating is unacceptable in any form. Examples include consultation of books, library materials, notes or electronic devices during tests without the instructor's permission; use of crib sheets or hidden notes; intentional observation of another student's test on paper or a computer screen; accessing another student's electronic device and taking information from the device; receipt of a copy of an exam or questions or answers from an exam to be given or in progress; submission of falsified data; alteration of exams or other academic exercises; and collaboration on projects where collaboration is forbidden.
3.) Falsification, forgery or alteration of any documents pertaining to assignments and examinations.
4.) The use of AI generated content from AI tools such as, but not limited to, Chat GPT, Dall-E, Co-Pilot, etc. is up to faculty discretion per course as stipulated within the course syllabus. Submitting AI generated work as your own, without attribution, will be considered academic dishonesty.
5.) In courses where the use of AI tools are not permitted as stipulated within the course syllabus, work submitted using AI will be considered academic dishonesty.
6.) Students who participate in, or assist with, cheating or plagiarism will also be in violation of this policy.

Classroom instructors and/or administrators will assess sanctions for violations of this policy. The seriousness of the violation will dictate the severity of the sanction imposed. Academic sanctions may include but are not limited to any of the following:

a. verbal or written warning
b. lowering of grade for an assignment
c. lowering of term grade

Administrative sanctions may include but are not limited to either of the following:

a. suspension from the course, program, or College
b. dismissal from the course, program, or College

General Education Philosophy:

The general education curriculum at Fort Hays Tech | North Central is committed to educating the whole student through a core of valuable learning experiences common to all students independent of program of study. All programs, degree and certificate seeking, require general education as part of the program of study, equipping students for life-long learning.

Courses within the curriculum provide a broad knowledge of science, communications, computer literacy, the human experience, critical thinking, and analytical reasoning. The general education curriculum prepares students for engaging in cultural awareness, collaboration, problem solving and leadership. All general education courses offered at Fort Hays Tech | North Central align with the Kansas Core Outcomes.

ASSOCIATE OF APPLIED SCIENCE DEGREE PROGRAMS:

Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra*	3
MA-111	College Algebra*	3
Computer Science	**(3 cr. hrs.)**	
CIS- 100	Computer Applications	3
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I*	3
COM-105	Fundamentals of Oral Communication	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**

CERTIFICATE B PROGRAMS:

Math	**Choose One MA (Math) Class**	
MA-102	Essential Math	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Social & Behavioral Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**9**

*Prerequisite requirements must be met in order to enroll in Intermediate Algebra, College Algebra or English Composition I.

Tech Connect:

Tech Connect (SS-102) is a course designed to connect and acclimate new students to Fort Hays Tech | North Central. Students will be introduced to skills for educational and career success. This course will also foster a sense of connection and engagement in the college experience.

All first year, full-time program students will be enrolled in Tech Connect in the fall semester. Successful completion of the course is a requirement for graduation.

Developmental Courses:

Prerequisite requirements must be met in order to enroll in College Algebra, Intermediate Algebra, and English Composition I. Students may be asked to take an additional placement test in order to ensure proper placement.

Fort Hays Tech | North Central offers developmental courses in both math and writing using the co-requisite model. Students may be asked to enroll in a co-requisite course along with the credit-bearing course to build skills for success. Traditional developmental courses in writing and math are also offered for students needing additional remediation.

General Education Add Procedure:

Students can add a general education course during the first week of each semester by meeting with their advisor. After the first week, special permission to add a course must be granted by the instructor. Forms may be obtained by contacting the Office of the Registrar.

Academic Evaluation Criteria: (all students)

The academic progress of the student is evaluated as follows:

Excellent ..... A
Good ..... B
Average..... C
Unsatisfactory ..... D
Passing ..... P
Failing ..... F
Incomplete I
Withdraw ..... W

NOTE: The grade of Incomplete will be utilized only when extenuating circumstances exist: justifying additional time for the student to establish a grade for the semester. If an Incomplete grade is given, the Incomplete must be changed to a letter grade within the first two weeks of the next term. Fall incompletes will have the first two weeks of the spring term to complete, spring incompletes will have the first two weeks of the summer term to complete, and summer incompletes will have the first two weeks of the fall term to complete.

Graduating with Honors:

Students graduating with honors from Fort Hays Tech | North Central will be recognized by wearing a tri-colored tassel on their graduation cap. Honors are awarded based on the student's cumulative grade point average (GPA). Eligible students must have a cumulative grade point average of a 3.5-4.0.

The reading of honors for degree candidates are based on the student's grade point average as of May 1st. Official honors will be awarded once final grades are posted and conferred at the completion of the school year.

Repeating a Course:

If a student repeats a course for which they have already earned a final grade, the original grade for the course will remain on the student's academic transcript with an "R" indicating the course was repeated. The last grade earned will be calculated in the student's grade point average. The grade received when the course was originally taken will not be factored into the grade point average once the course has been repeated.

Auditing a Course:

Student may elect to audit a course. Students auditing a course/courses should expect to attend all class sessions and may be required to complete assignments and/or lab work at the instructor's discretion. Permission to audit a course must be granted by the Dean of Instruction and is only permitted with approval from the course faculty and when space permits.

Students will not receive a grade nor transcripted credit for the course/courses. Transcripts will note a grade of audit. Once a course is audited, the student will not be permitted to enroll in the course at a later date to receive credit. Students will be charged all tuition and fees per the course.

Students auditing courses are subject to all course and institutional policies. Courses eligible for auditing are determined by the department chair. Not all courses are eligible for auditing. Please consult with the Registrar. Students must contact he Registrar to officially enroll as an auditing student.

Independent Study:

Independent study may be used in special circumstances to meet graduation requirements. An academic contract will be developed outlining the course content, competencies, course assignments, assessments, course modality, and time frame to complete the course. The contract will also include any required course materials needed for course completion.

- All independent study course must be approved by the course instructor and the Dean of Instruction and documented within the Office of the Registrar.
- Academic credit is posted on the transcript with the College course number and a letter grade.
- Tuition and fees applicable to the course code for Independent Study will be charged.

Assessment of Student Learning:

Fort Hays Tech | North Central is committed to the continuing process of improving learning opportunities for our diverse community of learners. This is accomplished through a process of ongoing assessment of student learning. All programs shall have a unique set of student learning objectives and program outcomes. The student achievement level of the stated learning objectives and program outcomes is measured through assessment activities throughout the academic year. The results of the assessment activities are used for improving programs and making curricular changes to maximize student learning.

Testing Policy:

Students may be asked to provide placement test scores for appropriate placement in Math and English classes. Test scores should be submitted to the Registrar's Office, PO Box 507, Beloit, KS 67420. Fort Hays Tech | North Central will provide one free placement test for all applicants at either the Beloit or Hays campuses. Accuplacer and Compass placement test scores are valid for five years from original testing date. ACT and SAT scores are valid from the original testing date.

Students who believe their placement scores in a given subject area does not accurately reflect their abilities may elect to be retested. A $10.00 fee will be charged for retesting per section. Students must wait a minimum of two weeks from the initial test date to retest.

Placement testing at Fort Hays Tech | North Central occurs in a quiet testing environment and is computerized. The testing is untimed so the student may work at a comfortable pace. If a learning or physical disability would prevent a student from taking a placement test under standard conditions, accommodations may be requested by contacting the Director of Learning Services at 785.738.9020.

Accommodations that can be arranged include (but are not limited to) enlarged test/screen magnification, modifiable screen colors, alternative test formats including Braille, and untimed testing breaks. Students wanting to request an accommodation will need to provide recent professional documentation regarding the disability. The documentation needs to include how the disability affects the student's academic performance and suggested accommodations.

Students may request a copy of their ACCUPLACER test scores sent to them or another institution through the Student Success Office.

The following scores will be used to indicate placement in writing and math courses at Fort Hays Tech | North Central for all college sites and online delivery:

	ACT	**ACCUPLACER Classic**	**ACCUPLACER Next Gen**
English Composition I	20	Sentence Skills – 69 Reading – 69	Reading – 255 Writing – 255
English Composition I with Review	17-19	Sentence Skills – 45-68 Reading – 45-68	Reading – 240-255 Writing – 240-255
Intro to Composition	16 or Below	Sentence Skills – 45 or Below Reading – 45 or Below	Reading – 240 or Below Writing – 240 or Below
Essential Math	17 or Below	80 or Below	262 or Below
Essential Math with Review	10 or Below	25 or Below	237 or Below
Intermediate Algebra	18	60-80	250-262
Intermediate Algebra with Review	16-18	50-59	240-249
College Algebra	22	81	263

Updated July 2018

Multiple Measures:

In addition to placement testing, multiple measures may be used. Multiple measures incorporate using two or more college readiness indicators for placement into college-level courses. The use of multiple measures for course placement is recommended by the Kansas Board of Regents' Kansas Placement/Assessment Guidelines. Fort Hays

Tech | North Central will use the following guides, along with placement test scores, to help place students in writing and math courses.

Students who have been out of school for more than five years, will be asked to take a placement test for more accurate placement.

Math Placement	
College Algebra	GED Score of 165 on Mathematical Reasoning
	Grade B or higher in Algebra II
	3.1 or higher High School cumulative GPA
Intermediate Algebra	GED Score of 155-165
	Grade C in Algebra II
	2.8-3.1 High School cumulative GPA
	or
	No Algebra II and a 3.0 or higher HS GPA
Essential Math	GED score of 145-155
	No Algebra II
	High School GPA lower than 3.0
English Placement	
Composition I	GED score of 165 on Reasoning in Language Arts
	Grade B or higher in English IV
	2.9 or higher High School cumulative GPA
Composition w/Review	GED score of 155 -165
	Grade C in English IV
	2.5 – 2.9 High School cumulative GPA
Introduction to Composition	GED score of 145-155
	Grade lower than C in English IV
	Lower than 2.5 High School GPA

Add/Drop Policy:

Students are allowed to add or drop classes during the first full week of each semester. Students dropping classes will not have a notation on their academic transcript.

Program Withdrawal:

To withdraw from a Program, a student must complete a Voluntary Withdrawal Form in the Dean of Student Success' Office.

- A student who withdraws from a program during the first week of the semester will not have a notation on the transcript.
- Students withdrawing after the first week but before the published drop date will receive grades earned on all completed courses up to the date of withdrawal. All remaining courses for the semester will receive a grade of W on the transcript.
- After the published drop date, students will not be allowed to withdraw and will receive the final earned grade for their courses.

General Education Withdrawal:

To withdraw from a general education course, a student must complete a Course Withdrawal Form in the Dean of Student Success' Office.

- A student who withdraws from a general education course during the first week of the semester will not have a notation on the transcript.
- Students withdrawing after the first week and up to 60% of the semester will be given a grade of W for that course.
- After 60% of the semester is completed, students will not be allowed to withdraw.
- General Education instructor's signature is required.

Administrative Withdrawal:
A student may be administratively withdrawn from any or all courses by a College administrator when the following conditions exists:

- The student has reached five consecutive absences without contacting their instructor, Registrar, or an Administrator.
- Failure to respond to contact attempts by the College during the 5 consecutive absences.

Students who are administratively withdrawn will receive grades earned on all completed courses up to the date of the withdrawal. Courses in progress will receive the final grade earned. All remaining courses for the semester will receive a W on the transcript.

Students will be notified before being withdrawn. The notice will include information regarding their right to a due process hearing.

If students cannot be notified in person or by phone, students will be notified in writing. Students may have to wait a full semester before being re-admitted.

A student who is administratively withdrawn may appeal by filing a written appeal with the College President **within 5 business days of receipt of notification of being withdrawn**. The appeal must include reasons why the student failed to meet obligations outlined in this policy and what the student's plan of corrective action is.

The College President will decide within 5 business days; **this decision is final**.

Short-term Withdrawal (CNA, CMA, CDL):
Students will not be allowed to withdraw from short-term courses. Students who stop attending and/or completing work will receive the grade earned at the end of the course.

Withdrawals are not effective until completed forms are on file in the Registrar's Office.

Academic Appeals:

Students who believe they have been treated unfairly with regard to academic regulations or grading procedures have the right to an appeals process. The first step must be to address the issue with the instructor. If the student is not satisfied with the result, the student can appeal the decision in writing to the Dean of Instruction within 30 days of the event. A student who wishes to appeal the decision of the Dean of Instruction may do so by filing a written appeal to the Vice President of Student and Instructional Services within 10 business days of the decision. A decision will be delivered to the student within 5 business days. A student who wishes to appeal the decision of the Vice President of

Student and Instructional Services may appeal to the College President within 10 days of the decision. The College President will deliver a decision to the student within 5 business days. The decision of the College President is final.

***Internship Guidelines*:**
Internship courses provide students with a capstone learning experience at the end of their technical coursework. Students must meet all requirements listed below to be eligible for internship. Only high achieving students will be permitted to leave on these dates. .

Students are eligible for internship upon successful completion of the following requirements:

1. Approval by the Department Chair documenting internship eligibility.
2. Complete a Graduation Application and grade/degree audit with the Registrar.
3. Complete all required coursework, including all general education courses, according to individual program objectives. Students receiving a failing grade "F" in any coursework will be required to retake the course. Incomplete coursework "I" will not count towards graduation requirements. Students will not be permitted to be concurrently enrolled in general education courses and internship.
4. Final grades posted in all coursework prior to the eligible internship date.
5. Attendance in a minimum of 85% of classroom and lab hours.
6. Documented internship site with employer signature and approval by the Department Chair of the program.
7. A minimum cumulative grade point average of 2.0.
8. An official high school transcript reflecting graduation date and school official signature, it's equivalent, or a GED.
9. No outstanding bills owed to the College.

- ***March 24, 2025*** *is the first available date for Diesel Technology and Electrical Technology.*
- ***April 14, 2025*** *is the first available date for Agricultural Equipment Technology, Automotive Technology, Automotive Collision Technology, and Telecommunications and Networking Technology.*
- ***April 21, 2025*** *is the first available date for Heavy Equipment Operation, Welding and Plumbing, Heating and Air Conditioning, Powersports.*

The maximum amount of time a student may devote to the internship program is 15% of the program of study.

TRANSFER POLICY

Transcription of credit from another institution by Fort Hays Tech | North Central will require the student to:

1. Have an official transcript from the secondary or post-secondary institution on file with Fort Hays Tech | North Central (Student-issued transcripts are not acceptable.)
2. Have a D or higher, or the equivalent of 1.0 on a 4.0 scale grade, in all classes being considered for transfer or award; Note: Certain programs require a C or higher grade for credit to be awarded, please consult with the Department Chair to determine the requirements of each program. Approved departmental academic requirements supersede institutional academic requirements.
3. Only for courses approved for certificate/degree credit will be considered for credit at the awarding institution; Note: A course description, course outline or course syllabus may be requested for each course the student wishes to be considered for acceptance by Fort Hays Tech | North Central.

Credit for any articulated courses and/or transfer credit (high school and/or postsecondary coursework from another accredited institution) will appear on the student's Fort Hays Tech | North Central transcript. Credits awarded from other institutions will be used to calculate the student's cumulative grade point average.

Intercampus Transfer:
Students seeking transfer from one Fort Hays Tech | North Central campus to another, between the first and second year of the same two-year program, must work through the Registrar to obtain approval of the program department chairs on both campuses. The department chairs will consider the availability of space and resources, as well as evidence of the student's ability to successfully complete the program.

Transfer from one Fort Hays Tech | North Central campus to another, once the program has started or once the academic year is underway, will not be permitted under normal circumstances. In the event of extenuating circumstances, a student may submit a written request for intercampus transfer to the College President. The President will consider feasible options for the College and the student to mitigate the circumstances. Additionally,

the decision may consider input from any of the affected parties on both campuses considering the availability of space and resources, as well as evidence of the student's ability to successfully complete the program.

General Education Courses:

General education courses taken at regionally accredited colleges, universities, or other recognized institutions may be submitted to the Fort Hays Tech | North Central Registrar for evaluation and possible acceptance. The Registrar will consult with the Vice President of Student and Instructional Services or designee to make the final determination of transferability. General education coursework must be at the 100 level or above. If a student has completed an associate or higher-level degree from an accredited institution of higher education, prior to entering a program of study at Fort Hays Tech | North Central, the general education courses will be accepted in total for the Fort Hays Tech | North Central general education requirements. These courses must meet the general education requirements of Fort Hays Tech | North Central's accrediting body.

Technical Education Courses:

Technical education courses taken at another accredited postsecondary or higher education institution may be submitted to the Fort Hays Tech | North Central Registrar for evaluation and possible acceptance. The program instructor and Department Chair will make the determination of transferability with final approval by the Vice President of Student and Instructional Services.

Technical education coursework eligible for transfer must have been completed within five (5) years prior to enrollment. Evidence of relevant experience in the industry may be presented for coursework taken more than five (5) years before a request for transfer of credit is made, or Fort Hays Tech | North Central coursework taken more than five (5) years before a request is made. This evidence will be evaluated by the Vice President of Student and Instructional Services or designee and the appropriate Department Chair for transferability.

OSHA 110 Requirement:
In order to be exempt from taking OSHA110 – students must provide a copy of their OSHA Card to the Registrar ***no later than Friday of add/drop week*** the semester the course is offered. If a copy of the card is not on file, the student will be required to take and pay for the course.

Articulated Credit:

Students may seek tuition reduction or award of credit received from a secondary institution that has in place a current articulation agreement with Fort Hays Tech | North Central. Determination of tuition reduction or award of credit will be based on the terms and status of the articulation agreement. Any student seeking transfer of credit or award of articulated credit must meet the same admissions requirements as all Fort Hays Tech | North Central students.

Program Transfer:

Students wishing to transfer to a different program may do so only within the first week (5 academic days) of the first semester.

Transfer of Fort Hays Tech | North Central Technical Education Credit between Programs:

With approval from the program instructor and Vice President of Student and Instructional Services or designee and upon completion of a written request for academic credit transfer, students may transfer program-specific courses in one program of study to other Fort Hays Tech | North Central programs of study.

Transfer of Courses from Fort Hays Tech | North Central:

Students wishing to transfer credit from Fort Hays Tech | North Central to another higher education institution must request, in writing, a transcript be sent from the Registrar to the receiving higher education institution or through the National Student Clearninghouse (link on the Fort Hays Tech | North Central website). The receiving institution will determine acceptance of Fort Hays Tech | North Central coursework for transfer of credit.

Written requests must be submitted to:

Fort Hays Tech | North Central

Office of the Registrar

3033 US Hwy 24, PO Box 507

Beloit, KS 67420

Concurrent Credit

Students completing course work while enrolled concurrently may not elect to receive college credit post enrollment deadlines. Open enrollment ends after the first full-week of classes per term.

Credit for Prior Learning (CPL):

- Credit for Prior Learning, also referred to as Prior Learning Assessment (PLA), is intended to expedite adults' completion of post-secondary education programs by evaluating an individual's existing knowledge and competencies and awarding credit as appropriate.
- Credit for Prior Learning may be earned by documenting skills acquired through work and life experiences. These experiences could include military training programs, industry certifications, documented work experience or civic/volunteer experiences.
- CPL credit may be awarded based on evaluation by trained faculty of the college, ACE (American Council on Education) recommendations, CAEL (Council for Adult and Experiential Learning) recommendations, successful apprenticeships, 3rd party certifications, professional licensure, or assessing prior military credits. The method of evaluation will be determined following the review of transcripts and upon a written request of the applicant.
- CPL will only be awarded for students enrolled in a full time program at Fort Hays Tech | North Central. Fort Hays Tech | North Central may award no more than 50% of the total program hours for CPL.
- Written requests for CPL must be submitted to the Registrar at least 30 days prior to the beginning of the first semester of the program. Questions regarding CPL can be directed to the office of the Registrar.

Credit Hour Definition:

Fort Hays Tech | North Central uses the Carnegie Credit Hour model for determining the number of clock hours per credit hour of instruction: 15 hours of lecture instruction; 30 hours of laboratory instruction; and 45 hours of clinical, on-the-job training or internship instruction.

Fort Hays Tech | North Central uses a consistent standard for determining the appropriate amount of time a class should meet, depending upon the type of instruction being delivered.

The conversion table below identifies the appropriate number of hours a class should meet per credit hour of instruction.

Lecture (1:1)	**Lecture/Lab (1.5:1)**	**Lab (2:1)**	**Clinical/Internship (3:1)**
15-29=1 credit	22.5-44=1 credit	30-59=1 credit	45-79=1 credit
30-44=2 credits	45-67=2 credits	60-89=2 credits	80-134=2 credits
45-59=3 credits	67.5-89=3 credits	90-119=3 credits	135-179=3 credits
60-74=4 credits	90-112=4 credits	120-149=4 credits	180-224=4 credits
75-89=5 credits	112.5-134=5 credits	150-179=5 credits	225-269=5 credits
90-104=6 credits		180-210=6 credits	270-314=6 credits
			315-359=7 credits
			360-405=8 credits

STUDENT ACCESSIBILITY SERVICES

Informational Overview for Students with Disabilities:

Fort Hays Tech | North Central is dedicated to providing equal access and opportunity to all campus programs and services for students with disabilities. We are committed to providing reasonable accommodations in accordance with applicable state and federal laws including, but not limited to, Section 504 and 508 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. We strive to create a safe, respectful and inclusive environment and promote awareness, knowledge and self-advocacy.

Fort Hays Tech | North Central acknowledges that traditional methods, programs and services are not always appropriate or sufficient to accommodate the limitations experienced by some qualified persons with disabilities. When a student's disability prevents him/her from fulfilling a course requirement through conventional procedures, consideration will be given to alternatives, **keeping in mind that academic standards must be maintained**.

Services are provided through Student Accessibility Services (SAS) staff located in the Student Success Center, on the Beloit Campus, and in Student Services, on the Hays Campus.

- Director of Learning Services, may be reached at 1-785-738-9020; or by mail at Fort Hays Tech | North Central, 3033 US Hwy 24, Beloit, KS 67420.

Student Responsibilities

Students requesting support services will need to register ("self-disclose" and complete Student Accessibility Services Intake and Consent Form), provide appropriate documentation (if available) including how the disability affects academic performance and suggested accommodations, and communicate with the Director of Learning Services as part of the interactive process to create an *Educational Accommodation Plan* that will notify Instructors of approved accommodations, services and/or auxiliary aids.

Students are encouraged to make timely and appropriate disclosures and requests, at least two weeks in advance of a course, program, or activity for which an accommodation is requested (or as soon as realistically possible) to allow adequate time for accommodation services to be set in place.

Accommodations, Academic Support Services, or Auxiliary Aids

Reasonable accommodations including academic support services and auxiliary aids are provided to allow students with disabilities an equal opportunity to participate in and benefit from our educational programs. Accommodations will be provided on a case-by-case basis determined by student request, documentation, intake interview, Educational Accommodation Plan team, and assessment of individual needs and course requirements.

Reasonable testing accommodations may include, but are not limited to:

- Extended testing time
- Reduced distraction testing environment
- Test reader and/or scribe
- Use of calculator

Academic support services/auxiliary aids may include, but are not limited to:

- Note-taking assistance (second set of notes, power point slides, or other visual aids provided)
- Sign Language Interpreter
- Preferential seating in the classroom
- Large print exams, handouts, signs, etc.
- Telecommunications devices
- Use of Assistive Technology

Accommodations may not fundamentally alter the nature of the program or activity, lower academic standards, present undue financial or administrative burden on the college, or post a threat to others or public safety.

Additionally, some accommodations and services cannot be provided, such as personal devices or assistance with personal services.

Auxiliary aids may be available through a variety of sources available to individual students. The student may make a request in obtaining specialized support services from other resources such as Vocational Rehabilitation Services (VR), Recordings for the Blind, Kansas Talking Book Service, etc. For example, Vocational Rehabilitation may fund such items as transportation to the institution, tuition, textbooks, hearing aids, and other individually prescribed medical devices.

If at any time throughout the academic year, a student feels that the agreed upon accommodations are not being followed or that alternate accommodations need to be provided, the student should notify Student Accessibility Services (SAS) staff. Fort Hays Tech | North Central is committed to student success; however, we do not require students to use accommodations. The decision of when to utilize approved accommodations or services is up to the student. Integration, self-advocacy and individual responsibility are promoted and expected.

Grievance Procedure

Any student who believes he or she has been subjected to discrimination on the basis of disability or has been denied access or accommodations, shall have the right to invoke the Grievance Procedure.

Students are encouraged to first discuss their concerns with SAS. An attempt will be made to resolve the issue(s) causing concern by assisting the student in discussions with the person(s) involved. Most situations are positively resolved through this process. If the student does not feel the concern or complaint has been appropriately resolved, he or she should contact the Vice President of Student and Instructional Services at 1-800-658-4655 or PO Box 507, 3033 US Hwy 24, Beloit, KS 67420, where grievance procedures are filed for all students, including students with disabilities.

If the complaint is not resolved at the College level, a student may choose to file a complaint with the Office for Civil Rights at 1-816-268-0550 or U.S. Department of Education, One Petticoat Lane, 1010 Walnut Street, Suite 320, Kansas City, MO 64106.

Confidentiality

All information regarding a student's disability is confidential. All documentation will remain separate from academic records and will not be released to an individual or source external to Fort Hays Tech | North Central without the student's written consent. In order to provide effective services, it may be necessary to communicate limited information on a need-to-know basis regarding disability-related needs to Fort Hays Tech | North Central faculty and/or staff.

Placement Testing Accommodations

Students are required to provide placement test scores to gain acceptance into their chosen full-time program. Fort Hays Tech | North Central administers the ACCUPLACER Test for appropriate placement in Math and English classes. Testing takes place in a quiet testing environment and is computerized and untimed so you can work at a pace that is comfortable for you. If you have a learning or physical disability that would prevent you from taking the ACCUPLACER under standard conditions, you may request accommodations by contacting Director of Learning Services, at 1-785-738-9020. Accommodations that can be arranged include (but are not limited to) enlarged text/screen magnification, modifiable screen colors, alternative test format including Braille, and untimed test breaks.

Students wanting to request a testing accommodation will need to provide recent professional documentation regarding the disability, which would include how the disability affects the student's academic performance and suggested accommodations.

Tools:

Students enrolled in the following programs are required to purchase tools:

Agricultural Equipment Technology

Automotive Collision Technology

Automotive Technology

Carpentry-Cabinetmaking

Diesel Technology

Electrical Technology

Plumbing, Heating & Air Conditioning

Powersports Technology

Telecommunications and Network Technology

Welding

Tools may be purchased through approved vendors. Questions regarding the use of tools other than those provided by approved vendors should be directed to the individual department.

Fort Hays Tech | North Central is not responsible for lost or stolen tools.

Students in Secondary Automotive Technology at the Hays campus pay a rental fee and are not required to purchase tools.

Books:

Required books and supplies are available through Fort Hays Tech | North Central's virtual bookstore. Students are responsible to purchase all required books and supplies prior to the beginning of each semester.

DEGREE AND CERTIFICATE REQUIREMENTS

Students are eligible to earn an Associate of Applied Science Degree, a Certificate A or Certificate B upon successful completion of the following requirements:

1. Complete a Graduation Application and grade/degree audit with the Registrar.
2. Complete all required coursework, including all general education courses, according to individual program objectives. Students receiving a failing grade "F" in any coursework will be required to retake the course. Incomplete coursework "I" will not count towards graduation requirements.
3. A minimum cumulative grade point average of 2.0.
4. An official high school transcript reflecting graduation date and school official signature, it's equivalent, or a GED.
5. No outstanding bills owed to the College.

Eligibility for Participation in Graduation:

To be eligible to participate in Fort Hays Tech | North Central's graduation ceremony, the student must meet all graduation requirements. An exception may be granted if a student is within 6 credit hours of completing their coursework for an AAS degree or within 3 credit hours of completing their coursework for a certificate.

Students who have not completed all requirements for graduation, but are within the acceptable limits identified above, must submit a Graduation Plan/Exception form to the Dean of Instruction stating their plan for completing their graduation requirements. A copy of the Graduation Plan/Exception form is available in the office of the Registrar and must be submitted by May 1st.

Dual enrolled students who have not officially earned a high school diploma may participate in Fort Hays Tech | North Central's graduation ceremony by presenting a letter of validation to the Registrar's office by May 1st. The letter must attest to the student's good standing in high school, be signed by the principal, and be presented on official school letterhead.

Students who do not complete all requirements for graduation and do not fall within 6 credit hours for an AAS degree or 3 credit hours for a certificate WILL NOT be allowed to participate in Fort Hays Tech | North Central's graduation ceremony. Appeals may be considered for special circumstances and should be made to the Dean of Instruction.

Recognizing Honor Students:

Students will be recognized with a publication as honor students after final grades are posted at the end of the fall and spring semester. Students earning **Honor Roll** recognition must achieve a semester grade point average of a 3.0-3.49. Students earning **Dean's Honor Roll** recognition must achieve a semester grade point average of a 3.5-4.0.

Programs of Study

Business / Technology Division

Certificate A

Business Office Management

Certificate B

Business Office Management
Business Technology
Culinary Arts
Telecommunications and Networking Technology

Associate of Applied Science Degree

General Business
Information Technology
Telecommunications and Networking Technology
Applied Technology

Business Office Management
Certificate A
CIP Code: 52.0204

The following offers a selection of sixteen credit hours of accelerated Business Management courses for students wanting additional experience in business education. These courses provide a basic knowledge of business practices for students wanting to begin their business education or those looking to start their own business. Students will receive instruction in business formation, marketing, human resources, insurance and risk management , business operations, teamwork, and communication.

Course Code	Course Title	Credits
BMGT-104	Marketing Concepts	3
BMGT-108	Entrepreneurship	3
BMGT-111	Foundations of Personal Finance	3
BMGT-112	Insurance Operations	3
BMGT-117	Principles of Management	3
BMGT-115	Employability Skills	1
	TOTAL	**16**

Business Office Management
Certificate B
CIP Code: 52.0204
Hays Campus

The Business Office Management Program provides training in marketing, merchandising, accounting and management/entrepreneurship. Students will develop the necessary business skills to be successful in a variety of career opportunities such as sales, promotion, retail, management and other related fields. Students who successfully complete the program of study will receive a Business Management Certificate.

Program Outcomes
• Identify and evaluate fundamental risk management practices
•Analyze and compare various leadership and management practices
•Demonstrate entrepreneurial skills
•Analyze and evaluate various marketing skills
•Develop professional, employable skills

Course Code	**Course Title**	**Credits**
FIRST SEMESTER:		
BT-103	Financial Accounting I	3
BMGT-104	Marketing Concepts	3
BMGT-109	Business Law Concepts	3
BMGT-115	Employability Skills	1
BMGT-117	Principles of Management	3
SS-102	Tech Connect	
	TOTAL	**13**
SECOND SEMESTER:		
BMGT-101	Leadership	3
BMGT-105B	Internship	1
BMGT-108	Entrepreneurship	3
BMGT-112	Insurance Operations	3
BMGT-116	Customer Relations	3
	TOTAL	**13**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**35**

Business Technology
Certificate B
CIP Code: 52.0408
Hays Campus

The Business Technology Program prepares students for positions in the business environment. Students receive training in the latest business software applications including word processing, desktop publishing, spreadsheet, and database programs. Students also learn computerized accounting and financial accounting. Students who successfully complete the program will receive a Business Technology Certificate.

Program Outcomes

- Demonstrate technical skills for entry-level employment.
- Demonstrate the skill to use business office application software in a proficient manner.
- Measure professionalism to model attendance and appearance in entry-level positions.
- Apply the basic practices and principles involved in modern business.
- Create an online presence for businesses including emerging digital technologies and trends in the marketplace.
- Demonstrate business communication skills by exchanging information in both traditional and digital formats.

Course Code	**Course Title**	**Credits**
FIRST SEMESTER:		
BT-100	Business Concepts	3
BT-102	Computer Systems Technology	3
BT-104	Word Processing Applications	3
BT-108	Spreadsheet Applications	3
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
BT-105	Business Communications	3
BT-106	Graphic Design Publishing	3
BT-110	Multimedia Applications	3
BMGT-111	Foundations of Personal Finance	3
BT-115	Digital Marketing	3
	TOTAL	**15**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**36**

Culinary Arts
Certificate B
CIP Code: 12.0505
Hays Campus

The Culinary Arts Program offers the job knowledge and skills to enter the food service industry. Students gain valuable hands-on experience in nutrition, quantity foods, buffet decoration, catering, baking, artistry for the baker and entrepreneurial skills. Upon successful completion of the program the student will receive a Culinary Arts Certificate.

Program Outcomes
•Apply proper personal hygiene, food handling safeguards, and standard cleaning and sanitizing techniques.
•Recognize and demonstrate safe and proper use of kitchen tools and equipment.
•Explain and illustrate an understanding of terminology and knowledge of food purchasing and inventory control.
•Demonstrate and understand the proper use of a standard recipe.
•Produce meats, fish and shellfish that meet industry standards.
•Produce properly cooked fruits, vegetables and starches.
•Incorporate standard baking practices to produce quality baked goods.

Course Code	**Course Title**	**Credits**
FIRST SEMESTER:		
CA-100	Sanitation, Safety & Housekeeping	3
CA-101	Standard Kitchen Tools & Equipment	3
CA-104	Understanding & Cooking Meats, Fish & Shellfish	5
CA-107	Understanding & Cooking Fruits, Vegetables & Starches	5
SS-102	Tech Connect	
	TOTAL	**16**
SECOND SEMESTER:		
CA-103	Food Purchasing & Inventory	3
CA-106	Recipe Structure & Uses	3
CA-102	Culinary Hospitality	2
CA-105	Quality Baking	3
CA-110	Pastries, Confections, Cake Decorating & Desserts	3
CA-109	Internship	2
	TOTAL	**16**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**41**

Telecommunications & Network Technology
Certificate B
CIP Code: 11.0901
Hays Campus

The Telecommunications and Networking Technology program provides student with the necessary technical knowledge and skills in communications systems, to become a successful employee. Student will receive a variety of training in the telecommunications and networking fields: circuits, devices, and media. Additional training in networking technology fields: LAN/WAN design, VoIP telephony, CISCO routing and switching, security, and troubleshooting. Upon successful completion of the program, students will be awarded a Certificate B**.**

Program Outcomes
• Facilitate Network Technologies.
• Demonstrate knowledge of telecommunications and network hazards and related safety practices
• Facilitate a telecommunications central office.
• Model construction, maintenance, and troubleshooting of different transmission types.
• Develop entry-level telecommunications technology skills used in employment.
• Develop entry-level electronic technology skills used in the telecommunications and networking fields.

Course Code	**Course Title**	**Credits**
FIRST SEMESTER:		
EL-101z	AC/DC I	4
TNT-165	Telecommunication Networks	4
TNT-175	Telecommunications Cable Standards	4
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
TNT-140	Introduction to Networks	3
TNT-202	Wireless Communications	4
TNT-180	LAN Troubleshooting	4
TNT-185	Soft-switching & PBX	3
TNT-190	Telecommunications Professionalism	2
	TOTAL	**16**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**37**

General Business
AAS Degree
CIP Code: 52.0101
Hays Campus

The General Business Program provides the necessary business technology and interpersonal skills to succeed in the job market. Students receive training in the latest business software applications, marketing, advertising, merchandising, and computerized and financial accounting. Options available to the students include an Associate of Applied Science Degree, or Business Technology and Business Management certificates.

Program Outcomes

- Possess the knowledge and skills to perform entry-level employment in the business field.
- Apply the theory of technical specialization to specific jobs using critical thinking/reasoning and the ability to work independently.
- Use mathematical data and reasoning skills in relation to employment in a business setting.
- Use effective communication skills appropriate to the business field.
- Demonstrate appropriate human relations skills that contribute to an effective job performance.
- Demonstrate managerial and leadership techniques.
- Exhibit professional etiquette.
- Possess the capacity to think for ones' self and make wise decisions.

Course Code	Course Title	Credits
FIRST SEMESTER:		
BT-100	Business Concepts	3
BT-102	Computer Systems Technology	3
BT-104	Word Processing Applications	3
BT-108	Spreadsheet Applications	3
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
BT-105	Business Communications	3
BT-106	Graphic Design Publishing	3
BT-110	Multimedia Applications	3
BMGT-111	Foundations of Personal Finance	3
BT-115	Digital Marketing	3
	TOTAL	**15**
FIRST SEMESTER:		
BMGT-104	Marketing Concepts	3
BMGT-109	Business Law Concepts	3
BT-103	Financial Accounting I	3
BMGT-115	Employability Skills	1
BMGT-117	Principles of Management	3
	TOTAL	**13**
SECOND SEMESTER:		
BMGT-101	Leadership	3
BMGT-105B	Internship	1
BMGT-108	Entrepreneurship	3
BMGT-112	Insurance Operations	3
BMGT-116	Customer Relations	3
	TOTAL	**13**

General Business (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

***General Business Associate Degree program consists of the combination of Business Office Management and Business Technology programs. Students have the option of choosing the order of study.**

Information Technology
AAS Degree
CIP Code: 11.0901
Beloit Campus

The Information Technology Program provides training in network administration, web page design, PC Maintenance, intranet and Internet operations, diagnosing and troubleshooting computer problems and software applications. Students will build and maintain a computer network system. Courses prepare the student for various certifications including the A+, Network+ and Microsoft Certified Application Specialist. Students will earn an Associate of Applied Science Degree after successfully completing the program of instruction.

Program Outcomes
- Develop entry-level computer technology skills used in employment.
- Model Computer Construction, Maintenance and Troubleshooting.
- Facilitate Network Technologies.
- Generate Software and Application Programs.
- Model Desktop Publishing Software.
- Design Web Media and Web Programming.

Course Code	Course Title	Credits
FIRST SEMESTER:		
ACIT-101	Operating Systems	3
ACIT-104	Web Development	2
ACIT-111	The Internet of Things	2
TNT-130	Telecommunications Cabling	2
TNT-140	Computer Networks I	3
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
ACIT-106	PC Servicing & Upgrade	4
ACIT-109	Advanced Web Development	3
ACIT-203	Programming I	3
TNT-230	Computer Networks II	3
	TOTAL	**13**
THIRD SEMESTER:		
ACIT-200	Digital Media Design & Development	2
ACIT-211Z	Network Servers	4
ACIT-206	Programming II	4
ACIT 210	Video Applications	3
	TOTAL	**13**
FOURTH SEMESTER:		
ACIT-201	Mobile Application Design & Development	4
ACIT-204	Database Design & Management	3
ACIT-207	Advanced Digital Media Design & Development	2
ACIT-208	Network Security	2
ACIT-214	IT Project Management	3
ACIT-212	IT Practicum	1
	TOTAL	**15**

Information Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Information Technology
AAS Degree
CIP Code: 11.0901
Beloit Campus

The Information Technology Program provides training in network administration, web page design, PC Maintenance, intranet and Internet operations, diagnosing and troubleshooting computer problems and software applications. Students will build and maintain a computer network system. Courses prepare the student for various certifications including the A+, Network+ and Microsoft Certified Application Specialist. Students will earn an Associate of Applied Science Degree after successfully completing the program of instruction.

Program Outcomes
• Develop entry-level computer technology skills used in employment.
• Model Computer Construction, Maintenance and Troubleshooting.
• Facilitate Network Technologies.
• Generate Software and Application Programs.
• Model Desktop Publishing Software.
• Design Web Media and Web Programming.

Networking Block

Course Code	Course Title	Credits
FIRST SEMESTER:		
ACIT-101	Operating Systems	3
ACIT-104	Web Development	2
ACIT-111	The Internet of Things	2
TNT-130	Telecommunications Cabling	2
TNT-140	Computer Networks I	3
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
ACIT-106	PC Servicing & Upgrade	4
TNT-230	Computer Networks II	3
	Electives (see options below)	6
	TOTAL	**13**
THIRD SEMESTER:		
ACIT-211Z	Network Servers	4
TNT-150Z	Switching & Routing Protocols	3
	Electives (see options below)	6
	TOTAL	**13**
FOURTH SEMESTER:		
ACIT-208	Network Security	2
TNT-250	LAN/WAN Design	4
ACIT-214	IT Project Management	3
ACIT-215	Scripting & Automation	4
ACIT-212	IT Practicum	1
OSHA-110	OSHA Training	1
	TOTAL	**15**

Networking Block (Cont.)

ELECTIVES:
FALL SEMESTER:

Course Code	Course Title	Credits
ACIT-200	Digital Media Design & Development	2
ACIT-206	Programming II	4
ACIT-210	Video Applications	3
BMGT-101	Leadership	3
MAR-101	Introduction to Digital Marketing	1
TNT-260	Unified Communications Systems	3

SPRING SEMESTER:

Course Code	Course Title	Credits
ACIT-109	Advanced Web Development	3
ACIT-201	Mobile Application Design & Development	4
ACIT-203	Programming I	3
ACIT-204	Database Design & Management	3
ACIT-207	Advanced Digital Media Design & Development	2
ACIT-213	Unmanned Aircraft Systems Technology	3

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Information Technology
AAS Degree
CIP Code: 11.0901
Beloit Campus

The Information Technology Program provides training in network administration, web page design, PC Maintenance, intranet and Internet operations, diagnosing and troubleshooting computer problems and software applications. Students will build and maintain a computer network system. Courses prepare the student for various certifications including the A+, Network+ and Microsoft Certified Application Specialist. Students will earn an Associate of Applied Science Degree after successfully completing the program of instruction.

Program Outcomes
- Develop entry-level computer technology skills used in employment.
- Model Computer Construction, Maintenance and Troubleshooting.
- Facilitate Network Technologies.
- Generate Software and Application Programs.
- Model Desktop Publishing Software.
- Design Web Media and Web Programming.

Programming Block

Course Code	Course Title	Credits
FIRST SEMESTER:		
ACIT-101	Operating Systems	3
ACIT-104	Web Development	2
ACIT-111	The Internet of Things	2
TNT-130	Telecommunications Cabling	2
TNT-140	Computer Networks I	3
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
ACIT-106	PC Servicing & Upgrade	4
ACIT-203	Programming I	3
ACIT-109	Advanced Web Development	3
	Electives (see options below)	3
	TOTAL	**13**
THIRD SEMESTER:		
ACIT-206	Programming II	4
	Electives (see options below)	9
	TOTAL	**13**
FOURTH SEMESTER:		
ACIT-201	Mobile Application Design & Development	4
ACIT-204	Database Design & Management	3
ACIT-214	IT Project Management	3
ACIT-212	IT Practicum	1
	Electives (see options below)	4
	TOTAL	**15**

Programming Block (Cont.)

ELECTIVES:

FALL SEMESTER:

Course Code	Course Title	Credits
ACIT-200	Digital Media Design & Development	2
ACIT-210	Video Applications	3
ACIT-211z	Network Servers	4
BMGT-101	Leadership	3
MAR-101	Introduction to Digital Marketing	1
MAR-106	Digital Media Privacy & Security	3

SPRING SEMESTER:

Course Code	Course Title	Credits
ACIT-207	Advanced Digital Media Design & Development	2
ACIT-208	Network Security	2
ACIT-213	Unmanned Aircraft Systems Technology	3
ACIT-215	Scripting & Automation	4
MAR-202	Search Engine Marketing	2
TNT-230	Computer Networks II	3

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Information Technology
AAS Degree
CIP Code: 11.0901
Beloit Campus

The Information Technology Program provides training in network administration, web page design, PC Maintenance, intranet and Internet operations, diagnosing and troubleshooting computer problems and software applications. Students will build and maintain a computer network system. Courses prepare the student for various certifications including the A+, Network+ and Microsoft Certified Application Specialist. Students will earn an Associate of Applied Science Degree after successfully completing the program of instruction.

Program Outcomes
- Develop entry-level computer technology skills used in employment.
- Model Computer Construction, Maintenance and Troubleshooting.
- Facilitate Network Technologies.
- Generate Software and Application Programs.
- Model Desktop Publishing Software.
- Design Web Media and Web Programming.

Web Development Block

Course Code	Course Title	Credits
FIRST SEMESTER:		
ACIT-101	Operating Systems	3
ACIT-104	Web Development	2
ACIT-111	The Internet of Things	2
TNT-130	Telecommunications Cabling	2
TNT-140	Computer Networks I	3
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
ACIT-106	PC Servicing & Upgrade	4
ACIT-109	Advanced Web Development	3
	Electives (see options below)	6
	TOTAL	**13**
THIRD SEMESTER:		
ACIT-210	Video Applications	3
ACIT-200	Digital Media Design & Development	2
MAR-202	Search Engine Marketing	2
	Electives (see options below)	6
	TOTAL	**13**
FOURTH SEMESTER:		
ACIT-201	Mobile Application Design & Development	4
ACIT-204	Database Design & Management	3
ACIT-214	IT Project Management	3
ACIT-212	IT Practicum	1
	Electives (see options below)	4
	TOTAL	**15**

Web Development Block (Cont.)

ELECTIVES:
FALL SEMESTER:

Course Code	Course Title	Credits
ACIT-206	Programming II	4
BMGT-101	Leadership	3
MAR-101	Introduction to Digital Marketing	1
MAR-106	Digital Media Privacy & Security	3

SPRING SEMESTER:

Course Code	Course Title	Credits
ACIT-203	Programming I	3
ACIT-207	Advanced Digital Media Design & Development	2
ACIT-208	Network Security	2
ACIT-213	Unmanned Aircraft Systems Technology	3
TNT-230	Computer Networks II	3

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Telecommunications & Network Technology
AAS Degree
CIP Code: 11.0901
Hays Campus

The Telecommunications and Networking Technology program provides student with the necessary technical knowledge and skills in communications systems, to become a successful employee. Student will receive a variety of training in the telecommunications and networking fields: circuits, devices, and media. Additional training in networking technology fields: LAN/WAN design, VoIP telephony, CISCO routing and switching, security, and troubleshooting. Upon successful completion of the program, students will be awarded an Associates of Applied Science**.**

Program Outcomes
• Facilitate Network Technologies.
• Demonstrate knowledge of telecommunications and network hazards and related safety practices
• Facilitate a telecommunications central office.
• Model construction, maintenance, and troubleshooting of different transmission types.
• Develop entry-level telecommunications technology skills used in employment.
• Develop entry-level electronic technology skills used in the telecommunications and networking fields.

Course Code	**Course Title**	**Credits**
FIRST SEMESTER:		
EL-101Z	AC/DC I	4
TNT-165	Telecommunications Networks	4
TNT-175	Telecommunications Cable Standards	4
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER:		
TNT-140	Introduction to Networks	3
TNT-202	Wireless Communications	4
TNT-180	LAN Troubleshooting	4
TNT-185	Soft-switching & PBX	3
TNT-190	Telecommunications Professionalism	2
	TOTAL	**16**
THIRD SEMESTER:		
TNT-235	Switching, Routing and Wireless Essentials	4
TNT-208	Network Security Fundamentals	3
TNT-215	Advanced Soft Switching	3
TNT-225	Computer Networks	3
	TOTAL	**13**
FOURTH SEMESTER:		
TNT-260	Enterprise Networking, Security & Automation	4
ACIT-211z	Network Servers	4
TNT-200	Internship	4
Or		
TNT-205	Telecommunications Practicum	4
	TOTAL	**12**

Telecommunications & Network Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Applied Technologies
AAS Degree
CIP Code: 30.0000
Beloit & Hays Campuses

The Associate of Applied Science in Technical Studies 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 the College. Students completing this degree must complete a minimum of 15 credit hours from at least two technical disciplines that will combine into a joint technical program with a technical focus directly related to the student's career objective. Students wishing to complete the A.A.S. degree in Technical Studies will develop an individualized course of study through a structured advising process with faculty and college counselors. This credential provides a means to meet the needs of students pursuing an emerging occupation and/or employer seeking skill sets in graduates from multiple technical disciplines.

Program Outcomes
The following objectives will be met in a minimum of two technical disciplines:

- Apply multi-disciplinary knowledge to a variety of applications.
- Learn how to quickly identify, analyze, and solve technical problems.
- Productively use available tools.
- Communicate well verbally, graphically, and in writing.
- Formulate and apply critical thinking skills to troubleshoot systems.
- Communicate and function effectively in teams.
- Demonstrate knowledge of the fundamental safety behaviors and safety equipment.
- Demonstrate the technical skills applicable to each one of the two technical disciplines.

Requirements for an AAS in Technical Studies
Satisfaction of the Kansas Board of Regents minimum requirements for AAS in Applied Technologies
Satisfaction of FH Tech | NC Graduation Requirements (including minimum of 15 General Education credit hours)
Evidence the combined skillset proposed has potential to lead to desired career objective
Pre-approved degree plan filed with Registrar's Office
Continued and regular consultation with advisor and faculty to ensure appropriate coursework is being taken to achieve the approved degree plan and career objective

Course Code	**Course Title**	**Credits**
TECHNICAL EDUCATION		
Approved coursework from one selected technical program		*at least 15
Approved coursework from second selected technical program		*at least 15
Approved coursework from any additional selected technical programs		*at least 15

**In most cases, the required technical education hours will exceed 15 credit hours; this is a minimum. The required hours will be determined based upon the programs selected and the skillset desired to meet the individual's career objective. The degree plan must be approved by the Registrar.*

Course Code	**Course Title**	**Credits**
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**60-68**

Programs of Study
Construction Division

Certificate A
- Welding

Certificate B
- Construction Technology
- Heavy Equipment Operation
- Plumbing, Heating and Air-conditioning
- Welding

Associate of Applied Science Degree
- Building Construction Technology
- Building/Construction Site Management
- Electrical Technology
- Welding Engineering Technology/Technician
- Applied Technology

Short-Term Courses
- OSHA Training
- Underground Technology
- Introduction to Welding

Welding
Certificate A
CIP Code: 48.0508

The Certificate A in Welding Technology provides specialized training in welding safety, theory, mathematics, cost-analysis/layout, and blueprint reading. Students will be involved in specific phases used in the welding industry; to include: SMAW, GMAW, GTAW, and cutting processes. Students will be proficient in all positions on mild steel according to AWS codes and standards. Upon completion of the program students will receive a certificate of completion in the short-term welding program.

Course Code	Course Title	Credits
WL-100	Welding Safety/OSHA 10	1
WL-102	SMAW (Shielded Metal Arc Welding)	3
WL-103	GMAW (Gas Metal Arc Welding)	3
WL-104	GTAW (Gas Tungsten Arc Welding)	3
WL-106A	Blueprint Reading/Welding Symbols I	3
WL-110	Advanced Cutting Processes	3
	TOTAL	**16**

Construction Technology
Certificate B
CIP Code: 46.0201
Beloit & Hays Campuses

The Construction Technology Program is supported with the National Center for Construction, Education, and Research (NCCER) curriculum and is designed to provide the skills, knowledge and pride of workmanship necessary to become a successful carpenter or cabinetmaker. Students will gain hands-on experience from a NCCER certified instructor in planning, estimating, drawing and building the Project House in Beloit and Hays. Students who successfully complete the program of study will receive a Construction Technology Certificate.

Program Outcomes
- Sketch diagrams of building projects and manipulate them into working drawings.
- Demonstrate proper use of drafting tools and equipment to produce working drawings.
- Lay out building lines for footings and foundations. Setting batter boards and demonstrate correct use of leveling instruments.
- Construct floor, wall and roof systems. Apply framing square techniques for rafter and stair applications.
- Complete exterior wall and finishes including doors, windows and trim.
- Acquaint self with estimating of building materials and labor costs.
- Establish a working estimate of materials and labor from a working drawing or blueprint.
- Estimate and install wall and ceiling insulation on an existing structure.
- Hang, tape, and finish drywall on walls and ceilings. Complete interior finish process by painting, texturing and installing doors and trim.
- Develop a plan for designing and creating working drawings for cabinetry to complete interior finish process.
- Demonstrate proper and safe use of portable and stationary power tools.
- Exhibit construction methods used in the cabinet industry.

Course Code	Course Title	Credits
FIRST SEMESTER:		
OSHA-110	OSHA Training	1
CC-101	Basic Drafting	1
CC-106	Introductory Craft Skills	3
CC-107A	Construction Basics	2
CC-113	Carpentry I	3
CC-114	Carpentry II	4
SS-102	Tech Connect	
	TOTAL	**14**
SECOND SEMESTER:		
CC-105	Cabinetmaking	4
CC-110	Windows and Doors	3
CC-111	Interior Finish	3
CC-112	Exterior Finish	1
CC-115	Concrete Technology	3
	TOTAL	**14**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**37**

***Optional: The Construction Technology program can be combined with other construction trade programs (Heavy Equipment Operation or Plumbing Heating and Air-Conditioning) to achieve an Associate of Applied Science degree in Building Construction Technology. Refer to the Building Construction Technology requirements for more information. *Note additional General Education courses required.**

Heavy Equipment Operation
Certificate B
CIP Code: 49.0202
Beloit Campus

The Heavy Equipment Program is supported with the National Center for Construction, Education, and Research (NCCER) curriculum. Hands-on training is provided by NCCER certified instructors with scrapers, motor graders, tractor crawler operations, excavators, loaders and backhoes. Students learn the use of hand level, laser levels and GPS to check grade. Also, theory course training includes rollers, asphalt and concrete paving equipment. Internships are available. A Heavy Equipment Certificate will be awarded upon successful completion of the program.

Program Outcomes

- Explore concepts and equipment related to underground technology.
- Safely operate crawler tractor for entry level employment in construction industry.
- Safely operate scraper for entry level employment in construction industry.
- Safely operate motor grader for entry level employment in construction industry.
- Safely operate loader tractor for entry level employment in construction industry.
- Safely operate backhoe and excavator for entry level employment in construction industry.
- Safely operate various types of rollers.
- Able to check and read grade stakes.

Course Code	Course Title	Credits
FIRST SEMESTER:		
HE-101	Occupational & Pre-Operational Safety & Basic Maintenance	1
HE-104	Crawler Tractor Operations & Maintenance I	3
HE-106Z	Motor Grader Operations & Maintenance I	4
HE-107	Loader Operations & Maintenance I	1
HE-108	Backhoe/Loader Operations & Maintenance I	1
HE-103Z	Excavator Operations & Maintenance I	3
HE-120	Locator Operations-Level I	1
HE-125	Horizontal Directional Drilling-Level I	2
SS-102	Tech Connect	
	TOTAL	**16**
SECOND SEMESTER:		
OSHA-110	OSHA Training	1
HE-112	Crawler Tractor Operations & Maintenance II	3
HE-114Z	Motor Grader Operations & Maintenance II	4
HE-115	Basic Employability Skills	1
HE-116	Backhoe/Loader Operations & Maintenance II	2
HE-117	Grade Stake & Civil Plan Reading	1
HE-119	Excavator Operations & Maintenance II	3
HE-110	Related Equipment Instruction	2
	or	
HE-118	Internship	2
	TOTAL/INTERNSHIP OPTION	**17**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**42**

***Optional: The Heavy Equipment Operation program can be combined with other construction trade programs (Construction Technology or Plumbing Heating and Air-Conditioning) to achieve an AAS degree in Building Construction Technology. Refer to the Building Construction Technology requirements for more information. *Note additional General Education courses required.**

Plumbing, Heating and Air Conditioning
Certificate B
CIP Code: 47.0201

Beloit & Hays Campuses

The Plumbing, Heating & Air Conditioning Program prepares students for entry-level positions in the Plumbing, Heating & Air Conditioning field. Students will receive training in planning, installation and maintaining plumbing, heating and air conditioning systems and water pumps. Internships with employers are available to receive valuable on-the-job training. A PHAC Certificate will be granted upon successful completion of the program and students will have the opportunity to take the journeyman license exam and industry competency exam.

Program Outcomes

•Apply refrigeration cycle.
•Acknowledge electrical theory.
•Apply regulations of the Uniform Plumbing Code.
•Be aware of high and low volt circuits.
•Apply gas heating.
•Recognize drain waste vent systems.
•Repair and recognize water distribution.

Course Code	Course Title	Credits
FIRST SEMESTER:		
OSHA-110	OSHA Training	1
PHAC-101	Plumbing Fundamentals	4
PHAC-110	EPA 608	1
PHAC-111	Electrical Fundamentals	4
PHAC-112	Heating System Fundamentals	3
PHAC-113	HVAC Fundamentals	4
SS-102	Tech Connect	
	TOTAL	**17**
SECOND SEMESTER:		
PHAC-107	Workplace Skills	1
PHAC-104	Advanced Plumbing Fundamentals	3
HE-120	Locator Operations	1
PHAC-114	Advanced Electrical Fundamentals	3
PHAC-115	Advanced Heating Systems Fundamentals	3
PHAC-116	Advanced HVAC Fundamentals	4
PHAC-108	Shop Practicum	3
	or	
PHAC-109	Internship	3
	TOTAL	**18**
	INTERNSHIP OPTION	**18**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**44**

***Optional: The Plumbing Heating and Air-Conditioning program can be combined with other construction trade programs (Construction Technology or Heavy Equipment Operation) to achieve an AAS degree in Building Construction Technology. Refer to the Building Construction Technology requirements for more information.**

***Note additional General Education courses required.**

Welding
Certificate B
CIP Code: 48.0508
Beloit & Hays Campuses

The Welding Program provides specialized training in welding safety, theory, mathematics, cost analysis/layout, blueprint reading and pipe template development for the pipe trades. Students will be involved in all phases used in the welding industry; to include: SMAW, oxy-fuel welding/cutting, carbon arc cutting/gouging, GMAW, FCAW, plasma cutting/gouging, and GTAW. Students will be proficient in all positions on mild steel, aluminum and stainless-steel plate and pipe according to AWS, ASME and API codes and standards. Upon completion of program students can become a certified welder in a variety of welding disciplines by successfully passing certification tests. Students will receive a certificate in welding.

Program Outcomes
- Apply safe working practices while welding and cutting.
- Prepare quality welds using the SMAW process.
- Prepare quality welds using the OFW process.
- Produce quality cuts using various cutting equipment and techniques.
- Prepare quality welds using GMAW/FCAW process.
- Prepare quality welds using GTAW process.
- Prepare working drawings or blueprints to produce quality products.
- Construct products from blueprints.

Course Code	Course Title	Credits
FIRST SEMESTER:		
WL-100	Welding Safety/OSHA 10	1
WL-101	Oxy-Acetylene/Oxy Fuel Procedures	2
WL-102	SMAW	3
WL-105	Special Welding Procedures	3
WL-106A	Blueprint Reading/Welding Symbols I	3
WL-109	Pipe Welding	2
WL-110	Advanced Cutting Processes	3
SS-102	Tech Connect	
	TOTAL	**17**
SECOND SEMESTER:		
WL-103	GMAW	3
WL-104	GTAW	3
WL-106B	Blueprint Reading/Welding Symbols II	3
WL-111	Advanced Pipe Welding	2
WL-112	CNC Plasma Cutting	2
WL-113	FCAW	2
WL-114	Introduction to Welding Robotics	1
WL-107	Shop Practicum	2
	or	
WL-108	Internship	2
	TOTAL	**18**
	INTERNSHIP OPTION	**18**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**44**

Building Construction Technology
AAS Degree
CIP Code: 46.9999

Beloit & Hays Campuses

The Building Construction Technology Program combines key components of three programs. It is aimed at producing highly skilled individuals with the ability to perform multiple tasks related to the construction trades. This program gives students the option to select two of the following 9-month programs: Carpentry, Heavy Equipment Operation, and Plumbing Heating and Air-Conditioning. Upon successful completion of two programs and 15 hours of General Education credits, the student will be awarded an Associate of Applied Science Degree in Building Construction Technology.

Program Outcomes

•Possess the knowledge to perform tasks appropriate for entry level employment in the Building Construction field.
•Demonstrate the skills appropriate to the Building Construction industry.
•Demonstrate knowledge of industry hazards and related safety practices.
•Use mathematical data and reasoning skills appropriate to the construction industry.
•Use effective communication skills.
•Demonstrate an understanding of personal and work characteristics that contribute to effective job performance.

Course Code	**Credits**
FIRST YEAR: Choose one	
Construction Technology	28
Heavy Equipment Operation	34
Plumbing, Heating & Air Conditioning	36
SECOND YEAR: Choose one	
Construction Technology	28
Heavy Equipment Operation	34
Plumbing, Heating & Air Conditioning	36

Course Code	**Course Title**	**Credits**
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**75-83**

Building/Construction Site Management
in Alignment with Fort Hays State University
AAS Degree
CIP Code: 15.0614
Fort Hays Tech | North Central and FHSU Campuses

Building/Construction Site Management

Certificate B in Construction Technology		37 credit hours
Prescribed Technical Courses at FHSU (See Below)		18 credit hours
Additional Hours of General Education		6 credit hours
	Total:	61 credit hours

Third Semester at FHSU

TECS-318	Intro to Computer Aided Drafting	3
TECS-382	Construction Estimating and Scheduling	3
TECS-484	Site Prep and Foundation	3
	General Education Course (FH Tech | NC)	3
	Total:	12 credit hours

Fourth Semester at FHSU

TECS-415	Construction Graphics	3
TECS-480	Industrial Management	3
TECS-385	Construction Planning and Design	3
	General Education Course (FH Tech | NC)	3
	Total:	12 credit hours

Elective:
GBUS-204 (FHSU)/BMGT-109 (FH Tech | NC) Business Law 3 credit hours

Electrical Technology
AAS Degree
CIP Code: 46.0302
Beloit & Hays Campuses

The Electrical Technology Program provides students the opportunity to gain technical knowledge and experience in residential and commercial wiring and in industrial maintenance areas of the electrical industry. Training is in electrical theory, blueprint reading, motors, motor controls, programmable logic controls, and the National Electrical Code. Students will also study the fundamentals of renewable energy sources such as solar and wind. Students experience hands-on work, including actual residential and commercial wiring installation. Students earn an Associate of Applied Science Degree upon successful completion of the program. Students also take a State Journeyman Electrician's License exam as a second-year student.

Program Outcomes

- Perform sizing, installation and maintenance of residential electrical systems.
- Perform sizing, installation and maintenance of commercial electrical systems.
- Perform sizing, installation and maintenance of industrial electrical systems.
- Interpret blueprints, schematics and diagrams.
- Follow established safety procedures and guidelines.
- Navigate and interpret the National Electric Code.
- Perform installation and maintenance of motors and generators.
- Perform installation and maintenance of transformers.
- Troubleshoot electrical and electronic systems.
- Use basic hand tools, meters and measuring devices.
- Demonstrate effective workplace and communication skills.

Course Code	Course Title	Credits
FIRST SEMESTER:		
OSHA-110	OSHA Training	1
EL-101Z	AC/DC I	4
EL-104	Print Reading	2
EL-105	Residential Wiring	4
EL-109	Solar Energy Systems	2
SS-102	Tech Connect	
	TOTAL	**13**
SECOND SEMESTER:		
EL-106	National Electrical Code I	4
EL-107	Electrical Motor Controls	4
EL-111	Electrical Troubleshooting I	2
EL-112	Switches and Sensors	2
	TOTAL	**12**
THIRD SEMESTER:		
AMC-201	Variable Frequency Drive	2
EL-202	Programmable Controllers	4
EL-203	Generators	2
EL-204	Transformers	2
EL-205	Motors	2
EL-210	Electrical Troubleshooting II	2
	TOTAL	**14**
FOURTH SEMESTER:		
EL-209	National Electrical Code II	4
EL-206Z	Commercial Wiring I	4
EL-207	Internship	6
	or	
EL-208	Shop Practicum (Hays Only)	6
Beloit Campus:		
EL-208	Shop Practicum and	3
EET-224	Advanced Programmable Controllers	3
	TOTAL	**14**
	INTERNSHIP OPTION	**14**

Electrical Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Welding Engineering Technology/Technician

with Fort Hays State University

AAS Degree

CIP Code: 15.0614

This program prepares individuals to apply basic engineering principles and technical skills to the design and engineering of welding and joining systems and the implementation of welding processes. It includes instruction in materials science; computer-aided design; welding design; welding processes; welding metallurgy; machining processes; automation; and codes, inspection, quality assurance and testing.

This degree allows graduates of Fort Hays Tech | North Central's 9-month Welding program (offered in Beloit and Hays) to expand into a second-year AAS degree program. Students combine 15 credit hours of the prescribed technical coursework through Fort Hays State University's Industrial Technology Studies Program with 6 additional general education credits from Fort Hays Tech | North Central to fulfill the requirements for the AAS degree in Welding Engineering Technology/Technician awarded by Fort Hays Tech | North Central.

1-Year Certificate		**44 Credit Hours**
Associate of Applied Science		**18 Credit Hours**
	TOTAL	**68 Credit Hours**

Associate of Applied Science
First Semester: Courses taken through FHSU

TECS-180 **3**
Materials and Processes
This course is a study of how people produce the necessary products for survival, work, and pleasure in a competitive, technological and global society.

TECS-260 **3**
Metal Processes
Advanced metal technology with practice in machine tool processes, basic metallurgy, measurement and layout, product design, metal casting, abrasives, fitting, and assembly. **Pre-requisites:** PR, TECS-180

TECS-318 **3**
Intro to CAD (Computer-Aided Drafting)
The purpose of this course is to provide students with an understanding of the features associated with the operation of a CAD system. This course is designed to help drafting students develop the knowledge, skills, and attitudes required to begin work at the job entry level in such positions as: CAD technician trainee, CAD system operator, or CAD technician. The course is designed for students who have received in-depth training in one or more application areas, such as architectural, mechanical, drafting, civil, etc. Requisites: PR, six hours of drafting or equivalent.

Associate of Applied Science
Second Semester: Courses taken through FHSU

TECS-310
Manufacturing Graphics **3**
Development of drawing skills by the use of advanced problems. Laboratory experiences include design, production drawings, surface intersections, developed views, gears and cams, and reproduction. **Pre-requisites:** PR, TECS-200 or equivalent.
(or)
TECS-200 **3**
Engineering Graphics
This course is designed to introduce the student to the fundamentals of engineering drafting. Laboratory experiences include: orthographic sketching and drawing, sections, auxiliary views, dimensioning, tolerances, threaded fasteners, computer aided drafting and manufacturing, detail & assembly drawings.
Requisites: PR, TECS 110 or equivalent.

TECS-331 **3**
Machine Tool Operations
Machine Tool Operations is the development of advanced machining skills through the use of standard machine tools, layout procedures, measuring instruments, inspection techniques, and process planning. The class provides the ultimate experience with standard machine tools, and includes the usual process experienced at the lath, mill, and the

assembly procedures necessary to produce a functional product. The product, when completed, will be accompanied by a typed, detailed, plan of procedure.

Welding Engineering Technology/Technician (cont.)

TECS-430 **3**
Computer Aided Manufacturing
This course deals with the operation and programming of machines which are controlled by a computer. This course develops entry level skills and provides the theory of computer numerical control (CNC).

Associate of Applied Science
General Education: Courses taken through Fort Hays Tech | North Central

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**

Applied Technologies
AAS Degree
CIP Code: 30.0000
Beloit & Hays Campuses

The Associate of Applied Science in Technical Studies 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 the College. Students completing this degree must complete a minimum of 15 credit hours from at least two technical disciplines that will combine into a joint technical program with a technical focus directly related to the student's career objective. Students wishing to complete the A.A.S. degree in Technical Studies will develop an individualized course of study through a structured advising process with faculty and college counselors. This credential provides a means to meet the needs of students pursuing an emerging occupation and/or employer seeking skill sets in graduates from multiple technical disciplines.

Program Outcomes
The following objectives will be met in a minimum of two technical disciplines:

- Apply multi-disciplinary knowledge to a variety of applications.
- Learn how to quickly identify, analyze, and solve technical problems.
- Productively use available tools.
- Communicate well verbally, graphically, and in writing.
- Formulate and apply critical thinking skills to troubleshoot systems.
- Communicate and function effectively in teams.
- Demonstrate knowledge of the fundamental safety behaviors and safety equipment.
- Demonstrate the technical skills applicable to each one of the two technical disciplines.

Requirements for an AAS in Technical Studies
Satisfaction of the Kansas Board of Regents minimum requirements for AAS in Applied Technologies
Satisfaction of FH Tech | NC Graduation Requirements (including minimum of 15 General Education credit hours)
Evidence the combined skillset proposed has potential to lead to desired career objective
Pre-approved degree plan filed with Registrar's Office
Continued and regular consultation with advisor and faculty to ensure appropriate coursework is being taken to achieve the approved degree plan and career objective

Course Code	**Course Title**	**Credits**
TECHNICAL EDUCATION		
Approved coursework from one selected technical program		*at least 15
Approved coursework from second selected technical program		*at least 15
Approved coursework from any additional selected technical programs		*at least 15

**In most cases, the required technical education hours will exceed 15 credit hours; this is a minimum. The required hours will be determined based upon the programs selected and the skillset desired to meet the individual's career objective. The degree plan must be approved by the Registrar.*

Course Code	**Course Title**	**Credits**
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**60-68**

Adult Short-Term Courses

OSHA-110 **1 cr.**
OSHA Training
This course provides a variety of training for construction safety and health to entry level workers (students). Instruction includes construction industry occupation safety and health modules and promotes workplace safety and health. The program provides information regarding worker's rights, employer responsibilities, and how to file a complaint. With this training, OSHA helps to ensure that workers are more knowledgeable about workplace hazards and their rights, and contribute to our nation's productivity. Through this program, students attend 10-hour class delivered by OSHA-authorized trainer. The 10-hour class is for entry level workers which upon completion of the final exam for the class with a score of 70% the student will earn a completion card issued by the US Department of Labor.

HE-120 **1 cr.**
Locator Operations-Level I
Locator operation is designed to equip participants with knowledge and skill development for operating locator equipment according to the standards of the equipment manufacturer's operator's manual.

HE-125 **2 cr.**
Horizontal Directional Drilling-Level I
This course is designed to equip participants with knowledge and develop skill for basic operation of horizontal directional drilling equipment. The course includes instruction, in-field exercises simulation and professional coaching for the following:
1. HDD Safety
2. Prep-Planning
3. Tracking Electronics
4. Maintenance/Safety
5. Drilling Fluids and Mixing
6. Downhole Tooling
7. Field Operation

Simulation for training will take an operator through modules that must be performed on the Jet Trac® Directional Drilling Simulator.

HE-109 **3 cr.**
Introduction to the Oilfield
This course is designed for entry level employment seekers into the oilfield industry. The 8 week course provides first hand insight into the industry, field trips, industry designed online training, and basic industry skills and knowledge. The majority of the course is online, although attendance at a face to face initial meeting and field trips are highly encouraged.

WL-120 **1 cr.**
Introduction to Welding
Orient students at an introductory level on the processes of Shielded Metal Arc Welding (SMAW), Oxy-Acetylene Welding, Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), and special welding principles. Introduce students to the work environment and work ethic needed to succeed in the welding field.

Programs of Study
Health Division

Certificate A
- Pharmacy Technician

Certificate B
- Practical Nursing

Associate of Applied Science Degree
- Nursing
- Respiratory Care

Short-term Courses
- Certified Nurse Aide (CNA)
- Certified Medication Aide (CMA)

Pharmacy Technician
Certificate A
CIP Code: 51.0805
Hays Campus

The Pharmacy Technician Certificate Program provides the student with the fundamental knowledge, skills, and training necessary for entry-level employment. Students will receive training in pharmaceutical calculations, institutional and community-based pharmacy practice, and operations and management. Upon successful completion of the program, students will be awarded a Certificate A and will be registered as a Pharmacy Technician by the Kansas State Board of Pharmacy.

Program Outcomes
• Apply the federal, state, and local laws; regulations and professional standards to pharmacy practice.
• Analyze the role of the Pharmacy Technician in distributive pharmacy.
• Perform math function, dosage calculation and compounding techniques.
• Demonstrate ethical and professional conduct in all job-related activities.
• Design and relate messages for effective and appropriate oral and written communication.

Course Code	Course Title	Credits
PHRM-100Z	Pharmacy Technician Science	4
PHRM-102	Pharmaceutical Calculations	3
PHRM-103Z	Community Pharmacy	4
PHRM-105	Pharmacy Technician Internship I	4
PHRM-125Z	Pharmacology for Pharmacy Technicians I	4
	TOTAL	**19**

Nursing
Certificate B & AAS Degree
CIP Code: 51.3801
Beloit & Hays Campuses

The Associate of Applied Science Degree in Nursing Program is a 1+1, full-time, multiple entry/exit, 18-month program leading to an Associate of Applied Science Degree in Nursing. The student will receive education to perform nursing interventions with precision and efficiency consistent with current concepts and evidence-based practices. Professionals in the nursing field teach nursing theory in the classroom. Under professional supervision, students obtain extensive clinical experience through hands-on experiential training. Successful completion of the first year will prepare the student for licensure through the National Council Licensure Examination (NCLEX-PN®). Students will receive a certificate in Practical Nursing. Successful completion of the second year will prepare the student for licensure through the National Council Licensure Examination (NCLEX-RN®). Students will receive an Associate of Applied Science Degree in Nursing.

Program Outcomes

- Integrate caring behaviors in practicing the art and science of nursing within a diverse population.
- Implement professional standards and scope of practice within legal, ethical, and regulatory frame works.
- Collaborate with clients and 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 evidenced-based practice.
- Manage care and provide leadership to meet client needs using available resources and current technology.
- Generate teaching and learning processes to promote and maintain health and to reduce risks for a global population.
- Demonstrate effective communication methods to manage client needs and to interact with other health care team members.

Course Code	Course Title	Credits
FIRST SEMESTER		
NUR-101	Foundations of Nursing	3
NUR-102	Foundations of Nursing Lab	1
NUR-104	Medical/Surgical Nursing Across the Life Span I	4
NUR-106	Medical/Surgical Nursing Across the Life Span I Clinical	2
NUR-107	Basic Pharmacology	1
NUR-108	Math Calculations	1
SS-102	Tech Connect	
	TOTAL	**12**
SECOND SEMESTER		
NUR-110	Medical/Surgical Nursing Across the Life Span II	4
NUR-111	Medical/Surgical Nursing Across the Life Span II Clinical	4
NUR-112	Maternal Child Nursing	1
NUR-113	Gerontology Nursing	1
NUR-114	Mental Health Nursing	1
NUR-115	Socialization into Practical Nursing	1
	TOTAL	**12**
THIRD SEMESTER		
NUR-201	Professional Nursing Role Transitions	1
NUR-203	Perspectives of Health Assessment & IV Therapy	1
NUR-204	Advanced Medical/Surgical Nursing Across the Life Span I	2
NUR-205	Advanced Medical/Surgical Nursing Across the Life Span II	3
NUR-206	Advanced Medical/Surgical Nursing Across the Life Span III Clinical	3
NUR-207	Advanced Pharmacology	1
NUR-209 (Elective)	Perspectives in Oncology Nursing	1
	TOTAL	**11**

Nursing (Cont.)

FOURTH SEMESTER		
NUR-210	Advanced Medical/Surgical Nursing Across the Life Span III	2
NUR-211	Advanced Medical/Surgical Nursing Across the Life Span IV Clinical	3
NUR-212	Advanced Maternal Child Nursing	2
NUR-214	Advanced Mental Health Nursing	2
NUR-215	Leadership for Professional Nursing Practice	1
NUR-216 (Elective)	Perspectives in Critical Care Nursing	1
NUR-217 (Elective)	Special Topics in Pharmacology	1
	TOTAL	**10**

REQUIRED GENERAL EDUCATION		
First Year		
BIOL-230	Human Anatomy & Physiology w/Lab	5
HE-230	Principles of Nutrition	3
MA-110	Intermediate **or**	3
MA-111	College Algebra	3
SS-100	General Psychology	3
SS-105	Human Growth & Development	3
	TOTAL	**17**
Second Year		
BIOL-225	Microbiology w/Lab	5
COM-103	English Composition I	3
	TOTAL	**8**
	Total Credit Hours	**70**

Respiratory Care
AAS Degree
CIP Code: 51.0908
Hays Campus

Program Description
The Respiratory Therapy program will prepare students to become an entry-level RRT. Students will receive extensive hands-on laboratory practice and clinical experience. The program encompasses training in cardiopulmonary physiology, patient assessment, diagnostics, pharmacology, and respiratory care. The program will prepare students to assess, educate and treat patients with cardiopulmonary disorders. At the end of the program, students will sit for the national examination for Respiratory Therapists. Upon successful completion, students will be awarded an Associate of Applied Science Degree.

Program Outcomes

- Demonstrate basic patient assessment skills
- Demonstrate knowledge of laws, theories, and principles to clinical situations
- Develop patient care plans
- Initiate prescribed respiratory care treatments
- Treat patients with breathing or cardiopulmonary disorders
- Promote evidence-based practice by using established clinical practice guidelines
- Coordinate care in an interdisciplinary team

Course Sequence:

Course Title	Course Name	Credit Hours
Prerequisites		
BIOL-230	Human Anatomy & Physiology w/Lab	5
BIOL-225	Microbiology w/Lab	5
MA-110	Intermediate Algebra	3 or
MA-111	College Algebra	3
COM-103	English Comp I	3
SS-100	General Psychology	3
	Total	**19***

* English Composition I, General Psychology, and College Algebra or Intermediate Algebra may be completed concurrent with the program.

First Semester:		
RT-101	Fundamentals of Respiratory Care	3
RT-102	Pharmacology	3
RT-103	Respiratory Patient Assessment	3
RT-104	Respiratory Physiology	4
SS-102	Tech Connect	
	Total	**13**
Second Semester:		
RT-105	Respiratory Diseases	3
RT-106	Respiratory Care I	4
RT-107	Respiratory Care Clinical I	5
RT-108	Cardiopulmonary Care & Diagnostics	3
	Total	**15**
Third Semester:		
RT-201	Respiratory Care II	4
RT-202	Respiratory Care Clinical II	5
RT-203	Neonatal/Pediatrics Respiratory Care	3
	Total	**12**
Fourth Semester:		
RT-204	Respiratory Care Seminar	2
RT-205	Respiratory Care III	4
RT-206	Respiratory Care Clinical III	5
RT-207	CRT Certification	1
	Total	**12**
	Total Credit Hours:	**71**

Health Short-term Course

AH-010 **5 cr.**

Certified Nurse Aide (CNA)

This course is designed to train health care assistants in basic skills necessary to assist nurses in a variety of health care settings and to be efficient health care team members. Students will become CPR certified. Kansas Department of Aging and Disability Services Certified Nurse Aide Curriculum Guidelines will be followed. Upon completion of the course, students will be eligible to take the state CNA Examination.

AH-011 **4 cr.**

Certified Medication Aide (CMA)

This course will provide students with basic training in medications and medication administration. Current Kansas CNA certification is required. Students must pass a reading test demonstrating a reading level at an eighth grade level or above prior to starting the course. The course is developed with the Kansas Department of Aging and Disability Services Certified Nurse Aide Curriculum Guidelines as the backbone of the course. CMA's are certified by the State of Kansas to legally be allowed to pass medications under the direct supervision of a Kansas licensed LPN or RN in a variety of long-term care settings, or a mental health care facility. Course time includes the didactic portion, skills lab time on campus, and clinical time in an area long-term care facility.

AH-101 **1 cr.**

CMA Update1

The course is designed to update Certified Medication Aides on the new classes of drugs and will fulfill the necessary continuing education requirements for the Certified Medication Aide License.

NUR-117 **2 cr.**

IV THERAPY for the LPN

This course will enable the participant to perform safely and competently the intravenous fluid therapy activities as defined in the Kansas Nurse Practice Act. The course is based on the nursing process and current intravenous nursing standards of practice. The student must be prepared to complete all the pre-clinical requirements for the Department of Nursing.

Prerequisite: All of the following must remain valid through the last clinical date: proof of current LPN/RN licensure in Kansas, CPR for Health Care Professional or BLS card, proof of negative TB test within the past year, proof of current individual professional liability (malpractice) insurance. Mandatory pretesting required for Anatomy and Physiology, Pharmacology and Asepsis. Students must submit a $100.00 non-refundable down payment due with application. The remaining balance is due one week prior to the start of the course.

Programs of Study
Transportation Division

Certificate B
- Powersports

Associate of Applied Science Degree
- Agricultural Equipment Technology
- Automotive Collision Technology
- Automotive Technology
- Diesel Technology
- Applied Technology

Short-term Courses
- Commercial Driving License (CDL)

Powersports Technology
AAS Degree
CIP CODE: 47.0606
Beloit Campus

Powersports Technology prepares students for a career in the powersports industry including outdoor recreation, personal watercraft as agricultural sectors. Students will receive education in diagnosing, troubleshooting, repair and maintenance of outdoor power, recreational, and marine equipment and machinery. Instruction includes areas such as engines, suspension and performance, and electricity and electronics. Students who meet the criteria will be eligible for an Internship in their second semester. Upon successful completion of the program, students will be awarded a Certificate in Powersports Technology.

Program Outcomes

- Apply safety standards and safe working practices.
- Interpret service information for repair and maintenance of powersports equipment.
- Apply the theory of powersports equipment to the service and repair of equipment.
- Diagnose to repair various systems on powersports and recreational equipment.
- Demonstrate proficiency in repairing powersports equipment and vehicle systems.
- Demonstrate professionalism and strong work ethic.
- Perform tasks appropriate for successful entry-level position as a Powersports Technician.

Course Code	Course Title	Credits
FIRST SEMESTER:		
OSHA-110	OSHA Training	1
PWT-101	Introduction to Powersports	3
PWT-102	Small Gas Engines Repair and Maintenance	3
PWT-103	Electrical and Electronic Systems	3
PWT-104	Outdoor Power Equipment Technology	3
PWT-105	Ignition, Charging and Starting Systems	3
SS-102	Tech Connect	
	TOTAL	**16**
SECOND SEMESTER:		
PWT-106	Fuel Systems	3
PWT-107	Preventative Maintenance and Inspection	3
PWT-108	Suspension and Performance	3
PWT-109	ATV Technology	3
PWT-110	Personal Watercraft & Marine Engines & Systems	3
PWT-111	Advanced Diagnostics and Repair	4
	or	
PWT-112	Internship	4
	TOTAL	**19**
	INTERNSHIP OPTION	**19**
GENERAL EDUCATION COURSES:		
CIS-100	Computer Applications	3
MA-102	Essential Math	3
SS-100	General Psychology	3
	TOTAL	**9**
	Total Credit Hours	**44**

Agricultural Equipment Technology
AAS Degree
CIP Code: 01.0205
Beloit Campus

The Agricultural Equipment Technology Program provides a quality learning atmosphere and direct hands on experience designed to prepare the student to enter and thrive in the rapidly growing field of Agricultural Equipment Technology. The majority of the classroom time will be spent learning and discussing the systems, components, operation, diagnostics and troubleshooting. The curriculum scope also covers calibrations to each system as required by manufacturers. Classroom work will be supplemented with hands on experience in the lab of each system being studied. Operational tests and component adjustments covered in the classroom discussion will be demonstrated to the students. Each student will then be required to perform the same task as they were shown, and will be graded on their performance of this task. Upon successful completion of the program, students will earn an Associate of Applied Science Degree.

Program Outcomes

- Demonstrate the ability to maintain, diagnose, and repair agriculture equipment in the most cost-effective way.
- Apply customer communication skills, good business ethics, and proper shop operations.
- Explain how systems operate to include: electrical, hydraulic, power trains, computers, along with axles, brakes, and engines as they relate to these systems.
- Describe the flow through each system and circuit.
- Perform checks and adjust pressures.
- Verify electrical voltages using electrical diagnostic equipment.
- Analyze systems using computer programs, diagnostics and clear event codes with the use of a computer or onboard electronic devices used by manufacturers.

Course Code	Course Title	Credits
FIRST SEMESTER:		
AET-100	Tools/Safety/Service	2
AET-103	Electrical I	3
AET-106	Gas Engines	3
AET-109	Diesel Engines	4
OSHA-110	OSHA Training	1
SS-102	Tech Connect	
	TOTAL	**13**
SECOND SEMESTER:		
AET-105	Electrical Systems	4
AET-108	Hay Equipment	2
AET-111	Hydraulics	5
AET-204Z	Heating & Air Conditioning	3
	TOTAL	**14**
THIRD SEMESTER		
AET-201Z	Fuel Systems	5
AET-203	Cab/Chassis Electrical	3
AET-205	Power Trains	4
	TOTAL	**12**
FOURTH SEMESTER:		
AET-202	Harvesting Equipment	2
AET-208z	Advanced Agricultural Equip Technologies	3
AET-209	Integrated Systems	5
AET-112z	Internship or Practicum	4
or		
AET-210	Shop Practicum	4
	TOTAL	**14**

Agricultural Equipment Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Automotive Collision Technology
AAS Degree
CIP Code: 47.0603
Beloit Campus

The Automotive Collision Technology Program is supported with the I-CAR curriculum and provides students with the basic knowledge and skills for all phases of the auto body industry using the latest equipment and training materials. Students will receive training by I-CAR certified instructors in estimating, analyzing damage, metal and body work, performing complete and partial painting, glass replacement, final detailing, structural and non-structural repair, advanced estimating and refinishing, and plastic and sheet molded compound repair. Students may become ASE certified and I-CAR welding certified. Upon successful completion of the two-year program, students will earn an Associate of Applied Science Degree in Automotive Collision Technology.

Program Outcomes
- Analyze automotive structural damage and repair requirements.
- Analyze automotive non-structural damage and repair requirements.
- Diagnose and repair collision damage mechanical and electrical components.
- Demonstrate automobile painting and refinishing skills.
- Demonstrate safe working habits and procedures within an auto-collision/repair facility.
- Diagnose and repair automotive structural damage.
- Diagnose and repair automotive non-structural damage.
- Diagnose and repair automotive stationary and moveable glass.

Course Code	Course Title	Credits
FIRST SEMESTER:		
OSHA-110	OSHA Training	1
ACRT-111	Non-Structural Analysis & Damage Repair I	4
ACRT-112	Painting & Refinishing I	3
ACRT-113	Structural Analysis & Damage Repair I	2
ACRT-114	Mechanical & Electrical I	3
SS-102	Tech Connect	
	TOTAL	**13**
SECOND SEMESTER:		
ACRT-108	Estimating & Diagnostic Scanning	2
ACRT-115	Non-Structural Analysis & Damage Repair II	4
ACRT-116	Painting & Refinishing II	3
ACRT-117	Structural Analysis & Damage Repair II	2
ACRT-118	Mechanical & Electrical II	3
	TOTAL	**14**
THIRD SEMESTER:		
ACRT-205L	Advanced Estimating & Blueprinting	3
ACRT-207	Non-Structural Analysis & Damage Repair III	4
ACRT-211	Painting & Refinishing III	3
ACRT-212	Structural Analysis & Damage Repair III	3
	TOTAL	**13**
FOURTH SEMESTER:		
ACRT-214	Non-Structural Analysis & Damage Repair IV	5
ACRT-216	Painting & Refinishing IV	4
ACRT-209	Internship	4
Or		
ACRT-208	Shop Practicum	4
	TOTAL	**13**

Automotive Collision Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Automotive Technology
AAS Degree
CIP Code: 47.0604
Beloit & Hays Campuses

The Automotive Technology Program provides fundamental knowledge, skills, and training necessary for entry-level employment or career advancement as an automotive technician. The student will be trained in advanced brake systems, electrical systems, fuel systems, electronic automatic transmission drive trains, and alternative fuel vehicles. Electronics and computerization are emphasized to meet the changing demands of the automotive industry. Internships with employers are available. The program is correlated to the MAST standards set by the National Automotive Technicians Education Foundation (NATEF). The student is prepared for the Automotive Service Excellence (ASE) exams. Students earn an Associate of Applied Science Degree in Automotive Technology upon successful completion of the program.

Program Outcomes

- Diagnose, service and repair automotive electrical systems.
- Diagnose, service and repair automotive performance and drivability systems.
- Diagnose, service and repair disc brakes, drum brakes and anti-lock braking systems.
- Diagnose, service and repair suspension and steering systems.
- Diagnose, service and repair heating and air conditioning systems.
- Diagnose, service and repair engines.
- Diagnose, service and repair automatic transmissions and transaxles.
- Diagnose, service and repair manual drive trains and axles.

Course Code	Course Title	Credits
FIRST SEMESTER:		
AMT-100	Orientation & Safety	1
AMT-101Z	Brakes 1	3
AMT-102	Suspension & Steering 1	3
AMT-103Z	Electrical 1	3
AMT-104Z	Engine Performance 1	3
SS-102	Tech Connect	
	TOTAL	**13**
SECOND SEMESTER:		
AMT-105	Engine Performance Fuel Systems	3
AMT-106	Automotive Engine Repair	3
AMT-107	Automotive Manual Transmission	3
AMT-108	Automotive Automatic Transmission	3
AMT-109	Automotive Heating/Air Conditioning	2
	TOTAL	**14**
THIRD SEMESTER:		
AMT-200	Advanced Electricity	3
AMT-210	Advanced Automotive Computer Systems	3
AMT-202	Advanced Fuels	3
AMT-211	Advanced Fuel Management Systems	3
	TOTAL	**12**
FOURTH SEMESTER:		
AMT-203Z	Electronic Automatic Transmission	3
AMT-206	Advanced Electronics & Networks	4
AMT-207	Light Duty Diesel Systems	4
AMT-208	Alternative Fuels	3
	or	
AMT-209	Internship	3
	TOTAL	**14**
	INTERNSHIP OPTION	**14**

Automotive Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**68**

Diesel Technology
AAS Degree
CIP Code: 47.0613
Beloit Campus

The Diesel Technology Program provides specialized training in engine overhaul, electrical systems, torque converters, power trains and testing of diesel equipment. First year students will learn about the basics of diesel skills, measurements and practical application with large diesel equipment. Second year students will continue to develop skill sets in electronic engine control and diagnostic evaluations on diesel equipment. Internships with employers are available. Student will receive an Associate of Applied Science Degree upon successful completion of the program.

Program Outcomes
- Demonstrate safety practices when working in a diesel engine shop.
- Apply the theory of diesel technology to the service and repair of equipment.
- Utilize mathematical reasoning and communication skills in relation to diesel mechanics profession
- Perform tasks necessary for an entry-level position in diesel mechanics profession
- Demonstrate ability to handle computers and hand-held diagnostic equipment, to make engine adjustments and diagnose problems.
- Demonstrate competence in mobile air conditioning, diagnostics, and the service of A/C systems.
- Proficiency in reading basic wiring diagrams and recognize electrical symbols.
- Identify all Federal and State Standards in regard to OSHA and EPA regulations in a diesel shop.
- Identify the various electronic controls of a Cat, Detroit, and Cummins engine.

Course Code	Course Title	Credits
FIRST SEMESTER:		
DT-101	Diesel Shop Equipment & Tool Safety	2
DT-102	Diesel Engines I	5
DT-103	Drive Trains	5
OSHA-110	OSHA Training	1
SS-102	Tech Connect	
	TOTAL	**13**
SECOND SEMESTER:		
DT-104	Hydraulics	5
DT-105	Electrical/Electronic Systems	5
DT-106	Mobile HVAC	3
	TOTAL	**13**
THIRD SEMESTER:		
DT-201	Diesel Shop Management	2
DT-202	Advanced Electrical/Electronic Systems	5
DT-203	Advanced Diesel Engines	5
DT-204	Diesel Engine Emission	1
	TOTAL	**13**
FOURTH SEMESTER:		
DT-205	Brakes	3
DT-206	Suspension & Steering	3
DT-207	Alternative Fuels & Bio-Fuel	2
DT-208	Truck & Heavy Equipment Repair	6
	or	
DT-209	Internship	6
	TOTAL	**14**
	INTERNSHIP OPTION	**14**

Diesel Technology (Cont.)

Course Code	Course Title	Credits
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours/With Internship	**68**

Applied Technologies
AAS Degree
CIP Code: 30.0000
Beloit & Hays Campuses

The Associate of Applied Science in Technical Studies 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 the College. Students completing this degree must complete a minimum of 15 credit hours from at least two technical disciplines that will combine into a joint technical program with a technical focus directly related to the student's career objective. Students wishing to complete the A.A.S. degree in Technical Studies will develop an individualized course of study through a structured advising process with faculty and college counselors. This credential provides a means to meet the needs of students pursuing an emerging occupation and/or employer seeking skill sets in graduates from multiple technical disciplines.

Program Outcomes
The following objectives will be met in a minimum of two technical disciplines:

- Apply multi-disciplinary knowledge to a variety of applications.
- Learn how to quickly identify, analyze, and solve technical problems.
- Productively use available tools.
- Communicate well verbally, graphically, and in writing.
- Formulate and apply critical thinking skills to troubleshoot systems.
- Communicate and function effectively in teams.
- Demonstrate knowledge of the fundamental safety behaviors and safety equipment.
- Demonstrate the technical skills applicable to each one of the two technical disciplines.

Requirements for an AAS in Technical Studies
Satisfaction of the Kansas Board of Regents minimum requirements for AAS in Applied Technologies
Satisfaction of FH Tech | NC Graduation Requirements (including minimum of 15 General Education credit hours)
Evidence the combined skillset proposed has potential to lead to desired career objective
Pre-approved degree plan filed with Registrar's Office
Continued and regular consultation with advisor and faculty to ensure appropriate coursework is being taken to achieve the approved degree plan and career objective

Course Code	**Course Title**	**Credits**
TECHNICAL EDUCATION		
Approved coursework from one selected technical program		*at least 15
Approved coursework from second selected technical program		*at least 15
Approved coursework from any additional selected technical programs		*at least 15

**In most cases, the required technical education hours will exceed 15 credit hours; this is a minimum. The required hours will be determined based upon the programs selected and the skillset desired to meet the individual's career objective. The degree plan must be approved by the Registrar.*

Course Code	**Course Title**	**Credits**
GENERAL EDUCATION		
Communications	**(6 cr. hrs.)**	
COM-103	English Composition I	3
COM-105	Fundamentals of Oral Communication	3
Computer Science	**(3 cr. hrs.)**	
CIS-100	Computer Applications	3
Math	**Choose One (3 cr. hrs.)**	
MA-102	Essential Math	3
MA-110	Intermediate Algebra	3
MA-111	College Algebra	3
Social Sciences	**(3 cr. hrs.)**	
SS-100	General Psychology	3
	TOTAL	**15**
	Total Credit Hours	**60-68**

Commercial Driver License

Fort Hays Tech | North Central Commercial Driver License program utilizes state of the art simulation training combined with classroom instruction and on-the-road driving time to prepare students to pass the Department of Motor Vehicles Commercial Driver's License Exam. Coursework prepares students for all three classes: A, B and C, as well as endorsement training for tanks, double and triples, hazardous materials, passenger and school bus. Drive Examination will be administered on campus by a State of Kansas Examiner and students will accompany the Examiner to the courthouse for license processing.

CDL-100 **1 cr.**

This course provides the necessary information to successfully acquire a Commercial Driver License and the skills to demonstrate proficiency while operating a commercial motor vehicle. Understanding changing conditions, demands, traffic situations, and hazards are essential in the professional driver's job. Maintaining professionalism and stress levels while operating a large motor vehicle safely are key components of a successful CDL holder. Utilizing classroom hours, audio and visual tools, simulation and actual driving scenarios help prepare the student for receiving a CDL.

CDL-105 Entry Level Driver Training **2 cr.**

This course focuses on the requirements set by the Federal Motor Carriers for entry-level driver training. Theory-based, this course focuses on basic operation, safety procedures, advanced operations, vehicle systems and reporting, and additional non-driving activities such as handling cargo. Each module within the courses must be passed with an 80% to progress through the course. This course will be pass/fail with students needing an 80% or better to pass. Students may enroll and complete Entry Level Driver Training prior to receiving their instructional permit.

CDL-115 Commercial Driving **2 cr.**

This course concentrates on the hands-on skills portion of the ELDT to earn a commercial driving license. The coursework covers all components of truck/trailer operation including vehicle controls, shifting, backing, speed and space management, and extreme driving conditions. Students will also learn pre and post trip inspection. Emphasis will be placed on safety through the two-week course. Students must have successfully passed an ELDT theory course, have a valid instructional permit, a valid Kansas driver's license, proof of a drug/alcohol screen, and DOT physical documentation prior to participating in class.

COURSE DESCRIPTIONS

Course **Credits**

ACIT-101 **3**

Operating Systems

This course introduces the students to the features and maintenance of Windows. Topics include operating systems fundamentals, installation, configuration and upgrading, and diagnosing and troubleshooting. Networking capabilities will also be discussed.

ACIT-104 **2**

Web Development

An in-depth introduction to the creation of web pages for an Internet site using HTML 5, CSS3 and JavaScript. Create individual web pages that use all the basic components, then build a web site that follows good design and navigation principles. Interactive and multimedia features will be added to the site. Issues concerning the Internet will be discussed.

ACIT-106 **4**

PC Servicing & Upgrade

Introduction to various hardware and software aspects of a microcomputer system including power supplies, microprocessors, input/output configurations, hard drives, modems, sound cards, video cards and mother boards.

ACIT-109 **3**

Advanced Web Development

Building on the topics discussed in ACIT-104, this course provides in-depth coverage of HTML and client-side scripting, with an introduction to current Web development topics. Topics include DHTML, e-commerce, security, web database programming, server-side scripting, XML, and Web site architecture and configuration.

ACIT-110 **2**

Advanced Word/Excel

This course offers advanced theories and operation of Microsoft Word Processing and Spreadsheet Software. The student will learn how to perform commands used to create, modify and manage documents.

ACIT-111 **2**

The Internet of Things

This course looks at the new and innovative technologies that make up the Internet of Things (IoT). Students will discover the many different technologies and how they work, while completing learning activities that allow students to use these new technologies. Students will also research, and then present a new technology to their peers.

ACIT-200 **2**

Digital Media Design & Development

This course introduces the student to the latest graphics packages used in business and industry. Also covered is the creation, manipulation, and presentation of computer art, charts, graphics, graphs, layout and publications.

ACIT-201 **4**

Mobile Application Design & Development

In this course, students will learn to design and develop mobile apps for many different platforms and devices. Students will work directly with the C# programming language to build mobile apps from scratch, with the goal of enabling students to independently produce fully functional app prototypes. User experience design plays a large role in app development, with most development decisions being informed by design decisions.

Pre-requisite: ACIT-203, ACIT-206

ACIT-203 **3**

Programming I

This class offers an introduction to basic programming using Microsoft Visual C# programming language. The student will learn program development, testing, debugging and documentation.

ACIT-204 **3**

Database Design & Management

Introductory course in compiling and manipulating collections of related data for immediate information retrieval and update. Investigation of hierarchical and relational databases. Design and manipulation including sorting, selection and printing reports, lists and mailing labels.

ACIT-206 **4**
Programming II
This course is a continuation of ACIT-203 and will cover additional programming languages such as Visual C#. Students will continue to develop more in-depth programs from ACIT-203.
Pre-requisite: ACIT-203

ACIT-207 **2**
Advanced Digital Media Design & Development
This class will allow students to design and create publications using desktop publishing software. The student will learn how to lay out a publication which includes text and graphics. Other topics include design, working with text, use of fonts and design effects.

ACIT-208 **2**
Network Security
This course introduces the fundamentals of computer security, beginning at the home desktop and progressing through a large Local Area Network with multiple nodes. The student will learn basic theory of virus protection and delve deeply into the theories of intrusion detection and securing both the physical premise equipment as well as the network and the information stored within it. The student upon completion will be able to demonstrate proficiency in hardware and software security devices.
Pre-requisite: TNT-140, TNT-230

ACIT-209 **2**
Essentials of Project Management
This course aims to develop a foundation base of the concepts and solutions a student would need for successful project management. Focus areas for this course include tasks that supports the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of a project.

ACIT-210 **3**
Video Applications
This class shows the student, how to create, edit and publish, short video segments which can be used in training employees and users how to use their technology. Students will use low cost equipment to record the videos. Then learn how to use video editing software such as Adobe Premiere Pro or other appropriate software to enhance the videos. Finally they will complete their projects by learning how to host or post their information to appropriate services.

ACIT-211Z **4**
Network Servers
This course introduces the basic fundamental skills necessary to effectively manage, monitor, and maintain a Microsoft network including installation of Windows Server, configuration of Active Directory, management of user accounts, file shares, group policies, and network printing. It will also introduce different email services and web services which could be Windows based or open source.

ACIT-212 **1**
IT Practicum
This course will serve as the practical application of previously studies work. Students will work independently and draw upon previous instruction towards a completed, self-directed project. The projects can be focused on these three areas: website design, construction and maintenance; Software design, construction and maintenance; or network design, construction and maintenance.

ACIT-213 **3**
Unmanned Aircraft Systems (UAS) Technology
This course introduces the students to UASs remote command and control, flight regulations, safety considerations, flight operations, conceptualization and designing UAS vehicles and components, and computer-aided design. Students will analyze operations. Within the course, conceptual designs and plans will be created for 3D printing

requiring the basic flight physics and characteristics, and construction and repair techniques used to create multi-rotor motored aerial vehicles.

ACIT-214 **4**
IT Project Management
This course aims to develop foundational skills and develop problem-solving based solution strategies needed to manage Information Technology (IT) projects. Students will build confidence and skills necessary to support planning, scheduling, controlling human and asset resource allocation, performance measurement using current applications for tracking projects, and customer relationship management (CRM) applications. Students will also learn how to better prepare for job placement by developing resumes, building digital certifications and creative portfolios, conducting mock interviews, and interpersonal skills.

ACIT-215
Scripting & Automation
This course is an introduction to the Python programming language for students with prior programming experience. We will cover data types, object-oriented programming, and graphical user interface applications.

ACRT-108 **2**
Estimating & Diagnostic Scanning
This is an introductory course to Estimating in the Automotive Collision industry. Students will learn how to produce a hand-written estimate using repair manuals. The course is a complete over-look of all mechanical, electrical, structural and non-structural damage, and paint and refinish repairs.

ACRT-111 **4**
Non-Structural Analysis & Damage Repair I
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: explore the components of safety pertaining to auto collision and repair; explore the parts and construction of vehicles; explore opportunities in the auto collision industry; identify metal straightening techniques; identify the application and use of body fillers; demonstrate proper use, set-up and storage of welding equipment; distinguish between weldable and non-weldable materials; demonstrate fundamental industry standard recommended welds; identify plastics and adhesives used in automotive industry; explain the general purpose of damage, estimation and repair orders; explore the processes required for outer body panel repairs, replacements and adjustments; and demonstrate fundamental cutting procedures.

ACRT-112 **3**
Painting & Refinishing I
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: identify safety and personal health hazards according to OSHA guidelines and the 'Right to Know" law; determine the different types of substrates and sanding materials relevant to autobody surface preparation; identify the process to clean and prepare a substrate for paint; distinguish between the properties, uses and manufacturer specifications of metal treatments and primers; distinguish among the various types of spray guns and equipment; explore various paint codes and specifications for use; Identify the various paint systems; explore the types of paint defects; distinguish between damage and non-damage related corrosion; and identify final detail procedures.

ACRT-113 **2**
Structural Analysis & Damage Repair I
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will: identify measuring procedures; analyze the basic structural damage conditions; identify the safety requirements pertaining to structural damage repair; analyze frame repair methods; analyze unibody inspection and measurement and identify procedures of welding for structural repair.

ACRT-114 **3**
Mechanical & Electrical I
Through classroom and/or lab/shop learning and assessment activities, in this course students will: determine how to diagnose steering and suspension; diagnose electrical concerns; complete headlamp and fog/driving lamp assemblies and repairs; demonstrate self-grounding procedures for handling electronic components; determine diagnosis, inspection and service needs for brake system hydraulic components; examine components of heating and air conditioning systems; determine the inspection, service and repair needs for collision damaged cooling system

components; distinguish between the under car components and systems; and determine the diagnosis, inspection and service requirements of active and passive restraint systems.

ACRT-115 **4**
Non-Structural Analysis & Damage Repair II
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will: identify trim and hardware to be protected; examine what to consider when working with movable glass; perform outer body panel repairs; Perform outer body replacements and adjustments; Perform metal straightening techniques; Perform body filling techniques; Perform metal finishing techniques; Use welding procedures in non-structural damage repair; Distinguish between mechanical and electrical components; apply safety standards for the collision repair industry; use cutting procedures in non-structural damage repair; and determine procedures necessary for working with plastics and adhesives.

ACRT-116 **3**
Painting & Refinishing II
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: select proper personal protective equipment; perform proper shop operations according to OSHA Guidelines; remove paint coatings; apply corrosion resistant coatings; demonstrate proper spray gun operation and cleaning procedures; select proper painting and substrate materials for projects; analyze paint defects, causes and cures; repair paint defects; measure paint mil thickness; and determine final detail procedures for given projects.

ACRT-117 **2**
Structural Analysis & Damage Repair II
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: apply safety requirements pertaining to structural damage repair; analyze frame inspection and repair procedures; determine direct and indirect damage for structural repair; analyze unibody inspection, measurement, and repair procedures; perform welding techniques for structural repair; and identify cutting procedures for structural repair.

ACRT-118 **3**
Mechanical & Electrical II
Through classroom and /or lab/shop learning and assessment activities in this course students will: determine how to diagnose steering and suspension; diagnose electrical concerns; complete headlamp and fog/driving lamp assemblies and repairs; demonstrate self-grounding procedures for handling electronic components; determine diagnosis, inspection and service needs for brake system hydraulic components; examine components of heating system components; distinguish between the under car components and systems; and determine the diagnosis, inspection and service requirements of active and passive restraint systems.

ACRT-205 **3**
Advanced Estimating & Blueprinting
This course is a continuation of Estimating & Diagnostic Scanning, covering the history and creation of computerized estimating. Students will complete computerized estimates taking into account refinishing and secondary damage. This course will also cover Blueprinting. The relationship between estimating and insurance will also be covered.

ACRT-207 **4**
Non-Structural Analysis & Damage Repair III
Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will: remove and install trim and hardware; determine process and procedures necessary for movable glass repair; repair outer body panel; replace and adjust outer body panels; remove and install mechanical and electrical components; demonstrate safety protocol appropriate for the auto repair setting; perform intermediate welding skills on non-structural damage repairs; and perform plastic and adhesive repairs.

ACRT-208 **4**
Shop Practicum
Provides time and opportunity for the student to work independently and draw upon previous program instruction to arrive at a satisfactory completed project. The purpose of the Practicum is to promote initiative, independent study and the assumption of responsibility to work without specific instruction.

ACRT-209 **4**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods ad theories in their chosen career. Progress will be monitored by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.

ACRT-211 **3**
Painting & Refinishing III
Through a variety of learning and/or shop/lab learning and assessment activities, students in this course will: identify safety and personal health hazards according to OSHA guidelines and the 'Right to Know" law; determine the different types of substrates and sanding materials relevant to autobody surface preparation; identify the process to clean and prepare a substrate for paint; distinguish between the properties, uses and manufacturer specifications of metal treatments and primers; distinguish among the various types of spray guns and equipment; explore various paint codes and specifications for use; identify the various paint systems; explore the types of paint defects; distinguish between damage and non-damage related corrosion; and identify final detail procedures.

ACRT-212 **3**
Structural Analysis & Damage Repair III
Through a variety of classroom and/or shop learning and assessment activities, students in this course will: apply safety requirements pertaining to structural damage repair; perform welding and cutting techniques for structural repair; diagnose unibody direct and indirect damage; apply unibody inspection and measurement procedures; apply unibody repair procedures; apply frame inspection and measurement procedures; apply frame repair procedures; and remove fixed glass.

ACRT-214 **5**
Non-Structural Analysis & Damage Repair IV
Through a variety of classroom and shop/lab learning and assessment activities, students in this course will: remove trim and hardware; install trim and hardware; repair movable glass; protect adjacent body panels; repair outer body panel; replace outer body panels; adjust outer body panels; replace mechanical and electrical components; demonstrate safety protocol appropriate for the auto repair setting, perform welding skills on non-structural damage repairs; and perform plastic and adhesive repairs.

ACRT-216 **4**
Painting & Refinishing IV
Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: apply exemplary safety procedures in all areas of auto body painting and refinishing; perform proper cleaning procedures for a refinish; prepare adjacent panels for blending; prepare plastic panels for refinishing; protect all non-finished areas of vehicle; operate high and low volume/pressure spray gun operations for painting and refinishing; perform all paint system applications on an automobile; apply appropriate paint color matching and mixing procedures; tint color using formula to achieve a blendable match; explore the causes, effects and correction of buffing-related imperfections; explore the causes, effects and correction of pigment flotation; measure mil thickness; apply decals, transfers, tapes, woodgrains, pinstripes to an automobile; apply buffing and polishing techniques to remove defects; apply cleaning techniques to automobile interior, exterior, glass and body openings; and remove overspray.

AET-100 **2**
Tools/Safety/Service
The study of the care and use of hand and power tools and welding equipment used in agricultural equipment service centers. The course will also cover shop planning, organization, and time management. The course will include an introduction to the processes typically utilized in a modern agricultural equipment service center. The student will be introduced to the diagnostic skills which will be applied in advanced courses of study. Applied safety practices, Material Safety Data Sheets and handling hazardous materials will be covered.

AET-103 **3**
Electrical I
This course will cover the basics of electricity referencing Ohm's Law, circuitry and schematics. Course content will include understanding circuit calculations, continuity, resistance, amperage and how voltage affects a circuit. It will

include the process in understanding how to use a multi-meter and how to interpret multi-meter readings. Safety instruction will accompany all units of study.

AET-105 **4**
Electrical Systems
The study of electrical systems found on agricultural equipment; DC and AC generators, alternators, starting circuits, batteries and accessories. Diagnosis and repair of agricultural equipment electrical systems both on the unit and on the bench. Includes testing and overhaul of generators, alternators, regulators, starters, batteries, gauges, switches and their respective circuits. Advanced study and application of electrical circuits and controls found on tractors, combines and other agricultural equipment which also includes test equipment. Applied safety is also covered.
Pre-requisites: AET-103

AET-106 **3**
Gas Engines
The study of the fundamental principles and theories of the internal combustion engine, both two and four-stroke. Includes practical diagnosis, disassembly and repair of smaller power units using manufacturers' specifications. Internal combustion engine cooling, lubrication, air intake, and exhaust systems are studied. Agricultural power safety is also covered.

AET-108 **2**
Hay Equipment
This course will include the fundamental principles and theories of hay equipment repair and operations. It includes the adjustment and repair of hay equipment. Electronic monitoring systems, operation, diagnosis and repair are also studied.

AET-109 **4**
Diesel Engines
The study of diesel and gasoline power units in tractors and other agricultural implements. Practical experience in diagnosing, disassembling, and repairing agricultural equipment power units. Instruction in the use of manufacturer's specifications and repair manuals as well as methods of agricultural equipment overhaul. Involves performance testing of agricultural power units. Diagnostic testing before and performance testing after repair. This knowledge is then applied to the study of performance principles in modern diesel engines.

AET-111 **5**
Hydraulics
An advanced study of hydraulic components utilized in agricultural equipment. Testing, diagnosis, disassembly and reassembly of components, including pumps, cylinders, valves, and accumulators will be studied. Diagnostic and repair procedures for hydraulic drive systems will be covered. Applied safety is also covered.

AET-112 **4**
Internship
The internship is designed to prepare the student for the transition from the classroom to a working environment through employment within the field of study.

AET-201z **5**
Fuel Systems
This course will include the advanced study of theories and principles of the diesel fuel injection pump, fuel injection nozzle, fuel injection components and controls. It will include the diagnosis and adjustment of fuel systems utilizing available tools and computer technology. All components involved in fuel systems will be taught for identification and function. Several makes of engines will be introduced to the student for various knowledge areas.

AET-202 **2**
Harvesting Equipment
Study of the fundamental principles and theories of harvesting equipment repair and operations, with emphasis on modern combines. Includes the adjustment and repair of combines and combine headers. Electronic monitoring systems, operation, diagnosis and repair are also studied.

AET-203 **3**
Cab/Chassis Electrical
Advanced study and application of electrical and electronic circuits and controls utilized on tractors, combines and other agricultural equipment. Troubleshooting, diagnosis, and repair of lighting circuit, A/C circuit, wiring, connectors, monitoring, and control systems used on agricultural equipment, including test equipment. Applied safety is also covered.
Pre-requisites: AET-103

AET-204Z **3**
Heating & Air Conditioning
A study of the basic principles, diagnosis, repair, and service of air conditioning systems found in agricultural equipment, and their component parts and functions. Refrigerant recovery/recycling and retrofit procedures for converting equipment from R-12 to R134A refrigerant will be covered. Students will become certified for A/C service by complying with state and federal laws. Air conditioning safety is also covered.

AET-205 **4**
Power Trains
The study of theories of operations and design of agricultural drive trains, including clutches, standard transmissions, hydraulic assist transmissions, hydrostatic drives, power take off, braking systems and special drivers. Study of seals and bearings as they are applied to power trains. The diagnosis and repair of problems associated with agricultural equipment power trains will be covered. The practical use of repair manuals and computer assisted resource materials will be included. Hands on training with demonstration units and experience in the repair of agricultural projects will be included. Applied safety in all areas is included.

AET-208Z **3**
Advanced Agricultural Equipment Technologies
An advanced study of theories of operation, testing and repair of precision farming tools, including global positioning systems, guidance systems, steering control systems, yield mapping/monitoring, field documentation, map based seeding, and tillage machine controls. Precision seeding and fertilizer, and chemical application equipment will be covered. Chemical application equipment such as self propelled sprayers will be included as an important part of this course.

AET-209 **5**
Integrated Systems
An advanced study of theories of operation, testing and repair of precision farming tools, including global positioning systems, guidance systems, steering control systems, yield mapping/monitoring, field documentation, map based seeding, and tillage machine controls. Precision seeding and fertilizer, and chemical application equipment will be covered. Chemical application equipment such as self-propelled sprayers will be included as an important part of this course.

AET-210 **4**
Shop Practicum
Provides time and opportunity for the student to work independently and draw upon previous program instruction to arrive at a satisfactory completed project. The purpose of the Practicum is to promote initiative, independent study and the assumption of responsibility to work without specific instruction.

AMC-201
Variable Frequency Drive (VFD)
The Variable Frequency Drive course discusses the use of electronic VFD devices as used in industrial applications for motor controls systems. The purpose of this class is to learn how to size and protect VFD's and be able to control them either as stand-alone units, or controlled via network communications with a PLC system.

AMT-100 **1**
Orientation & Safety
This course will provide information to the students regarding career opportunities, safety, EPA standards, vehicle maintenance, and vehicle inspection.

AMT-101Z **3**

Brakes 1
This course is a thorough and detailed study of brake system theory and functional operation. Principles of hydraulic systems as it applies to brake systems 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 rotors.

AMT-102 **3**
Suspension & Steering 1
This course is a thorough and detailed study of theory and practical application of wheel balancing and complete suspension alignment. This includes the study of alignment angles, suspension, steering gears, shock and strut assemblies and the basic causes for tire and wheel unbalance. The application of fraction and degrees, ratios and geometry as it applies to alignment.

AMT-103Z **3**
Electrical 1
This class will cover basic theory of DC electricity and complete coverage of the battery, charging systems, starting systems and basic circuitry. Practical application of charging systems, starting systems and basic circuit troubleshooting will also be included.

AMT-104Z **3**
Engine Performance 1
This class will cover introduction to basic ignition systems. Sub systems would include point ignition, HEI ignition and some computer control ignition systems. Practical application of these systems will be taught.

AMT-105 **3**
Engine Performance Fuel Systems
This course will cover basic fuel system theory. Fuel pumps, low pressure and high pressure systems, carburetion and introduction to fuel injection will be included. Practical application of this class will include shop practices and service procedures for automotive gasoline fuel systems.

AMT-106 **3**
Automotive Engine Repair
This course is a thorough and detailed study of internal combustion engine theory and analysis consisting of all aspects of engine valve trains, crankshafts, bearings and lubrication systems. Precision measuring and evaluation of engine internal components will be done during the practical application.

AMT-107 **3**
Automotive Manual Transmission
This course is a thorough and detailed study of theory and operation for manual transmissions including manual and hydraulic clutch systems, drive train and differential gear assemblies. Practical application of this class will include shop practices and service procedures for clutch, manual transmission, drive train and differential assemblies.

AMT-108 **3**
Automotive Automatic Transmission
This course is a thorough and detailed study of the theory and operation of automatic transmissions and transaxles. Included will be the principal of hydrodynamics, friction materials apply devices, sealing components and final drive assemblies. Practical application of this class will include shop practices and service procedures for automatic transmission overhaul procedures.

AMT-109 **2**
Automotive Heating/Air Conditioning
This course is a thorough and detailed study of basic principles and theory of operation for automotive climate control systems. The study will cover basic heating and air conditioning system operation, component repair and diagnosis including air delivery systems. Practical application includes heating and air conditioning system evaluation and diagnosis of performance.

AMT-200 **3**
Advanced Electricity

This course will expand a student's basic understanding of electrical and electronic systems used in current production cars and trucks. Students will build their diagnostic skills in use of multimeters and digital storage oscilloscopes to trouble shoot and repair automotive systems.

AMT-201 **6**
Electricity & Computers
This course is a thorough and detailed study of electronic and electrical knowledge necessary to diagnose and service current automobile systems. This course will have emphasis on automotive electrical theory and principles of circuit operation. Introduction to internal computer function and automotive computer systems will be taught in this course. Practical application will include digital ohmmeters and digital storage oscilloscopes will be utilized in a lab environment. Student will use scan tools to interface with on board systems for diagnostic evaluation.

AMT-202 **3**
Advanced Fuels
Covers all areas affecting the power, fuel economy, emission output levels and dependability of today's automobiles. Study will include strategy based diagnostics skills used to isolate and simplify complex problems. Student will have the opportunity to learn Ford, General Motors, Daimler Chrysler and Bosch fuel-control systems. Course will also cover advanced ignition systems such as distributor-less ignition, coil over plug and coil near plug systems.

AMT-203Z **3**
Electronic Automatic Transmission
Course covers both service and complete overhaul procedures for electronic-controlled transmissions. In practical application the course will cover diagnostics for electronic-controlled systems and hydraulic-controlled systems including the use of specialized test equipment, hydraulic and electrical schematics, diagnostic flow charts, diagnostic equipment and procedures used on both front and rear wheel drive vehicles.

AMT-206 **4**
Advanced Electronics & Networks
This course is a thorough and detailed study of basic principles and theory of operation for advanced electronic systems used in domestic car and trucks. This will cover advance driver/passenger comfort systems, light systems, driver assistance systems, supplemental restraint systems, electronic stability with rollover mitigation systems and the advanced network topography that manages these systems. This course will serve as the programs electronic capstone course for automotive electronic systems.

AMT-207 **4**
Light Duty Diesel Systems
This course is a thorough and detailed study of diesel engine injection systems as they are used in light vehicles such as domestic cars and trucks. The course will have a detailed look into operation and diagnostics of electronic common rail systems. We will cover the systems used by domestic manufacturers in light duty trucks, up to one ton pickup models. On-vehicle testing of the electronic management systems will be explained and actual on vehicle test and repair will be completed.

AMT-208 **3**
Alternative Fuels
This course will cover alternative fuels besides regular gasoline that are used in today's customer vehicles and focus on alternative drive systems use in today cars & trucks. This course will also include the theory and operation of Hybrid vehicles. The course will break down the Hybrid vehicle and electric vehicle drive components and study individual component operation and repair.

AMT-209 **3**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.

AMT-210 **3**
Advanced Automotive Computer Systems

Students will learn how automotive computer sensor arrays are used to collect data for multiple computer systems. Students will learn automotive sensors from an electronic standpoint of what is inside each sensor. This will allow students to cross train on multiple manufacturers' systems at one time. Students will analyze data collected by these systems in order to understand the computer's predicted response to a given situation.

AMT-211 **3**
Advanced Fuel Management Systems
This course will study the diagnosis of the management systems that controls the complete engine operation. Students will learn how multiple systems work together to control engine operation allowing for maximum power while meeting federal regulations. They will learn to use strategy-based diagnostics to identify needed repairs to keep these systems working at the manufacturers designed operational levels.

BIOL-121 **4**
Human Biology w/Lab
An introductory course using exploration of principles and processes common to all living systems as a starting point for the study of human structure and function and the interrelationships between humans and the rest of the biosphere. Lecture will be supplemented with laboratory exercises.

BIOL-225 **5**
Microbiology w/Lab
This class is an in-depth study of the microbial organisms that affect human health. Lecture will cover the cellular and molecular biology of microbes, as well as providing historical perspective on microbiology. Bacterial genetics will be discussed in detail as a background for examination of microbial resistance, bioengineering and biotechnology. The student will learn practical techniques and applications of microscopy, aseptic technique and microbial identification through multiple laboratory exercises. Illustrations of the interactions between nurses, physicians, laboratorians, other health professionals and the patient will be provided to introduce the student to their respective roles in the diagnosis and management of human infectious disease.
Prerequisite: Grade of C or better in BIOL-230. Students are not permitted to enroll in Anatomy & Physiology and Microbiology within the same term.

BIOL-230 **5**
Anatomy & Physiology w/Lab
This class is an in-depth study of human anatomy and physiology. Anatomy is the study of the structure of the human body from cell structure through organ systems. Physiology is the study of the mechanical and biochemical functions of the body. To illustrate the concepts discussed in the lecture portion of the class, lectures will be supplemented with laboratory exercises.
Prerequisite: Grade of C or better in BIOL-121, or qualifying examination score.

BMGT-101 **3**
Leadership
In this class, students will study theories, concepts and issues associated with leadership. Students will be exposed to information on these theories and concepts as well as how to practically apply them. Students will also work to develop a self-awareness of their individual leadership styles.

BMGT-104 **3**
Marketing Concepts
Sales and marketing work together to improve customer satisfaction and increase profits. This course covers marketing functions such as financing, pricing, and distribution. Other areas of study include: selling techniques, retail selling, and marketing strategies/concepts. The student will also learn about the importance of meeting customer needs along with distribution and global marketing.

BMGT-105B **1**
Internship
Students prepare for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.
Pre-requisite – Student must be employed before enrolling in this course.

BMGT-108 **3**

Entrepreneurship

In this class students study the different forms of business entities, how to begin a business, and how to operate a business as an entrepreneur or manager. Important areas covered in the setting up and operation of a small business includes: planning, organizing, controlling, strengths and weaknesses, site location, financing, human resources, and promotion. An emphasis will be placed on creating, planning and presenting a business plan.

BMGT-109 **3**

Business Law Concepts

This course is designed to provide students with a better understanding of business law with emphasis on business and consumer issues, contracts, sales agreements, partnership agreements, licensing, insurance and liability. Students may observe live court cases involving criminal, civil, and traffic court law.

BMGT-111 **3**

Foundations of Personal Finance

This course is designed to cover issues relating to personal finance. Topics covered include: the economic system, managing your finances, income and taxes, financial institutions and credit, investing and retirement planning, consumer economics, and career and working world planning.

BMGT-112 **3**

Insurance Operations

This course is designed to cover issues relating to insurance and risk management. Topics include: the nature of insurance, state and federal regulation of insurance, COBRA, HIPAA, PPACA, legal principles, careers, worker compensation, unemployment, Medicare/Medicaid, Social Security, property and casualty insurance, health insurance, life and disability insurance and specialty coverages.

BMGT-115 **1**

Employability Skills

The purpose of this course is to help students be aware of the skills needed for entry into the competitive world of work and to provide students with strategies that will be beneficial to them as they prepare to make the transition from the academic environment to a career setting. The course will focus on job search strategies, as well as strategies for career success once they get the job. Specific job search skills covered will include topics such as investigating pre-employment strategies; exploring the job application process; resume preparation; writing employment correspondence, such as a cover letter and thank you letter; and developing interviewing techniques. This course will also include the exploration of soft skills and strategies for career success.

BMGT-116 **3**

Customer Relations

In today's competitive environment, customer service has become even more important. This course is designed to develop the necessary knowledge and skills to successfully provide effective customer service in a quality-oriented, customer-focused environment. It will provide an introduction to customer service and examine various service situations. Students will develop an attitude of superior customer service, which is critical to success in all organizations, whether a private enterprise, the government, a non-profit organization, or a self-owned or a family-owned business. The course will include exploration of consumer behavior, methods to effectively communicate with customers, and strategies for handling difficult customers.

BMGT- 117 **3**

Principles of Management

In this course students will get an introduction to organizational management. Students will learn about the basic management functions of planning, organizing, leading, and controlling. This course will allow students to explore skills involved in managing people and projects to achieve organizational success.

BT-100 **3**

Business Concepts

This course is designed to cover issues relating to the economic environment and how modern business affects both customers and businesses. Students will be exposed to the many functions of business including a multitude of career fields such as management, marketing, ethics, social responsibility and the human resource side of running a business.

BT-102 **3**

Computer Systems Technology

This course will cover the rapidly expanding use of information technology as it relates in the business environment. Students will explore, discover and experience both the fundamentals of computers and the latest trends. Topics include: operating systems, file management, software applications, networking fundamentals, security, website design and exposure to coding.

BT-103 **3**

Financial Accounting I

This course is an introduction to business practices and accounting concepts. Some of the concepts covered include steps in the accounting cycle for a sole-proprietorship such as: analyzing, journalizing, and posting transactions; adjusting and closing entries; and preparing financial statements for a service business.

BT-104 **3**

Word Processing Applications

This course covers theory and operation of word processing systems in a realistic business environment. Users will become proficient in basic and advanced functions needed to create, modify and manage documents. Microsoft Office Specialist certification is included with this course.

BT-105 **3**

Business Communications

Business Communication is designed to study the methods of communicating in a professional manner across all media platforms. Students will identify strategies for successful workplace correspondences, principles of written business correspondences, development of listening skills, communication skills, and job placement techniques.

BT-106 **3**

Graphic Design Publishing

This course is designed to acquaint students with graphic design techniques, principles of page layout and design, and desktop publishing terminology and applications. Students will be taught how to correct and enhance images for use in publications and will gain a better understanding of the capabilities of desktop publishing. Extensive hands-on practice with a desktop publishing software package will assist students in the production of professional publications.
Pre-requisite: BT-104

BT-108 **3**

Spreadsheet Applications

This course will provide a comprehensive study of the major features of spreadsheet applications. Students will learn the skill needed to operate this application software in a realistic business environment. These skills include: creating and maintaining a spreadsheet document, working with formulas and functions, enhancing worksheet appearance, and expanding the uses of workbook data for decision-making and problem-solving. Microsoft Office Specialist certification is included with this course.

BT-110 **3**

Multimedia Applications

This course is designed to provide the student with an understanding of the elements of a multimedia presentation. Students will produce slides/presentations using various techniques such as text, lines, fills, colors, objects, charts, tables, pictures, clipart, and animation slide show effects. Microsoft Office Specialist certification is included with this course.

BT-115 **3**

Digital Marketing

This course will focus on the dynamic, interactive and ever evolving field of Internet Marketing, as part of an existing marketing strategy. Students will learn the foundations of eMarketing, and the tools needed for online branding and strategy development. The course will cover the what, why and how of major approaches including social media, email campaigns, mobile marketing, website usability, search engine optimization, and the latest technologies.
Pre-requisite: BT-102

CA-100 **3**

Sanitation, Safety & Housekeeping

Study of professional standards and practices for proper food handling and environmental infection control in hospitality management. This will be directly linked to the Kansas Department of Agriculture, Kansas Food Code. Candidates are prepared for the National Restaurant Associate ServSafe certification examination.

CA-101 **3**
Standard Kitchen Tools & Equipment
After this course, the student will recognize various small wares and large equipment used in commercial kitchens. Along with construction and uses, safety will be stressed.

CA-102 **2**
Culinary Hospitality
Students will learn the history and trends of food service hospitality, and identify occupations directly related to hospitality in food service. Training for positions in hospitality area of food service will be introduced. This course will teach the aspects of hospitality from dining to the kitchen. Students will also develop personal career plans within this course.

CA-103 **3**
Food Purchasing & Inventory
A basic history of the culinary and food industry is taught as well as types of food services. Emphasis is placed on supply, marketing trends, ordering and receiving and food storage. Principles of food, beverage and labor costs are studied.

CA-104 **5**
Understanding & Cooking Meats, Fish & Shellfish
Basic cooking methods as they apply to meat, poultry, fish and shellfish are explored with emphasis on understanding of composition, structure, grading, inspection and basic cuts. In addition, the student will prepare and cook meat, poultry, fish and shellfish in various ways.

CA-105 **3**
Quality Baking
Students will learn basic methods and techniques in quality baking. This course will cover yeast breads, quick breads and pie creation. Students will learn about the organization, ingredients, tools and equipment found in a bakeshop.

CA-106 **3**
Recipe Structure & Uses
This course discusses various forms of recipes and their structure in a commercial kitchen. Students will examine techniques for measuring ingredients, portioning, converting recipes and calculating food costs.

CA-107 **5**
Understanding & Cooking Fruits, Vegetables & Starches
Students will understand the factors that influence texture, flavor, color and nutritional changes when cooking fruits, vegetables, and starches. Students will determine the pluses and minuses of frozen, canned and dried when compared to fresh. In-depth study of starches will result in the proper selection, preparation and cooking.

CA-110 **3**
Pastries, Confections, Cake Decorating & Desserts
Students will learn basic methods and techniques in creating pastries, confections, and desserts. Students will also learn the techniques in cake decorating. The course will provide an overview of the processes as well as the ingredients, tools, and equipment needed.

CA-109 **2**
Internship
This course utilizes our local community and industry leaders to enhance a real-life experience in the Culinary Arts. Students will be able to work in the Culinary Field to further build relationships with Industry Leaders. It will give students an understanding of how the industry operates on a daily basis.

CC-101 **1**

Basic Drafting
This course covers sketching, multi-view drawing, dimensioning, and working drawings. It also covers proper and efficient use of basic drafting tools and equipment to produce technical drawings. It focuses on applying geometric construction as a problem-solving tool in technical drawing.

CC-105 **4**
Cabinetmaking
This course is designed to cover the use and maintenance of hand tools, power tools, hardware, adhesives, types of joints, types of cabinet materials, cabinet hardware, ordering materials and methods of construction. This course also covers actual construction of all cabinetwork to be placed in residential homes under construction. It includes vanities, china closets, built -in study areas, kitchen cabinets, and other incidental cabinet work in custom homes.

CC-106 **3**
Introductory Craft Skills
This course provides an overview to the construction industry including career paths and benefits of a career in the construction trades. Ina addition, the courses will focus on safety of construction sites. Course topics include: careers in construction; basic safety, including site safety; introduction to construction tools and equipment; construction math; and power tools.

CC-107A **2**
Construction Basics
This course deals with the actual construction of a residential home. During the construction, the following units are studied and methods applied: foundation layout, leveling instruments, foundation formwork, floor and wall framing methods, roof framing, covering and exterior finish plus the study of the framing square, building materials and remodeling projects.

CC-110 **3**
Windows and Doors
Describes the various types of windows, skylights, and exterior doors, and provides instructions for installing weather-stripping and locksets. This course also covers various types of stairs and common building code requirements related to stairs. The module focuses on the techniques for measuring and calculating rise, run, and stairwell openings, laying out stringers, and fabricating basic stairways.

CC-111 **3**
Interior Finish
Covers interior trim work, finish floor covering, ceramic tile setting, interior wall and ceiling finishes, insulation, and special architectural features such as ceiling beams, room dividers and paneling.

CC-112 **1**
Exterior Finish
This course covers the installation of siding, exterior trim, cornices and roof trim.

CC-113 **3**
Carpentry I
This course covers the foundational elements of the construction of a residential home. During the construction, the following units are studied and methods applied: building site and layout; foundational layout; leveling instruments; foundation formwork; building materials and estimating, and calculating remodeling projects; and safety with material handling.

CC-114 **4**
Carpentry II
This course outlines the details in construction floor, wall and roof systems. Framing and the procedures for laying out and constructing various floor systems. Students will learn wall and ceiling framing including rough-in for doors and windows. Roof systems will be covered including laying out rafters for gable roofs and valley intersections. Coverage includes both stick-built and truss-built roofs. In addition, various types of stairs and common building code requirements related to stairs will be covered including measuring and calculating rise, run and stairwell openings, laying out stringers and fabricating basic stairways.

CC-115 **3**
Concrete Technology
This course will cover the basic principles in concrete formation. Topics covered will including: specialized concrete tools, mixing properties, concrete footings, foundations, forming and flatwork. Site preparation and finishing techniques will also be covered.

CHEM-100 **4**
The Chemist's View of the World w/Lab
An exploration of the major concepts of the scientific discipline of chemistry. Concepts include the scientific method of inquiry, the structure of matter and the major natural laws. The course utilizes an approach to quantitative reasoning that requires a minimum of mathematical skill. Lecture will be supplemented with laboratory exercises.

CIS-100 **3**
Computer Applications
Students will learn basic computer operations utilizing a windows-based computer. Word processing, spreadsheet, database, and presentation applications skills will be developed through the use of Microsoft Office, and students will learn how to integrate the data produced. Hands-on practice projects will be utilized that will be relevant for home and business use.

COM-098
English Composition I Review **1**
This course is intended for students whose placement review indicates the need for additional support in order to be successful in COM-103. Enhancing reading and writing skills will be emphasized. Class time will provide practice in writing fluency, development, organization, revising and editing. Successful completion is required in order to receive credit for COM-103. Co-requisite enrollment in COM-103 is required.

COM-099 **3**
Introduction to Composition
Introduction to Composition is a transition course to prepare students for success in COM-103. The course will provide instruction in building effective sentences and paragraphs, short essay construction and general writing skills. Students will gain competency in basic research skills, critical thinking and analytical reading.

COM-103 **3**
English Composition I
English Composition I will examine rhetorical strategies and application of these strategies through writing, emphasizing grammatical correctness, acceptable usage, effective organization and expression of ideas.
Prerequisite: Grade of C or better in COM-099 or appropriate placement scores.

COM-110 **3**
English Composition II
This course is a continuation of COM-103, English Composition I focusing on persuasive writing. Emphasis will be on the writing process, the writing workshop and incorporating research and documented sources into writing. Assigned readings, expository writings and a research paper are required.
Prerequisite: Grade of C or better in COM-103, English Composition I

COM-105 **3**
Fundamentals of Oral Communication
An elementary course in the study and practice of the basic principles of speech and interpersonal communication. We examine a variety of speaking situations including workplace speaking, persuasive speaking and special occasion speaking with emphasis on critical thinking, creative and intelligent selection of material, organization and oral presentations.

COM-106 **3**
Introduction to Literature
An introduction to literature covering a range of genres including fiction, poetry, and drama. Students will learn how to analytically interpret text for meaning based on their own social constructs. Students will gain experience in analytical reading, writing, and critical thinking.

COM-210 **3**
Medical Terminology
Body systems approach to learning medical language. Word parts are used to build, analyze, define, and spell medical terms. Structural, directional, disease and disorder terms, pronunciation, and abbreviations are included.

DT-101 **2**
Diesel Shop Equipment & Tool Safety
Diesel Shop Equipment and tool safety introduces the different pieces of equipment and tools (both basic and some specialty) that are commonly used in a diesel shop, and the safety precautions and rules for each. The student will become certified in forklift truck and tug truck operation.

DT-102 **5**
Diesel Engines I
Diesel Engines I introduces the theory of operation and the use of the engine's mechanical components; disassembling, inspecting, measuring, reassembling and performing maintenance procedures on diesel engines.

DT-103 **5**
Drive Trains
Basic power trains follows the natural path of diesel torque through clutches, mechanical transmission's, drive trains, differentials and final drive units, finishing with wheels and track applications on diesel powered equipment. Operation and characteristics of each of these components are studied, demonstrated and tested. Components are disassembled, inspected, evaluated, adjusted and rebuilt.

DT-104 **5**
Hydraulics
Application of basic principles of applied hydraulics that reference confined fluids. Study of system components and functions, multiplication of work force, safety, performance testing, line hookups, and the identification of hydraulic pump characteristics, as related to basic hydraulic systems.

DT-105 **5**
Electrical/Electronic Systems
Electrical/Electronic Systems studies the principles of electricity through operations and testing procedures and provides an introduction to electronics. Diagnostics and repair of starting and charging electrical systems are covered, in addition to practical applications of the principles of electricity. Electronic management programs are referenced and studies.

DT-106 **3**
Mobile HVAC
Mobile HVAC is a study and practice of servicing the components of mobile air conditioning systems. Diagnostic evaluations, evacuate systems down and repair are practiced. Handling refrigerant products and safety are demonstrated and practiced throughout this course. Retrofitting heavy-duty A/C systems and complying to the service requirements of the Clean Air Act complete this course in driver cab comfort. An optional certification test is offered at the conclusion of this unit.

DT-201 **2**
Diesel Shop Management
Diesel Shop Management is a study and practice of the office/administrative portions of a repair facility. The student will learn to create and keep a repair order up to date, as well as keeping a detailed work log of each day's lab activities. Resume writing and the proper job application completion will be studied as well as interview techniques.

DT-202 **5**
Advanced Electrical/Electronic Systems
Advanced Electrical/Electronic Systems provides a study of electronic management components and their operation. Several major electronic management programs are referenced and studied.

DT-203 **5**
Advanced Diesel Engines
Advanced Diesel Engines studies the theory and operation of electronic controlled diesel engines, parts identification, parts failure operating principles, familiarization of shop procedures, areas of specialized repair, and preventive maintenance.

DT-204 **1**
Diesel Engine Emission
This is an introductory course into the theory and operation of diesel engine emission control systems. Both EGR and SER systems will be studied and discussed on Caterpillar, Cummins, and Detroit Diesel engines.

DT-205 **3**
Brakes
Brakes will cover the theory and operations of hydraulic and air brake systems, teaching troubleshooting, disassembly, inspection and adjustments of hydraulic and air brake systems, including ABS.

DT-206 **3**
Suspension & Steering
Suspension and Steering addresses the theory, operations and trouble-shooting of various steering and suspension system components.

DT-207 **2**
Alternative Fuels & Bio-Fuel
This is the study of alternative fuels. Students will study the effect alternative fuels have on components of the Engine and Fuel systems.

DT-208 **6**
Truck & Heavy Equipment Repair
Truck & Heavy Equipment repair will cover the federal motor safety standards when it comes to vehicle inspections. Preventative maintenance programs on heavy truck and heavy equipment will be examined including tires and wheels, and coupling devices. Undercarriages, toolbars, and attachments for heavy equipment will also be examined.

DT-209 **6**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.

EET-224 **3**
This course is an extension of EL-202 with more in-depth ladder logic programming.

EL-101Z **4**
AC/DC I
AC/DC Circuits I addresses the basics of direct and alternating current.

EL-104 **2**
Print Reading
This course addresses the fundamentals of interpreting construction drawings. Students will learn to interpret plan views, elevation views, sections, details, schedules, specifications, symbols and abbreviations found on most residential, commercial and industrial construction drawings.

EL-105
Residential Wiring **4**
An introductory course on residential wiring methods that includes practical applications and hands-on experience in implementing code requirements.

EL-106 **4**
National Electrical Code I
An introductory course on the use and interpretation of the current National Electrical Code (NEC chapters 1-4).

EL-107 **4**

Electrical Motor Controls
Course covers construction and operation of pilot devices, motor starters, control circuits, direct current, single-phase and three-phase motors. Basic motor control circuits are constructed from a schematic or ladder diagram. Students also troubleshoot basic motor control circuits. Current and overload protection for motors is studied as well.

EL-109 **2**
Solar Energy Systems
A fundamental understanding of various components, applications, and installation methods of photovoltaic systems.

EL-110 **1**
AC/DC Theory
AC/DC Theory addresses basics of electricity with the focus on DC current. This course will cover Ohms and Watts Laws and touch on basic AC theory such as three-phase and single-phase power generation. Students will be able to apply theory and use industry standard test equipment.

EL-111
Electrical Troubleshooting I **2**
This course is an introduction to Electrical Troubleshooting of lighting, power and motor control circuits.

EL-112 Switches and sensors **2**
An introduction to digital and analog switches and sensors. The course will focus on the different types and applications of digital and analog switches and sensors.

EL-201 **3**
Electrical Troubleshooting
Course covers many special applications of electrical and electronic circuits. Explains the use of various types of test equipment and the procedures to find and solve electrical and electronic problems. Students learn about many different types of electrical and electronic equipment and possible causes for failure.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-202 **4**
Programmable Controllers
Study of the operation of a programmable-control managed system and how programmable controllers fit into the industrial system. PC ladder logic, elementary programming procedures, PC logic applications and troubleshooting are also covered.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-203 **2**
Generators
This course covers the basics of how a generator operates and its construction; where and when generators are required by the National Electric Code; and how generators are installed and connected to the electrical service.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-204 **2**
Transformers
Course covers transformer construction, principles and classifications, circuitry, cooling, connections and transformer maintenance. Students determine polarity of the transformer, how control transformers are used, single-phase and three-phase hookups for both delta and wye systems.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-205 **2**
Motors
This course covers the theory of basic motor action of both AC and DC motors. Studies will cover many different types of motors, the characteristics of each, theory of operation, starting methods, and applications of each as they apply to industry.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-206Z **4**

Commercial Wiring I
An introductory course on commercial wiring methods that includes practical applications and hands-on experience in implementing code requirements.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-207 **6**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-208 **6**
Shop Practicum
Provides time and opportunity for the student to work independently and draw upon previous program instruction to arrive at a satisfactory completed project. The purpose of the Practicum is to promote initiative, independent study and the assumption of responsibility to work without specific instruction.
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-209 **4**
National Electrical Code II
A continuation of the National Electric Code I course on the use and interpretation of the current National Electric code (NEC Chapters 5-9).
Pre-requisite: EL-101Z, EL-102Z, EL-105, EL-104, EL-106, EL-107

EL-210 **2**
Electrical Troubleshooting II
An introduction into the troubleshooting of electrical transformers, motors, electric motor drives, and programmable logic controllers. Students learn to use sophisticated electrical test equipment to check and ensure the proper operation of electrical devices and equipment.

GOV-100 **3**
American Government
This course is an introduction to American government and politics. The roles, powers, and relationships of the three government branches will be studied. Common political themes are covered including: U.S. political history; political institutions; elections; rights and freedoms; and public policy issues. Emphasis will be placed on application to current events.

HE-101 **1**
Occupational & Pre-Operational Safety & Basic Maintenance
Familiarization of the hazards of operating heavy equipment. Introduction in the proper use of grease guns and other preventative tools, oils used in different compartments of equipment, occupational safety with emphasis on performing routine maintenance and safety measures. Instruction in starting procedures of different equipment, control levers, functions and gearshift patterns and attachments.

HE-103Z **3**
Excavator Operations & Maintenance I
The student is instructed in the proper use and maintenance of an excavator. They apply their knowledge performing activities such as ditching and digging trenches and footings.

HE-104 **3**
Crawler Tractor Operations & Maintenance I
Basic crawler operations to full scale operation, including dozers, push tractors, and basic maintenance.

HE-106Z **4**
Motor Grader Operations & Maintenance I

In this course the student is instructed in the articulated motor grader. Students are instructed in building and maintenance of roads, cutting both back slopes and front slopes and cutting of "V" ditches. Instructions include the use of different attachments and maintenance of equipment.

HE-107 **1**
Loader Operations & Maintenance I
The student is instructed in the proper way to use the loader as an excavating machine, a backfill machine and how to load trucks properly. This course also includes basic maintenance of the loader.

HE-108 **1**
Backhoe/Loader Operations & Maintenance I
The student is instructed in the proper use of a backhoe to dig footings, a ditch to a pre-determined grade and how to excavate a basement. Students will be instructed on how to use the backhoe to backfill an excavated area. Basic maintenance of the backhoe/excavator is part of this course also.

HE-110 **2**
Related Equipment Instruction
This is a theory course involving supporting equipment used in the industrial trades such as dump trucks, compacting equipment and how soil conditions and classifications affect equipment selection and performance.

HE-112 **3**
Crawler Tractor Operations & Maintenance II
Continuation of Crawler Tractor Operations and Maintenance I.
Pre-requisite: HE-104

HE-114Z **4**
Motor Grader Operations & Maintenance II
Continuance of Motor Grader Operations and Maintenance I.
Pre-requisite: HE-106

HE-115 **1**
Basic Employability Skills
In this course the student is instructed on how to obtain employment and retain it. Students are instructed on how to dress appropriately for the job they are applying for. How to speak at a job interview. Students will be instructed on how to fill out a job application in its entirety.

HE-116 **2**
Backhoe/Loader Operations & Maintenance II
Continuation of Backhoe/Loader Operations and Maintenance I.
Pre-requisite: HE-108

HE-117 **1**
Grade Stake & Civil Plan Reading
This course introduces the students to the terms associated with grade work and explains the meaning of markings on various types of grade stakes. Students will be able to identify and operate equipment used by the operator to check grade. Students will use a builders level, laser levels, hand levels, grade rods and tapes to check horizontal and vertical distance of cut and fill stakes. The students will learn how to read civil plans and how to convert rod readings to elevations to check grade.

HE-118 **2**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.

HE-119 **3**
Excavator Operations & Maintenance II

A continuance of Excavator I. Students apply their knowledge preforming activities such as exposing buried pipe and excavating trenches to a specified grade. Students also practice staking and digging footings according to design. **Pre-requisite:** HE-103

HE-120 **1**
Locator Operations-Level I
Locator operation is designed to equip participants with knowledge and skill development for operating locator equipment according to the standards of the equipment manufacturer's operator's manual.

HE-125 **2**
Horizontal Directional Drilling-Level I
This course is designed to equip participants with knowledge and develop skill for basic operation of horizontal directional drilling equipment. The course includes instruction, in-field exercises simulation and professional coaching for the following:
1.HDD Safety
2.Prep-Planning
3.Tracking Electronics
4.Maintenance/Safety
5.Drilling Fluids and mixing
6.Downhole Tooling
7.Field Operation
Simulation for training will take an operator through modules that must be performed on the Jet Trac® Directional Drilling Simulator.

HE-230 **3**
Principles of Nutrition
This course is an in-depth study of the essential nutrients for healthy lifestyles, body processes, and fallacies with emphasis on the scientific basis of nutrition.

HIS-101 **3**
American History to 1877
This course is an introductory survey of American history from early European settlements through Reconstruction. Students will explore the major political, economic, social and cultural developments. Students will be introduced to historical critical analysis and how to read and interpret primary resources.

HIS-102 **3**
American History since 1877
This course is an introductory survey of American history from post-Civil War Reconstruction to modern times. Students will explore the major political, economic, social and cultural developments of the period including social movements and the changing role of the United States within the world. Students will apply skills in historical analysis and interpretation of primary resources.

MA-097
Essential Math Review **1**
This course is intended for students whose placement review indicates the need for additional support in order to be successful in MA-102. Enhancing critical thinking and problem-solving will be emphasized. Class time will provide practice in concepts discussed within MA-102 lectures with additional support for application of concepts. Successful completion is required in order to receive credit for MA-102. Co-requisite enrollment in MA-102 is required.

MA-098 **1**
Intermediate Algebra Review
This course is intended for students whose placement review indicates the need for additional support in order to be successful in MA-110. Class time will provide practice in number systems, linear equations and equalities, polynomials, exponents, rational expressions and quadratic equations. Successful completion is required in order to receive credit for MA-110. Co-requisite enrollment in MA-110 is required.

MA-099 **3**
Basic Algebra

This course is designed for students with little or no high school algebra, or those who have appropriate math scores on the placement exam. Topics covered will include Number Systems, Solving Linear Equations, Applications of Linear Equations, Properties of Lines, Systems of Linear Equations, Polynomials, Factoring, and Radicals.

MA-102 **3**
Essential Math
Essential Math is a course starting with the basic numerical concepts and moving to more complex concepts involving critical thinking and problem solving. The course will not only deal with theory and principles, but will also concentrate on applications of using those concepts in solving problems dealing with Finance, Probability and Risk, Social Issues, and across other disciplines.

MA-110 **3**
Intermediate Algebra
The concepts of fundamental operations with real and imaginary numbers, symbolism used in Algebra, solving and graphing equations, and applications of these concepts to word problems will be developed. The course is designed for students who have only one year of high school algebra, are inadequately prepared for College Algebra, or score in the prescribed range on the placement exam. Topics covered include number systems, linear equations and equalities, polynomials, exponents, rational expressions, and quadratic equations.
Prerequisite: Grade of C or better in MA-099 Basic Algebra or appropriate placement scores.

MA-111 **3**
College Algebra
The course reviews the fundamental concepts of real and imaginary numbers along with symbolism used in Algebra. Concepts to be developed include solving and graphing linear and quadratic equations, exponential and logarithmic functions, systems of equations and matrices. Students will apply these concepts to real world situations through word problems.
Pre-requisite: Grade of C or better in MA-110 Intermediate Algebra or appropriate placement scores.

MA-200 **3**
Elementary Statistics
This course covers topics related to distributions, measures of central tendency and dispersion, sampling methods, hypothesis testing, correlation, and regression. A good working knowledge of "intermediate" algebra is necessary for the successful student of introductory statistics. Students will apply these concepts to real world situations through applications, simulations and word problems.

MAR-101 **1**
Introduction to Digital Marketing
With the explosion of the internet and instant connectivity, marketing technologies have evolved to keep pace. In this course students will explore the history of digital marketing and various digital developments as well as the growth of digital marketing, specifically social media and e-commerce. Future trends in digital marketing also will be examined. The course will focus on social media's use beyond the personal into the business community.

MAR-106 **3**
Digital Media Privacy & Security
In this course students will examine rights, privacy issues and security challenges involved with using digital media within a professional setting. Topics covered include: how to set privacy settings in a variety of social media applications, legal implications of community engagement within social media, how to prevent hacking and new laws and concerns for social media users.

MAR-202 **2**
Search Engine Marketing
This course will introduce students to the process of inbound marketing and search engine optimization. Topics include: organic versus sponsored search results, enhancing a web page for maximum organic search results, and the ethics involved in creating pages optimized for best results. Students will also focus on the role target audience and geography has on search engine results.

NUR-101 **3**
Foundations of Nursing

This course introduces the learner to applications of critical thinking and the nursing process to provide care to clients in a variety of health care settings. Emphasis is on holistic health care across the health-illness continuum. This course introduces learners to the clinical skills essential for the nursing role of care provider including safe and effective clinical environment, skill preparation, implementation and evaluation. Beginning health assessment concepts are introduced. The course emphasizes use of caring behaviors, critical thinking, and communication while completing nursing skills.
Pre-requisites: Admission criteria met with acceptance into the first year of the nursing program.

NUR-102 **1**
Foundations of Nursing Lab
Nursing skills will be taught and practiced in the campus laboratory. Learners will be expected to know selected nursing procedures, and will be responsible for return demonstration and check-off of selected nursing procedures.
Pre-requisites: Admission criteria met with acceptance into the first year of the nursing program.
Co-requisite: NUR-101

NUR-104 **4**
Medical/Surgical Nursing Across the Life Span I
This course introduces the learner to the health/illness concept that becomes the focus of clinical study in subsequent courses. Emphasis is placed on holistic health care across the health-illness continuum.
Pre-requisites: NUR-101, NUR-102
Co-requisite: NUR-106

NUR-106 **2**
Medical/Surgical Nursing Across the Lifespan I Clinical
Learners will be provided experiences in a long-term facility. Development of the plan of care and nursing care plans with clinical practice introduces the nursing process, caring behaviors, and basic human needs.
Pre-requisites: NUR-101, NUR-102, Admission criteria met with acceptance into the first year of the nursing program.
Co-requisite: NUR-104

NUR-107 **1**
Basic Pharmacology
This course introduces the basic concepts of pharmacology related to the actions, therapeutic and adverse effects, interactions of drugs, drug classifications, and the basic pharmacology of commonly used medications. Learners will apply critical thinking skills to the calculation and administration of medications by oral and parenteral (including intravenous) routes of administration. Emphasis is placed on nursing consideration and client education. Learners will apply knowledge gained in selected clinical settings in caring for clients across the life span in subsequent courses.
Co-requisites: NUR-101, NUR-102, NUR-104, NUR-106

NUR 108 **1**
Math Calculations
Concepts and techniques of dosage calculation are reviewed. Basic math concepts to complex conversion of dosages between and among various systems of weights and volumes will be reviewed.
Pre-requisites: Admission criteria met with acceptance into the first year of the nursing program, or instructor's approval.
Co-requisites: NUR-101, NUR-102, NUR-104, NUR-106, NUR-107

NUR-110 **4**
Medical/Surgical Nursing Across the Life Span II
This course introduces the learner to applications of critical thinking and the nursing process to provide care to client's in a variety of health care settings. Nursing concepts related to health/illness concept guide the learner in assisting the individual in achieving optimal functioning. Knowledge from fundamental nursing, the sciences, pharmacology, and nutrition along with the continued integration of cultural concepts provides foundations for nursing care planning for medical and surgical clients.
Pre-requisites: NUR-101, NUR-102, NUR-104, NUR-106, NUR-107, NUR-108
Co-requisite: NUR-111

NUR-111 **4**
Medical/Surgical Nursing Across the Life Span II Clinical

This course offers the practicum to apply the related nursing theory in a variety of health care settings. This will enable the student to become more proficient in using the nursing process and performing nursing skills when providing care to individuals with common health problems along the health illness continuum. Clinical learning assignments are designed to utilize the nursing process, caring behaviors, communication, computer literacy, and critical thinking skills. The learner will have the opportunity to be a provider of care to one or two clients.
Pre-requisites: NUR-101, NUR-102, NUR-104, NUR-106, NUR-107, NUR-108
Co-requisite: NUR-110, NUR-112, NUR-113, NUR-114, NUR-115

NUR-112 **1**
Maternal Child Nursing
This course focuses on pre- and post-natal maternal nursing care, as well as, the care of children from infancy to adolescence. Emphasis is given to normal reproduction and frequently occurring biological, cultural, spiritual and psychosocial needs of the child-bearing and child-rearing family.
Pre-requisites: NUR-101, NUR-102, NUR-104, NUR-106, NUR-107, NUR-108, NUR-110
Co-requisite: NUR-111

NUR-113 **1**
Gerontology Nursing
This course is designed to explore issues related to the aging adult using the nursing process and the health/illness concept as the organizing framework. In addition, the impact of ageism and the role of the practical nurse in caring for older adult clients is discussed.
Pre-requisites: NUR-101, NUR-102, NUR-104, NUR-106, NUR-107, NUR-108, NUR-110, NUR-112
Co-requisite: NUR-111

NUR-114 **1**
Mental Health Nursing
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.
Co-requisite: NUR-111

NUR-115 **1**
Socialization into Practical Nursing
This course introduces the learner to roles and responsibilities of the graduate practical nurse as defined by established standards, including the Kansas Nurse Practice Act. Emphasis is placed on accountability and perspectives in health care. Career and job readiness skills are developed.
Pre-requisites: NUR-101, NUR-102, NUR-104, NUR-106, NUR-107, NUR-108, NUR-110, NUR-112, NUR-113, NUR-114
Co-requisite: NUR-111

NUR-201 **1**
Professional Nursing Role Transitions
This course introduces the learner to selected concepts related to the role of the Associate Degree nurse as a provider of care, teacher, manager, client advocate, and member of the profession. Emphasis is placed on application of critical thinking in providing and managing comprehensive care in a variety of health care settings with individuals across the life span. Promotion of wellness will be covered. This course is designed to assist the Licensed Practical Nurse with the transition into the practice of professional nursing. The Kansas Nurse Practice Act will be addressed.
Pre-requisites: Admission into the second year of the nursing program.
Co-requisite: NUR-206

NUR-203 **1**
Perspectives of Health Assessment & IV Therapy
This course places an emphasis on nursing responsibilities related to alterations in hematology and perspectives of intravenous therapy and blood administration.
Pre-requisites: NUR-201
Co-requisite: NUR-206
NUR-204 **2**
Advanced Medical/Surgical Nursing Across the Life Span I

This course prepares the learner to apply theoretical knowledge when providing care to medical/surgical individuals/families with common health problems along the health illness continuum. This course will continue to emphasize nursing processes, caring behaviors, communication, nursing assessment, and the role of the registered nurse professional in promoting health and wellness. The health/illness concept will provide the framework and focus is placed as a care provider, teacher, manager, professional, and advocate in meeting the nursing needs of individuals across the life span.
Pre-requisites: NUR-201, NUR-203
Co-requisite: NUR-206

NUR-205 **3**
Advanced Medical/Surgical Nursing Across the Life Span II
This course continues on where NUR-204 left off. Health/Illness concept continues to provide the framework and focus is placed as a care provider, teacher, manager, professional, and advocate in meeting the nursing needs of individuals across the life span. The learner is prepared to apply theoretical knowledge when providing care to medical/surgical individuals/families with common health problems along the health illness continuum. This course will continue to emphasize the nursing process, caring behaviors, communication, nursing assessment, and the role of the registered nurse professional in promoting health and wellness.
Pre-requisites: NUR-201, NUR-203, NUR-204
Co-requisite: NUR-206, NUR-207

NUR-206 **3**
Advanced Medical/Surgical Nursing Across the Life Span III Clinical
Advanced nursing skills will be taught and practiced in the campus laboratory. Learners will be expected to know selected nursing procedures and health assessment, and will be responsible for return demonstration and check-off of selected nursing procedures. Clinical learning experiences will be provided in acute and chronic health care facilities. This course will continue to emphasize the nursing process, caring behaviors, communication, critical thinking, nursing assessment, computer literacy.
Pre-requisites: Admission into the second year of the nursing program.
Co-requisite: NUR-201, NUR-203, NUR-204, NUR-205, NUR-207

NUR-207 **1**
Advanced Pharmacology
This course focuses on advanced pharmacology concepts related to the body systems and the medications commonly prescribed for clients with various medical conditions. In addition, drug dosage calculations will be reviewed.
Pre-requisites: Admission criteria met with acceptance into the second year of the nursing program, or instructor's approval.
Co-requisite: NUR- 201, NUR-203, NUR-204, NUR-205, NUR-206

NUR-209 **1**
Perspectives in Oncology Nursing
This elective course focuses on oncology nursing concepts as it relates to individuals and families across the life span. Topics to be covered provide the learner with a well-rounded view of oncology nursing.
Pre-requisites: Admission criteria met with acceptance into the second year of the nursing program, or instructor's approval.

NUR-210 **2**
Advanced Medical/Surgical Nursing Across the Life Span III
This course continues on where NUR-205 left off. The health/illness concept continues to provide the framework and focus is placed as a care provider, teacher, manager, professional, and advocate in meeting the nursing needs of individuals across the life span. The learner is prepared to apply theoretical knowledge when providing care to medical/surgical individuals/families with common health problems along the health illness continuum. This course will continue to emphasize the nursing process, caring behaviors, communication, nursing assessment, and the role of the registered nurse professional in promoting health and wellness.
Pre-requisites: NUR-201, NUR-203, NUR-204, NUR-205, NUR-206, NUR-207
Co-requisite: NUR-211

NUR-211 **3**
Advanced Medical/Surgical Nursing Across the Life Span IV Clinical

Clinical learning experiences will be provided in acute and/or chronic health care facilities and community-based experiences. This course will continue to emphasize the nursing process, caring behaviors, communication, critical thinking, nursing assessment, computer literacy, and the role of the nurse as provider and manager of care, and as a member of the discipline in promoting health and wellness.
Pre-requisites: NUR-201, NUR-203, NUR-204, NUR-205, NUR-206, NUR-207
Co-requisite: NUR-210, NUR-212, NUR-214, NUR-215

NUR-212 **2**
Advanced Maternal Child Nursing
This course will expand on concepts taught in NUR-112 and will focus on the complex health/wellness needs of individuals/families throughout the life span. The needs of the high risk obstetric client, neonate, acutely ill child, as well as the client in the perioperative experience and the nurse's role in each are explored. The ethical/legal issues as a provider of care and manager of individuals/families will be discussed. The learner will use skills in communication, caring behaviors, and the nursing process to facilitate the attainment of individual and family health and wellness.
Pre-requisites: NUR-201, NUR-203, NUR-204, NUR-205, NUR-206, NUR-207, NUR-210
Co-requisite: NUR-211

NUR-214 **2**
Advanced Mental Health Nursing
This course will expand on concepts taught in NUR-114 and will examine mental health, mental illness, nurse client relationships, and self-awareness. Through the use of the nursing process, therapeutic communication, and caring behaviors, the path to wellness will be promoted in individuals, families, and groups. The role of the psychiatric nurse as a member of the mental health team and the impact trends and issues in mental health have on current practice will be examined.
Pre-requisites: NUR-201, NUR-203, NUR-204, NUR-205, NUR-206, NUR-207, NUR-210, NUR-212
Co-requisite: NUR-211

NUR-215 **1**
Leadership for Professional Nursing Practice
This course introduces the learner to the role of the Associate Degree nurse in an evolving health care delivery system. Concepts concerning principles of leadership and management, contemporary information technologies, evolving trends and issues, interdisciplinary teams, accountability, alternative therapies, and the need for life-long learning will be explored. This course prepares students for job readiness.
Pre-requisites: NUR-201, NUR-203, NUR-204, NUR-205, NUR-206, NUR-207, NUR-210, NUR-211, NUR-212, NUR-214

NUR-216 **1**
Perspectives in Critical Care Nursing
This elective course focuses on introductory critical care nursing concepts as it relates to individuals and families across the life span.
Pre-requisites: Admission criteria met with acceptance into the second year of the nursing program, or instructor's approval.

NUR-217 **1**
Special Topics in Pharmacology
The study of drug actions in special populations through an in-depth knowledge of human pharmacology and therapeutics, this elective course in clinical pharmacology focuses on fundamental concepts highlighted with examples from clinical cases and therapeutic applications.
Pre-requisites: Admission criteria met with acceptance into the second year of the nursing program, or instructor's approval.

OSHA-110 **1**
OSHA Training
This course provides a variety of training for construction safety and health to entry level workers (students). Instruction includes construction industry occupation safety and health modules and promotes workplace safety and health. The program provides information regarding workers' rights, employer responsibilities, and how to file a complaint. With this training, OSHA helps to ensure that workers are more knowledgeable about workplace hazards and their rights, and contribute to our nation's productivity. Through this program, students attend 10-hour class delivered by OSHA-

authorized trainer. The 10-hour class is for entry level workers which upon completion of the final exam for the class with a score of 70% the student will earn a completion card issued by the US Department of Labor.

PHAC-101 **4**
Plumbing Fundamentals
Designed to provide an understanding of the plumbing system of a structure including water supply distribution pipes; fixtures and fixture traps; soil, waste and vent pipes; building drains and building sewers; storm water drainage and their devices; appurtenances and connections within the building and outside the building within the property line. All plumbing is taught to specifications of the Uniform Plumbing Code and occupational safety.

PHAC-104 **3**
Advanced Plumbing Fundamentals
Advanced Plumbing Fundamentals is a continuation of Plumbing Fundamentals. Students will continue their study of all aspects of the plumbing trade with emphasis on practice and application. All plumbing is taught to specifications of the Uniform Plumbing Code and occupational safety.

PHAC-107 **1**
Workplace Skills
This course is designed to introduce students to the skills necessary to be successful, productive and competitive as an HVAC/Plumbing technician. Topics covered include: human relations skills, problem solving in the workplace, resource management, oral communication and work ethics. In class presentations will include professionals in the field as well as other instructional materials.

PHAC-108 **3**
Shop Practicum
Provides time and opportunity for students to work independently and draw upon previous program instruction to arrive at a satisfactory completed project. Promotes initiative, independent study and the assumption of responsibility to work without specific instruction.

PHAC-109 **3**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.

PHAC-110 **1**
EPA 608
This course will cover Section 608 of the Federal Clean Air act. Section 608 requires all persons who maintain, service, repair or dispose of appliances containing regulated refrigerants be certified in proper refrigerant handling techniques. Students will take the EPA 608 exam upon completion of the course to become certified in HVAC Technician Certification EPA Clean Air Section 608.

PHAC-111 **4**
Electrical Fundamentals
This course will provide practice in application of electrical theory as well as in the interconnection of components in heating and cooling systems. Basic wiring practices for 120/240 volt and 24 volt control circuits will be covered. The student will have an understanding of heating controls, switches, relays, transformers, gas valves, etc. Students will be able to wire a furnace and air-conditioning system upon completion of the course.

PHAC-112 **3**
Heating System Fundamentals
This course consists of classroom and lab learning experiences enabling students to become proficient in the installation, repair and maintenance of heating systems. Theory and application of basic principles of heating and controlling humidity will be covered. Topics covered include heating fuels, carbon monoxide and gas pressures, and sequence of operation.

PHAC-113 **4**
HVAC Fundamentals

In this course students will study the basic installation and repair of air-condition systems. Topics include the principles of the refrigeration cycle, the components of an air-conditioning system, and recovering, charging and evacuation of systems following EPA guidelines. The course will also cover the refrigeration tubing system and soldering and brazing.

PHAC-114 **3**
Advanced Electrical Fundamentals
Advanced Electrical Fundamentals is a continuation of Electrical Fundamentals. This course will provide practice of electrical theory including 240-voltage and three-phase wiring for air conditioning controls and circuits. Students will apply electrical theory with installation and troubleshooting of heating and cooling systems.

PHAC-115 **3**
Advanced Heating Systems Fundamentals
This course combines classroom and shop learning experiences to enable the student to become proficient in the installation, repair and maintenance of heating systems. Theory and application of basic principles of heating, filtering and controlling humidity. The course is designed to provide an understanding of the ducts in a building or residence using the flat, basic-method of building ducts from flat metal. Includes instruction in the basic movement of air for a heating system.

PHAC-116 **4**
Advanced HVAC Fundamentals
This course is a continuation of HVAC Fundamentals. Students will study the theory and application in the repair and installation of air conditioning systems. Students will apply EPA 608 regulations.

PHRM-100Z **4**
Pharmacy Technician Science
An integrated course combining lecture and laboratory exercise in practical, technical, and legal aspects of drug management; distribution (dispensing); and storage in outpatient (retail), inpatient (hospital), and nursing home settings. Includes pharmacy equipment and devices, concepts related to computer operations, materials, non-sterile dosage forms, and inventory control. Also includes small- or large-scale compounding, packaging and quality control; practical aspects of recordkeeping, and insurance issues relevant to the daily pharmacy.

PHRM-102 **3**
Pharmaceutical Calculations
Students will demonstrate the ability to perform pharmaceutical calculations required for the usual dosage determinations and solution preparation. Emphasis will be placed on basic computations, use of measuring tools, dosage computations, compounding calculations and solution preparation. Topics covered include ratio and proportion, dilution and concentration, milliequivalent, units, and intravenous flow rates.

PHRM-103Z **4**
Community Pharmacy
This course covers the important processes and details of the everyday pharmacy work of dispensing medications, such as understanding the parts of a prescription, the different types of prescriptions, and the input and maintenance of the patient profile. Discussed is the importance and intricacies of insurance processing and assisting patients without access to insurance. The business of community pharmacy- including the application of business math, the operation of automated devices, and the maintenance of inventory – has its own chapter also covering the range of OTC, homeopathic, and holistic medications and dietary supplements. Finally, students will learn concepts and techniques involved with compounding nonsterile products following the revised guidelines outlines in USP Chapter 795 .

PHRM-105 **4**
Pharmacy Technician Internship I
Students who have completed all the program specific courses qualify for this course. Students will participate for a minimum of 180 hours in a certified community/outpatient pharmacy setting supervised by a registered, licensed pharmacist. Students practice skills developed in the didactic and laboratory phases of their training. The duties and tasks to be performed will be pre-determined based on the didactic/lab instructions to reinforce competencies and will be agreed upon by the student and the supervising pharmacist to guarantee learning.
Pre-requisite: Successful completion of all courses with a grade of “C” or better in program specific courses.

PHRM-106 **1**

Pharmacy Technician Certification

Students will share work related experiences with the instructor and their peers. Students will prepare to take the national pharmacy technician exam for board certification.

PHRM-107 **3**

Hospital Pharmacy

This course focuses on institutional pharmacy practice, including the functions and processes involved in hospital pharmacy and accreditation standards of the Joint Commission. Aseptic technique and infection control practices are described in detail, including garbing and universal precautions. Finally, students will learn concepts and techniques involved with compounding sterile products and handling hazardous drugs following guidelines outlined in USP Chapter 797 and the proposed standard of the new USP Chapter 800.

PHRM-125L **4**

Pharmacology for Pharmacy Technicians I

This course will provide an introduction to basic concepts of pharmacology as it relates to all the body systems. Students will have a review of each body system. Common disorders and diseases of the human body will be introduced. Common drug reactions and interactions will be covered. Medical terms commonly used will be introduced. The student will have a beginning working knowledge of drug therapy and its relationship with individuals across the lifespan upon the completion of this course.

RT-101 **3**

Fundamentals of Respiratory Care

This course examines respiratory care fundamentals. Students will study the principles and theory of clinical application of basic respiratory treatments and therapies. This course provides a foundation for the development of knowledge and skills for respiratory care, including history, medical terminology/symbols, medical/legal, infection control, vital signs, physical assessment, medical gas therapy, oxygen analyzers and humidity/aerosol therapy.

RT-102 **3**

Pharmacology

This course introduces students to pharmacology as it pertains to the role of the Respiratory Therapist. Students will study general principles, autonomic and central nervous system agents, cardiovascular agents, and immunotherapies. This course studies the drugs used in managing renal, GI tract, endocrine and infections or neoplastic diseases and disorders.

RT-103 **3**

Respiratory Patient Assessment

The course focuses on the basic clinical assessment skills needed by a respiratory therapy professional. Students will study assessment techniques, standardized data collection, relevant findings, and respiratory documentation.

RT-104 **4**

Respiratory Physiology

This course provides a concentrated study of cardiopulmonary anatomy and physiology essential to the practice of respiratory care. Students will study the cardiovascular and pulmonary physiology.

RT-105 **3**

Respiratory Diseases

This course examines the principles of disease management, patient education. infection control principles, common infectious disease, and acute and chronic respiratory diseases. The course will provide an overview of the respiratory care for the medical/surgical patient, including and introduction to the respiratory management of traumatic chest injury and head trauma.

RT-106 **4**

Respiratory Care I

This course provides instruction in basic gas physics and basic Respiratory Therapy. Included is a section on microbiology, patient assessment and professionalism.

RT-107 **4**

Respiratory Care Clinical I
The first clinical rotation courses within the program. This course provides students mentored practice of skills within the hospital environment. Focus in on assessment skills including medical chart reviews and patient observation and examination.

RT-108 **3**
Cardiopulmonary Care & Diagnostics
An in-depth study of cardiopulmonary anatomy and physiology will be presented. Units on renal physiology and acid-base balance are included. Students will study blood gas interpretation as well as the role of the respiratory therapist in treatment.

RT-201 **4**
Respiratory Care II
This course is a continuation of Respiratory Care I. The focus will include patient diagnostics and equipment and therapies. The student will learn about specialized oxygen devices, arterial blood puncture analysis and interpretation, plus pulmonary function testing. In addition, emergency care, artificial airways, and the electrical conduction system of the heart will also be taught.

RT-202 **4**
Respiratory Care Clinical II
Second round of clinical rotation with the focus on mechanical ventilation and assessment of patients in intensive care. Students will experience mentored practice of skills within the hospital environment.

RT-203 **4**
Neonatal/Pediatrics Respiratory Care
This course provides comprehensive coverage of the concepts of neonatal and pediatric respiratory care. Students will study therapeutic procedures, intensive care activities, life-support, and fetal, neonatal and pediatric pathophysiology. Patient assessment and documentation for pediatric patients will be covered.

RT-204 **2**
Respiratory Care Seminar
This seminar explores problem-based clinical concepts and the research methods. Students will review scientific data supporting approaches to respiratory care. The course provides overview on the skills needed for leadership positions within the respiratory care field today.

RT-205 **4**
Respiratory Care III
This course will include an in-depth study of mechanical ventilation along with weaning procedures and the care of the critically ill patient. Emphasis will be placed on specialized areas of Respiratory Therapy such as neonatal and pediatric Respiratory Therapy, long-term ventilator care, home health, and sleep studies.

RT-206 **4**
Respiratory Care Clinical III
This clinical rotation provides mentored practice of the critically ill patients as well as neonatal/pediatric patients in the critical care setting. Focus is on rehabilitation, extended care, home care, patient assessment for discharge planning.

RT-207 **2**
CRT Certification
This course prepares students for employment and licensure within the RT field. Students will practice information gathering and decision-making skills in a controlled classroom environment in preparation for skills specific to passing the NBRC entry level exam.

SOC-135 **3**
Introduction to Sociology
This transferable course introduces the student to the study of the structure and function of human groups, particularly those occurring in contemporary industrialized cultures. The relationships between the individual and society, culture and society and the social dynamics of institutions are discussed. Sociological principles will be applied to current social problems.

SPN-101 **5**
Spanish I
This is a beginning course to develop a functional proficiency in Spanish. Students will be instructed in the four basic skills of listening, speaking, reading and writing. Students will also develop an introductory knowledge of Spanish-speaking cultures. This course is the first in the sequence.

SPN-102 **5**
Spanish II
This course is a continuation of Spanish I. Students will continue their development of Spanish through instruction in listening, speaking, reading and writing. Students will advance in their production of writing and reading comprehension in Spanish. Students will also study Spanish-speaking cultures.

SS-100 **3**
General Psychology
This course is a survey of the introduction to the social science of psychology. It introduces basic concepts, theories, and founders of psychology, research methods, and contributions to the understanding of human behavior. Chapters studied throughout the course include the nervous system, perception, motivation, learning and memory, social behavior, personality, developmental, and clinical psychology.

SS-102
Tech Connect
Tech Connect is designed to connect and acclimate new students to Fort Hays Tech | North Central. Students will be introduced to skills for educational and career success. This course will also foster a sense of connection and engagement in the college experience. Upon completion of the course, students will be able to apply the strategies and skills gained for academic, personal and professional success.

SS-105 **3**
Human Growth and Development
This course is an introduction to the study of the basic principles of behavior and the factors which influence it. Emphasis is placed on the relationship of these principles to the problems of everyday life.

TNT-130 **2**
Telecommunications Cabling
This course introduces the student to the theory and practical application of copper cabling for telecommunication systems. During the course, students will learn how to install, maintain, test and modify communications cabling. Topics include transmission theory, structured cabling standards, cable and connector types, installation methods, and grounding/shielding techniques.

TNT-140 **3**
Introduction to Networks
This covers networking and architecture, structure, and functions. The course introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations to provide a foundation for the curriculum. By the end of the course, students will be able to explain network technologies; explain how devices access local and remote network resources; describe router hardware; explain how switching operates in a small to medium-sized business network; design an IP addressing scheme to provide network connectivity for a small to medium-sized business network; configure initial settings on a network device; implement basic network connectivity between devices; configure monitoring tools available for small to medium-sized business networks.

TNT-150Z **3**
Switching and Routing Protocols
This course describes the architecture, components and operations of routers and switches in larger more complex networks. Students learn how to configure router and switches for advanced functionality. By the end of the course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP and STP in both IPv4 and IPv6 networks. Student also develop the knowledge and skills necessary to implement WLAN in a small-to-medium network.

TNT-155 **4**
LAN Switch & Routing Protocols

This course describes the architecture, components and operations of routers and switches in larger more complex networks. Students learn how to configure router and switches for advanced functionality. By the end of the course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP and STP in both IPv4 and IPv6 networks. Students also develop the knowledge and skills necessary to implement WLAN in a small-to-medium network.

TNT-165 **4**
Telecommunication Networks
This course introduces the student to the principal elements and theory of both analog and digital telecommunications networking systems. Topics include, system network topologies, testing and measurement, wiring, network transmission techniques, switching, synchronization and analysis, and signaling.

TNT-200 **4**
Internship
This course prepares students for the transition from the classroom to a working environment through employment in their field of study. Progress will be monitored and evaluated by the employer and the Fort Hays Tech | North Centra faculty.

TNT-202 **4**
Telecommunication Wireless Communications
This course introduces the basic fundamentals of Wireless Local Area Networks. The course defines the different channel spectrums and the advantages to each. It then develops into the design and security of wireless local area networks from the home network through wireless LAN technology. Antenna wave lengths and patterns are discussed in detail. Upon completion of this course the student will be able to design and configure wireless LAN's from a home environment to a campus wide wireless LAN, as well as troubleshoot connectivity problems

TNT-205 **4**
Telecommunications Practicum
Provides time and opportunity for the student to work independently and draw upon previous program instruction to arrive at a satisfactory completed project. The purpose of the Practicum is to promote initiative, independent study and the assumption of responsibility to work without specific instruction.

TNT-208 **3**
Network Security Fundamentals
This course introduces the fundamentals of computer security, beginning at the home desktop and progressing through a large Local Area Network with multiple nodes. The student will learn basic theory of virus protection and delve deeply into the theories of intrusion detection and securing both the physical premise equipment as well as the network and the information stored within it. The students upon completion will be able to demonstrate proficiency in hardware and software security devices.

TNT-210 **3**
Telecommunications Soft Switching Systems
This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network.

TNT-220 **3**
Fiber Optics & Other Transmission Methods
This course introduces the theory and application of fiber optics ranging from OC (optical carrier) systems to fiber to the home. This class provides a practical understanding and the skills required to properly design, install, and maintain single-mode and multi-mode fiber optic networks. Students will use the latest fiber optic technology and equipment to learn how to splice, terminate, and test, fiber optic networks. Other transmission methods that will be covered in this course are T-1s, PRIs, DS3, and wireless.

TNT-230 **3**
Computer Networks II
This course covers the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of the course, students will be able to: Determine how a router will forward traffic based on the contents of a routing table; Explain how switching operations in a small to medium-sized business network; Use monitoring tools and network management protocols to troubleshoot

data networks; Configure monitoring tools available for small to medium-sized business networks; Configure initial settings on a network device; Configure Ethernet switch ports; Implement VLANs; Implement static routing; Implement DHCP on a router; Implement network address translation (NAT); Implement access control lists (ACLs) to filter traffic. Students complete hands-on labs, virtual labs and interactive media activities. These labs and other activities reinforce new concepts and allow students to model and analyze routing and switching processes that may be difficult to visualize or understand.
Pre-requisite: TNT-140

TNT-250 **4**
LAN/WAN Design
This course introduces theory and provides experience in analyzing and troubleshooting telecommunications network systems. Topics include physical issues, software debugging, viruses, e-mail, traffic management, server and router configuration, documentation and equipment use. Upon completion, the student will be able to identify and solve telecommunication network problems.

TNT-260 **4**
Unified Communication Systems
This course introduces the student to the principal elements and theory of the latest digital telecommunications networking systems (Voice over IP). Topics include system network overview, subscriber lines, network testing and measurement, voice security, QoS, network transmission techniques, and signaling protocols such as SIP, H.323, SS7, and MGCP.

TNT-270 **4**
LAN/WAN Troubleshooting Fundamentals
In this course students will learn the fundamentals of troubleshooting LAN/WAN networks. Students will use the OSI model to troubleshoot different networks. Students will also learn to troubleshoot copper and fiber optics cabling using the latest test equipment.

WL-100 **1**
Welding Safety/OSHA 10
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).

WL-101 **2**
Oxy-Acetylene/Oxy-Fuel Procedures
Orient students on the process of oxy-fuel welding and brazing procedures using RG-45 and brazing filler material on mild steel and cast. Welding will be done in all positions (flat, horizontal, vertical, and overhead). Students will also be engaged in oxy-fuel cutting and hard surfacing. Technical knowledge and practical applications in welding safety, first-aid, tools, and equipment will be stressed throughout course.

WL-102 **3**
SMAW (Shielded Metal Arc Welding)
Orient students on the process of Shielded Metal Arc Welding procedures using E-6010, 7010, ER-80S D-2, ER-308L filler metal on steel and stainless steel. Welding will be done in all positions (flat, horizontal, vertical, overhead). Students will also be engaged in aluminum, cast iron and other alloying materials. Safety will be addressed throughout the course. Certification available if applicable weld tests meet AWS/API 1104 standards.

WL-103 **3**
GMAW (Gas Metal Arc Welding)
Orient students on the process of Gas Metal Arc Welding procedures using ER70S-6, E70C and ER4043 on mild steel and aluminum plate and pipe. Welding will be done in all positions (flat, horizontal, vertical, and overhead). Classroom instruction includes safety equipment, filler metal, gas selection, applications and welding techniques. Certification available if applicable weld tests meet AWS/ASME standards.

WL-104 **3**
GTAW (Gas Tungsten Arc Welding)

Orient students on the process of Gas Tungsten Arc Welding procedures using ER70S-D2, ER308, ER4043 filler material on carbon steel, stainless steel and aluminum. Welding will be done in all positions (flat, horizontal, vertical, and overhead). Classroom instruction includes welding safety, theory, blueprint reading, gas selection, filler metal selection and welding techniques. Certification available if applicable weld tests meet AWS/API standards.

WL-105 **3**
Special Welding Procedures
Orient students on special welding procedures in the welding field using OFW and SMAW on cast iron, carbon steel, hydraulic/brake lines, piping and maintenance/repair welding. Metallurgy and metal principles will also be addressed. Safety will be addressed at the introduction and throughout the course.

WL-106A **3**
Blueprint Reading/Welding Symbols I
Students will learn the importance of blueprints/working drawings in the welding field. Students will explore the various blueprint layouts, views, lines, notes, scales, and specifications. Mathematics and fractions will be stressed throughout.

WL-106B **3**
Blueprint Reading/Welding Symbols II
Students will learn the importance of blueprints/working drawings in the welding field. Students will explore the various blueprint layouts, views, lines, notes, scales, and specifications. Students will explain the different types of blueprint drawings, (structural, mechanical, and piping). Mathematics, fractions, and metrics will be stressed throughout with students working independently with blueprints at the conclusion of the course.
Pre-requisite: WL-106A

WL-107 **2**
Shop Practicum
Educate students with real world, hands on projects and assemblies in the shop setting to allow for practice in the welding processes and procedures they have learned throughout the class.

WL-108 **2**
Internship
Preparation for the transition from the classroom to a working environment through employment within the field of study. Students will use this opportunity to apply learned concepts and skills in practical situations, to acquire knowledge and experience of current techniques, methods and theories in their chosen career. Progress will be monitored and evaluated by the employer supervisor and the Fort Hays Tech | North Central internship supervisor.

WL-109 **2**
Pipe Welding
Orient students on the process of Shielded Metal Arc Welding and Gas Tungsten Arc Welding Procedures using E-6010 filler metal on carbon pipe. Welding will be done in the 1G, 2G and 5G positions. Students will be educated in the keyhole technique for SMAW and walking the cup for GTAW. Safety will be addressed throughout the course. Certification available if applicable weld tests meet AWS/API 1104 standards.

WL-110 **3**
Advanced Cutting Processes
Orient students on advanced cutting methods used in the welding industry and include carbon arc cutting/gouging, plasma, and mechanical methods. Students will be cutting various materials including carbon steel, stainless steel and aluminum all positions (flat, horizontal, vertical, and overhead). Classroom instruction includes welding safety, gas selection/pressures, current/polarities, and techniques.

WL-111 **2**
Advanced Pipe Welding
Orient students on the process of Shielded Metal Arc Welding and Gas Tungsten Arc Welding Procedures using E-6010, 7010, ER-80S D-2, ER-308L filler metal on carbon pipe and stainless pipe. Welding will be done in the 1G, 2G, 5G and 6G positions. Students will be educated in the keyhole technique for SMAW and walking the cup for GTAW. Safety will be addressed throughout the course. Certification available if applicable weld tests meet AWS/API 1104 standards.

WL-112 **2**
CNC Plasma Cutting
Orient students with CNC (Computer Numerical Control) cutting equipment and drafting software (Autocad) to produce and fabricate parts and products. Students will use technical problem solving skills along with mathematic computations to produce drawings. Students will convert drawings to code for the cutting equipment to make parts. Safety and workplace skills will be stressed throughout the course.

WL-113 **2**
FCAW (Flux Cored Arc Welding)
Orient students on the process of the Flux Cored Arc Welding procedure using E-71T-1 on carbon steel and E308LT1-1 on stainless steel. Welding will be done in the 1-4F and 1-3G positions. Students will be educated in the short circuit and spray transfer modes. Safety will be addressed throughout the course. Certification available if applicable weld tests meet AWS/ASME standards.

WL-114 **1**
Introduction to Welding Robotics
Orient students with an overview of welding robotics with theory of operation and robotic fundamentals in a classroom setting. Lab activities include basic robot manipulation, jig fixtures, welding parameters and basic troubleshooting.

Online Courses

Fort Hays Tech | North Central offers a variety of online classes. Please refer to our website at www.fhtechnc.edu/onlinecourses for a list of course offerings.

NOTICE: Students may be required to submit transcripts and/or placement scores for proof of pre-requisite requirements.

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