



# Northwest Technical College

*Bemidji, Minnesota*

905 Grant Avenue SE • Bemidji, MN 56601  
800-942-8324 • 218-333-6600 • 218-333-6694 (fax)



## 2022-2023 CATALOG



A MEMBER OF THE MINNESOTA STATE COLLEGES  
AND UNIVERSITIES SYSTEM

## Program Offerings

### Automotive

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Automotive Service and Performance – DIP

### Business

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Accounting – CERT, AAS	Accounting Clerk – DIP
Administrative Business Specialist – CERT	Administrative Support – DIP
Administrative Assistant – AAS	Business Foundations – CERT
Business – AAS, AS	Business Transfer Pathways - AS
Computer Support – CERT	E-Merging Computer Technology – AAS
Human Resources – CERT	Management and Entrepreneurship – CERT
Sales and Marketing – CERT, DIP	Sales, Marketing, and Management – AAS

### Child Care

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Child Development Careers – CERT, AAS	Child Development – AS
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### Healthcare

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Community Health Worker – CERT	Dental Assisting – DIP, AAS
Gerontology – CERT	Health Sciences Broad Field – AS
Healthcare Administrative Support – DIP	Healthcare Administrative Leadership – AAS
Medical Coding – CERT, DIP, AAS	Practical Nursing – DIP
Nursing – AS	

### Trades & Technology

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Commercial Refrigeration – DIP	Plumbing Technology – CERT
Electrical Instrumentation – CERT	Residential Plumbing/ HVAC – DIP
Electrical Construction and Maintenance - DIP, AAS	

Program course descriptions are available on our website at [www.ntcmn.edu](http://www.ntcmn.edu)  
Click on programs to find courses and 'Program Report Information'  
click on course titles for course descriptions.

## OFFICES

General Information .....	333-6600
Admissions .....	333-6600
Bookstore .....	751-1987
Business Office .....	333-6614
Campus Visits .....	333-6645
Financial Aid.....	333-6654
Records .....	333-6647
Student Success Center .....	333-6655

## ADMINISTRATION

Vice President of Academic Affairs.....	333-6611
Dean of Nursing and Human Services.....	333-6663
Dean of Skilled Trades, Business, and Industry .....	333-6611

Northwest Technical College is a member of the Minnesota State Colleges and Universities, an agency which serves technical college, community college, and state university campuses across Minnesota. Northwest Technical College reserves the right to change any of the contents published in this catalog without notice. Information herein shall not be regarded as contractual.

**Every effort has been made to ensure the accuracy of the material contained within this catalog as of the date of publication. However, all policies, procedures, academic schedules, program information, and fees are subject to change at any time by appropriate action of the faculty, the University/College administration, the Minnesota State Colleges and Universities Board of Trustees or the Minnesota Legislature without prior notification. The provisions of this catalog do not constitute a contract between the student and the University/College. The information in this catalog is for use as an academic planning tool and is subject to change at any time. Upon printing of this catalog, all previous issues are revoked.**

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## **MINNESOTA STATE NONDISCRIMINATION – EQUAL OPPORTUNITY STATEMENT**

Minnesota State Colleges and Universities is committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission as defined by law.

Harassment of an individual or group on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission has no place in a learning or work environment and is prohibited. Sexual violence has no place in a learning or work environment. Further, the Minnesota State Colleges and Universities shall work to eliminate violence in all its forms. Physical contact by designated system, college, and university staff members may be appropriate if necessary to avoid physical harm to person or property.

This document is available in alternative formats to individuals with disabilities by calling 218-333-6656, 1-800-942-8324, or through the Minnesota Relay Service at 1-800-627-3529.

### **MISSION**

Northwest Technical College engages, supports, and prepares students for rewarding careers through innovative programs and hands-on learning.

### **VISION**

Northwest Technical College will be a regional leader in providing accessible and innovative education to meet the evolving needs of our diverse students, communities, and workforce.

### **NTC HISTORY**

Northwest Technical College possesses a rich history of growth and change, evolving from a post-secondary vocational institution to a technical college and now into a new model of higher education.

From its beginnings in 1965 with only 99 enrollees, NTC growth now boasts an enrollment of over 1,000 students. Program and offerings started with just 2 to now over 40 in the areas of business, industrial technology, general education courses, and health and human protective services.

A unique alignment between Bemidji State University and Northwest Technical College gives NTC students the option to utilize many of BSU's services. These include residence hall living, meal plans, the Gillett Wellness Center, health services, the library, and access into the many campus events. The two campuses are only a short 10 minutes apart. It is the only such partnership between a technical college and university within the state. NTC students can have the best of both worlds – a taste of university life and a focused, technology-based education which can get them on the road to their careers faster.

Step inside NTC and you will enter a unique 21<sup>st</sup> century learning environment where technology is the foundation of all instruction, and academic programs present a global perspective. It is a place where students of all ages and backgrounds can start a new career or advance in their chosen professions. NTC is decorated with inspiring artwork for a warm, inviting feel. Cultural diversity is respected, and students become part of a close community of classmates, faculty, and staff.

# Accreditation:

The College is accredited by the Higher Learning Commission, North Central Association of Colleges and Schools (NCA); 30 North LaSalle Street, Suite 2400; Chicago, IL 50502-0504; phone; 1-800-621-7440.



## Program:

### Dental Assisting

#### Program Accreditation Agency:

Commission on Dental Accreditation of ADA  
211 East Chicago Avenue  
Chicago, IL 60611-2678  
(312) 440-4653  
[www.ada.org](http://www.ada.org)



### Nursing

Accreditation Commission for Education in Nursing (ACEN)  
Practical Nursing Diploma and Associate of Science in Nursing Degree Programs  
Initial Accreditation: June 30, 2017  
Date of Initial Site Visit: September 2019  
Current Accreditation Status: Accredited  
Next Site Visit: Spring 2024

#### Program Accreditation Agency:

Accreditation Commission for Education in Nursing  
(ACEN)  
33423 Peachtree Road NE, Suite 850  
Atlanta, GA 30326  
(404) 975-5000  
Website: <http://www.acenursing.com/accreditedprograms/programsearch.htm>



# REGISTRATION

All new students who have completed the requirements for admission and initial registration are eligible to register for courses. Returning students in good standing are eligible to register. Registration is conducted online, and registration priority is based on cumulative credits completed. The College may impose registration holds, when necessary, for reasons such as:

- Overdue account with the College
  - Northwest Technical College complies with Minnesota Statute 197.775 which exceeds all criteria of Title 38 United States Code Section 3679(e).
- Academic suspension
- Non-compliance with College Readiness policy
- Required information has not been submitted (e.g., college transcripts for financial aid verification, immunization documentation)
- Lack of fulfillment of Prerequisite(s) (course hold)
- Failure to complete the required Sexual Violence Prevention Training.

## REGISTRATION CHANGES (ADD, DROP, WITHDRAW)

The College allows enrolled students to make changes to their registered courses within certain time limits. Students are encouraged to consult with their advisor before making registration changes. Students are responsible for knowing the actual deadline dates for making registration changes.

**Add/Drop Courses.** The Add/Drop period is the first five instructional days of the semester. Last Day to Add/Drop dates are determined by the Registrar. *(NOTE: "Instructional days" refers to class days listed on the college's academic calendar, not class sessions of individual courses.)*

**Add courses:** Students may **add** courses until registration closes at midnight of the Last Day to Add/Drop. Alternative registration options may be applied by the Registrar.

**Drop courses:** Students may **drop** courses until midnight of the Last Day to Add/Drop without incurring liability for the course tuition and without impacting their GPA. It is important for students to note a student may not drop a course simply by non-attendance. Students can drop a course through the e-services web registration page. Courses dropped by the student within the "Add/Drop" period do not appear on the student's transcript. Financial aid awards will be recalculated minus the credits from the dropped course(s), and the student will not be financially liable for the dropped course. For courses whose first class session is after the Add/Drop date, students must drop the course by the end of the next business day after the first class session to cancel their liability for the course.

**Withdrawal:** Once the Add/Drop period has ended, students who decide to discontinue attending a class must complete a course withdrawal. Withdrawing from a course does not reduce the tuition obligation. The Last Day to Withdraw date is established by the Registrar. Students should consult their E-Services for specific dates.

**Withdraw from a course:** Students may officially **withdraw from** a course until midnight of the official Last Day to Withdraw (see above). It is important for students to note a student may not withdraw simply by non-attendance. Students can withdraw from a course through the e-services web registration page. If a student withdraws from a course after midnight of the fifth instructional day and prior to midnight of the official withdraw date of the semester, a grade of **W** (*Withdraw*) will appear on the student's academic record. When a student stops attending a course for which he/she is registered without officially withdrawing from that course, the student will receive the earned grade for the course and remains liable for tuition and fees for that course.

**Withdraw from all courses.** Students who withdraw from all courses (entirely withdraw from the college) after the Drop/Add date are entitled to a partial refund of tuition in accordance with the schedule specified in the [2090-1-01 Tuition Refund](#) policy.

**Courses of Shorter Duration:** Proportional time limits for withdrawing from all courses (80% of course length) are applied to courses of shorter duration than one semester.

**Student Responsibilities:** It is the responsibility of the students to know all registration deadline dates, to manage and monitor their own course registrations, and to determine what impact registration changes will have, if any, on their progress toward program completion and on their tuition obligation and their financial aid. Repayment of financial aid received is usually required as the result of course withdrawals.

## **CANCELLATION OF REGISTRATION DUE TO NON-PAYMENT**

The College is dedicated to providing access to its courses to students who in return fulfill their financial obligations. In accordance with [Policy 5.12](#) of the Minnesota State Colleges and Universities, registration will be cancelled for students who have not met one of the following conditions by no later than five business days after the first day of classes in any semester:

- NTC's Financial Aid Office has received the results of the student's financial aid application (FAFSA -- Free Application for Federal Student Aid), OR
- NTC's Business Office has received a down-payment of \$300 or 15% of tuition and fees due for the semester, OR
- The student has submitted a Third-Party Billing Authorization to NTC's Business Office, OR

The President or designee may grant short-term tuition and fee payment deferrals in cases where, due to exceptional circumstances, a student needs additional time to arrange third-party financing or otherwise satisfy a tuition and fee balance due. Deferrals must document the reason for and time duration of the deferral and must be signed by the President or designee.

## **CANCELLATION OF REGISTRATION DUE TO NON-ATTENDANCE**

In order to maximize enrollment opportunities for all students, if a student has not attended a single class session or contacted the instructor of a course for which he/she is registered (i.e., is a "no-show") by the fifth class day of the semester, the College reserves the right to cancel the student's registration for that course.

This policy does not negate the student's responsibility to manage his or her own registration (see [Policy 2065-1-01 Registration Changes](#)). Financial aid awards will be recalculated minus the credits of the cancelled course(s), and the tuition billing will be adjusted.

## **ADVANCED STANDING**

Advanced standing refers to credit granted and transcribed by the College for previously gained knowledge and skills that are equivalent to coursework at the College. Such credit may be granted through various means: direct transfer of courses of equivalent nature that were completed at other regionally accredited institutions of higher education; by examination; by College Board programs--i.e., Advanced Placement (AP), College-Level Examination Program (CLEP), and International Baccalaureate (IB); experiential learning, military or other course work that is transcribed and can substitute for program credit; and/or through formal Technical Preparation (Tech Prep) agreements with high schools.

## Credit Transfer:

Northwest Technical College grants transfer credit for individuals enrolled in a college major based on the following criteria:

- Applicable credits from regionally accredited institutions will generally be accepted for transfer. Transfer of applicable credits from institutions accredited by other national accrediting agencies may be reviewed on a case-by-case basis for those institutions listed by the U. S. Dept. of Education ([http://www.ed.gov/admins/finaid/accred/accreditation\\_pg6.html](http://www.ed.gov/admins/finaid/accred/accreditation_pg6.html)). Transfer of applicable international credits will be reviewed on a case-by-case basis.
- Transfer decisions are not made solely on the source of accreditation of a sending program or institution.
- Minnesota Transfer Curriculum (MnTC) courses that have been taken at other Minnesota State institutions that apply to the student's major are automatically transferred.
- The course work to be transferred must be comparable in nature, content, and level to NTC courses and must be appropriate and applicable to the learning experiences required of the declared major.
- Non-MnTC (technical and applied general education) courses accepted in transfer must have a grade of at least "C." MnTC courses must have a grade of at least "D" unless program major policy requires a grade of at least "C."
- Pass (P) credits cannot be used to transfer to a technical area.
- Technical credits that have been completed within five years are eligible for transfer. MnTC and applied general education courses have no time limit.
- Official transcripts must be on file for transfer credits to be recorded.
- Credits that are part of a signed articulation agreement will be accepted for transfer.
- If a student changes majors from the one initially declared, transfer courses must be re-evaluated for applicability to the new major to ensure that all appropriate credits are applied.

**Appeal of Credit Transfer Decisions:** The results of credit transfer evaluations may be appealed using the college's normal [Appeals and Grievance Process](#). If the student is not satisfied with the college transfer appeal decision, the student may submit a request to the Minnesota State Senior Vice Chancellor of Academic and Student Affairs for a system level appeal of the college transfer appeal decision (see <http://www.minnstate.edu/board/procedure/321p1.html>).

**Minnesota Transfer Curriculum:** Northwest Technical College will implement the Minnesota Transfer Curriculum as appropriate to the general education requirements of Associate of Applied Science and Associate in Science degrees. Northwest Technical College will inform individuals about transferring the Minnesota Transfer Curriculum and provide for appeals of transfer decisions.

## Credit via College Board Programs: Advanced Placement (AP), Credit by Examination Program (CLEP), International Baccalaureate (IB)

Entering students who have taken College Board examinations may receive credit at Northwest Technical College. Credit may be granted for specific courses or electives. Scores must be submitted to the Admissions Office.

To be recognized for credit, AP scores must be 3 or above; CLEP scores must be 50 or above. IB credit will be individually analyzed by the transfer specialist. Credits will be awarded pursuant to Minnesota State policies 3.15, 3.16, and 3.33, and Minnesota Statute 120B.131, Section 16, Subd 3.

**Credit by Examination:**

An enrolled student with a declared major may challenge a course through an examination for credit. Students challenging a course will be charged an examination processing fee which must be paid prior to taking the examination.

Transcripted credits will count toward academic awards, however, no grade will be assigned, and the credits will not count in grade point average calculations. Credits earned through challenge examination do not apply toward full-time status for financial aid. Students cannot repeat an unsuccessful challenge and cannot challenge a course which already appears on the student's transcript. Credit by examination tests (i.e. test outs) for classes in which students are currently registered must be completed within the first four academic days of the start of the semester. Test-out exams must effectively test on at least 75% of the course content.

**Credit for Experiential Learning:**

The college recognizes that individuals acquire substantial learning from experiences other than formal education. As a result, the college will award Credit for Experiential Learning under the following circumstances:

- The petitioner provides evidence of the mastery of a minimum of 75% of the learning outcomes of a particular course at an equivalent level of achievement as documented in a specified portfolio format. This evidence will include all required elements. For assistance with preparing the portfolio, the student can work with the faculty member to see what is required.
- An experienced instructor of the course in question analyzes the portfolio and verifies equivalency. The decision of the instructor is final.
- A maximum of 25% of the total program credits may be awarded for experiential learning.

The College will provide assistance to the petitioner in how to prepare the portfolio and in selecting the kinds of documentation that would be acceptable. All petitioners must pay a processing fee before the portfolio will be evaluated. Transcripted credits will count toward academic awards; however, no grade will be assigned, and the credits will not count in grade point average calculations. Credits earned for experiential learning do not apply toward full-time status for financial aid.

**Technical Preparation (Tech Prep) Agreements:**

Northwest Technical College will work in partnership with affiliated technical preparation (Tech Prep) consortium(s) and the consortium member high schools to explore and develop ways to help prepare high school students to transition into postsecondary technological education.

Credits earned through advanced standing agreements made with the member high schools will be transcripted when the following requirements have been met:

- A certificate of advanced standing or other official notification by the high school is received by the NTC Registrar indicating that the student earned an A or B in the eligible course and received the recommendation of the instructor (both are required to receive the certificate), AND
- The student has enrolled at Northwest Technical College.

**CURRENCY OF CREDITS**

Due to the rate of change of technological skill requirements, a student may be required to validate coursework that was completed more than five (5) years prior to expected graduation date. Such validation requires the approval of both the advisor and the division chair. Only courses with grades of C

or better may be validated. The division may require that students repeat such courses or take additional coursework.

## **AUDITING COURSES**

Students intending to audit a course (earn no credit) are required to register for the course on a space available basis. Students must indicate their intention to audit at the time of registration. Auditing students may not need to meet regular course requirements but should confer with the instructor as to their privileges and responsibilities in the course. A student who first enrolls for audit status may change to credit status during the first six (6) days of the semester. Courses audited are not included in determining the total credits earned toward a major or the cumulative grade point average. Upon completion of the course, the course entry made on the student's permanent record is indicated with "AU" (audit).

## **PASS/NO PASS CREDIT**

Students may enroll in certain courses on a Pass/No Pass basis. Credits recorded as P/NP are not included in the computation of the student's grade point average, but a limited number of pass credits count toward graduation.

The option to register on a Pass/No Pass basis may be exercised through the drop/add deadline of the semester. The Pass/No Pass registrant is obligated to complete all course requirements and to take all examinations. A Pass grade is awarded for performance equivalent to a C or above. The following restrictions apply to Pass/No Pass registration.

1. Students may accumulate no more than 9 semester credits for graduation under the P/NP grading option.
2. Student may take no more than 1 class per semester on a P/NP basis.
3. Students who are on Academic Probation will not be allowed to register for any courses on a P/NP basis.
4. Prerequisite courses may not be taken on P/NP basis.
5. No class taken initially for a letter grade maybe repeated on a P/NP basis.

It is the student's responsibility to consult with his/her instructor and/or advisor prior to choosing the P/NP option for a given course to discuss possible ramifications of taking a class on a P/NP basis, such as the impact on potential for transfer and licensure/certification requirements.

## **GENERAL EDUCATION, MINNESOTA TRANSFER CURRICULUM, CORE ABILITIES, APPLIED GENERAL EDUCATION**

General education curricula assist individual development as a person and citizen. Technical education prepares the student to achieve success within a chosen career area.

The College implements the Minnesota Transfer Curriculum as appropriate to the Associate of Applied Science and Associate in Science degrees. Individuals may transfer courses that are part of the Minnesota Transfer Curriculum among Minnesota State institutions. NTC's Appeals and Grievance process provides for appeals of transfer decisions (see Policy 3020-1-01, Credit Transfer).

Program faculty members, in conjunction with industry and advisory committees, determine general education course requirements for individual programs. The minimum credit requirements are outlined in the General Education Credit Requirements table below. (See the Catalog for specific course requirements.)

Total Program Credits	Minimum Requirement MN Transfer Curriculum Gen Ed	Minimum Category Requirement
AS Degree	30 credits	6 categories
AAS Degree	15 credits	3 categories

Minnesota Transfer Curriculum General Education for Associate Degree programs: NTC requires that each Associate Degree program include a minimum number of [Minnesota Transfer Curriculum General Education](#) credits. The Minnesota Transfer Curriculum General Education courses listed below are identified by the *Minnesota Transfer Curriculum (MnTC)* goal(s) that they address and are typically accepted as individually transferable to/from other institutions. (NOTE: transfer of credits is determined by the receiving institution.)

		MnTC Goal Area
ANTH 1110	<a href="#">Cultural Anthropology</a>	#2, #5
BIOL 1111	<a href="#">General Biology</a>	#3, #10
BIOL 2130	<a href="#">Principles of Nutrition</a>	#3
BIOL 2221	<a href="#">Microbiology</a>	#3
BIOL 2252	<a href="#">Anatomy &amp; Physiology I</a>	#3
BIOL 2254	<a href="#">Anatomy &amp; Physiology II</a>	#3
BIOL 2256	<a href="#">Advanced Physiology</a>	#3
CHEM 1100	<a href="#">Introduction to Chemistry</a>	#3
ECON 2204	<a href="#">Markets &amp; Resource Allocation</a>	#5
ECON 2404	<a href="#">Macroeconomics and the Business Cycle</a>	#5
ENGL 1111	<a href="#">College Writing, I</a>	#1, #2
ENGL 1113	<a href="#">College Writing II</a>	#1, #2
MATH 1110	<a href="#">College Algebra</a>	#4
MATH 1930	<a href="#">Introduction to Math Sciences</a>	#4
MATH 2200	<a href="#">Statistics</a>	#4
NSCI 2203	<a href="#">Environmental Science</a>	#3, #10
PHIL 1201	<a href="#">Ethics</a>	#6, #9
PHIL 2210	<a href="#">Bioethical Issues in Contemporary Society</a>	#2, #6, #9
PSYC 1105	<a href="#">General Psychology</a>	#5
PSYC 2201	<a href="#">Developmental Psychology</a>	#5
PSYC 2220	<a href="#">Abnormal Psychology</a>	#5
SGNL 1100	<a href="#">American Sign Language I</a>	#8
SGNL 2100	<a href="#">American Sign Language II</a>	#8
SPCH 1110	<a href="#">Introduction to Public Speaking</a>	#1
SPCH 1120	<a href="#">Interpersonal Communication</a>	#1

[Minnesota Transfer Curriculum Goals:](#)

- #1: [Communication](#)
- #2: [Critical Thinking](#)
- #3: [Natural Sciences](#)
- #4: [Math & Logical Reasoning](#)
- #5: [History & Social Science](#)
- #6: [Humanities & Fine Arts](#)
- #7: [Human Diversity](#)
- #8: [Global Perspectives](#)
- #9: [Ethical & Civic Responsibility](#)
- #10: [People & Environment](#)

Additional **Minnesota Transfer Curriculum General Education** courses can be taken at Bemidji State University or other regionally accredited post-secondary institutions. See your advisor for guidance in selecting appropriate courses.

**Core Abilities:**

Core Abilities are outcomes that the college intends for all its students to develop during their time at Northwest Technical College. These are achieved through general education courses or within the program of study, as well as through participation in co-curricular activities. Following are the six Core Abilities NTC promotes for every student to achieve.

- #1 Effective Communication and Interaction Skills – Use effective methods to communicate through written, oral, and reading skills. Effectively participate in group or team-based activities.
- #2 Critical Thinking, Active Learning, & Problem-Solving skills – Apply Critical Thinking/problem-solving strategies in multiple contexts. Apply Active learning skills to analyze issues relating to a specific field.
- #3 Mathematical Skills – Develop use of mathematical concepts and reasoning specific to a field of study. Apply problem-solving skills to mathematical concepts.
- #4 Career and Self-development Skills – Develop career skills to prepare for entry into the workforce. Explore options for life-long learning and professional growth.
- #5 Technological Skills – Develop technological literacy skills specific to a field of study. Utilize both general and specific software skills for a field of study.
- #6 Global and Multicultural Awareness Skills – Demonstrate personal responsibility in one’s civic, social, and multicultural environment. Demonstrate understanding of ethical or environmental consequences of choice or behavior.

**Applied General Education Courses**

NTC programs may include Applied General Education (also known as General Studies) credits. Applied General Education courses are aligned with NTC’s six Core Abilities (above – also known as General Student Learning Outcomes) and are NOT intended to be transferable to/from other institutions. They do not fulfill Minnesota Transfer Curriculum goals.

The following Applied General Education (non-MnTC) courses and several MnTC courses apply to NTC’s Core Abilities:

#1. Communication/ Interaction Skills	#2 Critical Thinking, active learning and problem solving	#3. Mathematical Skills	#4. Career and Self Development skills	#5 Technology Skills	#6. Global and Multicultural Awareness
*ENGL 1111 *ENGL 1113 COMM 1102 COMM 2250 SSCI 1104 *SPCH 1110 *SPCH 1120	*ANTH 1110 *ENGL 1111 *ENGL 1113 *PHIL 1201 *PHIL 2210 *PSYC 1105 *PSYC 2201 *PSYC 2220	*MATH 1110 *MATH 1930 *MATH 2200	CRLT 1102 *SPCH 1110 *SPCH 1120 HLTH 1000 *BIOL 2131 BEST 1100 HPER 1410 HPER 2200	MATH 1100 CPTR 1104 CPTR 1105 CTEC 1108	*ANTH 1110 SSCI 1104 *NSCI 2203 *PHIL 1201 *PHIL 2210 *SGNL 1100 *SGNL 2100

\*MnTC approved transfer courses

# TUITION & FEES

## TUITION

Tuition for a Minnesota resident or non-resident is set annually by the Board of Trustees of the Minnesota State Colleges and Universities and charged on a per credit basis. The President will consult with the college's Campus Government on proposals to change the tuition rate prior to submitting the proposal to the Board.

All applicable tuition and fee charges are billed to the student and are payable on or before the first day of the academic term. Tuition not paid or deferred by no later than five business days after the start of classes will result in cancellation of registration pursuant to Minnesota State Policy 5.12 and NTC Policy [1100-1-02](#).

Pursuant to Minnesota Statute 135A.51 and 135A.52, any Minnesota resident 62 years or older may register for and attend classes without payment of tuition or activity fees when space is available after all tuition paying students have been accommodated; however, an administrative fee will be charged unless the student is auditing the course, or the course is a non-credit course. Persons seeking to register under this policy may register during the add/drop period after the first day of class.

## RESIDENCY

Northwest Technical College does not differentiate tuition rates based on state residency, as approved by the Minnesota State Board of Trustees; however, residents of the reciprocity states of North Dakota, South Dakota, and Wisconsin, as well as the Canadian province of Manitoba, will be charged tuition at the reciprocity rate. Residents of these states and/or province are required to complete reciprocity forms.

## COLLEGE FEES

Various fees will be assessed to students depending upon enrollment status, courses attempted, and services offered by the campus attended. The following is a list of the fees that may be assessed. Fees unique to a program or a class offering are detailed in the course requirement list. Fees are established annually by the President. A fee schedule is available from the College Business Office for the current academic year.

### Application Fee

All students entering the College will be assessed a one-time, non-refundable application fee.

### Student Activity Fee

A student activity fee will be charged to students. The activity fee is allocated to Student Service activities.

### Late Payment Fee

Late payment fees will be assessed on the 21st day of each semester to any student who has not paid tuition, when no proof of financial aid or other funding is provided. The fee is based on the number of credits for which a student is registered. Northwest Technical College complies with Minnesota Statute 197.775 which exceeds all criteria of Title 38 United States Code Section 3679(e).

### Professional Liability Fee

Professional liability fees will be assessed to students enrolling in courses requiring clinical/internship experience. This fee is used to purchase professional liability insurance on the student's behalf.

### Parking Fee:

Parking permits are required to park in the College parking lots and may be purchased in the Business Office.

Technology Fee:

Northwest Technical College will assess on a per-credit basis a technology fee. Proceeds from this fee will be used to support the personnel, hardware, software, and technical infrastructure of the college.

Test Out Fee:

When a student wishes to test out of a course through credit by examination, a test out fee will be assessed. The fee will be based on the lab/lecture content of the course.

Credit for Experiential Learning Fee:

When a student wishes to have his/her experience reviewed for course equivalency for college credit, a fee will be assessed. The fee will be based on the total credits for the course(s) for which the person's experience is judged to be equivalent.

Student Association Fee:

All students will be assessed a fee which is passed on to the Minnesota State College Student Association for college membership dues. This fee will be assessed on a per credit basis.

<b>FEE TYPE:</b>	<b>RATE:</b>	<b>COMMENTS:</b>
Application Fee	\$20.00 (One Time)	
Tuition	2021-22 Tuition: \$196.55 per credit	Resident & Non-Resident
	<b>Tuition-Special Program:</b>	
Automotive Service, Construction Electricity, Residential Plumbing/HVAC Dental Assisting, Nursing	\$208.95 per credit	Resident and Non-Resident
Distance Education	\$211.55 per credit	Resident and Non-Resident
360 Center of Excellence	\$211.45 per credit	Resident and Non-Resident
	<b>Fees:</b>	
Senior Citizens Administration Fee	\$12.00 per credit	In-lieu of tuition
Student Activity Fee	\$1.43 per credit	Required
Student Association Fee	\$.35 per credit	Required
Late Fee	\$50.00	Assessed on the 21 <sup>st</sup> day to students with unpaid tuition
Parking Permit	\$65.80 Annual	Parking permit needed to park in College lots.
Professional Liability Insurance Fee	\$10.25 / year / student	Dental Assisting, Childcare, Young Child Education, Massage Therapist, Nursing Assistant, Nursing/Practical Nursing
Technology Fee	\$9.25 per credit	Required
Assessment Retest	\$10.00 / student	For students who choose to re-test on any Accuplacer assessment
C.N.A. Testing Fee	\$160.00 / student	For C.N.A. students who choose to seek certification
Credit by Examination Fee	\$75 per lecture/lab credit	For students challenging a course by test-out
Credit for Experiential	Fee is equal to half the tuition for the course(s)	For students requesting credit for prior experience

All tuition and fees are due the first day of the semester or the first day of class unless a deferment has been made through designated personnel.

An account will be considered delinquent if no payment or arrangement has been made by the 21<sup>st</sup> day of the semester or the due date of the deferment. In the event a class does not follow the semester schedule, an account will be considered delinquent if it is not paid or arrangements to pay are not made by the second day of the class.

In the event an account becomes delinquent, a written notice will be sent to the student which will make the student aware of the delinquency and indicate that registration will be canceled if payment is not received or if a payment arrangement is not made with the designated personnel. Any person who has not responded to the above notice will receive a 20-day letter. This notice will inform the individual that registration will be canceled, and he/she no longer will be allowed to attend classes unless financial arrangements are made. This notice will also state that the individual may be turned over to the Minnesota Collection Entity.

In addition, no person with an outstanding account will be allowed to register for the following semester's classes unless she/he receives a special approval from the designated personnel.

**All charges are subject to change after review by college administration, Campus Government, or Minnesota State Board of Trustees.**

## **DEFERMENT/PAYMENT PLAN**

In accordance with Minnesota State policy 5.12, Northwest Technical College has the ability to grant deferments and payment plans to students demonstrating the need for such arrangements.

A deferment is defined as an agreement between the college and the student to delay payment until financial aid, which is sufficient to cover all student charges, arrives at the College. Financial aid, for this purpose is described as grants, loans, scholarships, or third-party authorizations. Deferments may be granted from authorized representatives of the financial aid or business office to students with approved federal, state, or other financial aid. Payment plans are available only via the third-party lender approved by the Business Office.

## **TUITION REFUND**

Students are entitled to have the opportunity to attend one class session for each registered, for-credit course, without obligation. Subject to the refund for full withdrawal provision of Subpart B, students are obligated for any classes dropped after the fifth business day of the term, or one business day after the first class session, whichever is later. For purposes of this policy, business days are defined as Monday through Friday (excluding posted holidays).

Tuition will be refunded to students who cancel their registration at the College through a formal process. This policy governs the amount, if any, to be refunded to the student.

- A. Course Drops.** Dropping a course means the student cancels his/her course registration by the fifth (5<sup>th</sup>) business day of the semester, which is the Add/Drop deadline. Students will receive a 100% refund for courses dropped by the Add/Drop deadline. For classes starting after the fifth (5<sup>th</sup>) business day of the semester, the student must drop the course by the first business day after the first course session to receive a 100% refund.
  
- B. Withdraw.** To receive any refund after the fifth day (the Add/Drop deadline), a student must totally withdraw from all courses. This means the student cancels his/her registration for all courses for which he/she is enrolled in accordance with Minnesota State [policy 5.12](#). The following refund schedule is for students who do an official, **complete withdrawal (entirely withdraw from the college)** from Northwest Technical College. To constitute a complete withdrawal, a student must withdraw from all courses for which they are registered in the term. The following refund schedule applies to when a student withdraws entirely from all registrations in a given semester.

**Refund for Fall and Spring term (at least 10 weeks in length):**

Withdrawal from 6<sup>th</sup> through 10<sup>th</sup> instructional day of the semester = 75% refund

Withdrawal from 11<sup>th</sup> through 15<sup>th</sup> instructional day of the semester = 50% refund  
Withdrawal from 16<sup>th</sup> through 20<sup>th</sup> instructional day of the semester = 25% refund  
Withdrawal after the 20<sup>th</sup> instructional day of the semester = 0% refund

**Refund for Summer session (at least 3 weeks in length)**

Withdrawal from 6<sup>th</sup> through 10<sup>th</sup> instructional day of the semester = 50% refund  
Withdrawal after 10<sup>th</sup> instructional day of the semester -0% = refund

Refund for courses less than three weeks in length:

Withdrawal on 2<sup>nd</sup> day of class = 50% refund

Withdrawal after 2<sup>nd</sup> day of class = 0% refund

## FINANCIAL AID

### FINANCIAL AID PROCESS

Follow these steps to apply for financial aid. More information on financial aid is available at the College's web site at [www.ntcmn.edu](http://www.ntcmn.edu). Please note that applications are processed as they are received so it is to your advantage to apply early. Applications are not complete and awards cannot be made until the Financial Aid Office has received and processed all requested information.

- Apply for a FSA ID (username and password) for yourself (and one parent for dependent students) at <https://studentaid.ed.gov/sa/fafsa/filling-out/fsaid>.
- File a Free Application for Federal Student Aid (FAFSA) at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) using school code 005759 and the appropriate year's tax and income information. It is encouraged for students and families to utilize the IRS Data Retrieval Tool on the FAFSA.
- Submit documents to the College's Financial Aid Office as requested, including transcripts from all colleges previously attended. Failing to submit this information will result in delays in processing your application.
- You will be notified if your application has been selected for verification (random selection made by the Federal Aid Processing Center). This will require the submission of additional documents. You are encouraged to respond promptly as the Financial Aid Office cannot complete the processing of your application until they receive all required verification documents.

NOTE: Summer students will be required to file an additional Summer Supplement, which will be available in March or April. Contact the Financial Aid Office for more information.

### IMPORTANT FINANCIAL AID ELIGIBILITY FACTS

- To be eligible to receive financial aid at Northwest Technical College, students must be enrolled in an eligible program and must be pursuing a degree, diploma or certificate from NTC.
- Students must maintain at least half-time enrollment status (6 credits) each semester to receive loans, work study or MN Child Care Grant.
- Students may not receive more financial aid (including loans) than the established institutional budget. This amount can be obtained from the Financial Aid Office.
- Students receiving outside agency funding may have their work study or loan eligibility reduced.
- Students must have a high school diploma or GED.
- Eligibility is determined by enrollment status on the 6<sup>th</sup> day of each semester. Enrollment status is defined as follows for all programs except Minnesota State Grant, which defines full-time as 15 credits.

*(NOTE: These enrollment definitions also apply to the summer semester.)*

Full-time	= 12 or more credits
$\frac{3}{4}$ time	= 9-11 credits
$\frac{1}{2}$ time	= 6-8 credits
Less than $\frac{1}{2}$ time	= 1-5 credits

- Students who withdraw from a course prior to the first day of the course and who withdraw from a course for which financial aid has already been received will be subject to a recalculation of aid and possible repayment.
- Transfer students may be subject to lower loan limits, and mid-year transfers may have limited grant eligibility.
- Students must reapply for aid every year. Each FAFSA process covers three semesters, beginning with fall semester and ending with summer.
- For students who are eligible for the Minnesota State Grant, the FAFSA must be received by the Federal Aid Processing Center within the first 30 days of the semester.
- For late applicants, NTC must have received the results of the FAFSA before the end of any semester for which aid is desired. In addition, loans may not be processed once a student is no longer in attendance and/or not making satisfactory progress.

## **TYPES OF AID AVAILABLE at NTC**

The following financial aid programs are available to assist students, provided the student is eligible and funds remain available.

### **GRANTS**

- Federal Pell Grant
- Minnesota State Grant
- Federal Educational Opportunity Grant (SEOG)
- Minnesota Post-Secondary Child Care Grant
- MN GI Bill

### **EMPLOYMENT**

- Minnesota State Work Study
- Federal Work Study

### **LOANS**

- Federal Direct Subsidized & Unsubsidized Loans
- Federal Parent Loans for Undergraduate Students (PLUS)
- Minnesota Student Educational Loan Fund (SELF)

### **SCHOLARSHIPS**

- Breen Scholarship
- NTC Foundation Scholarships
- Tribal Scholarships
- MN Indian Scholarship

Links to other sources that provide scholarships are posted on the NTC web site. Students are encouraged to seek other outside sources of funding, as well.

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## **DISBURSEMENT OF FINANCIAL AID**

All students are able to charge books through the campus bookstore or through our online Distance MN bookstore. A student is responsible to verify they have enough funds to cover those charges. Financial aid that exceeds institutional charges will be made available to students starting with approximately the 18<sup>th</sup> day of each semester, Grants will be applied to students' accounts first. Students receiving a loan for a single semester will be split into equal disbursements; one disbursement at the original disbursement date, the other at the midpoint of the semester. Overage checks will then be processed twice per week by the Business Office. Overage checks will be mailed to the student's permanent address, or a student can sign up for Direct Deposit. Checks cannot be picked up.

## **SATISFACTORY ACADEMIC PROGRESS FOR FINANCIAL AID** (Effective Fall Semester July 12, 2021)

Northwest Technical College and Minnesota State Board Policy 2.9, in compliance with Federal and State regulation, requires that all students maintain satisfactory academic progress toward the completion of a

degree, diploma, or certificate in order to receive financial aid. Programs covered by this policy include Federal and State Work-Study, loans, grants, and scholarships. The standards used in this policy must include all periods of enrollment, whether or not a student received financial aid.

Satisfactory academic progress measures a student's progress toward the completion of a particular degree or licensure program at NTC. Federal regulations specify that the institutions must measure progress toward the completion of a student's academic program regardless of whether the student received financial aid for the terms and credits measured. In addition to the Satisfactory Academic Progress Policy for Financial Aid, all students must comply with NTC's academic standards as published by the Records Office in order to remain enrolled at NTC.

**NOTE:** *The Satisfactory Academic Progress Policy for Financial Aid is different than Northwest Technical College's Academic Policy for Satisfactory Progress (policy 3110-1-01). It is possible to be suspended from financial aid and not be suspended from the college. Students are first and foremost responsible for their own academic progress and for seeking assistance when experiencing academic difficulty.*

#### **I. GRADE POINT AVERAGE REQUIREMENT (Qualitative Measure)**

Financial aid recipients are required to maintain a 2.0 (C) cumulative grade point average beginning with the first term of attendance. (Note: A 2.0 GPA is required to graduate). Grades of A, B, C, D, and F are included in the GPA calculation.

#### **II. PERCENTAGE OF CREDITS COMPLETED AND MAXIMUM TIME FRAME REQUIREMENT (Quantitative Measure)**

**A. Percentage Completion Requirement:** To remain eligible for financial aid, a student is required to progress toward the completion of an academic program by successfully completing 66.67% of all credits attempted at NTC. Courses for which a student receives a letter grade of A, B, C, D, P, and S are included in the calculation of cumulative credit completion percentage as courses successfully completed. Courses for which a student receives a letter grade of F, I, FN, FW, IP, N, NC, NP, NR, W and Z grades will be treated as credits attempted but not successfully completed. Any credits accepted in transfer by NTC are also counted as completed and attempted credits in the completion calculation.

**B. Maximum Time Frame (MTF):** The maximum allowable time frame for a student to complete an academic program is 150% of the published credit length of the program of record. Credits attempted toward the declared program(s) of study at NTC and transferred in from other institutions are counted for determining this standard. A student who reaches or exceeds the maximum number of credits will have aid terminated at the end of that semester. If at any point it is determined a student will reach and/or exceed the maximum time frame allowed, they will immediately have their financial aid eligibility suspended.

#### **III. EVALUATION PERIOD**

Financial Aid Satisfactory Academic Progress will be evaluated three times each year after Fall, Spring, and Summer Semester grades are recorded. All prior terms of attempted enrollment are considered when determining satisfactory academic progress regardless of whether aid was awarded for the term.

#### **IV. FAILURE TO MEET STANDARDS**

##### **A. Financial Aid Warning**

- a. For each evaluation period, the first time a student fails to meet the minimum completion rate or GPA requirement stated above, the student will be placed under a warning status for one semester. Students placed under a warning status are eligible to receive financial aid for the following term of enrollment.
- b. At the conclusion of the warning period, if a student has met NTC's cumulative GPA and percentage completion standards, the student's eligibility for financial aid shall be reinstated.

**B. Financial Aid Suspension for Students on Warning Status.** If at the end of a semester a student who has been on warning status has not met both the institution's cumulative grade point average and percentage completion standards, NTC shall suspend the student's aid eligibility immediately upon completion of the evaluation.

**C. Suspension of Students for Other Reasons**

- a. A student who meets or exceeds the maximum time frame allowed during a semester will immediately have their financial aid eligibility suspended at the conclusion of that semester.
- b. Any student may be immediately suspended from financial aid eligibility in the event of extraordinary circumstances, including but not limited to previously suspended (and reinstated) students whose academic performance falls below acceptable standards during a subsequent term of enrollment; students who register for courses, receive financial aid, and do not attend any classes; students whose attendance patterns appear to abuse the receipt of financial aid; and students that have multiple program changes and do not complete his/her declared program(s).
- c. If the institution determines that it is not possible for a student to raise their GPA or course percentage completion to meet the institution's standards before the student would reach the end of the program for which they are receiving financial aid, the institution will suspend the student from financial aid immediately upon completion of the evaluation.

**V. APPEALS AND PROBATION**

A. A student who fails to meet the satisfactory academic progress standards may appeal to re-establish eligibility by completing a Petition for Reinstatement of Financial Aid. This form is available from the NTC Financial Aid Office website. The petition may be based on undue hardship, death of a relative, injury or illness; or extenuating circumstances as determined by the institution. Petitions must be supported with appropriate documentation and verification and will be reviewed on a case-by-case basis. An approved academic plan is also required as part of the petition.

When considering a petition, a student's prior academic history, test scores, and potential for successful completion of the academic program will be considered. A petition for the reinstatement of financial aid will be reviewed by the Director of Financial Aid or a designee. A student will be notified of the results on a return copy of the petition. Any student whose petition is denied may appeal the denial to the Financial Aid Review Committee. In some instances, it is possible for a student to successfully petition and be reinstated through the Records Office in order to register for courses but have a financial aid petition denied for the same term.

B. A student with an approved petition for reinstatement of financial aid will be placed on financial aid probation. While on this probation status, a student will be eligible to receive financial aid, but must also meet the terms that are set forth in the approved petition.

**VI. NOTIFICATION**

Students will be notified in writing of his/her warning status and cancellation/suspension of financial aid. These notifications are made once semester grades are recorded and the satisfactory academic progress review is completed. A student who is petitioning for a probation period on financial aid will receive a return copy of the petition with the results clearly stated on the form.

## VII. REINSTATEMENT OF FINANCIAL AID

The approval of a Petition for Reinstatement for Financial Aid places a student on probation with the Financial Aid Office. An approved petition will state the terms of the probation semester and the specific conditions that apply. During this probation period, a student is eligible to receive financial aid. At the conclusion of the probation semester, if the student has not met cumulative satisfactory academic progress minimum standards but has met the conditions of the approved petition, the student will automatically have the probation extended for the next term(s) of enrollment. Neither paying for their own classes nor sitting out a period of time is sufficient in and of itself to re-establish a student's financial aid eligibility. Students may have their financial aid eligibility reinstated by again meeting the cumulative GPA and percent completion requirements. If a student who is not meeting satisfactory academic progress has a late grade recorded or receives a grade change at any time during the academic term, the student should contact the Financial Aid Office to check his/her financial aid eligibility.

## VIII. ADDITIONAL ELEMENTS

- A. Treatment of grades:** In the percentage completion calculation, grades of A, B, C, D, P, or S are considered attempted and successfully completed grades. Grades of F, FN, FW, I, IP, N, NC, NP, NR, W, or Z (no grade) are considered attempted but not successfully completed.
- B. Academic Amnesty/GPA Adjustment for Returning Students:** Academic Amnesty and Grade Point Average (GPA) Adjustments are not available for financial aid recipients. All attempted credits are counted in financial aid satisfactory academic progress.
- C. Audited Courses:** Audited courses (AU grade) will not be funded by financial aid and are not included in any financial aid satisfactory academic progress measurements.
- D. Consortium Credits:** Credits for which financial aid is received under a consortium agreement will be included in cumulative GPA, completion percentage, and maximum time frame calculations.
- E. College Readiness/Remedial/Developmental Credits:** All remedial/developmental courses are included when determining GPA and excluded from the completion percentage calculation of satisfactory academic progress. Up to 30 remedial credit shall be omitted when determining maximum time frame.
- F. Repeated Credits:** Upon submission of the repeat form to the Registrar, only the highest repeated grade will be counted toward the cumulative GPA measurement. According to NTC Academic Policy, "program accreditation requirements may impose limits on the number of times a course may be repeated." All credits, original and repeated, are included in determining the 66.67% completion requirement and maximum time frame. However, a student may only receive financial aid to repeat a course once when the previous grade is already passing.
- G. Transfer Credits:** Accepted transfer credits at NTC are included in the maximum time frame calculation. Any credits accepted in transfer at NTC are also counted as credits earned and credits attempted when determining percentage completion. Transfer credits are not included in the NTC GPA calculation.
- H. Withdrawals:** Credits for which a grade of "W" is received are considered attempted credits but not successfully completed credits. A grade of "W" does not impact GPA but does negatively impact the cumulative completion percentage and counts toward the maximum time frame.

**NOTE:** *The Satisfactory Academic Progress Policy for Financial Aid is different than Northwest Technical College's Academic Policy for Satisfactory Progress (policy 3110-1-01). It is possible to be suspended from financial aid and not be suspended from the college. Students are first and foremost responsible for their own academic progress and for seeking assistance when experiencing academic difficulty.*

# RETURN OF TITLE IV FUNDS

## RETURN OF TITLE IV FUNDS POLICY

(Effective 7/1/2011)

**Repayment requirements for students who cease enrollment prior to the end of a payment period or period of enrollment:** Financial aid recipients, who withdraw or cease attending all of their classes prior to 60% of the term being completed (including courses with a grade of “F”, “FW”, and “FN” for non-attendance), are subject to the federal rules for the Return of Title IV Funds for any federal aid not earned and the refund calculation for the Minnesota State Grant and SELF loan. A student who does not complete all days they are scheduled to complete in module courses (that is, courses that do not span the entire length of the semester) are also considered withdrawn and are subject to the Return of Title IV funds rules. A student who withdraws from a module course but is scheduled to attend a module beginning later in the semester, must notify the Financial Aid Office in writing or he/she will be considered withdrawn. For the Return of Title IV funds calculation, the percentage of unearned aid is equal to the number of calendar days remaining in the term (or number of days of attendance remaining in planned modules) divided by the total number of calendar days in the term (or total number of days in planned modules). The calculation of Title IV funds unearned has no relationship to the student’s incurred institutional charges as determined by the college’s refund schedule for students that officially withdraw from a term. The Registrar’s Office is the college’s designated office to accept notification of official withdrawals. In the event that the last date of attendance cannot be determined, the mid-date (50%) of the semester will be used. If a grade of incomplete “I” is issued, confirmation from the instructor must be received by the financial aid office verifying the student is actively working on completing the course(s), or a last date of attendance/participation would be used in determining the unearned aid. Students receiving a letter grade for one or more courses may be subject to a recalculation if the student was not actively participating in at least one course to the 60% point of their enrollment period. For faculty-initiated withdrawals (“FW” and “FN” grades), a student is not considered an official withdrawal and is subject to a calculation based on the entire enrollment period. The Business Office will determine the repayment based upon federal and state procedures, the last date of attendance, type of aid awarded, and charges for tuition and fees. The repayment amount is considered unearned aid that a student was not eligible to receive because of not completing the term, necessitating the repayment of funds. The college may have an obligation to return funds to an aid program that was previously applied to the student’s account. The student may have an obligation to repay funds that were paid directly to him/her. If the college returns funds that were applied to the student’s account, a balance due the college by the student will result.

Federal student aid may not cover all unpaid institutional charges due to the college upon withdrawal. Failure to repay will prevent future registration at the college and initiate delinquent collection procedures, which will adversely affect the student’s credit rating. *Actual Sample Withdrawal Case:* (1) Student received \$1970 Federal Direct Loan and \$2025 Federal Pell Grant. (2) Student completed only 27% of the semester. (3) Student was required to repay \$2535 of the \$3995 total aid received. A student may contact the Business Office to receive an estimation of the required financial aid repayment, if any.

### **Non-Federal Funds:**

Repayments to state aid programs and non-state aid programs will be calculated on a proportional basis using the institutional refund policy. To calculate the minimum refund due to the Minnesota State Grant, SELF Loan program, and other aid programs, the Office of Higher Ed Refund Calculation Worksheet will be utilized.

# ACADEMIC POLICIES AND PROCEDURES

The College publishes current information regarding academic policies and procedures yearly. Please refer to this catalog for detailed information on grading, attendance, graduation requirements, and academic or financial policies. Information is also available on the college website.

## ACADEMIC INTEGRITY

Northwest Technical College promotes the highest standards of academic integrity and the highest regard for truth and honesty. Violations of academic integrity include the following:

1. The attempt by students to present as their own any work not actually performed by them
2. Collusion, fabrication, and cheating on examinations, papers, and other course-related work
3. Stealing, duplicating, or selling examinations
4. Substituting for other in class discussions or examinations
5. Producing other students' papers or projects
6. Knowingly furnishing false or misleading academic information to college officials on official college records
7. Altering information on official college records

Violations of this policy are covered under the Student Code of Conduct. In accordance with this Code, students who, after due process, are found to have violated the Academic Integrity Policy shall be subject to college sanctions that may include discretionary sanctions, including failure on assignments and/or examinations, suspension, or expulsion.

## ACADEMIC CREDIT

A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement.

A lecture credit hour is defined as one hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately sixteen weeks for one semester, or the equivalent amount of work over a different amount of time.

A lab credit hour is defined as a minimum of two hours of classroom or direct faculty instruction or at least an equivalent amount of work for other academic activities as established by the college including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

Student Credit hours and contact hours presented within this policy are a representative of student workloads to achieve desired learning outcomes and are not necessarily representative of workload or pay provisions of the Collective Bargaining Agreement between Minnesota State Colleges and Universities and Minnesota State College Faculty. All provisions regarding workload and pay for faculty based upon credits or contact hours are defined by the collective bargaining agreement and not this policy.

## SATISFACTORY ACADEMIC PROGRESS

Northwest Technical College (NTC) and Minnesota State Board Policy 2.9, in compliance with Federal and State regulation, require that all students maintain satisfactory academic progress as measured by Grade Point Average (GPA) and percent of courses completed. Individual program majors may have additional requirements for satisfactory academic progress.

**I. GRADE POINT AVERAGE REQUIREMENT (Qualitative Measure)**

All students are required to maintain a minimum 2.0 (C) cumulative grade point average beginning with the first term of attendance. *(Note: A 2.0 GPA is required to graduate).* Grades of A, B, C, D, and F are included in the GPA calculation.

**II. PERCENTAGE COMPLETION (Quantitative Measure)**

**A. Percent Completion Requirement:** To remain eligible to attend NTC a student is required to progress toward the completion of an academic program by successfully completing 66.67% of all credits attempted at NTC. Courses for which a student receives a letter grade of A, B, C, D, P, and S are included in the calculation of cumulative credit completion percentage as courses successfully completed. Courses for which a student receives a letter grade of F, I, FN, FW, IP, N, NC, NP, NR, W and Z grades will be treated as credits attempted but not successfully completed. Any credits accepted in transfer by NTC are also counted as completed and attempted credits in the completion calculation.

**III. EVALUATION PERIOD**

Satisfactory Academic Progress will be evaluated three times each year after Fall, Spring, and Summer semester grades are recorded. All prior terms of attempted enrollment are considered when determining satisfactory academic progress.

**IV. FAILURE TO MEET STANDARDS**

**A. Academic Warning**

- a. For each evaluation period, the first time a student fails to meet the minimum completion rate or GPA requirement stated above, the student will be placed under a warning status for one semester.
- b. At the conclusion of the warning period, if a student has met NTC's cumulative GPA and percentage completion standards the student will no longer be on a warning status.

**B. Academic Suspension for Students on Warning Status.** If at the end of a semester a student who has been on warning status has not met both the institution's cumulative grade point average and percentage completion standards, NTC shall suspend the student and cancel their upcoming semester(s) registration if applicable. The duration of academic suspension is as follows:

- a. First instance: one semester
- b. Second instance: one year
- c. Third instance: two years

**V. APPEALS AND PROBATION**

A student who fails to meet the satisfactory academic progress standards may appeal to be allowed to continue their education with NTC by completing an Academic Appeal form. This form is available from the NTC website under Records & Registration. Students placed on academic suspension may not be eligible for financial aid, even if their academic appeal is approved and they are reinstated. Reinstated students who wish to appeal financial aid eligibility must follow the financial aid appeal process.

## VI. PROBATION

Students with an approved appeal will be placed on academic probation. While on probation, 100% completion and a minimum 2.25 must be achieved each semester until the minimum cumulative requirements are met.

## VII. ADDITIONAL ELEMENTS

- A. Audited Courses:** Audited courses (AU grade) are not included in satisfactory academic progress measurements.
- B. Consortium Credits:** Credits under a consortium agreement will be included in cumulative GPA and completion percentage.
- C. College Readiness/Remedial/Developmental Credits:** All remedial/developmental courses are included when determining satisfactory academic progress for GPA and completion percentage.
- D. Repeated Credits:** Only the highest repeated grade will be counted toward the cumulative GPA measurement. According to NTC Academic Policy, "program accreditation requirements may impose limits on the number of times a course may be repeated." All credits, original and repeated, are included in determining the 66.67% completion requirement.
- E. Transfer Credits:** Accepted transfer credits at NTC are included in determining what number of credits a student has attempted for the GPA review. Any credits accepted in transfer at NTC are also counted as credits earned and credits attempted when determining percentage completion. Transfer credits are not included in the actual NTC GPA calculation.
- F. Withdrawals:** Credits for which a grade of "W" is received are considered attempted credits but not successfully completed credits. A grade of "W" does not impact GPA but does negatively impact the cumulative completion percentage.

## GRADE POINT AVERAGE

Academic progress will be evaluated in terms of grade point average. The following system will be used to establish a student's grade point average and will be the only grades included in the GPA calculation.

- A = 4 grade points per credit
- B = 3 grade points per credit
- C = 2 grade points per credit
- D = 1 grade point per credit
- F = 0 grade points per credit

A grade point average (GPA) is determined by the sum of all grade points divided by total credits attempted, except those credits that carry grades other than A - F grades.

## GRADING

The College uses the following letter grades to document student academic achievement and activity:

- |                   |                           |              |
|-------------------|---------------------------|--------------|
| A = Excellent     | FN = Failed, never attend | W = Withdraw |
| B = Above Average | FW = Failed, walked away  | R = Repeat*  |
| C = Average       | P/NP = Pass/No Pass*      |              |
| D = Below Average | AU = Audit*               |              |
| F = Failing       | I = Incomplete*           |              |

\* Subject to college policy.

## INCOMPLETE GRADES

The college does not encourage the assignment of "Incomplete" grades (I); however, instructors may assign grades of "Incomplete" at their discretion. Students may ask the instructor in writing that they be assigned a grade of "Incomplete" under the following conditions:

- A request must be made in writing to the instructor no later than one week prior to the end of the semester.
- An “Incomplete” (I) grade will be granted only for emergency circumstances only at the discretion of the instructor.

To remove the Incomplete (I) grade, course requirements must be completed by the end of the next semester of regular program offerings. Any “I” not removed by that time will be changed to an “F.” Students may not request an incomplete if they are on probation or if they have an unfinished incomplete from a previous semester.

## REPEATING COURSES

In order to successfully complete program requirements, a student may repeat a course for which he/she is unsatisfied with the grade achieved if they do not want the lower grade to be calculated in their GPA. The course must be one that is “owned” and delivered by Northwest Technical College.

Grades for repeated courses not calculated in the GPA shall be denoted by parentheses ( ) on the transcript.

(NOTE: Program accreditation requirements may impose limits on the number of times a course may be repeated. Check with your advisor.)

## GPA ADJUSTMENT FOR RETURNING STUDENTS

Students who have less than a 2.00 cumulative GPA may petition for an adjustment of their GPA under the following conditions:

1. A minimum of two (2) years absence from the college;
2. Completion of one semester of full-time (12 credits) attendance with at least a 2.00 GPA for the semester.

*Note. The GPA earned from earlier courses may be adjusted to 2.0 or more at the time the above criteria have been satisfied by adjusting previous course work to reflect only those grades of 2.0 or more. This may result in reduced total semester credits earned toward graduation. Course grades not included in the adjusted GPA are placed in brackets [ ] on the transcript.*

## PROGRAM INTERRUPTION

Northwest Technical College’s calendar is subject to modification or interruption due to occurrences such as weather, fire, flood, labor disputes, interruption of utility services, Acts of God, epidemic or pandemic illnesses, civil disorders, and war. In the event of such occurrences, the college will attempt to accommodate its students. It does not, however, guarantee that courses of instruction, content goal statements, extra-curricular activities, syllabi or other college programs or events will be completed or rescheduled. See policy [1000-1-01](#) on the College’s website.

## CATALOG USE

A student working toward a certificate, diploma or degree will follow the approved program curriculum at the time of acceptance in a major. Students who have maintained continuous enrollment may elect to follow a new approved program curriculum that is adopted during their enrollment. Students who have not attended for more than one academic year from withdrawal or last date of attendance prior to registration must meet the program requirements in effect at the time of their current registration. Course changes and substitutions made by the College are considered part of the program.

## **GRADUATION**

Northwest Technical College grants certificates, diplomas, Associate in Applied Science degrees, and Associate in Science degrees for completion of program majors in accordance with all requirements listed below:

- Minimum cumulative GPA of 2.0.
- All coursework required for the program major(s) successfully completed according to criteria established by the College. NOTE: Programs may have additional graduation requirements. These requirements are published and available from program faculty and advisors. Any additional requirements for graduation are specifically outlined for each program major. It is the student's responsibility to understand and meet graduation requirements.
- Application for Degree completed and submitted one semester prior to graduation.

Students must be approved for graduation by the Registrar. Graduation awards will not be released to students who have an outstanding account balance with the college. The actual graduation date will be within the semester in which all course work, transfer credits and related materials required for program completion are finalized.

## **Graduation Appeals**

Appeals pertaining to graduation requirements must be submitted on the College's Appeals and Grievance form the semester prior to graduation. The appeals will be reviewed by the campus Academic Appeals Committee and then the Dean.

## **Commencement**

The College's Commencement ceremony is held at the end of spring semester. In order to qualify for participation in the ceremony, a student must have no more than 12 credits left to complete in his or her program, be in good academic and financial standing, and be able to complete all remaining courses for his or her program by the following September 1. Students must have an Application for Degree on file with the Registrar.

Students who have a cumulative GPA of 3.5 or higher at the beginning of their final semester of enrollment prior to graduation will be designated in the commencement program as graduating with honors. Honors graduates are distinguished at commencement ceremonies by the wearing of an honors medallion. Members of the Phi Theta Kappa International Honor Society are distinguished at commencement ceremonies by the wearing of the PTK stole.

## **RESIDENCE CREDITS**

Residence credits are credit hours earned from Northwest Technical College. To be eligible for a degree or diploma, a student must earn 1/3 of the credits required for graduation at the granting institution. All credits earned at Northwest Technical College including Distance and Corporate credits, courses taken from Bemidji State University that are listed on the NTC course schedule, credit by examination (successful test outs/challenged credits), and credit for experiential learning will count toward residence credits. For accreditation reasons, programs may require a limited number of key or capstone courses to be completed in residence.

Unless specific exceptions are noted in the program/degree requirements or requirements are waived through a petition process, the College will accept as resident credits those online courses/credits offered by the partner colleges in the Distance Minnesota consortium. These courses are included on the NTC course schedule.

## IMMUNIZATION RECORD REQUIREMENT

In conformance with M.S. 135A.14 (2000 revision) Northwest Technical College requires an immunization record be submitted from the following students born after 1956 who did not graduate from a Minnesota high school in 1997 or later.

The immunization record submitted must indicate the month and year the student was immunized against measles, rubella, and mumps, after having attained the age of 12 months. The immunization record must also indicate the month and year the student was immunized against diphtheria and tetanus within ten years of first registration at the institution.

Students registered for non-credit, corporate credit or Distance Education courses only are exempt from submitting the required immunization record unless the course requires on-campus lab, internship, clinical or other on-campus contact for the purpose of completing coursework. The Department of Health and the local Board of Health in whose jurisdiction the institution is located may inspect immunization records.

**Medical Exceptions:** An immunization record is not required if the student submits to an administrator a statement signed by a physician that shows:

1. the student did not receive an immunization for medical reasons.
2. the student has experienced the natural disease against which the immunization protects; or
3. a laboratory has confirmed the presence of adequate immunity.

**Additional Exception:** If the student submits a notarized statement that the student has not been immunized as required because of the students' conscientiously held beliefs, the immunizations are not required.

**Additional Immunization Requirements:** Students in certain majors may be required to submit additional immunization records besides those indicated within this policy.

## VETERANS BENEFITS

The majors offered by the College have been approved by the Minnesota State Approving Agency for veterans and their dependents eligible for educational benefits under Chapters 30-Montgomery GIBILL®-Active Duty, 31-Vocational Rehabilitation, 33-Post 9/11 GIBILL®, 35-Dependent's Educational Assistance, 1606-Montgomery GIBILL®-Selected Reserve and 1607-Reserve Educational Assistance Program (REAP). Students should contact the Veterans Certifying Official or their local Veterans Administration Office for assistance with the application process and to determine eligibility/entitlement.

Veterans may receive credit for appropriate military training. The campus transfer specialist personnel will determine the number of credits acceptable for transfer. Veterans or veterans' dependents receiving educational benefits must conform to the following regulations to maintain their eligibility:

1. Register for at least 12 credits per semester to receive full benefits; 9-11 credits for three-quarter time; 6-8 for half-time; 4-5 for less than half-time.  
(Veterans Administration pays tuition and fees only for 1-3 credits. These credits must apply toward a degree.)
2. Maintain satisfactory academic progress toward graduation.
3. Report any changes in credits (drops/adds), address, or status (i.e. withdrawal) to the VA certifying official.

**GI Bill® TRADEMARK:** The US Department of Veterans Affairs owns the US trademark registration for the phrase "GI Bill." Third-party use of the term is restricted to educational and training institutions eligible to receive VA educational benefits, SAAs, and Veteran Service Organizations. Ensure that you include the trademark in your school's published catalogs, advertisements, or other documentation.

## **AFFIRMATIVE ACTION**

Northwest Technical College is committed to conducting all personnel and educational activities without regard to race, sex, color, creed, religion, age, national origin, marital status, disability, status with regard to public assistance, sexual orientation, or membership or activity in a local commission as defined by law. Personnel activities include, but are not limited to: recruitment, selection, placement, employee development, promotion, retention, compensation, leaves of absence, disciplinary action, transfer, demotion, termination, and layoffs affecting all employees and job applicants. Northwest Technical College will not tolerate discrimination on the basis of these protected class categories in accordance with all state and federal equal opportunity/ affirmative action laws, directives, orders, and regulations.

# Automotive

## Automotive Service and Performance

Diploma – 66 credits

### Description

The Automotive Service Technician is a person working in an exciting and rapidly changing industry. Students in this program will receive training in the many service and diagnostic procedures necessary to maintain our nation on wheels. Students are trained in modern laboratories equipped with current service and testing equipment. Opportunities for advancement may include factory and dealer representatives, management, and self-employment.

### Employment

A career in the exciting automotive service industry holds many rewards. Among these is the continued satisfaction from the occupation you are engaged in, plus a sound financial future. Our graduates have found employment positions as service technicians, alignment and brake specialists, air conditioning and heating specialists, and shop owners. Students have the opportunity to work part-time in an automotive field while attending school. With 40,000 auto dealers, 120,000 independent garages, 200,000 service stations and service centers in the U.S., the job and advancement opportunities are plentiful for the trained auto technician. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

### Degree Requirements

Course #	Course Name	Credit
AMST 2001	<a href="#">Introduction to Transportation</a>	1
AMST 1002	<a href="#">Introduction to Automotive Electrical/Electronics</a>	4
AMST 1220	<a href="#">HP Drivelines</a>	4
AMST 1330	<a href="#">HP Fuel/Electronics Ignitions</a>	4
AMST 1003	<a href="#">Engine Theory/Service</a>	4
AMST 1016	<a href="#">Brakes</a>	4
AMST 1104	<a href="#">Power Train Systems</a>	4
AMST 1105	<a href="#">Steering and Suspension</a>	4
AMST 1130	<a href="#">Automotive Electrical II</a>	4
AMST 2113	<a href="#">Heating Ventilation A/C</a>	2
AMST 2215	<a href="#">Motorsports Fabrication</a>	4
AMST 2216	<a href="#">Engine Performance</a>	2
AMST 2217	<a href="#">Engine Performance Lab</a>	4
AMST 2220	<a href="#">Introduction to Hybrid Vehicles</a>	2
AMST 2230	<a href="#">Auto Diesel/ Diesel Performance</a>	3
AMST 2236	<a href="#">Chassis Dynameter Lab</a>	2
AMST 2242	<a href="#">Forced Induction Systems</a>	3
AMST 2800	<a href="#">Capstone</a>	4
COMM 1102	<a href="#">Applied Communication</a>	3
HPER 1410	<a href="#">First Aid / CPR</a>	1
MATH 1100	<a href="#">Technical Math</a>	3
	<b>TOTAL CREDITS</b>	<b>66</b>

# Business

In this section – programs in:

- Accounting
- Administrative Support
- Business
- Computer Support
- Human Resources
- Management & Entrepreneurship
- Sales, Marketing & Management

## Accounting Programs

### Accounting

Certificate – 18 credits

This program will increase your practical knowledge and abilities in the field of accounting, you can position yourself to advance in your career and increase your marketability. The following areas will be covered in this program: auditing, taxes and budgeting from a business perspective. Completion of this program can also lead into a diploma or AAS option.

Course #	Course Name	Credit
ACCT 1120	<a href="#">Legal Environment</a>	3
ACCT 1134	<a href="#">Computerized Accounting Applications</a>	3
ACCT 2201	<a href="#">Accounting I: Financial Accounting</a>	4
ACCT 2203	<a href="#">Accounting II Managerial Accounting</a>	4
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
CRLT 1102	<a href="#">Contemporary Career Search</a>	1
	TOTAL CREDITS	18

## Accounting Clerk

### Diploma – 32 credits

#### Description

This major provides the knowledge and skills necessary to perform routine calculating, journalizing, posting, and verifying duties to maintain accounting records, prepare payroll reports, and state and federal tax returns. Both manual and computerized accounting concepts and applications are included.

#### Employment

Every business whether small, corporate or non-profit has accounting responsibilities to complete and the need for accounting assistance. Public accounting firms, banks, hospitals, school districts, private businesses, governmental agencies and many private accountants offer accounting clerk positions. Find out more about salary, job outlook and career opportunities for this program at [ISEEK – Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ACCT 1000	<a href="#">Financial Information for Life</a>	3
ACCT 1124	<a href="#">Spreadsheet Concepts</a>	3
ACCT 1134	<a href="#">Computerized Accounting Applications</a>	3
ACCT 2200	<a href="#">Income Tax</a>	3
ACCT 2201	<a href="#">Accounting I: Financial Accounting</a>	4
ACCT 2203	<a href="#">Accounting II: Managerial Accounting</a>	4
ADMS 1116	<a href="#">Business Communications</a>	3
ADMS 2124	<a href="#">Advanced Micro Computer</a>	3
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
	TOTAL CREDITS	32

## Accounting

### AAS – 60 credits

#### Description

This major provides the knowledge and skills necessary to examine, analyze, interpret, and correct accounting data for the purpose of financial statements, budgets, forecast accounting reports, payroll reports, and state and federal income tax returns. Computerized accounting concepts are included in this area of study.

#### Employment

Accounting opportunities are available in nearly every city in America. Accountants are employed by public accounting firms, banks, hospitals, school districts, private business of every type and non-profit governmental agencies. Many accountants choose to begin their own accounting practice. Find out more about salary, job outlook and career opportunities for this program at [ISEEK – Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ECON 2204	<a href="#">Markets &amp; Resource Allocation</a>	3
ENGL 1111	<a href="#">College Writing I</a>	3
MATH 1110	<a href="#">College Algebra</a>	3
PHIL 1201	<a href="#">Ethics</a>	3
	<b>SELECT ADMS 2124 or CPTR 1106</b>	
ADMS 2124	<a href="#">Advanced Micro Computer</a>	3

Course #	Course Name	Credit
CPTR 1106	<a href="#">Microcomputer Databases</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
MATH 2200	<a href="#">Math Statistics</a>	3
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
<b>Required Courses</b>		
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
ACCT 1000	<a href="#">Financial Information for Life</a>	3
ACCT 1120	<a href="#">Legal Environment</a>	3
ACCT 1124	<a href="#">Spreadsheet Concepts</a>	3
ACCT 1134	<a href="#">Computerized Accounting Applications</a>	3
ACCT 2200	<a href="#">Income Tax</a>	3
ACCT 2201	<a href="#">Accounting I: Financial Accounting</a>	4
ACCT 2203	<a href="#">Accounting II: Managerial Accounting</a>	4
ACCT 2204	<a href="#">Intermediate Accounting I</a>	4
ACCT 2218	<a href="#">Fund/Nonprofit Accounting</a>	3
	General Education Electives	3
	<b>TOTAL CREDITS</b>	<b>60</b>

## Administrative Support Programs

### Administrative Business Specialist

Certificate – 18 credits

#### Description

This 18-credit certificate program provides the necessary foundation for students interested in administrative work or continuing in their education toward a diploma or Associate of Applied Science (AAS) degree. The applicable coursework will focus on keyboarding, desktop publishing, business office management and computer technology. Further, students will learn about office applications and presentation graphics.

Course #	Course Name	Credit
ADMS 1100	<a href="#">Keyboarding I</a>	3
ADMS 1102	<a href="#">Keyboarding II</a>	3
ADMS 1112	<a href="#">Desktop Publishing/Presentation Graphics</a>	3
ADMS 1126	<a href="#">Business Office Management</a>	3
ADMS 2124	<a href="#">Advanced Micro Computer</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
	<b>TOTAL CREDITS</b>	<b>18</b>

# Administrative Support

Diploma – 34 credits

## Description

The Administrative Support Diploma will provide students with the computer, bookkeeping, business communication and secretarial skills they will need to succeed as an office professional.

## Employment

In Minnesota and nationally, a large number of job openings exist for experienced secretaries. Temporary or part-time work is available during peak business periods. Demand for secretaries will be stimulated by the increasing use of information and the trend of secretaries handle more administrative responsibilities such as budgeting, scheduling, and office management, which are not easily automated. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ACCT 1100	<a href="#">Principles of Bookkeeping</a>	3
ACCT 1000	<a href="#">Financial Information for Life</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
CRLT 1102	<a href="#">Contemporary Career Search</a>	1
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
ADMS 1100	<a href="#">Keyboarding I</a>	3
ADMS 1102	<a href="#">Keyboarding II</a>	3
ADMS 1112	<a href="#">Desktop Publishing/Presentation Graphics</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
ADMS 1126	<a href="#">Business Office Management</a>	3
ADMS 2124	<a href="#">Advanced Micro Computer</a>	3
	Business Technical Elective	3
	<b>TOTAL CREDITS</b>	<b>34</b>

# Administrative Assistant

## AAS – 60 credits

### Description

The Administrative Assistant degree will provide students with the computer knowledge, bookkeeping, business communication and secretarial skills they will need to succeed as an administrative assistant, executive secretary, or office assistant.

### Employment

Graduates of this major may find employment in a wide variety of business, educational, and governmental offices - possibly in management positions or with supervisory responsibilities. The shortage of experienced office employees and the increase in demand anticipated by the U.S. Department of Labor make this an excellent career choice. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ECON 2204	<a href="#">Markets &amp; Resource Allocation</a>	3
ENGL 1111	<a href="#">College Writing I</a>	3
PHIL 1201	<a href="#">Ethics</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
ACCT 1100	<a href="#">Principles of Bookkeeping</a>	3
ACCT 1000	<a href="#">Financial Information for Life</a>	3
ADMS 1100	<a href="#">Keyboarding I</a>	3
ADMS 1102	<a href="#">Keyboarding II</a>	3
ADMS 1112	<a href="#">Desktop Publishing/Presentation Graphics</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
ADMS 1126	<a href="#">Business Office Management</a>	3
ADMS 2124	<a href="#">Advanced Micro Computer</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
CTEC 1108	<a href="#">E-Merging Technologies</a>	3
CRLT 1102	<a href="#">Contemporary Career Search</a>	1
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
SUPL 1120	<a href="#">Supervisory Leadership</a>	3
	Business Technical Electives	8
	<b>TOTAL CREDITS</b>	<b>60</b>

# Business Programs

## Business Foundations

Certificate - 16 credits

### Description

NTC's Business Foundations program is designed to provide fundamental business occupational training necessary for rewarding employment in today's professional workplace. Upon completion of the certificate, you will develop effective communication skills, financial management skills and gain an understanding of business environments and opportunities. Students will learn to build and maintain good working relationships with fellow employees and develop exceptional customer service skills. All Business Foundation courses transition to NTC Business Diplomas & AAS Degrees.

### Employment

In Minnesota and nationally, employers looking to fill entry-level positions need workers who have the fundamental occupational skills to meet or exceed workplace demands. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Required Courses</b>		
ACCT 1000	<a href="#">Financial Information for Life</a>	3
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
SUPL 1104	<a href="#">Intro to Business</a>	3
	Technical Electives	4
	<b>TOTAL CREDITS</b>	<b>16</b>

# Business

## AAS – 60 Credits

### Description

The Business AAS program is designed to meet the diverse employment & skill areas needed in the Business field. This program will prepare students for existing and emerging business careers. Students can pursue a specific business career area, enhance their general business skills foundation and diversify their skill base by adding an additional specific career certification.

### Degree Requirements

Course #	Course Name	Credit
ENGL 1111	<a href="#">College Writing I</a>	3
<b>Required Courses</b>		
MATH 1110	<a href="#">College Algebra</a>	3
PHIL 1201	<a href="#">Ethics</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
ACCT 1000	<a href="#">Financial Information for Life</a>	3
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
SUPL 1104	<a href="#">Intro to Business</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3

Complete two Certificates from the list below.

#### Accounting Certificate

ACCT 1120	<a href="#">Legal Environment</a>	3
ACCT 1134	<a href="#">Computerized Accounting Applications</a>	3
ACCT 2201	<a href="#">Accounting I: Financial Accounting</a>	4
ACCT 2203	<a href="#">Accounting II: Managerial Accounting</a>	4
CRLT 1102	<a href="#">Contemporary Career Search</a>	1

#### Administrative Business Specialist Certificate

ADMS 1100	<a href="#">Keyboarding I</a>	3
ADMS 1112	<a href="#">Desktop Publishing/Presentation Graphics</a>	3
ADMS 1126	<a href="#">Business Office Management</a>	3
ADMS 2124	<a href="#">Advanced Micro Computer</a>	3
ADMS 2226	<a href="#">Advanced Administrative Office Applications</a>	3

#### Computer Support Certificate

CPTR 1138	<a href="#">Information Systems</a>	3
CPTR 1142	<a href="#">Network Essentials</a>	3
CPTR 1148	<a href="#">Microcomputer Operating Systems</a>	3
CTEC 1106	<a href="#">Helpdesk Operations</a>	3
CTEC 1108	<a href="#">E-Merging Technologies</a>	3

#### Human Resources Certificates

ACCT 1104	<a href="#">Payroll</a>	3
ACCT 1120	<a href="#">Legal Environment</a>	3
MKTG 2220	<a href="#">Human Resource Management</a>	3
MKTG 2200	<a href="#">Prin of Management</a>	3
SUPL 1120	<a href="#">Supervisory Leadership</a>	3

#### Sales Marketing Certificates

<b>Course #</b>	<b>Course Name</b>	<b>Credit</b>
MKTG 1106	<a href="#">Professional Sales</a>	3
MKTG 1116	<a href="#">Advertising &amp; Promotion</a>	3
ADMS 1112	<a href="#">Desktop Publishing&amp; Presentation Graphics</a>	3
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2214	<a href="#">E-Marketing</a>	3
<b>Management Entrepreneurship Certificate</b>		
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2200	<a href="#">Principles of Management</a>	3
MKTG 2236	<a href="#">Small Business Management</a>	3
MKTG 2220	<a href="#">Human Resource Management</a>	3
ACCT 1100	<a href="#">Principles of Bookkeeping</a>	3
	<b>TOTAL CREDITS</b>	<b>60</b>

# Business and Business Transfer Pathways

AS – 60 credits

## Description

This program is a university-parallel program equivalent to the first two years of a bachelor degree program. This program prepares student for majors in such areas as accounting, management, marketing, human resources, economics, and other business-related fields.

This program includes business and general education courses to provide a sound background for study and a career in business.

Course #	Course Name	Credit
<b>Required Courses</b>		
ENGL 1111	<a href="#">College Writing I</a>	3
SPCH 1110	<a href="#">Public Speaking</a>	3
MATH 1110	<a href="#">College Algebra</a>	3
MATH 2200	<a href="#">Statistics</a>	3
PHIL 1201	<a href="#">Ethics</a>	3
ECON 2204	<a href="#">Markets &amp; Resource Allocation</a>	3
ECON 2404	<a href="#">Macroeconomics and the Business Cycle</a>	3
General Education Credits (MnTC courses) – need an additional 9 credits from 3 of the following Goal areas: 6, 7, 8, 9, 10		9
ACCT 1120	<a href="#">Legal Environment</a>	3
ACCT 2201	<a href="#">Financial Accounting/ Acct I</a>	4
ACCT 2203	<a href="#">Managerial Accounting/ Acct II</a>	4
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2200	<a href="#">Principles of Management</a>	3
General Electives (may be additional MNTC courses)		10
TOTAL CREDITS		<b>60</b>

# Computer Support

## Computer Support Certificate – 18 Credits Description

The certificate prepares students to become a Computer Support Specialist troubleshooting and resolving various computer and software issues. They may work in a help-desk environment or provide technical support in an organization's IT department. This certificate can lead into a Business diploma or AAS.

Course #	Course Name	Credit
<b>Required Courses</b>		
CPTR 1138	<a href="#">Information Systems</a>	3
CPTR 1142	<a href="#">Network Essentials</a>	3
CPTR 1148	<a href="#">Microcomputer Operating Systems</a>	3
CTEC 1106	<a href="#">Helpdesk Operations</a>	3
CTEC 1108	<a href="#">E-Merging Technologies</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
Total Credits		<b>18</b>

## E-Merging Computer Technology AAS – 60 credits

### Description

The E-Merging Computer Technology degree offers students both theory and hands-on training in computer equipment servicing and networking. The program prepares graduates for immediate entry-level employment in any size company utilizing computer technology. Graduates adding industry certification such as A+, Network+, CCNA, etc. have an advantage. The program provides students with the foundation required to build a rewarding career in the continually expanding field of computer service and networking.

### Employment

The field of computers and technology are expected to grow 6% in the next few years. Employers look for people who have strong problem-solving and analytical skills. They also look for people who can communicate well with a variety of people. Employment opportunities are available in many size companies utilizing computer technology, such as business management companies, hospitals, colleges & universities, local, state, and federal agencies and private enterprises. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Required Courses</b>		
ENGL 1111	<a href="#">College Writing I</a>	3
MATH 1110	<a href="#">College Algebra</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3

Course #	Course Name	Credit
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
ACCT 1000	<a href="#">Financial Information for Life</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
CPTR 1106	<a href="#">Microcomputer Databases</a>	3
CRLT 1102	<a href="#">Contemporary Career Search</a>	1
CPTR 1138	<a href="#">Information Systems</a>	3
CPTR 1142	<a href="#">Network Essentials</a>	3
CPTR 1148	<a href="#">Microcomputer Operating Systems</a>	3
CTEC 1106	<a href="#">Helpdesk Operations</a>	3
CTEC 1108	<a href="#">E-Merging Technologies</a>	3
CTEC 1100	<a href="#">Security Essentials</a>	2
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
SUPL 1120	<a href="#">Supervisory Leadership</a>	3
	Technical Electives	9
	General Education Electives	3
	<b>TOTAL CREDITS</b>	<b>60</b>

## Human Resources Programs

### Human Resources

#### Certificate – 18 Credits

##### Description

The program will prepare individuals for human resource practices at the technical, operational, and management level. Students completing this program will possess the skills needed for entry level roles in the growing Human Resources field. This program will also lead to other program options.

Course #	Course Name	Credit
<b>Required Courses</b>		
ACCT 1104	<a href="#">Payroll</a>	3
ACCT 1120	<a href="#">Legal Environment</a>	3
MKTG 2220	<a href="#">Human Resource Management</a>	3
MKTG 2200	<a href="#">Prin of Management</a>	3
SUPL 1120	<a href="#">Supervisory Leadership</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
	<b>TOTAL CREDITS</b>	<b>18</b>

# Management & Entrepreneurship

## Management and Entrepreneurship

Certificate – 18 credits

### Description

A dynamic marketplace and advancing technology have changed the way we do business and created a competitive marketplace. This program will help you develop the skills you need to achieve satisfying management positions in a variety of industries. The program will focus on introductory level training in management and entrepreneurial skills. You will learn how to manage a business and how to start a small business from the ground up.

### Employment

There are many employment opportunities for students seeking a career in the sales, marketing, and management field. Approximately, one out of every five people work in this fast-paced and dynamic field. Students may find diverse employment opportunities in retail, wholesale, production, or service related enterprises. Graduates in this program have careers that include sales representatives, managers, business owners, food brokers, buyers, merchandisers, and customer service representatives. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2200	<a href="#">Principles of Management</a>	3
MKTG 2220	<a href="#">Human Resource Management</a>	3
MKTG 2236	<a href="#">Small Business Management</a>	3
ACCT 1100	<a href="#">Principles of Bookkeeping</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
	TOTAL CREDITS	18

# Sales, Marketing & Management

## Sales and Marketing

Certificate – 18 credits

### Description

This program can help you prepare for a dynamic career in sales, marketing, merchandising, selling, retailing and service businesses. The program offers diverse training including courses in computer technology, selling strategies, marketing skills, customer service, e-marketing, and retail management concepts. Students completing this program will possess the skills needed for entry roles in these exciting fields. This certificate can also lead into other educational program options.

### Employment

There are many employment opportunities for students seeking a career in the sales, marketing, and management field. Approximately, one out of every five people work in this fast-paced and dynamic field. Students may find diverse employment opportunities in retail, wholesale, production, or service related enterprises. Graduates in this program have careers that include sales representatives, managers, business owners, food brokers, buyers, merchandisers, and customer service representatives. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
MKTG 1106	<a href="#">Professional Selling</a>	3
MKTG 1116	<a href="#">Advertising &amp; Promotion</a>	3
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2214	<a href="#">E-Marketing</a>	3
ADMS 1112	<a href="#">Desktop Publishing &amp; Presentation Graphics</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
	TOTAL CREDITS	18

## Sales and Marketing

Diploma – 32 credits

### Description

This program prepares graduates to enter a Sales and Marketing career. Positions are available in marketing, merchandising, selling, retailing, and service businesses. This major includes courses in computer technology, selling strategies, customer service, telemarketing, and retailing and marketing concepts.

### Employment

A career in Sales and Marketing offers many opportunities. The number of positions is growing and every industry needs capable sales employees. Individuals may start as a management trainee, assistant manager, customer service representative, sales associate, route salesperson, independent sales representative, or account executive. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
	<b>Required Courses</b>	
ACCT 1000	<a href="#">Financial Information for Life</a>	3

Course #	Course Name	Credit
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
ADMS 1112	<a href="#">Desktop Publishing &amp; Presentation Graphics</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
MKTG 1106	<a href="#">Professional Selling</a>	3
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
MKTG 1116	<a href="#">Advertising &amp; Promotion</a>	3
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2214	<a href="#">E-Marketing</a>	3
SUPL 1104	<a href="#">Introduction to Business</a>	3
	Technical Electives	2
	<b>TOTAL CREDITS</b>	<b>32</b>

## Sales, Marketing and Management

AAS – 60 credits

### Description

Sales, Marketing & Management prepares graduates for career advancement, self-employment or positions in customer service, retail sales and management. Other options are business-to-business sales for wholesalers, manufacturers, and service industries. Entry-level management jobs include department manager, management trainee and small business manager or owner.

### Employment

There are many employment opportunities for students seeking a career in the sales, marketing, and management field. Approximately, one out of every five people work in this fast-paced and dynamic field. Students may find diverse employment opportunities in retail, wholesale, production, or service related enterprises. Graduates in this program have careers that include sales representatives, managers, business owners, food brokers, buyers, merchandisers, and customer service representatives. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ACCT 1000	<a href="#">Financial Information for Life</a>	3
ACCT 1100	<a href="#">Principles of Bookkeeping</a>	3
or ACCT 1134	<a href="#">Computerized Accounting Applications</a>	
ADMS 1112	<a href="#">Desktop Publishing and Presentation Graphics</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
CPTR 1104	<a href="#">Computerized Business Applications</a>	3
MKTG 1106	<a href="#">Professional Selling</a>	3
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
MKTG 1116	<a href="#">Advertising &amp; Promotion</a>	3
MKTG 2100	<a href="#">Principles of Marketing</a>	3
MKTG 2200	<a href="#">Prin of Management</a>	3
MKTG 2214	<a href="#">E-Marketing</a>	3
MKTG 2220	<a href="#">Human Resource Management</a>	3
MKTG 2236	<a href="#">Small Business Management</a>	3

Course #	Course Name	Credit
SUPL 1104	<a href="#">Introduction to Business</a>	3
SUPL 1120	<a href="#">Supervisory Leadership</a>	3
ECON 2204	<a href="#">Markets &amp; Resource Allocation</a>	3
ENGL 1111	<a href="#">College Writing I</a>	3
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
	General Education Electives	6
	<b>TOTAL CREDITS</b>	<b>60</b>

## Child Care

In this section – programs in:

Child Development Careers

Child Development

## Child Development Careers

### Child Development Careers

Certificate – 18 credits

#### Description

This 18-credit certificate provides an essential foundation for students preparing to work in a variety of child care settings. Courses focus on the elements of a healthy, developmentally appropriate learning environment for children, working with parents and fellow professionals, understanding and promoting the stages of child development and learning, and gaining hands-on experience in the field. The Level II certificate also provides an introduction to basic child guidance in both individual and group settings, as well as how to assist children with special needs in both special education and inclusive settings.

#### Employment

Child care is the third largest industry in Minnesota, and the opportunities are vast across the nation as well. Graduates primarily work in family child care, work as an aide in a child care center or continue their education to obtain an additional credential. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Required Courses</b>		
CDEV 1101	<a href="#">Healthy Safety and Nutrition</a>	3
CDEV 1104	<a href="#">Child Growth and Development</a>	3
CDEV 1114	<a href="#">Child and Family Relations in a Diverse World</a>	3
CDEV 1116	<a href="#">Guiding Young Children</a>	3
CDEV 1135	<a href="#">Creative Activities and Environments</a>	3
CDEV 1138	<a href="#">Observing &amp; Assessing</a>	3
	<b>TOTAL CREDITS</b>	<b>18</b>

# Child Development Careers

AAS – 60 credits

## Description

This 60-credit Associate of Applied Science (AAS) degree provides comprehensive preparation for students to work in a variety of child care settings. Courses not only establish a strong foundation in such areas as healthy child development and learning, but also focus on such areas as working with children who have special needs or challenging behavior, observing and assessing children's development, supporting infant and toddler learning in a variety of settings, and providing a developmentally appropriate environment for school-age children. A preschool internship or advanced field experience is included. This program meets the requirements for assistant teacher/teacher as specified by Minnesota Department of Human Services Rules 9503. Additional work experience may be required for teacher positions in licensed child care centers.

## Employment

Child care is the third largest industry in Minnesota, and the opportunities are vast across the nation as well. Graduates may choose to specialize in these areas: infant-toddler, preschool, school-age, children with special needs, family child care, nanny or administration. You will also qualify to work as a paraeducator in a school setting Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Required Courses</b>		
ENGL 1111	<a href="#">College Writing I</a>	3
SGNL 1100	<a href="#">American Sign Language (ASL) I</a>	4
SGNL 2100	<a href="#">American Sign Language (ASL) II</a>	4
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1120	<a href="#">Interpersonal Communications</a>	2
CDEV 1101	<a href="#">Health Safety and Nutrition</a>	3
CDEV 1104	<a href="#">Child Growth and Development</a>	3
CDEV 1107	<a href="#">Intro to Early Childhood Education</a>	3
CDEV 1111	<a href="#">Practicum I</a>	3
CDEV 1114	<a href="#">Child and Family Relations in a Diverse World</a>	3
CDEV 1116	<a href="#">Guiding Young Children</a>	3
CDEV 1135	<a href="#">Creative Activities and Environments</a>	3
CDEV 1138	<a href="#">Observing &amp; Assessing</a>	3
CDEV 2208	<a href="#">Infant/Toddler Learning Exper</a>	3
CDEV 2220	<a href="#">Foundations of Early Childhood Education</a>	3
CDEV 2222	<a href="#">School-Age Development</a>	2
CDEV 2224	<a href="#">Intro to Literature and Literacy</a>	3
CDEV 2230	<a href="#">Children with Differing Abilities</a>	3
CDEV 2237	<a href="#">Parent and Professional Relations</a>	3
CDEV 2240	<a href="#">Practicum II</a>	3
	<b>TOTAL CREDITS</b>	<b>60</b>

# Child Development

## Child Development

AS – 60 credits

### Description

You will be qualified to work as a teacher in child care facilities or an educational paraprofessional. You may choose to specialize in these areas: infant-toddler, preschool, school-age, children with special needs, family child care, nanny or administration. You will also be qualified to work as a para-educator in a school setting.

### Employment

Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Required Courses</b>		
ENGL 1111	<a href="#">College Writing I</a>	3
ENGL 1113	<a href="#">College Writing II</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
SGNL 1100	<a href="#">American Sign Language (ASL) I</a>	4
SGNL 2100	<a href="#">American Sign Language (ASL) II</a>	4
CDEV 1101	<a href="#">Health Safety and Nutrition</a>	3
CDEV 1104	<a href="#">Child Growth and Development</a>	3
CDEV 1107	<a href="#">Intro to Early Childhood Education</a>	3
CDEV 1111	<a href="#">Practicum I</a>	3
CDEV 1114	<a href="#">Child and Family Relations in a Diverse World</a>	3
CDEV 1116	<a href="#">Guiding Young Children</a>	3
CDEV 1135	<a href="#">Creative Activities and Environments</a>	3
CDEV 1138	<a href="#">Observing &amp; Assessing</a>	3
CDEV 2224	<a href="#">Intro to Language and Literacy</a>	3
CDEV 2230	<a href="#">Children with Differing Abilities</a>	3
	General Education Electives	10
	<b>TOTAL CREDITS</b>	<b>60</b>

# Healthcare

In this section, programs in:

- Community Health Worker
- Dental Assisting
- Gerontology & Aging Care
- Health Science – Broad Field
- Healthcare Support
- Nursing

## Community Health Worker

### Community Health Worker

Certificate – 16 credits

#### Description

The Community Health Worker (CHW) program will prepare you to obtain employment in a variety of organizations. Community Health Workers perform a broad range of health-related functions and play an important role in bridging the gap between cultures and health care systems. A CHW will work with health care organizations to increase cultural competence, improve access to health care for racial and ethnic minorities, improve the quality of care for the chronically ill, promote healthy communities, and educate families about access to and use of health care coverage

#### Employment

Most community health workers are employed by community-based organizations such as community health clinics, community social and human service agencies and county public health departments. Sometimes they are called by another title such as health advocate. Community health workers can make an average of \$10.50 to \$16 per hour. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
CMHW 1000	<a href="#">Community Health Worker Role, Advocacy, Outreach &amp; Resources</a>	3
CMHW 1100	<a href="#">Health Communication, Teaching &amp; Capacity Building</a>	3
CMHW 1200	<a href="#">Documentation, Legal &amp; Ethical Issues in Community Health Work</a>	3
CMHW 1300	<a href="#">Health Promotion</a>	5
CMHW 1400	<a href="#">Community Health Worker Internship</a>	2
	TOTAL CREDITS	16

# Dental Assisting

## Dental Assisting

Diploma – 45 credits

### Description

The Dental Assisting program provides knowledge necessary for the dental assistant to assist in performing general clinical assisting and support functions, intraoral clinical procedures, business office procedures and laboratory tasks. The curriculum includes content in general studies; biomedical, dental, and clinical sciences; clinical practice; and additional intraoral clinical functions. Certain biomedical and dental science courses offered in the curriculum are common to both Dental Assisting and Dental Hygiene majors. Graduates are eligible to write the Dental Assisting National Board Certification Exam and the Minnesota State Board of Dentistry Registration Exam.

### Employment

The demand for dental care continues to grow. Dentists will need to employ more dental hygienists and dental assistants than ever before to meet the increased demand for dental care. There are more than 200,000 active dental assistants in the U.S. today. The majority of dental assistants are employed by general dentists, however career opportunities are available with dental specialists, orthodontists and oral/maxillofacial surgeons. In addition to private practices, dental assistants may seek employment with public health/government clinics, military dental services, dental schools, allied dental education programs, the retail/wholesale dental industry, insurance and consulting companies. There is a great deal of stability and employment security for individuals that are interested in becoming a dental assistant. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
COMM 1102	<a href="#">Applied Communications</a>	3
HPER 1410	<a href="#">First Aid / CPR</a>	1
DENT 1010	<a href="#">Infection Control</a>	1
DENT 1100	<a href="#">Biomaterials</a>	3
DENT 1106	<a href="#">Biodental Science</a>	2
DENT 1112	<a href="#">Dental Anatomy</a>	3
DENT 1114	<a href="#">Dental Radiology</a>	4
DENT 1122	<a href="#">Dental Ethics &amp; Jurisprudence</a>	1
DENT 1124	<a href="#">Clinical Assisting I</a>	4
DENT 1126	<a href="#">Clinical Assisting II</a>	4
DENT 1130	<a href="#">Dental Practice Management</a>	1
DENT 1132	<a href="#">Credentialing Exam Preparation</a>	1
DENT 1134	<a href="#">Clinical Affiliation</a>	7
DENT 1136	<a href="#">Advanced Functions</a>	7
DENT 1500	<a href="#">Dental Health</a>	3
	TOTAL CREDITS	<b>45</b>

# Dental Assisting

AAS – 60 credits

## Description

The Dental Assisting program provides knowledge necessary for the dental assistant to assist in performing general clinical assisting and support functions, intraoral clinical procedures, business office procedures and laboratory tasks. The curriculum includes content in general studies; biomedical, dental, and clinical sciences; clinical practice; and additional intraoral clinical functions. Certain biomedical and dental science courses offered in the curriculum are common to both Dental Assisting and Dental Hygiene majors. Graduates are eligible to write the Dental Assisting National Board Certification Exam and the Minnesota State Board of Dentistry Registration Exam.

## Employment

The demand for dental care continues to grow. Dentists will need to employ more dental hygienists and dental assistants than ever before to meet the increased demand for dental care. There are more than 200,000 active dental assistants in the U.S. today. The majority of dental assistants are employed by general dentists, however career opportunities are available with dental specialists, orthodontists and oral/maxillofacial surgeons. In addition to private practices, dental assistants may seek employment with public health/government clinics, military dental services, dental schools, allied dental education programs, the retail/wholesale dental industry, insurance and consulting companies. There is a great deal of stability and employment security for individuals that are interested in becoming a dental assistant. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Select one from options listed</b>		
BIOL 2252	<a href="#">Anatomy &amp; Physiology I</a>	3
BIOL 2221	<a href="#">Microbiology</a>	3
<b>Required Courses</b>		
ENGL 1111	<a href="#">College Writing I</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1110	<a href="#">First Aid / CPR</a>	3
HPER 1410	<a href="#">First Aid / CPR</a>	1
DENT 1010	<a href="#">Infection Control</a>	1
DENT 1100	<a href="#">Biomaterials</a>	3
DENT 1106	<a href="#">Biodental Science</a>	2
DENT 1112	<a href="#">Dental Anatomy</a>	3
DENT 1114	<a href="#">Dental Radiology</a>	4
DENT 1122	<a href="#">Dental Ethics &amp; Jurisprudence</a>	1
DENT 1124	<a href="#">Clinical Assisting I</a>	4
DENT 1126	<a href="#">Clinical Assisting II</a>	4
DENT 1130	<a href="#">Dental Prac Management</a>	1
DENT 1132	<a href="#">Credentialing Exam Preparation</a>	1
DENT 1134	<a href="#">Clinical Affiliation</a>	7
DENT 1136	<a href="#">Advanced Functions</a>	7
DENT 1500	<a href="#">Dental Health</a>	3
	General Education Electives	6
	<b>TOTAL CREDITS</b>	<b>60</b>

# Gerontology and Aging Care

## Gerontology and Aging Care

Certificate 18 credits

### Description

Graduates of the gerontology certificate program have the knowledge and skills needed to provide seamless quality service to the aging population and their families. Gerontology career pathways include a wide variety of service and leadership opportunities related to diversity; coping strategies related to death, dying and bereavement; economics; housing options; health and wellness; programs and services for the elderly; public policy and advocacy; and consumer service.

### Employment

NTC realizes there is an untapped market in entry-level caretakers for healthy aging and home care. It will not only improve the pride that entry-level employees have in the work they do, but will carry over into job loyalty and professionalism. A workforce that can assist in healthy aging and close the healthcare gap that currently exists, we can increase quality of care and employee retention in a field that traditionally sees high burnout and high turnover rates.

Course #	Course Name	Credit
<b>Required Courses</b>		
GERO 1100	Intro to Gerontology	3
GERO 1200	Biology of Aging	3
GERO 1230	Healthy Aging	3
GERO 1250	Dementia & Alzheimer's Care	3
GERO 1300	Death & Dying	3
GEROP 1305	Psychosocial Aspects of Aging	3
	<b>TOTAL CREDITS</b>	<b>18</b>

# Health Sciences

## Health Sciences Broad Field

AS – 60 credits

### Description

The Health Sciences Broad Field Associate of Science program at Northwest Technical College is for those who choose to double major or consider transferring to another health and human services related program. Some programs that have common Prerequisite(s) expectation include, nursing, social work, nutrition, corrections, health education, and exercise science. This program positions a learned to being their education at Northwest Technical College, transfer to a baccalaureate program and achieve a career in a high demand health and human service areas.

The basic sciences and health occupations curriculum is a solid base for many health and human services careers. Students completing the Health Sciences Broad Field Associate of Science degree will work closely with a knowledgeable adviser to outline an education pathway to their choice of Minnesota State Universities.

### Employment

Graduates of this flexible program have the opportunity to be employed in a broad variety of fields, depending on their occupational goals and courses of study. See [www.iseek.org](http://www.iseek.org) for additional employment information in all areas.

Course #	Course Name	Credit
<b>Goal Area 1 – Communication</b>		
ENGL 1111	<a href="#">College Writing I</a>	3
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
<b>Goal Area 3 – Natural Sciences</b>		
BIOL 1111	<a href="#">General Biology</a>	4
CHEM 1100	<a href="#">Intro to Chemistry</a>	4
<b>Goal Area 4 – Math Logic</b>		
MATH 1110	<a href="#">College Algebra</a>	3
MATH 2200	<a href="#">Statistics</a>	3
<b>Goal Area 5 – History Social Sciences</b>		
PSYC 1105	<a href="#">General Psychology</a>	3
PSYC 2201	<a href="#">Developmental Psychology</a>	3
SOCI 1110	<a href="#">Intro to Sociology</a>	3
OR PSYC 2250	<a href="#">Social Psychology</a>	3
<b>Goal Area 6 – Humanities – Fine Arts</b>		
PHIL 1201	<a href="#">Ethics</a>	3
<b>Required Courses</b>		
BIOL 2130	<a href="#">Principles of Nutrition</a>	3
BIOL 2221	<a href="#">Microbiology</a>	3
BIOL 2252	<a href="#">Anatomy &amp; Physiology I</a>	3
BIOL 2254	<a href="#">Anatomy &amp; Physiology II</a>	3
BIOL 2256	<a href="#">Advanced Physiology</a>	2
HLTH 1000	<a href="#">Intro to Health Careers</a>	2

Course #	Course Name	Credit
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Select a minimum of 12 elective credits with the help of an advisor that are most suited for the students intended health sciences baccalaureate major will be recommended. Some options that students at NTC have considered are listed below. Additional elective options may be selected with advisor approval.

**Technical Electives**

ADMM 1125	<a href="#">US Healthcare Systems</a>	3
CDEV 1102	<a href="#">Parent &amp; Professional Relations</a>	3
CDEV 1104	<a href="#">Child Growth and Development</a>	3
CDEV 1114	<a href="#">Child and Family Relations in a Diverse World</a>	3
CDEV 2202	<a href="#">Abuse and Neglect</a>	2
CMHW 1000	<a href="#">Community Health Worker Role, Advocacy, Outreach &amp; Resources</a>	3
CMHW 1100	<a href="#">Health Communication, Teaching &amp; Capacity Building</a>	3
CMHW 1200	<a href="#">Documentation, Legal &amp; Ethical Issues in Community Health Work</a>	3
CMHW 1300	<a href="#">Health Promotion</a>	5
COMM 1102	<a href="#">Applied Communication</a>	3
HLTH 1106	<a href="#">Medical Terminology</a>	2
HLTH 1110	<a href="#">Nursing Assistant</a>	3
HLTH 2002	<a href="#">Pharmacology</a>	2
HLTH 2208	<a href="#">Pathophysiology</a>	3
HPER 1410	<a href="#">First Aid / CPR</a>	1
HPER 2200	<a href="#">CPR Healthcare Provider</a>	1
SSCI 1104	<a href="#">Human Relations</a>	3
GERO 1100	<a href="#">Intro to Gerontology</a>	3
GERO 1200	<a href="#">Biology of Aging</a>	3
GERO 1230	<a href="#">Healthy Aging</a>	3
GERO 1250	<a href="#">Dementia</a>	3
GERO 1300	<a href="#">Death and Dying</a>	3
GERO 1305	<a href="#">Psychosocial Aspects of Aging</a>	3

**General Electives**

ANTH1110*	<a href="#">Cultural Anthropology</a>	3
MATH 1930*	<a href="#">Intro to Math Sciences</a>	3
PHIL 2210*	<a href="#">Bioethical Issues</a>	3
PSYC 2220*	<a href="#">Abnormal Psychology</a>	3
PSYC 2250*	<a href="#">Social Psychology</a>	3
SGNL 1100*	<a href="#">American Sign Language I</a>	4
SGNL 2100*	<a href="#">American Sign Language II</a>	4
SOCI 1110*	<a href="#">Intro to Sociology</a>	3
	<b>TOTAL CREDITS</b>	<b>60</b>

\*denotes MnTC course

# Healthcare Support

## Healthcare Administrative Support

Diploma – 40 credits

### Description

This 40 credit diploma prepares graduates for a position in health care administrative support to assist with medical office management. Coursework concentrates on administrative skills such as patient scheduling, medical record maintenance, patient billing and medical office management, as well as a strong emphasis in medical terminology.

### Employment

Graduates of the medical secretary, medical administrative secretary and emphasis area programs have employment opportunities in a variety of health care settings including, but not limited to, hospitals, clinics, insurance companies, government agencies, public health, home health agencies, long-term care facilities, and dental offices. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ADMM 1120	<a href="#">Medical Office Procedures</a>	3
ADMM 1125	<a href="#">US Healthcare Systems</a>	3
ADMM 1140	<a href="#">Medical Billing/Insurance</a>	3
ADMM 1151	<a href="#">AAPC Medical Coding I</a>	3
ADMM 1175	<a href="#">AAPC Medical Coding II</a>	3
ADMM 2200	<a href="#">Medical Language Applications</a>	3
ADMM 2245	<a href="#">Inpatient Billing</a>	3
ADMM 2270	<a href="#">Healthcare Leadership</a>	3
ADMS 1100	<a href="#">Keyboarding I</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
CPTR 1105	<a href="#">Intro to Computers - Medical Applications</a>	3
CRLT 1102	<a href="#">Contemporary Career Search</a>	1
MKTG 1108	<a href="#">Customer Relations Mgmt</a>	3
SPCH 1110	<a href="#">Introduction to Public Speaking</a>	3
	TOTAL CREDITS	<b>40</b>

# Healthcare Administrative Leadership

(Previously Healthcare Administrative Specialist)  
AAS – 60 credits

## Description

Medical secretaries are highly trained office specialists who are responsible for the coordination of the day-to-day medical office functions of patient appointment scheduling, telephone communications, medical record maintenance, medical transcription, and patient billing processes. Successful medical secretaries have excellent communication skills and exhibit a high degree of professionalism in their work.

## Employment

Graduates of the medical secretary, medical administrative secretary and emphasis area programs enjoy a wide range of employment opportunities in a variety of healthcare settings including hospitals, clinics, insurance companies, government agencies, public health, home health agencies, long-term care facilities and dental offices. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ADMM 1120	<a href="#">Medical Office Procedures</a>	3
ADMM 1125	<a href="#">US Healthcare Systems</a>	3
ADMM 1140	<a href="#">Medical Billing/Insurance</a>	3
ADMM 1151	<a href="#">AAPC Medical Coding I</a>	3
ADMM 1175	<a href="#">AAPC Medical Coding II</a>	3
ADMM 2200	<a href="#">Medical Language Applications</a>	3
ADMM 2245	<a href="#">Inpatient Billing</a>	3
ADMM 2270	<a href="#">Healthcare Leadership</a>	3
ADMM 2285	<a href="#">Internship</a>	2
ADMS 1100	<a href="#">Keyboarding I</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
CPTR 1105	<a href="#">Intro to Computers - Medical Applications</a>	3
CRLT 1102	<a href="#">Contemporary Career Search</a>	1
ENGL 1111	<a href="#">College Writing I</a>	3
MKTG 1108	<a href="#">Customer Relations Management</a>	3
MKTG 2200	<a href="#">Principles of Management</a>	3
PHIL 1201	<a href="#">Ethics</a>	3
PHIL 2210	<a href="#">Bioethical Issues in Contemporary Society</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1110	<a href="#">Introduction to Public Speaking</a>	3
SUPL 1104	<a href="#">Intro to Business</a>	3
	<b>TOTAL CREDITS</b>	<b>60</b>

# Medical Coding

## Certificate – 29 credits

### Description

This 29 credit certificate prepares graduates for entry-level medical coding positions or to advance their studies with a diploma or an Associate of Applied Science (AAS) degree in medical coding. The NTC Medical Coding programs use the American Academy of Professional Coders (AAPC) curriculum to provide training to prepare the student to take the AAPC Certified Professional Coder (CPC) exam using nationally recognized coding systems to classify procedures and diagnoses related to medical treatment. Medical coders are needed for patient account management, medical billing and insurance claims processing.

### Employment

With your medical coding education, you will be prepared to perform medical coding duties in a variety of healthcare settings including hospitals, clinics, insurance companies, government agencies, public health, home health agencies, long-term care facilities and dental offices. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
ADMM 1120	<a href="#">Medical Office Procedures</a>	3
ADMM 1140	<a href="#">Medical Billing/Insurance</a>	3
ADMM 1151	<a href="#">AAPC Medical Coding I</a>	3
ADMM 1175	<a href="#">AAPC Medical Coding II</a>	3
ADMM 2200	<a href="#">Medical Language Applications</a>	3
ADMM 2245	<a href="#">Inpatient Billing</a>	3
CPTR 1105	<a href="#">Intro to Computers - Medical Applications</a>	3
BIOL 1004	<a href="#">Intro to Anatomy &amp; Physiology</a>	3
HLTH 1106	<a href="#">Medical Terminology</a>	2
HLTH 2208	<a href="#">Pathophysiology</a>	3
	TOTAL CREDITS	<b>29</b>

# Medical Coding

## Diploma - 40 credits

### Description

This 40-credit diploma prepares graduates for a career in medical coding or to advance their studies with an Associate of Applied Science (AAS) degree in medical coding. The NTC Medical Coding programs use the American Academy of Professional Coders (AAPC) curriculum to provide training to prepare the student to take the AAPC Certified Professional Coder (CPC) exam using nationally recognized coding systems to classify procedures and diagnoses related to medical treatment. The diploma program includes coursework in anatomy and physiology, pharmacology, U.S. health care systems and medical billing and insurance. Medical coders are needed for patient account management, medical billing and insurance claims processing.

### Employment

With your medical coding education, you will be prepared to perform medical coding duties in a variety of healthcare settings including hospitals, clinics, insurance companies, government agencies, public health, home health agencies, long-term care facilities and dental offices. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
<b>Required Courses</b>		
ADMM 1120	<a href="#">Medical Office Procedures</a>	3
ADMM 1125	<a href="#">US Healthcare Systems</a>	3
ADMM 1140	<a href="#">Medical Billing/Insurance</a>	3
ADMM 1151	<a href="#">AAPC Medical Coding I</a>	3
ADMM 1175	<a href="#">AAPC Medical Coding II</a>	3
ADMM 2200	<a href="#">Medical Language Applications</a>	3
ADMM 2245	<a href="#">Inpatient Billing</a>	3
ADMM 2280	<a href="#">Advanced Medical Coding</a>	3
CPTR 1105	<a href="#">Intro to Computers - Medical Applications</a>	3
BIOL 1104	<a href="#">Intro to Anatomy &amp; Physiology</a>	3
HLTH 1000	<a href="#">Intro to Health Careers</a>	3
HLTH 1106	<a href="#">Medical Terminology</a>	2
HLTH 2002	<a href="#">Pharmacology</a>	2
HLTH 2208	<a href="#">Pathophysiology</a>	3
	TOTAL CREDITS	<b>40</b>

# Medical Coding

AAS - 60 credits

## Description

This 60-credit Associate of Applied Science (AAS) degree prepares graduates for a career in medical coding with comprehensive training. The NTC Medical Coding programs use the American Academy of Professional Coders (AAPC) curriculum to provide training to prepare the student to take the AAPC Certified Professional Coder (CPC) exam using nationally recognized coding systems to classify procedures and diagnoses related to medical treatment. The AAS program includes coursework in anatomy and physiology, pharmacology, U.S. health care systems and medical billing and insurance, as well as college-level courses in writing, bioethical issues in contemporary society, general psychology, intro to public speaking, and business communications. Medical coders are needed for patient account management, medical billing and insurance claims processing.

## Employment

With your medical coding education, you will be prepared to perform medical coding duties in a variety of healthcare settings including hospitals, clinics, insurance companies, government agencies, public health, home health agencies, long-term care facilities and dental offices. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#)

Course #	Course Name	Credit
ADMM 1120	<a href="#">Medical Office Procedures</a>	3
ADMM 1125	<a href="#">US Healthcare Systems</a>	3
ADMM 1140	<a href="#">Medical Billing/Insurance</a>	3
ADMM 1151	<a href="#">AAPC Medical Coding I</a>	3
ADMM 1175	<a href="#">AAPC Medical Coding II</a>	3
ADMM 2200	<a href="#">Medical Language Applications</a>	3
ADMM 2245	<a href="#">Inpatient Billing</a>	3
ADMM 2270	<a href="#">Healthcare Leadership</a>	2
ADMM 2280	<a href="#">Advanced Medical Coding</a>	3
ADMS 1116	<a href="#">Business Communications</a>	3
CPTR 1105	<a href="#">Intro to Computers - Medical Applications</a>	3
BIOL 1104	<a href="#">Intro to Anatomy &amp; Physiology</a>	3
ENGL 1111	<a href="#">College Writing I</a>	3
HLTH 1000	<a href="#">Intro to Health Careers</a>	3
HLTH 1106	<a href="#">Medical Terminology</a>	2
HLTH 2002	<a href="#">Pharmacology</a>	2
HLTH 2208	<a href="#">Pathophysiology</a>	3
PHIL 1201	<a href="#">Ethics</a>	3
PHIL 2210	<a href="#">Bioethical Issues in Contemporary Society</a>	3
PSYC 1105	<a href="#">General Psychology</a>	3
SPCH 1110	<a href="#">Intro to Public Speaking</a>	3
	<b>TOTAL CREDITS</b>	<b>60</b>

# Nursing

## Practical Nursing

Diploma – 42 credits

### Description

The Practical Nursing program is designed to prepare the nursing assistant to complete a three- semester program and to practice within the scope of practical nursing under the supervision of a registered nurse.

Students have the opportunity to learn the nursing process, safe and effective care, health promotions and maintenance, pharmacological therapies, psychosocial care, teamwork and collaboration, and nursing informatics, with an emphasis on evidenced-based research practice as well as acknowledging cultural considerations.

Students will apply theory to practical experiences in supervised clinical areas: long-term care, ambulatory clinics, surgery, and simulation.

The practical nursing requirements must be successfully completed to receive a diploma. Students may apply to the National Council Licensure Examination for the Practical Nurse (NCLEX-PN). Passing NCLEX allows licensure for the LPN in the state of the student's choice.

### Employment

Employment opportunities have experienced a major expansion in recent years. Graduates are currently employed in acute-care hospitals, state hospitals, long-term care facilities including nursing homes and rehabilitation hospitals, clinics and physicians' offices, group homes and child care centers, health care and public health agencies, armed services, school nursing, industry and private homes. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

#### Prerequisite Courses

Course #	Course Name	Credit
HLTH 1106	<a href="#">Medical Terminology</a>	2
HLTH 1110	<a href="#">Nursing Assistant</a>	3
BIOL 2252	<a href="#">Anatomy &amp; Physiology I</a>	3
PSYC 2201	<a href="#">Developmental Psychology</a>	3

#### Required Courses

BIOL 2254	<a href="#">Anatomy &amp; Physiology II</a>	3
PNSG 1110	<a href="#">Adult Nursing I</a>	4
PNSG 1112	<a href="#">Technical Skills I</a>	3
PNSG 1120	<a href="#">Pharmacology</a>	2
PNSG 1125	<a href="#">Clinical I</a>	4
PNSG 1150	<a href="#">Adult Nursing II</a>	4
PNSG 1155	<a href="#">Technical Skills II</a>	3
PNSG 1160	<a href="#">Maternal/Child Nursing</a>	2
PNSG 1180	<a href="#">Psychosocial Nursing</a>	2
PNSG 1185	<a href="#">Clinical Practice II</a>	4
	TOTAL CREDITS	<b>40</b>

## AD Nursing

### Generic Track (AS) – 64 credits

#### Description

The AS in Nursing (ASN) program is a mobility program which allows the Licensed Practical Nurse (LPN) to advance their knowledge and skill for licensure and practice as a registered nurse (RN). This program is approved by the Minnesota State system and Minnesota Board of Nursing. The program offers full-time and may offer limited part-time options.

#### Must be taken prior to ADNG prefixed courses

Course #	Course Name	Credits
HLTH 1110	<a href="#">Nursing Assistant</a>	3
HPER 2200	<a href="#">CPR Healthcare Provider</a>	1

#### Required Program Courses

ADNG 1000	<a href="#">Foundations of Nursing</a>	2
ADNG 1050	<a href="#">Foundation – Nursing Skills</a>	4
ADNG 1100	<a href="#">Pharmacology</a>	2
ADNG 1150	<a href="#">Nursing I</a>	4
ADNG 1200	<a href="#">Clinical I</a>	2
ADNG 2050	<a href="#">Advanced Skills</a>	2
ADNG 2100	<a href="#">Clinical II</a>	4
ADNG 2150	<a href="#">Nursing II</a>	4
ADNG 2200	<a href="#">Clinical III</a>	4
ADNG 2250	<a href="#">Leadership</a>	2
ADNG 2350	<a href="#">Maternal-Newborn Nursing</a>	2
ADNG 2400	<a href="#">Psychosocial Nursing</a>	2

#### Required Courses

BIOL 2221	<a href="#">Microbiology</a>	3
BIOL 2252	<a href="#">Anatomy &amp; Physiology I</a>	3
BIOL 2254	<a href="#">Anatomy &amp; Physiology II</a>	3
BIOL 2256	<a href="#">Advanced Physiology</a>	2
CHEM 1100	<a href="#">Intro to Chemistry</a>	4
ENGL 1111	<a href="#">College Writing I</a>	3
PSYC 2201	<a href="#">Developmental Psychology</a>	3

#### Select a Mathematics course

MATH 1110	<a href="#">College Algebra</a>	3
or MATH 1930	<a href="#">Introduction to Mathematical Sciences</a>	3

#### Select a Philosophy course

PHIL 1201	<a href="#">Ethics</a>	3
or PHIL 2210	<a href="#">Bioethical Issues in Contemporary Society</a>	3
	General Education Electives	3
	<b>TOTAL CREDITS</b>	<b>64</b>

## AD Nursing

LPN Step-in Track (AS) 64 credits

Course #	Course Name	Credits
BIOL 2221	<a href="#">Microbiology</a>	3
BIOL 2252	<a href="#">Anatomy &amp; Physiology I</a>	3
BIOL 2254	<a href="#">Anatomy &amp; Physiology II</a>	3
CHEM 1100	<a href="#">Intro to Chemistry</a>	4
ENGL 1111	<a href="#">College Writing I</a>	3
PSYC 2201	<a href="#">Developmental Psychology</a>	3
<b>Select one from options listed</b>		
MATH 1110	<a href="#">College Algebra</a>	3
MATH 1930	<a href="#">Introduction to Mathematical Sciences</a>	3
<b>Required Program Courses</b>		
ADNG 1150	<a href="#">Nursing I</a>	4
ADNG 1300	<a href="#">Transition to Professional</a>	4
ADNG 2050	<a href="#">Advanced Skills</a>	2
ADNG 2100	<a href="#">Clinical II</a>	4
ADNG 2150	<a href="#">Nursing II</a>	4
ADNG 2200	<a href="#">Clinical III</a>	4
ADNG 2250	<a href="#">Leadership</a>	2
ADNG 2300	<a href="#">Advanced Standing</a>	6
ADNG 2350	<a href="#">Maternal-Newborn Nursing</a>	2
ADNG 2400	<a href="#">Psychosocial Nursing</a>	2
<b>Required Courses</b>		
BIOL 2256	<a href="#">Advanced Physiology</a>	2
PHIL 1201	<a href="#">Ethics</a>	3
or PHIL 2210	<a href="#">Bioethical Issues in Contemporary Society</a>	3
	General Education Electives	3
	<b>TOTAL CREDITS</b>	<b>64</b>

# Building Systems

In this section – programs in:

Commercial Refrigeration

Electrical Construction

Residential Plumbing/HVAC

## Commercial Refrigeration

### Commercial Refrigeration

Diploma – 60 Credits

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#### Description

Students pursuing their degree in Commercial Refrigeration/HVAC at NTC have the opportunity to work with state-of-the-art equipment on campus and in the field.

The 60-credit diploma combines courses from the college's current Plumbing/HVAC and Electrical Construction & Maintenance programs with a 15-credit block of new Commercial Refrigeration courses, along with general education requirements. It will provide training and coursework that directly correlates to business and industry requests. Sixty percent of the program's instruction will be in classrooms with forty percent occurring in hands-on training and field environments.

Students will take courses in electrical theory, advanced electronics and motor controls along with specialized coursework exploring commercial refrigeration systems and equipment.

Course #	Course Name	Credit
<b>Required Courses</b>		
BEST 1100	<a href="#"><u>Basic Education &amp; Skills Training</u></a>	2
MATH 1100	<a href="#"><u>Technical Math</u></a>	3
CONE 1102	<a href="#"><u>Intro to Electrical Circuit Theory</u></a>	4
CONE 2216	<a href="#"><u>Motor Control</u></a>	3
CONE 2226	<a href="#"><u>Motor Control Lab</u></a>	4
CONE 2300	<a href="#"><u>Programmable Logic Controllers</u></a>	3
CREF 1600	<a href="#"><u>Commercial Refrigeration Introduction Internship</u></a>	1
CREF 1700	<a href="#"><u>Introduction to Commercial Refrigeration Systems</u></a>	3
CREF 1710	<a href="#"><u>Introduction to Commercial Refrigeration Electronic Controls Systems</u></a>	4
CREF 2100	<a href="#"><u>Commercial Refrigeration Racks &amp; Chillers Theory Design &amp; Install</u></a>	4
CREF 2600	<a href="#"><u>Commercial Refrigeration Capstone Internship</u></a>	3
PLHE 2032	<a href="#"><u>Air Conditioning, Heat Pump, Refrigeration and Recovery</u></a>	3
PLHE 2076	<a href="#"><u>Forced Air Systems Theory</u></a>	4
PLHE 2095	<a href="#"><u>HVAC Design I</u></a>	3

Course #	Course Name	Credit
PLHE 2135	<a href="#">HVAC Code Interpretation</a>	2
PLHE 2140	<a href="#">Optimizing HVAC Control Systems</a>	4
PLHE 2146	<a href="#">HVAC Design II</a>	4
PLHE 2151	<a href="#">Hydronic Design and Controls</a>	3
PLHE 2160	<a href="#">Air Conditioning, Refrigeration and Heat Pump Controls</a>	3
TOTAL CREDITS		<b>60</b>

## Electrical Construction

### Residential Wiring

Certificate – 20 Credits

#### Description

The Residential Wiring program prepares students for employment for entry level jobs in residential wiring. Topics include National Electrical Code regulations, basic electricity fundamentals and residential wiring practices.

Course #	Course Name	Credit
<b>Required Courses</b>		
BLDG 1102	<a href="#">Construction Safety</a>	1
CONE 1102	<a href="#">Intro to Electrical Circuit Theory</a>	4
CONE 1104	<a href="#">Intro to NEC</a>	2
CONE 1117	<a href="#">Residential Wiring Lab</a>	5
CONE 1107	<a href="#">Intro to Residential Wiring</a>	3
ENER 1500	<a href="#">PV System Design &amp; Install</a>	2
MATH 1100	<a href="#">Technical Mathematics</a>	3
TOTAL CREDITS		<b>20</b>

### Electrical Instrumentation

Certificate – 30 Credits

#### Description

This program prepares the student for employment in automation and process controls industries. This program provides individuals currently employed in industry an opportunity to update their technical skills with training in a hands-on environment.

Course #	Course Name	Credit
<b>Required Courses</b>		
CMAE 1506	<a href="#">Introduction to Computers</a>	2
CONE 1102	<a href="#">Intro to Electrical Circuit Theory</a>	4
CONE 1108	<a href="#">Electrical Circuit Theory</a>	5
CONE 2226	<a href="#">Motor Control Lab</a>	4
CONE 2210	<a href="#">Electronic Motor Control</a>	2

Course #	Course Name	Credit
CONE 2216	<a href="#">Motor Control</a>	3
CONE 2300	<a href="#">Programmable Logic Controllers</a>	3
CONE 2100	<a href="#">Instrumental Process Control</a>	2
CONE 2400	<a href="#">Adv Programmable Logic Control</a>	2
MATH 1100	<a href="#">Technical Mathematics</a>	3
Total Credits		<b>30</b>

## Electrical Construction & Maintenance

### Diploma – 74 Credits

#### Description

This program prepares students for work installing and maintaining systems in residential, commercial, and industrial applications. Courses include a mix of theory and hands-on lab applications. The program includes courses in wiring practices, electrical theory, National Electrical Code application, programmable controllers, and troubleshooting.

#### Employment

As a graduate of our electrical construction/maintenance program, you will enter the workforce as a construction electrician apprentice, and you will be equipped to work toward a journeyman or master electrician's license. The electrical construction/maintenance diploma opens a wide range of career opportunities for you depending on your interests and skill levels; related field advancement options include sales positions, maintenance jobs, low voltage alarm services, data cabling and management positions. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

Course #	Course Name	Credit
MATH 1100	<a href="#">Technical Mathematics</a>	3
CONE 1102	<a href="#">Intro to Electrical Circuit Theory</a>	4
CONE 1104	<a href="#">Intro to NEC</a>	2
CONE 1106	<a href="#">Wiring I</a>	4
CONE 1108	<a href="#">Electrical Circuit Theory</a>	4
CONE 1114	<a href="#">National Electrical Code I</a>	2
CONE 1115	<a href="#">Electrical Blueprint/Estimating</a>	2
CONE 1119	<a href="#">Wiring II</a>	6
CONE 1300	<a href="#">Electrical Safety</a>	2
CONE 2000	<a href="#">Industry Career Skills</a>	1
CONE 2100	<a href="#">Instrumentation Process Control</a>	2
CONE 2106	<a href="#">Wiring III</a>	5
CONE 2107	<a href="#">Wiring IV</a>	5
CONE 2114	<a href="#">National Electrical Code II</a>	2
CONE 2200	<a href="#">Building Automation</a>	3
CONE 2210	<a href="#">Electronic Motor Control</a>	2
CONE 2216	<a href="#">Motor Control</a>	3

Course #	Course Name	Credit
CONE 2226	<a href="#">Motor Control Lab</a>	4
CONE 2242	<a href="#">Alternate Energy Methods</a>	2
CONE 2248	<a href="#">Code Applications</a>	2
CONE 2300	<a href="#">Programmable Logic Controllers</a>	3
CONE 2400	<a href="#">Adv Programmable Logic Control</a>	2
CONE 2600	<a href="#">Grounding and Bonding</a>	2
CONE 2800	<a href="#">Capstone</a>	3
	General Education Electives	4
	<b>TOTAL CREDITS</b>	<b>74</b>

## Electrical Construction and Maintenance

### AAS - 82 Credits

#### Description

This program prepares students for work installing and maintaining systems in residential, commercial, and industrial applications. Courses include a mix of theory and hands-on lab applications. The program includes courses in wiring practices, electrical theory, National Electrical Code application, programmable controllers, and troubleshooting. Minnesota Transfer Credits earned through the Associate of Applied Science (AAS) degree at NTC will transfer for graduates wishing to further their education.

Course #	Course Name	Credit
<b>Required Courses</b>		
CONE 1102	<a href="#">Intro to Electrical Circuit Theory</a>	4
CONE 1104	<a href="#">Intro to NEC</a>	2
CONE 1106	<a href="#">Wiring I</a>	4
CONE 1108	<a href="#">Electrical Circuit Theory</a>	4
CONE 1114	<a href="#">National Electrical Code</a>	2
CONE 1115	<a href="#">Electrical Blueprint/Estimating</a>	2
CONE 1119	<a href="#">Wiring II</a>	6
CONE 1300	<a href="#">Electrical Safety</a>	2
CONE 2000	<a href="#">Industry Career Skills</a>	1
CONE 2100	<a href="#">Instrumental Process Control</a>	2
CONE 2106	<a href="#">Wiring III</a>	5
CONE 2107	<a href="#">Wiring IV</a>	5
CONE 2114	<a href="#">National Electrical Code II</a>	2
CONE 2200	<a href="#">Building Automation</a>	3
CONE 2210	<a href="#">Electronic Motor Control</a>	2
CONE 2216	<a href="#">Motor Control</a>	3
CONE 2226	<a href="#">Motor Control Lab</a>	4
CONE 2242	<a href="#">Alternative Energy Methods</a>	2
CONE 2248	<a href="#">Code Applications</a>	2

Course #	Course Name	Credit
CONE 2300	<a href="#">Programmable Logic Controllers</a>	3
CONE 2400	<a href="#">Adv Programmable Logic Control</a>	2
CONE 2600	<a href="#">Grounding and Bonding</a>	2
CONE 2800	<a href="#">Capstone</a>	3
	General Education Electives	15
	<b>TOTAL CREDITS</b>	<b>82</b>

## Residential Plumbing/HVAC

### Plumbing Technology

Certificate – 16 Credits

#### Description

Upon successful completion of this certificate program the student will have the necessary knowledge and skills for a career in residential, commercial, and industrial service and repair or construction plumbing. Reading of blueprints, layout, estimating, installation of piping systems and fixtures, repair of supply and waste water systems are just some of the skills that will be mastered during this program.

Course #	Course Name	Credit
<b>Required Courses</b>		
PLHE 1055	<a href="#">Plumbing Code Interpretation</a>	3
PLHE 1085	<a href="#">Piping System Fabrication I</a>	3
PLHE 1091	<a href="#">Plumbing Design and Installation I</a>	3
PLHE 1145	<a href="#">Piping Systems Fabrication II</a>	3
PLHE 1147	<a href="#">Plumbing Design and Installation II</a>	3
PLHE 2800	<a href="#">Boilers License Prep</a>	1
	<b>TOTAL CREDITS</b>	<b>16</b>

## Residential Plumbing/HVAC

Diploma - 60 credits

#### Description

The Residential Plumbing/HVAC Technology program prepares the student to begin their career in the plumbing and heating professions. Coursework provides the student with a technical understanding and skills development. Coursework integrates theory and practical experience. The successful graduate is eligible for documented hours towards state apprenticeship requirements and employment in an advanced apprenticeship level in a variety of businesses found in rural and metropolitan areas.

#### Employment

With a certification in construction technology and a diploma in plumbing/HVAC, there are a variety of career opportunities for graduates of NTC, including working for commercial or residential plumbing/HVAC contractors. Find out more about salary, job outlook and career opportunities for this program at [ISEEK - Minnesota's career, education and job resource](#).

<b>Course #</b>	<b>Course Name</b>	<b>Credit</b>
	<b>Required Courses</b>	
MATH 1100	<a href="#">Technical Math</a>	3
BEST 1100	<a href="#">Basic Education &amp; Skills Training - HVAC</a>	2
PLHE 1000	<a href="#">Introduction to Plumbing/HVAC</a>	1
PLHE 1015	<a href="#">Plumbing Technical Drawing</a>	3
PLHE 1055	<a href="#">Plumbing Code Interpretation</a>	3
PLHE 1085	<a href="#">Piping System Fabrication I</a>	3
PLHE 1091	<a href="#">Plumbing Design and Installation I</a>	3
PLHE 1105	<a href="#">Plumbing Repair and Service Technology</a>	3
PLHE 1145	<a href="#">Piping Systems Fabrication II</a>	3
PLHE 1147	<a href="#">Plumbing Design and Installation II</a>	3
PLHE 1193	<a href="#">Residential Plumbing Advanced Design</a>	2
PLHE 2032	<a href="#">Air Conditioning, Heat Pump, Refrigeration and Recovery</a>	3
PLHE 2076	<a href="#">Forced Air Systems Theory</a>	4
PLHE 2095	<a href="#">HVAC Design and Installation</a>	3
PLHE 2135	<a href="#">HVAC Code Interpretation</a>	2
PLHE 2140	<a href="#">Optimizing HVAC Control Systems</a>	4
PLHE 2146	<a href="#">HVAC Design II</a>	4
PLHE 2151	<a href="#">Hydronic Design and Controls</a>	3
PLHE 2160	<a href="#">Air Conditioning, Refrigeration and Heat Pump Controls</a>	3
PLHE 2170	<a href="#">HVAC Design III</a>	3
PLHE 2195	<a href="#">HVAC Advanced Design</a>	2
	TOTAL CREDITS	60

# Course Descriptions 2022-2023

**ACCT 1000 Financial Information for Life (3 credits)** This course is an introduction to the use and interpretation of financial information needed to be a functioning member of society. Topics include business and non-business financial statements, compound interest related to loans and investment opportunities, banking transactions, personal financial statements, and the basic impact of Federal taxes on personal financial decisions.

Prerequisite(s): None

Co-requisite(s): None

**ACCT 1100 Principles of Bookkeeping (3 credits)** This course covers the basic accounting cycle for service and merchandising businesses. Topics include the analyses of business transactions, recording transactions in a variety of journals, payroll procedures and the preparation of financial reports.

Prerequisite(s): None

Co-requisite(s): None

**ACCT 1104 Payroll (3 credits)** This course covers the various tax laws pertaining to the computation and payment of salaries and wages. Topics include preparation of employment records, payroll registers, timecards, employee earnings records, and governmental payroll reports.

Prerequisite(s): None

Co-requisite(s): None

**ACCT 1120 Legal Environment (3 credits)** This course is an introduction to the principles of law as they apply to citizens and businesses. Topics include the court system, legal system, contract, negotiable instruments, agency and the employer/employee relationship.

Prerequisite(s): None

Co-requisite(s): None

**ACCT 1124 Spreadsheet Concepts (3 credits)** This course covers the use of a computerized spreadsheet system for accounting applications. Topics include document creation, storage, and retrieval, editing, printing, creating charts, database applications, and file distribution.

Prerequisite(s): CPTR 1104

Co-requisite(s): None

**ACCT 1134 Computerized Accounting Applications (3 credits)** This course is an introduction to computerized accounting applications and software used in the business environment. Topics may include general ledger accounting, payroll procedures, accounts receivable, accounts payable, inventory and depreciation.

Prerequisite(s): ACCT 1100 or ACCT 2201 or instructor permission

Co-requisite(s): None

**ACCT 2200 Income Tax (3 credits)** This course provides an explanation and interpretation of the Internal Revenue Code as applied to income tax returns. Topics may include filing requirements, filing status, gross income inclusions and exclusions, gains and losses, itemized deductions, and deductions for adjusted gross income, business income and expenses, business tax credits, and payment of estimated taxes.

Prerequisite(s): None

**ACCT 2201 Accounting I: Financial Accounting (4 credits)** This course is an introduction to the fundamental accounting concepts and principles used to analyze and record business transactions. Topics include the accounting cycle, accounting for a merchandising business, accounting system design, inventory and depreciation methods, calculating payroll.

Prerequisite(s): None

Co-requisite(s): None

**ACCT 2203 Accounting II: Managerial Accounting (4 credits)** This course covers the accounting principles and concepts applicable to various capital structures. Additional topics may be covered.

Prerequisite(s): ACCT 2201

Co-requisite(s): None

**ACCT 2204 Intermediate Accounting I (4 credits)** This course is a comprehensive study of accounting theory and concepts with an analysis of the influence on accounting by various boards, associations, and government agencies. Topics include the purpose of financial reporting and the significance of the FASB's conceptual framework, preparation of financial statements, adjusting and closing entries, classification of balance sheet items, and various revenue recognition methods. Other miscellaneous topics may be included.

Prerequisite(s): ACCT 2203

Co-requisite(s): None

**ACCT 2218 Fund/Nonprofit Accounting (3 credits)** This course is concerned with the fundamentals involved in fund/nonprofit accounting. It prepares the student to apply the basic governmental accounting principles and to prepare financial statements for fund/nonprofit organizations.

Prerequisite(s): ACCT 2201

Co-requisite(s): None

**ACCT 2240 Accounting Internship (3 credits)** This course provides students with actual work experiences in accounting careers. A competency-based internship plan is developed for each student.

Prerequisite: Advisor approval.

Co-requisite(s): None

**ADMM 1120 Medical Office Procedures (3 credits)** This course covers medical office tasks performed by the medical secretary/assistant. Medical topics covered include health care careers, legal and ethical responsibilities, medical appointments, telephone techniques, medical records management, medical office management and meeting and travel arrangements.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 1125 US Healthcare Systems (3 credits)** This course is a study of the historical development of the health care delivery system. The student is given an opportunity to learn about the role of the health information professional and how this role is integrated into the health care delivery system.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 1140 Medical Billing/Insurance (3 credits)** Medical insurance plays an important role in the financial well-being of every healthcare business. This course is designed to emphasize the revenue cycle - ten steps that clearly identify all the components needed to successfully manage the medical insurance claims process. The cycle shows how administrative medical professionals "follow the money". This course covers both outpatient physician and inpatient/outpatient hospital situations.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 1145 CPT & HCPCS (3 credits)** This course is an introduction to medical coding and emphasizes coding in a medical office and other outpatient care facilities. Course topics include Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II and III procedural coding, an introduction to International Classification of Diseases (ICD)-10 coding, and legal and ethical issues related to physician and outpatient coding practices.

Prerequisite(s): ADMM 2200

Co-requisite(s): None

**ADMM 1151 AAPC Medical Coding I (3 credits)** This course teaches the fundamentals of medical coding including both diagnosis coding utilizing International Classification of Diseases, Clinical Modification, 10th revision (ICD-10-CM) and procedural coding utilizing Current Procedural Terminology (CPT). A review of medical terminology and anatomy is also presented. Course content is based on American Academy of Professional Coders (AAPC)-approved curriculum and prepares students to take the Certified Professional Coder (CPC) exam.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 1175 AAPC Medical Coding II (3 credits)** This course teaches the fundamentals of medical coding including both diagnosis coding utilizing International Classification of Diseases, Clinical Modification, 10th revision (ICD-10-CM) and procedural coding utilizing Current Procedural Terminology (CPT) and focuses on the coding of Digestive System, Urinary System and Male Genital System, Female Reproductive System and Maternity Care & Delivery, Endocrine System and Nervous System, Special Senses (Ocular and Auditory), Anesthesia, Radiology, Pathology and Laboratory, Evaluation and Management, Medicine sections. A review of medical terminology and anatomy is also presented. Course content is based on American Academy of Professional Coders (AAPC)-approved curriculum and prepares students to take the Certified Professional Coder (CPC) exam.

Prerequisite(s): ADMM 1151

Co-requisite(s): None

**ADMM 2200 Medical Language Applications (3 credits)** This course covers appropriate usage of medical language in written documentation. Authentic medical documentation will be reviewed. Proofreading for errors, analysis of content, spelling and phonetic problem solving are emphasized. A solid foundation of medical terminology is necessary for success in this class.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 2228 Advanced Medical Transcription (3 credits)** This course is a continuation of medical transcription practice. Emphasis is placed on independent practice of techniques used in a medical transcription setting. Proper formatting, appropriate terminology and development of transcription proficiency are stressed.

Prerequisite(s): ADMM 1170

Co-requisite(s): None

**ADMM 2245 Inpatient Billing (3 credits)** This course is designed to transition the student's knowledge of billing and coding concepts to billing and coding in a hospital environment. The course provides an introduction to the hospital environment and billing process. Coding concepts are reviewed in the context of hospital coding. Discussion on the relationship between billing, coding, documentation, claims forms and reimbursement is presented in various sections to provide an overall view of the connection between various elements in the billing process.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 2252 ICD-10-CM (3 credits)** This course is an introduction to diagnosis coding for billing and insurance purposes. Topics include the basis for classifying and indexing diagnoses for the purpose of standardization, retrieval, and statistical analysis. The course prepares students to assign International Classification of Diseases (ICD) diagnostic codes supported by medical documentation with entry-level proficiency.

Prerequisite(s): ADMM 2200

Co-requisite(s): None

**ADMM 2270 Healthcare Leadership (2 or 3 credits)** This course will develop necessary skills to lead a healthcare support team. The topics will include leadership styles, communication, problem solving, and team development.

Prerequisite(s): None

Co-requisite(s): None

**ADMM 2280 Advanced Medical Coding (3 credits)** This course simulates medical coding in the real world and is designed to give a full account of the healthcare code sets used within medical coding: Current Procedural Terminology (CPT), Healthcare Common Procedural Coding System (HCPCS), International Classification of Diseases, 10th revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, 10th revision, Procedure Coding System (ICD-10-PCS). Codes are presented along with an account of healthcare billing basics, as well as a description of the interconnectedness of medical coding and billing. Students gain knowledge in use of American Health Information Management Association (AHIMA) VLab software, specifically 3M Coding and Reimbursement System. Career search and advanced coding certification research is also performed.

Prerequisite(s): ADMM 1150, ADMM 1175

Co-requisite(s): None

**ADMM 2285 Internship (2 credits)** This course is designed to provide a purposeful occupational experience in Healthcare Administrative Specialist or Medical Coding career fields. Each internship is an individualized experience. A training plan is created in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program.

Prerequisite(s): Advisor approval

Co-requisite(s): None

**ADMS 1100 Keyboarding I (3 credits)** This course covers the development of keyboarding and formatting techniques. Emphasis is on building speed and accuracy in the operation of the alphabetic, numeric, symbol, and service keys and in introducing document formatting concepts. Proofreading skills are stressed.

Prerequisite(s): None

Co-requisite(s): None

**ADMS 1102 Keyboarding II (3 credits)** This course covers the development of formatting and text editing techniques. Emphasis is on building speed and accuracy in the operation of the alpha, numeric, symbol, and service keys and in developing text editing concept, critical thinking and decision making. Proofreading skills are stressed.

Prerequisite(s): ADMS 1100

Co-requisite(s): None

**ADMS 1112 Desktop Publishing/Presentation Graphics (3 credits)** This course introduces the concepts, terminology, techniques, and applications of desktop publishing. Students will integrate word processing and graphics to facilitate the designing of printed pages and presentations. Students learn to manipulate text and graphics to produce professional publications and business presentations using microcomputer software. Students

will reinforce critical thinking skills in planning, designing, and evaluating business documents and presentations.

Prerequisite(s): CPTR 1104

Co-requisite(s): None

**ADMS 1116 Business Communications (3 credits)** This course covers composing, editing, and proofreading memos, letters, and other business documents. The principles of grammar, punctuation, spelling, and word use are developed and applied. The application of teamwork and critical thinking skills is included in the course.

Prerequisite(s): ENGL 0100 or appropriate assessment scores

Co-requisite(s): None

**ADMS 1126 Business Office Management (3 credits)** This course covers office support functions appropriate in a variety of business settings such as: work organization, time management, scheduling, organizing meetings, records management, transcription techniques, document production and arranging travel.

Prerequisite(s): None

Co-requisite(s): None

**ADMS 2124 Advanced Microcomputer Technology (3 credits)** Advanced Microcomputer Technology is a "literacy" course. This course provides an overview of microcomputer concepts such as hardware devices, types of software, networking, internet applications, and computer security.

Prerequisite(s): None

Co-requisite(s): None

**ADNG 1000 Foundations of Nursing (2 credits)** The course introduces the fundamentals of nursing care and the interactive role of the nurse. Physiological topics covered include: integumentary system, elimination, infection control, safety, and assessment across the life-span. Psychosocial topics covered include: therapeutic and professional interpersonal communication and cultural competence. Nursing professional topics include: the nursing process, evidence-based practice (EBP), confidentiality, patient education, professionalism, scope of practice, and nursing informatics.

Prerequisite(s): Admission to the program, Nursing Assistant Certification/Training, BIOL 2221, BIOL 2252, ENGL 1111

Co-requisite(s): ADNG 1050, BIOL 2254, MATH 1110/1930

**ADNG 1050 Foundations of Nursing Skills (4 credits)** The course introduces the fundamentals of nursing care and the interactive role of the Nurse. Skills addressed include Vital signs, documentation, physical assessment, nursing process, wound management, care of the surgical patient, vision-hearing screening, enteral feedings, urinary

catheterization, ostomy care, airway management, and oxygen delivery devices. Medication administration concepts and associated psychomotor skills will be presented. Essential components of provider orders and the nursing role related to safe medication administration will be addressed.

Prerequisite(s): Admission to the program, Nursing Assistant Certification/Training, BIOL 2221, BIOL 2252, ENGL 1111

Co-requisite(s): ADNG 1000, BIOL 2254, MATH 1110/1930

**ADNG 1100 Pharmacology (2 credits)** This course presents the foundational pharmacological concepts. Medications' physiologic effects on the body and pharmacologic principles will be emphasized. Pharmacology principles addressed will include: major pharmacological classifications; medication effects, side effects, adverse reactions, and age-specific modifications; essential components of provider orders; and the nursing role related to safe medication administration. Included in this course is information on pharmacokinetics, pharmacodynamics, common adverse/side effects, and contraindications to drug use. Emphasis is placed on drug classifications and nursing care related to the safe administration of medications to patients across the life span.

Prerequisite(s): ADNG 1000, 1050, BIOL 2254, MATH 1110/1930

Co-requisite(s): ADNG 1150, 1200, CHEM 1100, PSYC 2201

**ADNG 1150 Nursing I (4 credits)** This course explores foundational concepts related to the pathophysiological processes affecting homeostatic balance and cell survival in the human system. Concepts of fluid & electrolytes, acid-base, oxygenation & gas exchange, hematology, nutrition, and elimination will be discussed. Learners will use assessment data to evaluate expected and unexpected outcomes and form the basis for prioritizing expected medical and nursing management of care. The nursing process, clinical reasoning, and use of research-based nursing actions are integrated throughout the course as the foundation for assisting clients across the lifespan experiencing disruptions in the health-illness continuum.

Prerequisite(s): ADNG 1000 & 1050 or ADNG 2300, BIOL 2254, MATH 1110/1930

Co-requisite(s): ADNG 1100 & 1200 or ADNG 1300, CHEM 1100, PSYC 2201

**ADNG 1200 Clinical I (2 credits)** This course will introduce the student to the role of the professional nurse in the clinical setting with the geriatric population. Emphasis will be placed on development as a member of the team, the establishment of therapeutic nurse-client relationships, and application of concepts and skills on stable patients. Role development will occur in a long-term care environment. The nursing process will be integrated throughout all aspects of the course.

Prerequisite(s): ADNG 1000,1050, BIOL 2254, MATH 1110/1930

Co-requisite(s): ADNG 1100, ADNG 1150, PSYC 2201, CHEM 1100

**ADNG 1300 Transition to Professional Nursing (4 credits)** This course is designed to help the LPN prepare for the transition to the RN role. Transitional topics include scope of practice and role differentiation, physical assessment, nursing process, patient education and evidence-based practice. Safety, infection control, and select clinical skills

will be addressed. This course addresses the integration and application of professional values and beliefs necessary for effective role transition.

Fees attached to course for Lab supplies- varies each year based on cost of supplies.

Prerequisite(s): Admission to program with LPN Advanced Standing, BIOL 2252, BIOL 2254, BIOL 2221, ENGL 1111, MATH 1110 or MATH 1930, CHEM 1100, PSYC 2201

Co-requisite(s): ADNG 1150

**ADNG 2050 Advanced Skills (2 credits)** This course develops the role and competencies of the professional nurse as they relate to management of advanced nursing skills used in the healthcare setting. Skills and/or procedures addressed include: Intravenous (IV) therapy & critical care nursing concepts. Skills are presented within the context of the nursing process, evidence-based practice, and industry certified standards of practice.

Course fees include Lab Pack purchased through NTC bookstore. Cost varies annually.

Prerequisite(s): ADNG 2100, ADNG 2150, ADNG 2400, BIOL 2256

Co-requisite(s): ADNG 2200, ADNG 2250, ADNG 2350, PHIL 1201 or PHIL 2210

**ADNG 2100 Clinical II (4 credits)** This course will prepare the student to function in the clinical setting as a professional nurse with emphasis on utilization of the nursing process, therapeutic communication, client education, evidence-based practice, and critical thinking. The student will holistically assess, plan, implement, and evaluate care in an effort to promote, maintain, and/or restore health to a variety of patients.

Prerequisite(s): Generic Students: ADNG 1100, 1150, 1200, PSYC 2201, CHEM 1100

Prerequisite(s): Step-In Students: ADNG 1150 & ADNG 1300

Co-requisite(s): ADNG 2400 & ADNG 2150

**ADNG 2150 Nursing II (4 credits)** This course explores the complex pathophysiological processes related to immunologic function, cardiovascular function, and the integration and regulation of the human system. Students will use assessment data to evaluate critical patient indicators as the basis for prioritizing care. Students will examine expected medical and nursing management of clients experiencing disruptions in health. The nursing process, clinical reasoning, and EBP (evidence-based practice) nursing actions are integrated throughout the course, forming the foundation for assisting clients across the lifespan experiencing disruptions in the health-illness continuum.

Prerequisite(s): Generic Track: ADNG 1100, 1150, 1200, PSYC 2201, CHEM 1100

Prerequisite(s): Step-In Track: ADNG 1150, 1300

Co-requisite(s): ADNG 2100, 2400, BIOL 2256

**ADNG 2200 Clinical III (4 credits)** This course will provide an opportunity for the student to implement care in a variety of clinical settings. Emphasis will be on the integration of the cognitive, psychomotor, and affective domains of the professional role. Students will be expected to integrate skills learned in previous courses to provide safe, holistic, compassionate care, in a manner that respects the dignity and value of a variety of clients. Students learn

to adapt and maintain effectiveness in new settings in an effort to promote, maintain, and/or restore health to a variety of patients.

Prerequisite(s): ADNG 2100, 2150, 2400, BIOL 2256

Co-requisite(s): ADNG 2050, 2250, 2350, PHIL 1201 or 2210

**ADNG 2250 Leadership (2 credits)** This course prepares the student to function in a multi-disciplinary, multicultural, dynamic environment. Scope of practice and role differentiation of health care practitioners is explored. The principles of leadership-management, delegation-supervision, teaching-learning, evidence-based practice, conflict management, and change are presented in the context of assimilating the ethics and standards of the profession.

Prerequisite(s): ADNG 2100, 2150, 2400 BIOL 2256

Co-requisite(s): ADNG 2050, 2200, 2350, PHIL 1201 or 2210

**ADNG 2300 Advanced Standing (6 credits)** LPN Advanced Standing credits are provided to the LPN to RN step-in student to complete their 64-credit requirement for the associate of science degree in Nursing, upon admission to the Associate of Science (A.S.) program. Advanced standing credits represent the completion of the Practical Nursing program.

**ADNG 2350 Maternal-Newborn Nursing (2 credits)** This course focuses on nursing care, health promotion, safety, and collaborative interventions for individuals and families experiencing care in the maternal-newborn environment. Potential complications of the mother and newborn will be addressed. Emphasis will be placed on accurate interpretation of client assessment data, recognition of deviations from normal, and identification of priority nursing and collaborative interventions to achieve optimal patient outcomes.

Prerequisite(s): ADNG 2100, 2150, 2400, BIOL 2256

Co-requisite(s): ADNG 2050, ADNG 2200, ADNG 2250, PHIL 1201/2210

**ADNG 2400 Psychosocial Nursing (2 credits)** The foundation of this course recognizes that mental health and mental illness occurs on a continuum. This course will focus on the therapeutic environment and implementation of the nursing process for clients across the lifespan experiencing mental health problems. Emphasis will be placed on understanding biological and environmental influences on mental health, recognizing clients in need of care, accurate interpretation of client assessment data, health promotion, identification of priority nursing and collaborative interventions to achieve optimal patient outcomes, and evaluation of the plan of care.

Prerequisite(s): Generic Track: ADNG 1100, 1150, 1200, PSYC 2201, CHEM 1100

Prerequisite(s): Step-In Track: ADNG 1300, 1150

Co-requisite(s): ADNG 2100, 2150, BIOL 2256

**AMST 1001 Automotive Motorsports Basics (4 credits)** This course covers occupational safety, shop operation procedures, power and hand tools use, shop equipment applications, fasteners, measuring instruments, service literature, general service knowledge, acceptable work habits, industry standards and expectations.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1002 Introduction to Automotive Electrical/Electronics (4 credits)** This course teaches the theory and operation of electricity, semi-conductors (transistors, diodes, light emitting diodes, fluorescent displays), and test instruments.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1003 Engine Theory/Service (4 credits)** This course covers the fundamentals of internal combustion engine operation, repair and maintenance. The procedures for removal, replacement, diagnosing, rebuilding and assembly. Proper tool and equipment applications, and failure diagnosis are emphasized in this course. The service portion of this course covers the disassembly, diagnosis, measurement, service, assembly and adjustment of engines and components.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1016 Brakes (4 credits)** This course teaches principles of brakes, hydraulic system foundations, disc and drum brakes, parking brakes, and power assist units. Emphasis is placed on operation, diagnosis, and repair of various types of brake systems. Electronic Anti-lock Brake Systems, Traction Control Systems, and Stability Control Systems are also covered.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1104 Power Train Systems (4 credits)** This course covers standard automotive and light truck clutches, drive line, differential/4x4, and manual transmission/transaxle. The clutch section includes design, adjustment, overhaul, diagnosis and repair of mechanical and hydraulic systems. The drive line section includes phasing, alignment, and balance. The differential/4x4 section covers the operation designs of various off-road, recreational, and highway vehicles. The manual transmission/transaxle section teaches the operating theory and repair procedures of manual transmissions and transaxles. Basic automatic transmission service is also covered.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1105 Steering and Suspension (4 credits)** This course covers the principles and operation of suspension and steering systems. Steering systems included are steering columns, power assist systems, steering gears, and rack & pinion systems. Suspension systems covered are independent, non-independent suspension, coil spring, leaf spring,

torsion bar, conventional shocks, and strut systems. Alignment theory will be covered and 4 wheel alignment procedures will be performed. Advanced suspension systems, electronic ride height, level control analysis and service are addressed. Tire and wheel service will also be addressed.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1130 Automotive Electrical II (4 credits)** This course teaches diagnosis and repair of charging and starting systems, interior and exterior lighting, safety devices, body electrical systems, comfort systems, and door, window, & seat control systems. The learner will use wiring diagrams to pinpoint body electrical problems and troubles. Window, door, and seat control service will also be performed. Common vehicle accessories will also be addressed.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1220 HP Drivelines (4 credits)** This course covers the principles of high performance Transmissions, Differentials and related drive train parts. Students will perform tasks related to ring and pinion set-up, and traction aids. Theory and application of automatic transmissions, and modifications that will include torque converter applications and trans-brakes. High performance manual transmission theory and service and HP braking systems will also be covered.

Prerequisite(s): None

Co-requisite(s): None

**AMST 1330 HP Fuel/Electronics/Ignitions (4 credits)** This course covers the principles of different performance enhancements systems/devices for race and street applications. Students will install and test performance devices on our Mustang chassis dynamometer and Land & Sea engine dynamometer. Systems tested will include fuel systems, exhaust systems, air induction systems, ignitions systems and engine management systems.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2001 Intro to Transportation (1 credit)** This course covers occupational safety, shop operation procedures, power and hand tool use, shop equipment applications, fasteners, measuring instruments, service literature, general service knowledge, acceptable work habits, industry standards and expectations.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2113 Heating Ventilation A/C (2 credits)** This course teaches the principles of air conditioning and its relationship to the heating system. The various types, the diagnosis of malfunctions, testing and repair are studied in the classroom. Practical experience is performed on live systems: recovering, evacuating, component replacement, charging and performance testing of the heating and air-conditioning systems.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2212 Introduction to Hybrid Vehicles (2 credit)** This course covers the theory of hybrid vehicle systems and their operation. The environmental impact of carbon based fuels will be covered. Manufacturer specific information related to hybrid vehicles and working safely on hybrid vehicles.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2215 Motorsports Fabrication (4 credits)** This course covers the basic skills required to perform repairs to the automotive chassis. Using basic gas, Arc, MIG & TIG welding procedures. Plasma cutting, grinding skills, metalworking, basic sheet metal work, tube bending and notching will also be covered. Students will design and build projects in tube steel, sheet metal. Basic lathe and mill procedures.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2216 Engine Performance (2 credits)** This course will study the many electronic control systems used on today's passenger cars and light trucks. Examples of these systems are: fuel injection, fuel delivery, ignition, emissions, engine management, and the second-generation OBD-II strategy. The environmental impact of automobiles will be addressed. Use of service literature is emphasized.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2217 Engine Performance Lab (4 credits)** In this course, students will work with scan tools, oscilloscopes, and other test equipment to diagnose the many electronic, and mechanical engine systems used on today's passenger cars and light trucks. Students will also remove and install components related to the following systems: fuel injection, fuel delivery, ignition, emissions, engine management, and the mechanical systems of the automotive engine. Students will compare the results of their diagnoses to the manufactures specifications and determine necessary repairs. The use of service literature is emphasized.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2220 Introduction to Hybrid Vehicles (2 credits)** This course covers the theory of hybrid vehicle systems and their operation. The environmental impact of carbon based fuels will be covered. Manufacturer specific information related to hybrid vehicles and working safely on hybrid vehicles. Other alternate fuel systems will also be covered in this course.

**AMST 2230 Auto Diesel/Diesel Performance (3 credits)** This course will cover principles of automotive diesel engines, combustion chamber designs, injection pumps/injectors, common rail fuel injection and turbocharger

operation. Air induction and exhaust treatment systems will also be covered.

Prerequisite(s): None

**AMST 2236 Chassis Dynamometer Lab (2 credits)** This course is designed to provide an opportunity for the student to gain proficiency in chassis dynamometer operation, including software use, vehicle inspection, weighing vehicles, and properly installing vehicle restraints.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2242 Forced Induction Systems (3 credits)** This course covers the basic theory of operation for turbochargers and superchargers. How to service and maintain stock turbo and supercharger systems. In addition, you will learn to size, design, install and dynamometer tune performance aftermarket turbo charger and supercharger systems. Related systems will be addressed to insure safe engine operation with forced induction systems.

Prerequisite(s): None

Co-requisite(s): None

**AMST 2800 Capstone (4 credits)** This course is a culminating experience. It is designed to provide opportunities for students to integrate knowledge from their core and concentration courses, to gain insight into the meanings of professionalism and professional practice, and to reflect on the norms of a discipline or profession. The project/experience must be pre-approved by the instructor.

Prerequisite(s): None

Co-requisite(s): None

**ANTH 1110 Cultural Anthropology (3 credits)** Meets MnTC goal area(s): 2,5. The course is meant to introduce students both to the diversity of human cultures and to the diversity within each of them, with an emphasis on so-called traditional societies. It looks at the major human institutions: kinship and marriage, economic production and reciprocity, gender and domestic relations, political power and forms of stratification, religious and healing beliefs and techniques, rites of passage and the life cycle. It attempts to make sense of cultural relativity: how seemingly very different customs or institutions can actually be so similar, in structure or function; but also how apparently very similar institutions can, in different societies, be in fact so different.

Prerequisite(s): None

Co-requisite(s): None

**BEST 1100 Basic Education & Skills Training - HVAC (2 credits)** This is an introductory course where students will develop and apply basic academic and career skills contextualized in the HVAC field of study.

Prerequisite(s): None

Co-requisite(s): None

**BIOL 1004 Intro to Anatomy & Physiology (3 credits)** This course is designed to assist the student in developing a basic understanding of the normal structure and function of the body.

Prerequisite(s): None

Co-requisite(s): None

**BIOL 1111 General Biology (4 credits)** Meets MnTC goal area(s) 3 & 10 This is an introductory level course where students study fundamental concepts of cell biology, the chemical and physical basis of life, concepts in genetics, evolution, and the impact that biological and genetic advances have on society and the biosphere. This course includes 3 lecture hours and 2 lab hours per week.

Prerequisite(s): None

**BIOL 2130 Principles of Nutrition (3 credits)** Meets MnTC Goal: 3 Principles of Nutrition provides an introduction to the basic concepts related to nutrients in foods and their metabolic functions. The course will also focus on methods for assessing nutritional status and dietary adequacy, as well as its applications to phases of the human life cycle.

Prerequisite(s): None

Co-requisite(s): None

**BIOL 2221 Microbiology (3 credits)** Meets MnTC goal area(s):3 This course is an introduction to fundamental theories, principles and methods of microbiology. Structure, function, effects of physical factors, and inhibition and killing of microorganisms will be studied. Microbial interactions with humans and their immune system are introduced. Students are familiarized with the concepts of medical and environmental microbiology and microbial diversity, as well as the necessary laboratory techniques needed to study those organisms. This course includes a laboratory component.

Prerequisite: None

Co-requisite(s): None

**BIOL 2252 Anatomy & Physiology I (3 credits)** Meets MnTC Goal area(s):3 This course is a comprehensive overview of human anatomy and physiology. The course is a study of the cells, tissues, and organs of the integumentary, skeletal, muscular and nervous systems. This course includes a laboratory component.

Prerequisite(s): BIOL 1004 or appropriate score on the science assessment.

Co-requisite(s): None

**BIOL 2254 Anatomy & Physiology II (3 credits)** Meets MnTC Goal Area(s):3 This course is a comprehensive overview of human anatomy and physiology. Study of the cells, tissues, and organs of the endocrine, circulatory, lymphatic, respiratory, digestive, excretory, and reproductive systems. This course includes a laboratory component.

Prerequisite(s): BIOL 2252 or Anatomy & Physiology I

Co-requisite(s): None

**BIOL 2256 Advanced Physiology (2 credits)** Meets MnTC goal area(s):3 This course is designed to increase the students understanding of the mechanisms involved in the normal functioning of the human body, with lesser emphasis regarding the effects of disease on that functioning. Focus is on the body defenses and interaction and integration of body processes. Upon completion of this course, students should have an enhanced knowledge and appreciation to the complexities of the human body by learning both the human anatomy of physiology for multiple organ systems and an understanding of cellular and molecular mechanisms that underlie human physiology. This is a general education course for all students interested in better understanding of human physiology. This course includes lab-like activities and exercises.

Prerequisite: BIOL2254 or Anatomy & Physiology II

**BLDG 1102 Construction Safety (1 credits)** This course provides learners with an understanding of occupational safety practices, basic requirements, purpose and enforcement of general safety rules.

Prerequisite(s): None.

**BLDG 1108 Metal Fabrication (2 credits)** This course provides an understanding of the scope and importance of welding in our society; welding safety, basic joints, positions, processes, welding procedures, electricity, and certification. An intro to SMAW (stick), GMAW (wire), and oxy-acet processes will be covered utilizing lecture and lab exercises.

Prerequisite(s): None

**BUSN 1100 Entrepreneurial Finance (3 credits)** This course will provide the student with the information and tools necessary to fund a small business. The student will be exposed to various methods of raising both start-up and operating capital. These methods include bank loans, SBA loans, and venture financing. The student will practice presenting his or her company in preparation for presenting to bankers and investors. The key topics include evaluating new business ideas and ventures, reading and understanding financial statements of rapidly growing companies, and developing financing strategies. There will also be discussion on various debt and equity alternatives of financing, the different valuation techniques, and key tactics and approaches to negotiating term sheets.

Prerequisite(s): None

Co-requisite(s): None

**BUSN 1110 Entrepreneurial Operations (2 credits)** This is an integrative course that focuses on consulting assignments with actual small business firms. It draws in the skills learned in the several business disciplines, and applies them to operating small businesses, including identifying problems and opportunities, and solving them. This is an integrating course dealing with the problems of general management of businesses and organizations. Strategy is stressed, using cases, simulation and field study and experiential activities for analysis and decision making.

Prerequisite(s): None

**BUSN 2100 Business Statistics (3 credits)** This course is a collection, presentation, analysis and interpretation of business and economic data.

Prerequisite(s): None

Co-requisite(s): None

**CDEV 1101 Health Safety and Nutrition (3 credits)** This course guides the student in obtaining skills needed to establish and maintain a physically and psychologically safe and healthy learning environment for young children. Topics include preventing illness and accidents; handling emergencies; providing health, safety, and nutrition educational experiences; meeting children's basic nutritional needs; child abuse prevention, safe sleep practices, and current health-related issues. The importance of collaboration with families and allied health professionals is addressed. This course does not include CPR or first aid certification.

This course meets Knowledge and Competency Framework requirements for the Parent Aware Star Rating.

Prerequisite(s): None

Co-requisite(s): ENGL 0100

**CDEV 1104 Child Growth and Development (3 credits)** This course provides an overview of child development from prenatal through eight years of age. Emphasis is placed on developmental domains and learning: physical, cognitive, language, creative, emotional, and social (includes cultural). It integrates theory with observation and assessment of development in home and center-based settings.

This course provides learners with a variety of field experience opportunities, including in person, virtual observations, and artificial intelligence-powered web simulations.

This course meets Knowledge and Competency Framework requirements for the Parent Aware Star Rating.

Prerequisite: None

Co-requisite: CDEV 1116, ENGL 1100

**CDEV 1107 Intro to Early Childhood Education (3 credit)** This course provides an overview of the early childhood field, including philosophies, regulations, and quality standards while connecting current and past research to sound educational practices and policies. Students will examine the roles, responsibilities, and job requirements of professionals in a variety of early childhood career settings in relation to ethical guidelines and professional standards.

**CDEV 1111 Practicum I (3 credit)** This course provides an opportunity to apply knowledge and skill in an actual child development setting. The learner will demonstrate competency in promoting health, safety, and nutrition, arranging developmentally appropriate learning experiences, implementing positive guidance strategies, examining the learning environment, and communicating with parents.

This course provides learners with a variety of field experience opportunities, including in person, virtual observations, and artificial intelligence-powered web simulations.

Prerequisite(s): CDEV 1104, 1101

Co-requisite(s): CDEV 1138

**CDEV 1114 Child and Family Relations in a Diverse World (3 credits)** This course provides the learner with an opportunity to examine how current societal and community issues impact the well-being of children and the well-being of families. Cultural diversity/dynamics, bias, public education, housing, employment, crime, health care, legal services and social services will be explored.

This course meets Knowledge and Competency Framework requirements for the Parent Aware Star Rating.

Prerequisite(s): None

Co-requisite(s): ENGL 1100

**CDEV 1116 Guiding Young Children (3 credits)** This course examines the positive, developmentally appropriate strategies used to guide children's behavior and support social and emotional development during early childhood. Emphasis is on problem prevention and positive guidance strategies; recognition, communication, limit setting, problem solving, and behavior modification. Multiple influences on child behavior as well as strategies to support self-regulation and peer relationships during early childhood will be examined. This course integrates theory with developmentally and culturally appropriate practices (DCAP) in home and center-based settings.

This course provides learners with a variety of field experience opportunities, including in person, virtual observations, and artificial intelligence-powered web simulations.

This course meets Knowledge and Competency Framework requirements for the Parent Aware Star Rating.

Prerequisite(s): ENGL 1111

Co-requisite(s): CDEV 1104

**CDEV 1135 Creative Activities and Environments (3 credits)** This course examines the role of adults in providing physical and social learning environments, positive interactions, and developmentally and culturally appropriate practices (DCAP) activities that support learning and creativity in the early childhood years. The nature and importance of play as a vehicle for child learning is addressed as well as implementation of developmentally and culturally appropriate practices. The importance of child choice and active exploration as strategies to meet appropriate goals for learning and development are stressed.

This course meets Knowledge and Competency Framework requirements for the Parent Aware Star Rating.

Prerequisite(s): None

Co-requisite(s): None

**CDEV 1138 Observing & Assessing (3 credit)** This course provides the learner with an opportunity to observe and assess children's development. Under the supervision of an instructor, the learner observes, records, interprets, and develops plans to strengthen the development of children, infants through school-age.

This course provides learners with a variety of field experience opportunities, including in person, virtual observations, and artificial intelligence-powered web simulations.

This course meets Knowledge and Competency Framework requirements for the Parent Aware Star Rating.

Prerequisite(s): CDEV 1104, 1116

Co-requisite(s): CDEV 1110

**CDEV 2202 Abuse and Neglect (2 credits)** This course provides students an opportunity to examine child abuse and neglect with an emphasis on the role of child development professionals in the identification, prevention, and treatment of child abuse and neglect.

Prerequisite(s): None

Co-requisite(s): ENGL 0100

**CDEV 2208 Infant/Toddler Learning Experience (3 credits)** This course provides an overview of infant/toddler (I/T) learning experiences, in home or center-based settings through the arrangement of the physical setting, provision of materials, construction of curriculum and implementation of learning experiences. Learners integrate knowledge of developmental needs, developmentally appropriate environments, and effective care-giving and teaching methods in an approved lab setting, or through virtual observations and artificial intelligence-powered web simulations.

Prerequisite(s): CDEV 1104, CDEV 1116

Co-requisite(s): None

**CDEV 2216 Children with Difficult Behavior (2 credits)** This course provides the student an opportunity to assess challenging behavior in children. The student will examine factors contributing to challenging behavior and identify prevention and positive guidance intervention strategies to resolve challenging behavior.

Prerequisite(s): CDEV 1132

Co-requisite(s): CDEV 2206

**CDEV 2220 Foundations of Early Childhood Educations (3 credits)** This course provides an advanced level exploration of program management skills for teachers of preschoolers and primary grades. Emphasis is on organizing, implementing, and evaluating a quality, comprehensive program that facilitates health development.

Prerequisite(s): CDEV 1138

Co-requisite(s): None

**CDEV 2222 School-Age Development (2 credits)** This course provides the student with an overview of school-age development: physical, cognitive, language, creative and social-emotional. It integrates theory with developmentally appropriate practice in home and center settings. The student will plan appropriate materials and activities for school-age children.

Prerequisite(s): CDEV 1138

**CDEV 2224 Intro to Language and Literacy (3 credits)** This course is an introduction of language and literacy development from birth to age eight. Students will obtain skills in creating developmentally appropriate learning experiences that support emerging literacy skills in children at all developmental levels. Students will apply knowledge of child development to a wide range of instructional practices, approaches, methods, and curriculum materials to promote conversation, literature appreciation, and to foster literacy in the home.

Prerequisite(s): CDEV 1138

Co-requisite(s): CDEV 2220

**CDEV 2230 Children with Differing Abilities (3 credits)** This course examines the development of children with special needs and prepares caregivers to integrate children with special needs into child development settings. The course includes discussion of important aspects of education for young children in special education and inclusive settings and facilitates learners' development of educational philosophy. In cooperation with the lab site supervisor, learners develop, implement, and evaluate lesson plans that include teaching strategies and needed adaptations for selected developmental areas. Artificial intelligence-powered web simulation and virtual observation skills will be used throughout the semester.

Prerequisite(s): CDEV 1138

Co-requisite(s): None

**CDEV 2237 Parent & Professional Relations (3 credits)** This course covers the relationship between the caregiver, families and co-workers. It explores strategies to maintain an open, friendly, and cooperative relationship with families and co-workers. Community and cultural considerations, potential barriers that may inhibit parent involvement, and strategies for productive family involvement are examined. This course will also explore parent conferences, conflict resolution, and staff professionalism.

Prerequisite(s): CDEV 1138

Co-requisite(s): ENGL 0100

**CDEV 2240 Practicum II (4 credits)** This course provides the learner with an opportunity to integrate theory and practice, applying knowledge and skill in an instructor approved, licensed child development setting. Learners participate in the setting as members of the teaching team. Learners implement a variety of learning experiences that are developmentally appropriate and culturally sensitive for a specific group of children. Artificial intelligence-powered web simulations and virtual teaching may be incorporated throughout the semester. This course is not designed to transfer to a four-year university.

Prerequisite(s): CDEV 1110, CDEV 2230, and Instructor approval

**CDEV 2286 Pre-School Internship (4 credits)** This course provides the learner an opportunity to integrate theory and practice, applying knowledge and skills in an instructor approved, licensed pre-school development setting. Learners participate in the setting as members of the teaching team. Learners implement a variety of learning experiences that are developmentally appropriate and culturally sensitive for a specific group of children. Learners complete a portfolio documenting learning experiences based on selected BOT standards.

Prerequisite(s): Instructor approval

Co-requisite(s): None

**CHEM 1100 Intro to Chemistry (4 credits)** Meets MnTC Goal Area(s):3

This course is designed to provide the student with an understanding of principles and theories of chemistry, atomic and molecular structure, elements, compounds, mixtures, the periodic table, the nature of gasses, liquids and solid states, chemical reactions and stoichiometry. This course includes a laboratory component.

Prerequisite(s): MATH0081 or appropriate placement scores.

**CMAE 1502 Technical Math (3 credits)** This is an introductory technical math course. The course is for students who have basic math skills and for those who need basic technical math concepts. The primary goals of this course are to help individuals acquire a solid foundation in algebra and geometry used in a technical setting. This course will show how these skills can model and solve authentic real-world problems.

Prerequisite(s): Appropriate placement scores for Reading and Math.

Co-requisite(s): None

**CMAE 1506 Introduction to Computers (2 credits)** This is an introductory course in Microsoft Office computer applications for technical fields. The primary goal of this course is to help individuals acquire a hands-on working knowledge of current personal computer applications including word-processing, spreadsheets, database, presentation, and internet browser software.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1510 Print Reading (2 credits)** This course will give students an understanding of basic mechanical drawing principles. Topics include the alphabet of lines, arrangement of views, orthographic projections, scaling, dimensioning, tolerancing, and symbols. Students will read and interpret mechanical drawings.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1514 Safety Awareness (2 credits)** This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Safety. The curriculum is based upon federally endorsed national standards for production workers including Occupational Safety Health Administration (OSHA) standards relating to Personal Protective Equipment (PPE), lockout/tagout (LOTO), Hazardous Material (HAZMAT), tool safety, and confined spaces.

Prerequisite(s): Appropriate placement scores for Reading

Co-requisite(s): None

**CMAE 1518 Manufacturing Engineering Technology/Technician (2 credits)** This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Manufacturing Processes. The curriculum is based upon federally endorsed national standards for production workers emphasizing lean manufacturing principles, basic supply chain management, communication skills, and customer service.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1522 Quality Practices (2 credits)** This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Quality Practices. The curriculum is based upon federally endorsed national standards for production workers. Emphasis is placed on Continuous Improvement concepts and how they relate to a quality management system. Students will be introduced to a quality management system and its components. These include corrective actions, preventative actions, control of documents, control of quality records, internal auditing of processes, and control of non-conforming product.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1526 Maintenance Awareness (2 credits)** This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Maintenance Awareness. The curriculum is based upon federally endorsed national standards for production workers. The course introduces the concepts of predictive and Total Productive Maintenance (TPM) with the fundamental principles of lubrication, electricity, hydraulics, pneumatics, and power transmission systems. Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1528 Career Success Skills (1 credit)** This is an introductory career success skills course. The primary goal of this course is to help individuals acquire a solid foundation in the basic skills for a successful career. This course will identify the skills important to businesses and help the student assess his/her level of skill. The course will provide suggestions for how the student can improve his/her level of skill.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1560 Interpreting Symbols (2 credits)** Welding symbols are used to facilitate communication among the designer, fabricator, and inspection personnel. To accurately layout and fabricate parts, the welder will need basic knowledge of working drawings and their significance to the welding industry. Students will break down welding prints to develop skills necessary to fabricate individual component parts of welded structures. Written and fundamental tests will be administered in accordance with American Welding Society (AWS) standards and the appropriate correlating code books (AWS A2.4). Prerequisite(s): Appropriate placement scores for Reading.

Reading.

Co-requisite(s): None

**CMAE 1562 Oxyfuel Welding (3 credits)** Covers the use of oxy-fuel equipment while welding, cutting, brazing, using Plasma Arc Cutting (PAC) and Air Carbon Arc Cutting (CAC-A) processes, including thermal welding, laser cutting equipment and safety. Welds will be made in flat, horizontal, vertical and overhead positions. Written and fundamental tests will be done in accordance with the American Welding Society (AWS) codes and standards.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1564 Shielded Metal Arc Welding (SMAW) (3 credits)** Students will study and demonstrate safety practices with Shielded Metal Arc Welding (SMAW). Students will also be introduced to the types of power sources used for arc welding, process applications, electrode selections, overview of weld types, and other work-related safety conditions in the welding field. Time will be spent in the lab developing skills utilizing SMAW processes. Welds will be made in the flat, horizontal, vertical, and overhead positions. Written and fundamental tests will be completed in accordance with American Welding Society (AWS) codes and standards.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1566 Gas Metal Arc Welding/ Flux Cored Arc Welding (3 credits)** Students will study and demonstrate safety practices with Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW). The GMAW and FCAW processes will be discussed in depth including the different type of modes of transfer available, shielding gases, and the different types of materials that can be welded. The differences in the electrode types of gas-shielded wires and self-shielded wires will be discussed, along with the types of shielding gases that are used. There will be discussions on the importance of how the welding process intersects with arc welding symbols and codes. There will also be a review of procedures used in visual inspections of welds. Time will be spent in the lab developing skills using GMAW and FCAW processes. Welds will be made in the flat, horizontal, vertical, and overhead positions. Written and fundamental tests will be completed in accordance with American Welding Society (AWS) codes and standards.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1568 Gas Tungsten Arc Welding (3 credits)** This course covers the safety hazards and applications for Gas Tungsten Arc Welding (GTAW) in the welding industry. Material covered will be power sources, setup, types of current, current selection, shielding gases, and torch types. Procedures and potential problems welding various metals (Aluminum, Stainless Steel, and Mild Steel) will be addressed in this course. Applications for the process in different industries, as well as the use of back purging will be discussed. Welds will be made in the flat, horizontal, vertical and overhead positions. Written and fundamental tests will be completed in accordance with the American Welding Society (AWS) codes and standards.

Prerequisite(s): Appropriate placement scores for Reading.

Co-requisite(s): None

**CMAE 1570 Metallurgy (1 credit)** This course covers the study of metals and the effects of welding and heat treatments on them. Metallurgical terminology will be an important part of the course. Physical and mechanical properties of ferrous and nonferrous metals will be covered along with the classifications of different types of metals. The range of materials and their usefulness in particular applications will be discussed. Written tests will be completed in accordance with the American Welding Society (AWS) codes and standards.

Prerequisite(s): Appropriate placement scores for Reading.

**CMHW 1000 Community Health Worker Role, Advocacy, Outreach, & Resources (3 credits)** This course defines the role of the Community Health Worker (CHW). Students will explain strategies for personal safety in relations to home visits. Students will also gain an understanding of value of self-care, and personal wellness. Students will also become familiar with the health-related needs of their communities and cultural considerations. Students will learn about their role as a liaison, connecting clients and appropriate community resources.

Prerequisite(s): None

**CMHW 1100 Health Communication, Teaching & Capacity Building (3 credits)** This course will introduce concepts of verbal and non-verbal communication required for the Community Health Worker (CHW) to effectively interact with clients, their families and healthcare providers of all backgrounds. Students apply skills such as active listening and motivational interviewing.

This course also focuses on the CHW's role as a teacher to increase the capability of the community and the client to access the health care and social services systems. Course materials will emphasis empowering clients to become self-sufficient in achieving personal health goals within the role of the CHW.

Prerequisite(s): None

Co-requisite(s): None

**CMHW 1200 Documentation, Legal & Ethical Issues in Community Health Work (3 credits)** This course focuses on the legal and ethical dimensions of the Community Health Worker's (CHW) role. Included are boundaries of the CHW position, agency policies, confidentiality, liability, mandatory reporting, and cultural issues that can influence legal and ethical responsibilities.

This course also focuses on the importance and ability of the CHW to gather, document and report client visits and other activities. The emphasis is on appropriate, accurate and clear documentation considering legal and agency requirements.

Prerequisite(s): None

Co-requisite(s): None

**CMHW 1300 Health Promotion (5 credits)** This course focuses on the role of the Community Health Worker (CHW) in health promotion and disease prevention/management including cultural navigation, social determinants of health, connections to resources and supporting clients and families.

Prerequisite(s): CMHW 1000, CMHW 1100, and CMHW 1200

Co-requisite(s): CMHW 1300

**CMHW 1400 Community Health Worker Internship (2 credits)** Students will complete three different practical experiences (field exploration, field experience, field application). Students will also discuss issues relevant to the career of Community Health Workers in the online classroom. The student is expected to complete a total of 80 hours at their approved internship site.

Prerequisite(s): CMHW 1000, CMHW 1100, and CMHW1200

Co-requisite(s): CMHW 1300

**COMM 1102 Applied Communications (3 credits)** This course is designed to teach the basics of style and substance in oral and written communications. Students will: 1)gain confidence in preparing, practicing, and evaluating written and oral work, 2)understand communication theory, 3)produce clear, creative, and logical speeches and application letters, and 4)understand the vital role communication has in the world of work.

Prerequisite(s): ENGL0 100 or appropriate assessment score

Co-requisite(s): None

**COMM 2250 Technical Communications (2 credits)** This course is designed to help the student understand the importance of written and verbal communication in the workplace and to improve the student's ability to discuss employment-related concepts and write about them in an organized, clear, concise, and correct manner. The foundation of technical communication is audience analysis, careful observation, accurate summary, insightful analysis and evaluation, and fair use of material from other sources, will be applied to various technical formats and applied to the student's field of study.

Prerequisite(s): ENGL 0100 or appropriate assessment score

**CONE 1102 Intro to Electrical Circuit Theory (4 credits)** This introductory course provides the knowledge of electrical theory including atomic structure, Ohm's Law, complex circuits, sine wave principles, inductive and capacitive circuits as it relates to the National Electrical Code.

Prerequisite(s): None

Co-requisite(s): None

**CONE 1104 Intro to NEC (2 credits)** This course provides an introduction to the National Electrical Code. The student develops basic skills and understanding of the National Electrical Code book and how it applies to electrical applications in the field.

Prerequisite(s): None

Co-requisite(s): None

**CONE 1106 Wiring I (4 credits)** This course is an introductory course to the electrical construction industry. Students will be introduced to various hand and power tools used in the electrical field. Students will learn about basic electrical circuits and wiring methods through hands on lab projects. Residential service equipment and basic electrical circuits will be examined. This course emphasizes applying safe work practices and the National Electrical Code.

Prerequisite(s): None

Co-requisite(s): CONE 1104

**CONE 1107 Intro to Residential Wiring (3 credits)** This course provides a fundamental technical understanding of residential wiring. In addition, basic wiring skills for residential occupancies will be practiced in lab settings for residential occupancies applying National Electrical Code standards.

Prerequisite(s): None

Co-requisite(s): BLDG 1102

**CONE 1108 Electrical Circuit Theory (4 credits)** This course provides the learner with an understanding of complex resistive, inductive, and capacitive circuits, transformers and single-phase and three-phase AC connections and calculations.

Prerequisite(s): CONE1102

Co-requisite(s): None

**CONE 1114 National Electrical Code (2 credits)** This course provides an understanding of the National Electrical Code articles related to overcurrent protection, raceways, special systems, panelboards, motors, compressors, transformers and the State Electrical Act.

Prerequisite(s): CONE 1104

Co-requisite(s): None

**CONE 1115 Electrical Blueprint/Estimating (2 credits)** This course provides the student with a working knowledge of residential blueprints and specifications. The student gains an understanding of blueprints, then interprets and applies this knowledge to the electrical industry.

Prerequisite(s): CONE 1104

Co-requisite(s): None

**CONE 1116 Conduit/Tool Applications (2 credits)** Numerous applications and skills will be developed in this course including bending, threading, and installation of various types of conduit. This course also provides a review of the operation and safety of both hand and power tools used in the construction electricity field.

Prerequisite(s): None

**CONE 1117 Residential Wiring Lab (5 credits)** This course covers the practical applications of residential wiring including materials used, proper tool care and use. Topics include installation of wiring methods, branch circuits, service-entrance equipment, device installation, blueprint reading, and application of the National Electric Code. This course is integrated with Residential Wiring and Intro to the NEC students must also be enrolled in CONE 1107 and CONE 1104.

Prerequisite(s): None

Co-requisite(s): CONE 1107, 1104

**CONE 1119 Wiring II (6 credits)** This course covers the practical applications of residential wiring including materials used, proper tool care and use. Topics include installation of wiring methods, branch circuits, service load calculations, sub panel and feeder sizing and installation, blueprint reading, and application of the National Electric Code.

Prerequisite(s): CONE 1106

Co-requisite(s): None

**CONE 1300 Electrical Safety (2 credits)** This course is designed to familiarize the student with the safety practices, procedures, and hazards in the installation and maintenance of electrical systems and equipment. Including identification of arc flash hazards, selection and use of test equipment, Lockout Tagout and Personal Protection Equipment. The course will use the National Fire Protection Agency 70E Standard for Electrical Safety in the Workplace and Occupational Safety Hazard Administration (OSHA) regulations.

Prerequisite(s): None

Co-requisite(s): None

**CONE 2000 Industry Career Skills (1 credit)** This course will help individuals acquire a solid foundation in the basic skills for a success career in the electrical field. This course will help the student identify personal accountability, civic responsibility, organizational and management skills. This course will cover resume building and interviewing skills along with job searching techniques.

Prerequisite(s): None

Co-requisite(s): None

**CONE 2100 Instrumental Process Control (2 credits)** Students are introduced to the concept of Instrumentation and Process Control. This course will focus on the understanding of those systems used in the process control industries including electrical devices, pneumatic devices, hydraulic devices, and mechanical devices. This course is a hands-on application through lab exercise.

Prerequisite(s): None

Co-requisite(s): None

**CONE 2106 Wiring III (5 credits)** This course examines the material and design aspects of commercial wiring. Topics included are raceways, boxes, design requirements for conduit layouts, circuit overcurrent protection, branch circuit, receptacles, lighting control and lighting. The National Electric Code (NEC) will be used as a standard for the lab installations. Safety on the job will be emphasized in the course.

Prerequisite(s): CONE 1119

Co-requisite(s): None

**CONE 2107 Wiring IV (5 credits)** This course covers the installation methods and materials used in commercial and industrial wiring. Topics included are transformers, busways, motor installation, distribution, special systems, and industrial hazardous locations, and the study of the National Electrical Code relating to these topics.

Prerequisite(s): CONE 2106

Co-requisite(s): None

**CONE 2114 National Electrical Code II (2 credits)** This course covers the use of the current National Electrical Code. All chapters of the NEC will be examined with an emphasis on Grounding, Special Occupancies, Special Equipment, Special Conditions and Communication Systems.

Prerequisite(s): CONE 1114

Co-requisite(s): None

**CONE 2200 Building Automation (3 credits)** This course will enable you to identify and describe the major components in a Building Automation System (BAS) along with the basic mechanical components and controls in an Heating Ventilation Air Conditioning (HVAC) control system. You will be able to describe and explain the basic functions of Direct Digital Control (DDC) systems and Human Machine Interface(HMI) basics, reference codes and standards applicable to BAS, and justify control components for project work.

Prerequisite(s): None

Co-requisite(s): None

**CONE 2210 Electronic Motor Control (2 credits)** This course provides application of basic theory and operation to electronic motor control including semi-conductor, rectifiers, regulators, and amplifiers.

Prerequisite(s): CONE1108, 2216

Co-requisite(s): None

**CONE 2212 Commercial Wiring (3 credits)** This course covers materials and design aspects of commercial wiring, in particular, lighting and fuse applications. Topics included are lighting and lamp installation and selection, fuse selection, special outlets, load schedule, short circuit calculations and emergency illumination.

Prerequisite: BLDG 1102

Co-requisite(s): None

**CONE 2216 Motor Control (3 credits)** This course provides the knowledge of electrical motors, including ladder logic, safety practices, NEC code applications, control, and complex schematic reading and circuit wiring.

Prerequisite(s): CONE 1104

Co-requisite(s): CONE 2226

**CONE 2217 Commercial Wiring Lab (5 credits)** This course is a hands on application of commercial wiring. Topics included are raceways, boxes, design requirements for conduit layouts, circuit overcurrent protection, lighting, and service equipment.

Prerequisite: None

Co-requisite(s): None

**CONE 2226 Motor Control Lab (4 credits)** This course utilizes a hands on approach to learning motor control circuit wiring. Students will learn to construct and build ladder diagrams, install typical motor control circuits in conformance with the National Electrical Code and the use of standard diagrams and wiring plans. Troubleshooting of circuits will be emphasized to allow students to develop critical thinking skills.

Prerequisite: None

Co-requisite(s): CONE 2216

**CONE 2242 Alternative Energy Methods (2 credits)** This course will cover basic principles and history of alternative energy sources. The utilization of renewable sources (solar, wind, geothermal, etc.) as well as alternatives in building operations (microturbines, fuel cells, combined heat and power) will be examined. Alternative and traditional energies will be defined and compared in terms of today's use. Emerging energy career areas will be discussed.

Prerequisite(s): None

Co-requisite(s): None

**CONE 2248 Code Applications (2 credits)** This course applies the principles of the National Electrical Code to job specific situations.

Prerequisite(s): None

Co-requisite(s): CONE 2114

**CONE 2300 Programmable Logic Controllers (3 credits)** This course covers the theory, operation, installation, hardware, software, and practical applications of the programmable logic controllers. Basic PLC programming techniques for counters, timers, and sequencers will be presented.

Prerequisite: CONE 1102 or Instructor approval

Co-requisite(s): None

**CONE 2307 Industrial Wiring (2 credits)** This course covers the installation methods and materials used in industrial wiring. Topics included are transformers, busways, motor installation, industrial metering, overcurrent system coordination, ground detection, grounding systems, power factor correction, surge protection, distribution, special systems, and industrial hazardous locations, and the study of the National Electrical Code relating to these topics.

Prerequisite(s): None

Co-requisite(s): None

**CONE 2400 Adv Programmable Logic Control (2 credits)** This course provides the student additional applications of programmable logic controllers (PLC) as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing to equipment.

Prerequisite(s): CONE 2300

Co-requisite(s): None

**CONE 2600 Grounding and Bonding (2 credits)** This course combines lecture and laboratory practice to introduce students to the knowledge surrounding the grounding and bonding of electrical systems and how it is addressed in the National Electric Code. The course introduces students to the equipment, materials, testing processes, and provides instruction on the grounding and bonding techniques.

Written and demonstration tests will be done in accordance with the industry standards and the current edition of the National Electric Code.

Prerequisite(s): CONE 2114

**CONE 2800 Capstone (3 credits)** This course will provide students with a significant Capstone Project in Electrical Technology and will generally include topics of current interest or topics not covered in courses currently offered by the department or in combinations not currently available. This aims to provide students with a significant experience that requires the application of disciplined expertise in a real-world context. Project advances the hands-on application of program learning with the assembly, testing, trouble-shooting, and dismantling of individual and/or group capstone projects. Students will prepare and complete a project (with instructor's approval).

Prerequisite(s): CONE 1117, CONE 2217, CONE 2226 and CONE 2300

Co-requisite(s): None

**CPTR 1104 Computerized Business Applications (3 credits)** This course consists of 2 parts. Part 1 is a Literacy component covering D2L/E-mail, Smartthinking/Research, and computer security. Part 2 of the course covers Microsoft Office including Word, Excel, Access, and PowerPoint.

Prerequisite(s): None

Co-requisite(s): None

**CPTR 1105 Intro to Computers - Medical Applications (3 credits)** This course will introduce students to concepts and skills they will need for a successful career in the medical office field. Students will receive instruction on key tasks for studying medical assisting, health information management and health information technology. In addition, the course will cover word processing, excel, power-point, access, email, Internet and Desire to Learn.

Prerequisite(s): None

Co-requisite(s): None

**CPTR 1106 Microcomputer Databases (3 credits)** This course covers database concepts, design, and construction using the latest database software. Topics include database normalization and table relationships, database objects, file creation, file manipulation, queries, macros, form development, and report generation. Database programming concepts will also be introduced.

Prerequisite: CPTR1104

Co-requisite(s): None

**CPTR 1138 Information Systems (3 credits)** This course is an introduction to information systems. Topics include an overview of data communications and information systems used in a variety of organization types, network hardware, software, topologies and resources, hardware and communications standards, and the systems development life cycle.

Prerequisite(s): None

Co-requisite(s): None

**CPTR 1142 Network Essentials (3 credits)** This course gives students the knowledge necessary to work with network administration environments. As well as learn the ability to implement, administer, and troubleshoot information systems.

Prerequisite(s): None

Co-requisite(s): None

**CPTR 1148 Microcomputer Operating Systems (3 credits)** This course covers basic information about computer hardware and software and the use of the Windows operating system. Topics include file management techniques, utilizing common screen elements, multi-tasking, object linking, and customizing the desktop.

Prerequisite(s): None

Co-requisite(s): None

**CREF 1600 Commercial Refrigeration Introduction Internship (1 credit)** The purpose of the Commercial Refrigeration Introduction Internship or early experiential learning experience is to enable the Commercial Refrigeration students to gain valuable work experience within the true industry environment. This experience is designed to complement the course work taken so that your technical education experience is enhanced. Experiential learning is an educational plan that integrates classroom study with practical work experience. It is intended to contribute meaningfully to your over-all preparation by providing an opportunity for the practical application of skills and concepts learned in your technical classes. An internship is much more than a job; it is a course which offers you an individualized educational experience through the study of a structured employment situation. The credit is for the learning-not the work experience.

Prerequisite(s): None

Co-requisite(s): None

**CREF 1700 Introduction Commercial Refrigeration Systems (3 credits)** This course covers the theory of and practical application in the maintenance of commercial refrigeration; high, medium and low temperature systems as they relate to Light Commercial Refrigeration. The student will have an understanding of various controls and components used in these applications. This course covers design, installation, piping procedures, wiring, operation, and troubleshooting. The student will also study air-cooled, water cooled, and evaporative-cooled condensers and their applications.

Prerequisite(s): None

Co-requisite(s): None

**CREF 1710 Introduction To Commercial Refrigeration Electronic Controls Systems (4 credits)** This course will focus on basic procedures related to the design, installation and repair of commercial HVAC equipment electronic control systems. Prerequisite(s): CREF 1700

Co-requisite(s): None

**CREF 2100 Commercial Refrigeration Racks & Chillers Theory Design & Install (4 credits)** Commercial Refrigeration Rack and Chillers Theory, Design, and Install will covers both large and small commercial applications including high pressure systems, low pressure systems, lithium bromide systems, and ammonia systems, identification of compressors and controls, evaporators, condensers, connecting refrigerant lines, and system

accessories; use of refrigerants; evacuation; pressurizing; testing for leaks; and charging. Students will also tear down and inspect compressors.

Prerequisite(s): CREF 1700

Co-requisite(s): CREF 1710

**CREF 2600 Commercial Refrigeration Capstone Internship (3 credits)** The Commercial Refrigeration Capstone Internship provides college credit for work experience in a field related to the student's degree program. As the capstone course for the program, the internship integrates the knowledge, concepts and skills associated with a program of study and helps students understand the "real world" applications of their academic studies. It is one of the final courses taken fourth semester. The student's work experience must meet identified learning outcomes in order to get course credit. The internship is much more than a job; it is a course which offers you an individualized educational experience through the study of a structured employment situation. The credit is for the learning-not the work experience.

Prerequisite(s): None

Co-requisite(s): 4th Semester Course

**CRLT 1102 Contemporary Career Search (1 credit)** This course covers such contemporary career topics as employer expectations, job market trends, networking, and various aspects of the employment search process, including legal and ethical issues. To apply their knowledge of the employment process, students develop resumes, letters, and applications as well as identify and use effective interviewing techniques. This course emphasizes a comprehensive knowledge of career processes that will serve students throughout their working lives.

Prerequisite(s): None

Co-requisite(s): None

**CTEC 1100 Security Essentials (2 credits)** This entry level course is for anyone interested in learning computer networking and security basics. This course will also prepare students for the Security 5 certification test.

Prerequisite(s): None

Co-requisite(s): None

**CTEC 1108 E-Merging Technologies (3 credits)** Technological advances have resulted in new ways to communicate in business and personal situations. This course covers the latest trends in communication technology as well as issues arising from these new communications opportunities. Topics include, but are not limited to, enhancing written business communications to foster understanding, integration of application software to produce business communications, online meetings, publishing to the internet, and web page development.

Prerequisite(s): CPTR 1104

Co-requisite(s): None

**DENT 1010 Infection Control (1 credits)** In this course students will learn about infection control practices relevant to the dental profession. Topics include the concepts of disease transmission and infection prevention, principles and techniques of disinfection, instrument processing and sterilization, regulatory and advisory agencies, and occupational health and safety.

Prerequisite(s): None

Co-requisite(s): None

**DENT 1100 Biomaterials (3 credits)** This is a foundation course that provides in-depth instruction and practice in identifying the materials, their purposes and properties as they are used during chairside and laboratory procedures. Material manipulation is a critical requirement of the lab component of this course. Laboratory safety measures and infection control are emphasized.

Prerequisite(s): ENGL 100, MATH 0081 or appropriate assessment score

Co-requisite(s): None

**DENT 1106 Biodental Science (2 credits)** This course provides an introduction to anatomy and physiology, an introduction to dental histology and embryology, and an overview of head and neck anatomy. This course is also designed to give the student basic concepts of microbiology and disease transmission and a survey of oral pathology and diseases.

Prerequisite(s): ENGL 0100, MATH 0080 or MATH 0081 or appropriate assessment score

Co-requisite(s): None

**DENT 1112 Dental Anatomy (3 credits)** The lecture portion of the course introduces the student to basic terminology for understanding the structures that form the foundation for tooth function, normal anatomy of the oral cavity, and tooth and root morphology. Lab sessions will provide opportunities for the student to work with tooth identification and charting systems, intraoral imagery, and occlusion assessment. Special topics include survey of dental anomalies, cavity classifications, and forensic dentistry.

Prerequisite(s): ENGL 0100, MATH 0081 or appropriate assessment score

Co-requisite(s): None

**DENT 1114 Dental Radiology (4 credits)** The lecture component of this course includes an overview of the history of x-ray development, a review of basic mathematics and radiation physics as they apply to x-ray production and radiographic quality, darkroom chemistry, radiation hygiene and safety, interpretation of normal anatomy and dental film analysis, radiographic interpretation and evaluation, and quality assurance issues. Lab sessions will allow the student to develop radiographic skills, and clinic sessions create an opportunity for students to enhance their efficiency in radiographic technique.

Prerequisite(s): ENGL 0100, MATH 0081 or appropriate assessment score.

Co-requisite(s): None

**DENT 1122 Dental Ethics & Jurisprudence (1 credit)** This course focuses on the ethical and legal implications of providing dental care and the parameters for dental assistants, dental hygienist, dental therapist, and dentist. The Dental Practice Act of Minnesota will be the focus of these studies.

Prerequisite(s): DENT 1112, 1124

Co-requisite(s): None

**DENT 1124 Clinical Assisting I (4 credits)** This is a pre-clinical course that teaches students the basic knowledge and skills for chairside assisting. Topics include an orientation to the history of dentistry, educational requirements, credentialing opportunities and professional associations for dental and allied dental careers. The student is provided with instruction in the use of dental equipment, instruments and supplies, principles of four handed dentistry, diagnostic data collection, and procedures related to oral diagnosis, management of medication and dental emergencies, and an introduction to restorative dentistry.

Prerequisite(s): ENGL 0100 or appropriate assessment score

Co-requisite: None

**DENT 1126 Clinical Assisting II (4 credits)** This course introduces the student to the dental specialties of Pediatric dentistry, Periodontics, Oral and Maxillofacial Surgery, Endodontics, Prosthodontics (fixed and removable), Orthodontics and also special needs patients. The student will be introduced to the lab and clinical procedures with each of the specialties listed. The lab portion will also build on material learned in Clinical Assisting I (DENT 1124). Student will repeat certain hands-on skills with an expectation of greater proficiency.

Prerequisite(s): DENT 1010, DENT 1112, and DENT 1124

Co-requisite: None

**DENT 1130 Dental Prac Management (1 credit)** This course provides the student with instruction in the principles and applications that are related to the management of a dental office. Emphasis is placed on managing patient records, financial records, third party payments, appointment scheduling, inventory and recall systems.

Prerequisite(s): DENT 1112, 1124

Co-requisite: None

**DENT 1132 Credentialing Exam Preparation (1 credit)** This course will provide information to prepare the individual for taking the dental assisting credentialing examinations. The topics included are those that are tested by the national certification and state board registration exams. This course is appropriate for those individuals who are in need of becoming re-credentialed or for those seeking initial credentialing.

Prerequisite: Instructor Approval

Co-requisite: None

**DENT 1134 Clinical Affiliation (7 credits)** This is a faculty-supervised course at extramural sites with dentists and dental auxiliaries providing ancillary supervision. The student will be provided with clinical experiences by affiliations in general dentistry and/or specialized practices. Emphasis is on professionalism in performing general chairside and advanced intraoral procedures.

Prerequisite(s): Instructor Approval

Co-requisite: None

**DENT 1136 Advanced Functions (7 credits)** This course is designed to provide the student with instruction and practice to perform the clinical competence in the following intraoral functions approved by the Minnesota Board of Dentistry: taking radiographic exposures, performing mechanical polishing, taking preliminary impressions and bite registrations, applying topical fluoride, whitening agents, placing and removing dental dam, placing and removing periodontal dressing, removing excess cement, and applying pit and fissure sealants, inducing patients to nitrous-oxide/oxygen sedation and removing excess bonding material from orthodontic appliances with a rotary handpiece, In addition the following intraoral functions are taught and practiced to laboratory competency: applying non-fluoride topical medications, removing sutures, preliminary adaptation of temporary (provisional) crowns, performing selected orthodontic functions.

Prerequisite(s): DENT 1100, 1112, 1114, 1106, 1124, HPER 1410

Co-requisite: None

**DENT 1500 Dental Health (3 credits)** This course covers the basic principles of nutrition, pharmacology, ergonomics, and citizenship skills as they apply to the dental field. Students will be introduced to basic nutritional concepts and its effects on the human body from the standpoint of general health and the relationship to oral disease. Students will also learn about medications that are commonly seen in the dental setting and the diseases, indications for which these drugs are prescribed and adverse reactions that can result in medical emergencies in the dental office. In addition, students will learn how ergonomic principles apply to dental assisting. Students will also participate in service-learning projects to gain a sense of community contribution and experience.

Prerequisite(s): ENGL 0100, MATH 0081 or appropriate score on assessment

Co-requisite: None

**DENT 1910 Directed Independent Study (3 credits)** Independent Study

**ECON 2204 Markets & Resource Allocation (3 credits)** Meets MnTC Goal Area(s):5 This course covers the various terminology and microeconomics principles. The course will explain and evaluate markets as mechanisms to signal consumer preferences and induce seller's responses to changes in the market. Students will be exposed to how the free enterprise market works, money and prices, supply and demand, the costs and factors of production, monopoly, oligopoly, and the role of buyers and sellers in the competitive market.

Prerequisite(s): None

Co-requisite: None

**ECON 2404 Macroeconomics and the Business Cycle (3 credits)** Meets MnTC Goal Area(s):5 Students will learn macroeconomic concepts to explore the determination of aggregate output, employment, and the price level in modern mixed economies. The interaction between the financial sector and commodity markets and the potential of monetary and fiscal policy to guide the course of the macro economy are also explored.

**ENER 1000 Introduction to Renewable Energy (2 credits)** This course will provide an introduction to the principles of renewable energies, including solar energy, wind power, hydropower, biomass, hydrogen, and fuel cells. Students will learn about the history of energy production and costs, the dynamics of worldwide energy consumption and growth, the principal methods by which energy is used, and the environmental and financial impacts and consequences. Students will also learn about the impact of government regulations on the use of renewable energies.

**ENER 1500 PV System Design & Install (2 credits)** This course introduces the student to the fundamentals of photovoltaic (PV) system design and installation procedures. Indoor classroom activities supplement outdoor fieldwork that will involve the installation of a residential scale PV system. Students completing this course will have the basic knowledge of photovoltaic systems suitable for a supervised, entry level position with a dealer/installer or other PV industry company.

Prerequisite(s): None

Co-requisite(s): None

**ENGL 0100 Reading, Reasoning & Writing (4 credits)** The purpose of this course is to enhance students' skills in critical thinking, reading and writing. Students will: Read actively and critically, and effectively use textual annotation; Identify and deconstruct abstract ideas found in complex academic texts; Formulate and explain valid inferences based on information from texts; Write and evaluate arguments for validity and credibility; Locate, evaluate and synthesize ideas and information from multiple sources and varying points of view; Support ideas with adequate and varied evidence; Summarize, paraphrase and quote information from source materials; Create citations using information from source materials; Tailor language to address a specific audience; Employ syntax and usage appropriate to academic disciplines and the professional world; and Use strategies to effectively address the non-cognitive issues that could affect students' academic success.

Prerequisite(s): None

Co-requisite(s): None

**ENGL 1111 College Writing I (3 credits)** Meets MnTC Goal Area(s):1, 2 This course is an introduction to college-level writing, focusing on descriptive, narrative, persuasive and expository essays that are written clearly, concisely and correctly. This course seeks to develop writers who 1) understand the importance of using the writing process (invention, organization, drafting, revision, proofreading, and editing) to produce interesting, thoughtful and thought-provoking essays; 2) understand the role the active reading of professional and peer review plays in writing well. Students in this course will share their writing and actively participate in discussion and peer review groups.

Prerequisite(s): ENGL 0100 or appropriate assessment score

Co-requisite(s): None

**ENGL 1113 College Writing II (3 credits)** Meets MnTC Goal Area(s):1, 2

Prerequisite(s): ENGL 0100 or appropriate score on assessment.

Co-requisite(s): None

**GERO 1100 Intro to Gerontology (3 credits)** This course is an overview of the multidisciplinary study of the biological, psychological, and social aspects of aging. This course explores the human aging process from these perspectives. Attention is also given to programs and services for the elderly.

Prerequisite(s): None

Co-requisite(s): None

**GERO 1200 Biology of Aging (3 credits)** This course will explore biological changes that occur with aging, including descriptions of population aging and theories on how and why we age. It will focus on the process of aging in the various body systems, and the clinical implications of age-related diseases.

Prerequisite(s): None

Co-requisite(s): None

**GERO 1230 Healthy Aging (3 credits)** Provides an overview of practices to promote healthy aging. Addresses nutrition, physical activity, and prevention practices as well as other health maintenance/management strategies. Emphasis is on practices to address current aging trends.

Prerequisite(s): None

Co-requisite(s): None

**GERO 1250 Dementia and Alzheimer's (3 credits)** Examine the signs, symptoms and stages of Alzheimer's and other forms of dementia and how these diseases affect physiology and brain function. This course focuses on the principles of communicating and providing care to individuals with memory loss and confusion while learning the best practices for dealing with behavior changes, challenges with the activities of daily living, and strategies to assist caregivers.

Prerequisite(s): None

Co-requisite(s): None

**GERO 1300 Death and Dying (3 credits)** This course provides students with the biological, sociological, and psychological perspectives of death, dying, and bereavement in our society and around the world as well as Advanced Care Planning.

Prerequisite(s): None

Co-requisite(s): None

**GERO 1305 Psychosocial Aspects of Aging (3 credits)** Students will become familiar with societal views of aging and the elderly. Students will understand the psychological, sociological, economic, political, and diversity aspects of

aging. Students will also learn of the psycho-social challenges of caregivers as well as availability of resources for end-of-life issues. Students will learn various communication strategies.

Prerequisite(s): None

Co-requisite(s): None

**HLTH 1000 Introduction to Health Careers (3 credits)** Students will explore career options within the fields of allied health. Course content is designed to provide information regarding health careers such as required education, working conditions, and typical salary. Content aims to promote discussion, encourage critical reflection and self-exploration.

This course will familiarize students with the historical, philosophical, and social foundations of the health care system and various health careers.

Prerequisite(s): None

Co-requisite(s): None

**HLTH 1106 Medical Terminology (2 credits)** This course covers prefixes, suffixes, and roots used to compose medical terms. The student learns to spell, pronounce, define, analyze, and formulate terminology related to body structure, disease, diagnosis, and treatment. Medical abbreviations are also included.

Prerequisite(s): None

Co-requisite(s): None

**HLTH 1110 Nursing Assistant (3 credits)** This course is intended to prepare the student to practice as Nursing Assistants and serve as an introduction to nursing for students who continue in nursing education. The integrated curriculum meets state and federal requirements. Students are introduced to the concepts of basic human need and learn to assist individuals in activities of daily living. Principles of body mechanics are emphasized. Selected common technical nursing skills are introduced. Successful completion of this course prepares the participant to take the state approved competency evaluation and seek employment in long-term care settings.

Prerequisite(s): None

Co-requisite(s): None

**HLTH 2208 Pathophysiology (3 credits)** This course presents information related to pathophysiology of various body systems. The nature, cause, diagnosis, and treatment of common disease conditions will be emphasized.

Prerequisite(s): None

**HPER 1410 First Aid / CPR (1 credit)** This course provides training in American Heart Association BLS (Basic Life Support) CPR with AED training used in the healthcare setting and American Red Cross basic first aid procedures. Students who successfully complete the course will receive the AHA Basic Life Support certification.

Prerequisite(s): None

Co-requisite(s): None

**HPER 2200 CPR Healthcare Provider (1 credit)** This course teaches American Heart Association Healthcare Provider course content.

Prerequisite(s): None

Co-requisite(s): None

**HPER 2300 CPR Recertification (0 credits)** This course is a CPR for Healthcare Provider and FA/CPR recertification following American Heart Association guidelines.

Prerequisite(s): None

Co-requisite(s): None

**MATH 0081 Math Foundations (QR-Ready) (3 credits)** This developmental course provides an alternative pathway to a college level liberal arts mathematics course. All college students, regardless of their college major, need to be able to make reasonable decisions about fiscal, environmental, and health issues that require quantitative reasoning skills. An activity-based approach is used to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential, and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. This course is the first in a two-part sequence and is not suited for Science, Technology, Engineering, or Math (STEM) students.

Prerequisite(s): None

Co-requisite(s): None

**MATH 0092 Intermediate Algebra (Previously: Algebra Foundations) (3 credits)** This course is an introduction to algebra concepts. This course covers polynomials, equations, formulas, ratios, proportions, graphing, factoring, and systems of linear equations and their solutions, exponents, rational expressions, radicals, and quadratic equations. All topics have appropriate applications to the technical college education.

Prerequisite(s): MATH 0081 or appropriate assessment score

Co-requisite(s): None

**MATH 1100 Technical Mathematics (3 credits)** This course presents basic mathematical topics as they are applied in a technical program. The course includes a review of basic mathematical operations and continues with the development of algebraic and trigonometric skills in a technical setting. Most concepts will be applied through course specific problems. This course is not intended for transfer.

Prerequisite(s): MATH 0081 or appropriate assessment score

**MATH 1110 College Algebra (3 credits)** Meets MnTC Goal Area(s):4 and NTC Core Ability 6 Problem solving with linear, quadratic, rational and absolute value equations and inequalities; function notation and inverses; graphs of relations and functions; polynomial, rational, exponential, and logarithmic functions and applications; systems of equations and inequalities, matrices.

Prerequisite(s): MATH 0092 or ACT Math score of 22 or Accuplacer score of 76 or Next Generation Accuplacer

Advanced Algebra & Functions score of 250

Co-Requisite(s): None

**MATH 1930 Introduction to Mathematical Sciences (3 credits)** Meets MnTransfer Goal Area 4: This course integrates the study of algebra and statistics. Topics include functions, graphical and tabular analysis, rate of change, syntax and semantics, the process of computing, data manipulation, sampling, statistical measures, basic probability, correlation. Examples are drawn from a wide range of disciplines and content will be taught within the framework of discipline-specific examples. This course will be taught in a lab environment, the sessions will be a mix of lecture, individual work, and group work. Student participation and activity learning will be stressed.

Prerequisite(s): MATH 0081 or MATH 0092 or appropriate assessment score

Co-Requisite(s): None

**MATH 1960 Consortium Credits (3 credits)** A course intended to act as a place holder for consortium credits taken at a non- MinnState school.

Prerequisite(s): None

Co-Requisite(s): None

**MATH 2200 Statistics (3 credits)** Meets MnTransfer Goal Area 4: A non-theoretical introduction to statistics with an emphasis on applications in a variety of disciplines. Topics include measures of central tendency, position and dispersion; basic probability; hypothesis testing; estimation; analysis of variance; linear correlation and regression; non-parametric statistics.

Prerequisite(s): Three years of high school mathematics (including two years of algebra) or completion of MATH 1110 or higher.

Co-Requisite(s): None

**MKTG 1106 Professional Sales (3 credits)** This course covers a fundamental sales approach that can be used as a foundation for future sales courses. The content covers steps used to plan a sales presentation and methods of determining and filling prospect needs or wants.

**MKTG 1108 Customer Relations Mgmt (3 credits)** Customer service can determine a company's success or failure. Customer service skills can determine an employee's success or failure. This course covers the skills necessary for an individual to build and maintain good relationships with internal and external customers and the role the customer service team plays in developing, evaluating, and improving customer service systems.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 1112 Retailing Management (3 credits)** This course provides an overview of the concepts and skills needed to operate a successful retail operation. Topics include retailing terminology, current practices in merchandising, types of retail institutions, site election, inventory control, and pricing.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 1116 Advertising & Promotion (3 credits)** This course is intended to acquaint students with advertising media, budgets, selection, ad copy, and layout. Also, students gain an understanding of advertising campaigns, promotional events, and techniques.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 2100 Principles of Marketing (3 credits)** This course introduces students to the dynamic field of marketing. This course is a comprehensive study of the marketing principles and concepts and their application to a changing business world.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 2200 Principles of Management (3 credits)** This course is designed to expose the student to a variety of concepts presented within the framework of the traditional functions of management. The various approaches to planning, decision making, organizing, motivation, leadership, communications, and controlling are explored.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 2204 Advanced Professional Selling (3 credits)** This course provides opportunity for the student to apply the steps of a sales presentation by planning and performing sales presentations in role-playing situations. The student applies strategies in sales communications, customer-oriented selling, and sales management.

Prerequisite(s): MKTG 1106

Co-Requisite(s): None

**MKTG 2214 E-Marketing (3 credits)** This course examines emerging electronic technologies and their impact on a firm's marketing strategy. Emphasis is placed on trends in e-marketing as well as unique opportunities and challenges faced in the electronic environment. Students apply components of the marketing mix to an electronic marketing strategy.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 2220 Human Resource Management (3 credits)** The purpose of this course is to acquaint the student with the importance of human resource management in contributing to the achievement of an organization's objectives. The content addresses techniques and legal aspects of recruiting, hiring, firing, promotion, documentation, evaluation, and other areas essential to the personnel function.

**MKTG 2232 Marketing Management (3 credits)** This course focuses on the development of strategic marketing skills needed in marketing and management in business. Training covers the cycle of marketing for customer acquisition, care and relationship building integrated with strategic business operation processes. Marketing

strategies include: target marketing, market research, product/service mix, promotional methods, distribution systems, and pricing methods.

Prerequisite(s): None

Co-Requisite(s): None

**MKTG 2236 Small Business Management (3 credits)** Small Business Management is a course on how to start and operate a small business. Topics include methods in starting a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues.

Prerequisite(s): None

Co-Requisite(s): None

**NSCI 2203 Environmental Science (4 credits)** Meets MnTC goal areas 3 & 10. This introductory course addresses the dynamic equilibrium of our environment. The design of the course is to teach the science behind the environmental issues on our planet. This will allow for discussion and analysis of current topics related to those issues. Lecture and lab.

Prerequisite(s): None

Co-Requisite(s): None

**PHIL 1201 Ethics (3 credits)** Meets MnTC Goal Area(s): 6 & 9 This course presents and examines moral theories, and applies these theories in contemporary moral issues such as articulate reproduction, abortion, sexual equality, racism, privacy, euthanasia, the environment, etc. The course develops one's sense of ethical and civic responsibility by developing the capacity to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life and to understand the ways in which they can exercise responsible and productive citizenship. This course also assists in developing critical thinking skills by developing thinkers who are able to unify factual, creative, rational, and value-sensitive modes of thought.

Prerequisite(s): None

Co-Requisite(s): None

**PHIL 2210 Bioethical Issues in Contemporary Society (3 credits)** Meets MnTC Goal Area(s): 2, 6 & 9 This course is an introduction to bioethical issues that arise in the contemporary practice of healthcare, and which are central to understanding healthcare in contemporary society. In addition to developing a basic understanding of standard moral theories, issues that arise with American culture for patients, providers, and planners of health care are examined. Examples of such issues include, but are not limited to, abortion, euthanasia, patient rights, informed consent, health care distribution and reform, genetic testing and research, and cloning.

Prerequisite(s): None

Co-Requisite(s): None

**PHYS 1110 Physics (3 credits)** Fundamental law of mechanics, fluids, temperature, gas laws, electricity, wave motion, origins of modern physics, radioactivity.

Prerequisite: None

Co-Requisite(s): None

**PLHE 1000 Introduction to Plumbing/HVAC (1 credit)** This course provides the student with an introduction to the history and structure of the plumbing and HVAC industry. Topics include history of plumbing and heating, development and structure of the piping/HVAC industry, plumbing, pipefitting and heating terms and identification of various plumbing and heating systems.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1015 Plumbing Technical Drawing (3 credits)** This course provides the student with the technical understanding and skills in blueprint reading needed by the plumbing industry. Topics include drawing interpretation, isometric sketches of piping/duct installation and drafting mechanical plans for residential construction.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1055 Plumbing Code Interpretation (3 credits)** This course provides the student with an introduction to the Minnesota State Plumbing Code as it relates to basic plumbing principles, materials, installation limitations, and licensing laws.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1085 Piping System Fabrication I (3 credits)** This course provides practical experience in the design and installation of residential plumbing systems, fixtures, and equipment in accordance with the Minnesota Plumbing Code.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1091 Plumbing Design and Installation I (3 credits)** This course covers practical experience in the installation of sewers and drain piping by laying out piping trenches, excavating trenches, using a builder's level to establish grade and elevations of the piping, and backfilling trenches in a safe and efficient manner.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1105 Plumbing Repair and Service Technology (3 credits)** This course provides the student with experience in repair, maintenance, and servicing of plumbing systems; including well and city water supply systems, pumps, water heaters, water conditioning, sewer lines, and associated equipment and fixtures.

Prerequisite(s): None

**PLHE 1145 Piping Systems Fabrication II (3 credits)** This course provides the student with advanced experience in the design and installation of residential plumbing systems, fixtures, and equipment in accordance with the Minnesota Plumbing Code.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1147 Plumbing Design and Installation II (3 credits)** This course covers practical experience in the installation of sewers and drain piping by laying out piping trenches, excavating trenches, using a builder's level to establish grade and elevations of the piping, and backfilling trenches in a safe and efficient manner.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 1193 Plumbing Internship (2 credits)** This course is designed for the plumbing student to gain valuable work experience in the plumbing and pipefitting field in conjunction with an industry placement. The assigned project must have the endorsement of the instructor. Only valid projects in the field of plumbing/pipefitting or in a closely related occupation shall be considered.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 2032 Air Conditioning, Heat Pump, Refrigeration and Recovery (3 credits)** This course is designed to give the student a basic understanding of air conditioning principles. The course begins with the history of refrigeration and progresses to the theory of heat, cooling and heat transfer. The course will also explore the many uses of refrigeration (including heating and cooling) from residential to commercial/industrial applications.

This course will prepare the student to take the federally mandated test to allow a person to handle refrigerant.

This class will prepare the student to pass the core requirements at all levels through universal technician.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 2076 Forced Air Systems Theory (4 credits)** This course covers gas, fuel oil and electric heating equipment, primarily furnaces. Emphasis is placed on understanding the theory of operation and design of ductwork that exist within an HVAC system.

Basics of indoor air quality (IAQ) and its effects on building inhabitants will be covered. The student will gain a thorough understanding of the relationship between IAQ and the theory of forced air heating systems.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 2085 Ventilation Systems (2 credits)**

**PLHE 2095 HVAC Design I (3 credits)** This course covers practical experience in the design and installation of residential HVAC systems and equipment in accordance with the Minnesota Mechanical and Gas Fuel Code.

Prerequisite(s): 1000 level courses

Co-Requisite(s): None

**PLHE 2135 HVAC Code Interpretation (2 credits)** This course covers the National Fuel Gas Code Book and its requirements for the major and minor fuels used to heat buildings and the national venting code requirements for buildings. The International Mechanical Code and the Minnesota Energy Code and their applicable requirements will also be discussed. Emphasis is placed on understanding the scope and purpose of the codes and how they relate to health and life safety issues.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 2140 Optimizing HVAC Control Systems (4 credits)** This course is designed to give the student an extensive understanding of forced air and hydronic heating controls. Instruction will begin with the electrical safety and the basics of electricity, then progress into electronic controls. Both low voltage and high voltage circuits will be addressed.

Prerequisite(s): PLHE 2031, 2075, 2095

Co-Requisite(s): None

**PLHE 2146 HVAC Design II (4 credits)** This course covers the design and installation of advanced forced air heating systems in a hands on situation. Emphasis is placed on understanding the theory of the relationship between the operational and design aspects as they apply to residential forced air HVAC systems. This course is designed to give the student an understanding of industry standards as they relate to the design requirements of residential heat loss. The student will have an understanding of sheet metal tools, sheet metal layout and commons fittings used in duct design and layout. The student will have a thorough understanding of all aspects needed to properly size and select equipment, ductwork, and other components of an HVAC system.

Prerequisite(s): None

**PLHE 2151 Hydronic Design and Controls (3 credits)** This course is designed to give the learner an extensive understanding of hydronic heating. It will include sections on heat theory, types of boilers, radiators, piping systems, floor heat and several other areas that are unique to hot water heat.

Prerequisite(s): PLHE 1085 and (2060 or 2146)

Co-Requisite(s): None

**PLHE 2160 Air Conditioning, Refrigeration and Heat Pump Controls (3 credits)** This course is designed to give the student a thorough understanding of air conditioning principles and controls. The course begins with a refresher on the refrigeration process and progresses to controls systems and troubleshooting. The student will progress from the controlled environment of the lab with system trainers and progress to operational residential and light commercial equipment.

**PLHE 2170 HVAC Design III (3 credits)** This course provides the student with practical experiences in the operation of the Vulcan 2000 Plasma Table for fabrication of sheet metal fittings and ductwork for HVAC applications.

Prerequisite(s): None

Co-Requisite(s): None

**PLHE 2195 HVAC Internship (2 credits)** This course is designed to enable the student to incorporate all the theory they have learned in all previous classes and implement it into a complete functional project. The student will design, layout, build, install, and calibrate a complete HVAC system from the ground up.

Prerequisite(s): None

Co-Requisite(s): None

**PNSG 1110 Adult Nursing I (4 credits)** This course introduces fundamental nursing concepts as they relate to acute and chronic medical conditions across the lifespan. Nursing concepts, nursing process and clinical decision-making skills are applied to patient care exemplars to facilitate learning. Principles of evidence-based practice, pathophysiology, pharmacology, and nutrition are introduced into each topic area.

Prerequisite(s): Admission to the Program

Corequisite(s): Program sequencing must be followed.

**PNSG 1112 Technical Skills I (3 credits)** This course starts by assisting the student in developing life management skills to support success in nursing school. Learning style, study skills, and time management practices are emphasized. NCLEX-PN test taking strategy development is highlighted. The course introduces fundamental nursing concepts and theory which underlie basic assessment and nursing skills. The nursing process is introduced as a framework for competent clinical decision-making. Fundamentals of safety are taught as it applies to evidence-based, client-centered care. The student will demonstrate critical thinking, decision making, and priority setting, essential to successful assessment and application of nursing skills in the laboratory setting. The student will learn personal and professional behaviors that support a caring relationship with clients and colleagues.

Prerequisite(s): Admission to the Program

Corequisite(s): Program sequencing must be followed.

**PNSG 1120 Pharmacology (2 credits)** This course presents the basic principles of pharmaceuticals. Including pharmacokinetics, pharmacodynamics, common adverse/side effects, and contraindications to drug use. Emphasizing drug classifications and nursing care related to the safe administration of medications across the life span.

Prerequisite(s): Admission into the Program

Co-requisite(s): Program sequencing must be followed.

**PNSG 1125 Clinical I (4 credits)** Provides the student an opportunity for introduction to patient care, apply nursing judgment using the nursing process to implement safe, patient-centered care. This includes client interaction, ADLs,

client safety, assessing, collecting data, implementing skills, documenting findings, and reinforcing teaching plans for patients. Developing communication and customer service skills; working with individual patients, families, and team members.

Prerequisite(s): Admission into the Program

Co-requisite(s): Program sequencing must be followed.

**PNSG 1150 Adult Nursing II (4 credits)** This course expands the application of nursing concepts as they interrelate to the safe, holistic nursing care management of acute and chronic medical conditions across the lifespan. Integrated nursing concept exemplars for complex clients with comorbidities will be covered. Principles of evidence-based practice, pathophysiology, pharmacology, and nutrition are integrated into each topic area.

Prerequisite(s): Admission into the Program

Co-requisite(s): Program sequencing must be followed.

**PNSG 1155 PN Technical Skills II (3 credits)** The course introduces additional evidence-based skills critical to the practice of the Practical Nurse. The students transition to the professional role of the Practical Nurse by examining personal and professional integrity, standards of nursing practice, state nurse practice acts, and the nursing code of ethics. Students will explore leadership styles, methods of team building, and the benefits of being part of a team. Students will demonstrate behaviors that support a professional caring relationship with clients and colleagues.

Prerequisite(s): Admission to the program

Co-requisite(s): Program sequencing must be followed

**PNSG 1160 Maternal Child Nursing (2 credits)** This course explores human reproduction, pregnancy, and fetal development. Prenatal assessment and care during pregnancy including complications of pregnancy. Nursing care during labor and delivery including complications. Post-partum care of mother, infant, and family. Growth, development, and health promotion of infant through adolescence. Pediatric concerns, considerations, and deviations in pediatric health.

Prerequisite(s): Admission to the program

Co-requisite(s): Program sequencing must be followed.

**PNSG 1180 Psychosocial Nursing (2 credits)** Psychosocial nursing care focuses on the care of patients with psychiatric and behavioral disorders. Emphasis is placed on common psychiatric and behavioral disorders as well as promoting and maintaining the mental health of individuals.

Prerequisite(s): Admission to the program

Co-requisite(s): Program sequencing must be followed.

**PNSG 1185 Clinical II (4 credits)** This course will expand on the concepts of client-centered care, safety, teamwork, collaboration, informatics, and professionalism for the care of individual clients. Applying fundamental nursing concepts, nursing process and nursing skills while promoting wellness. Caring for clients with acute and chronic conditions in various settings.

Prerequisite(s): Admission to the program

Co-requisite(s): Program sequencing must be followed

**PSYC 1105 General Psychology (3 credits)** Meets MnTC Goal Area(s):5 This course is an introduction to basic principles and theories of human behavior and mental processes. It will cover the history and contemporary research in the field. The course will also examine the biological, psychological, and social aspects of human interaction with self and environment.

Prerequisite(s): None

Co-requisite(s): None

**PSYC 2201 Developmental Psychology (3 credits)** Meets MnTC Goal Area(s):5 Prerequisite(s): None This course is an introduction to the psychological development of the individual using a lifespan approach from conception through death. The learner will explore the influences of biological, cognitive, and psychosocial factors that influence the development of a pattern of change throughout a person's life.

Prerequisite(s): ENGL 0100 or appropriate assessment score.

Co-requisite(s): ENGL 0100 if prerequisite is not met.

**PSYC 2220 Abnormal Psychology (3 credits)** Meets MnTC Goal Area(s):5 This course provides an examination of major personality maladjustment and disorganization with primary emphasis on causes, diagnostic criteria, and treatment approaches. It includes historical and theoretical approaches, as well as an examination of related contemporary issues. This is a general education course that is appropriate for all learners interested in examining and having a better understanding of psychological abnormalities such as personality disorders, disorders related to stress and substance abuse, and other brain-related and/or cognitive impairments.

Prerequisite(s): ENGL 0100 or appropriate assessment score.

Co-requisite(s): ENGL 0100 if prerequisite is not met.

**SGNL 1100 American Sign Language (ASL) I (4 credits)** Meets MnTC Goal Area(s): 8; Meets MnTC Goal Area(s): 8 This course is an introduction to American Sign Language (ASL), a visual/gestural language used by individuals with profound hearing impairment or deaf people.

Students will develop practical skills and fundamental grammar knowledge required for successful interactions within the Deaf Community. Students will learn the ability to use sign language appropriate within a deaf cultural context (including attention-getting strategies, use of facial expressions to produce meaning, using politically correct terminology, and behavioral norms/values). Examination of traditions and values unique to the Deaf Community will allow students to apply a comparative perspective to cross-cultural experiences.

Prerequisite(s): None

**SGNL 2100 American Sign Language (ASL) II (4 credits)** Meets MnTC Goal Area(s): 8 This course is a continuation of American Sign Language I (ASL I). This course emphasizes development and refinement of comprehension, production, and interpersonal skills covered in ASL I. Additional information about the Deaf community and Deaf education will be included.

Prerequisite(s): SGNL 1100

Co-requisite(s): None

**SOCI 1110 Intro to Sociology (3 credits)** Meets MnTC Goal Area(s):5,8 . This course is intended to introduce students to the sociological perspective as a part of understanding the larger society and themselves. Topics include basic concepts of sociology, the process of socialization and social change, deviant behavior, social inequalities of various groups, sociological theories, and major social institutions.

Prerequisite(s): None

Co-requisite(s): None

**SPCH 1110 Intro to Public Speaking (3 credits)** Meets MnTC Goal Area(s):1 This course focuses on three areas: providing an overview of the process of communication and public speaking, developing and understanding of the principles needed for speech preparation, and application of these principles in preparing and delivering various types of speeches.

Prerequisite(s): ENGL 0100 or appropriate assessment score.

Co-requisite(s): None

**SPCH 1120 Interpersonal Communications (2 credits)** Meets MnTC Goal Area(s):1 Prerequisite(s): None This course will focus on helping the learner improve their ability to communicate effectively in one-on-one and small group encounters. This course examines small group communication through the aspects of small group theory, interpersonal behavior, group dynamics, listening skills, conflict, leadership, decision-making, and stress, problem solving, and crisis management. Role playing experience, reflection, and analysis of interactions are the key components to growth and learning. This course will provide learners with tools to navigate through limit setting/inappropriate behavior and crisis situations.

Prerequisite(s): None

Co-requisite(s): None

**SSCI 1104 Human Relations (3 credits)** This course is designed to help the learner gain an awareness of and improve upon human relationships especially appropriate to the workplace. This course is a study of human relations as it relates to an employee's relationship with him/herself, co-workers, supervisors, and customers. Emphasis will be placed on team building, sexual harassment, and cultural diversity in the workplace.

Prerequisite(s): ENGL 0100 or appropriate placement score

Co-requisite(s): None

**SUPL 1104 Intro to Business (3 credits)** This course provides learners with an "insider's" view of the concepts and processes involved in business and business operation. The course provides a comprehensive view of the contemporary business environment from the internal functions of a business to the challenges of business on an

international scale.

Prerequisite(s): None

Co-requisite(s): None

**SUPL 1108 Lead & Facilitate Teams (3 credits)** The course will address the role of supervisor, manager, and leader as a leader and facilitator of work teams. Topics will include planning work teams, creating effective team interaction, identifying characteristics of successful teams, and demonstrating skills and behaviors of both team leader and team member.

Prerequisite(s): None

Co-requisite(s): None

**SUPL 1120 Supervisory Leadership (3 credits)** The methods and techniques of leadership and supervision and their applications are emphasized in this course. The content covers such topics as delegation, motivation, training, orienting, evaluating, and effectively increasing productivity.

Prerequisite(s): None