COLLEGE CATALOG

2024 - 2025

NORTHLAND
COMMUNITY & TECHNICAL COLLEGE

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ABOUT THE COLLEGE

Northland is a comprehensive two-year community and technical college located in northwestern Minnesota, providing education that transforms lives and strengthens the communities we serve. Northland offers certificates, diplomas, transfer courses, Associate of Arts (A.A.), Associate of Science (A.S.), and Associate of Applied Science (A.A.S.) degrees in more than 30 areas of study, as well as workforce training and continuing education programs. Northland is a member of the Minnesota State Colleges and Universities System and is accredited by the Higher Learning Commission.

LETTER FROM THE PRESIDENT

Welcome to Northland Community & Technical College. As you begin your journey as a Pioneer, my wish for you this year is that you make lifelong connections with your peers, your instructors, and your community as you work to achieve your academic and career goals. I am excited for your future and thrilled to be on this journey with you.

As a Northland graduate you'll leave this place with more than a degree, diploma, or certificate. You'll leave here with advanced training, real-world experience, and the confidence to become a leader in your chosen field. Our focus is student achievement, giving you the tools and resources you need for lifelong success.

Northland has a long history of serving the needs of students and employers. Beginning in 1949, the Minnesota State Board of Education approved a vocational school – Thief River falls Area Vocational Institute – to help meet the local workforce needs. A junior college opened in 1965, when the Thief River Falls State Junior College held its first classes. The names of each institution changed throughout the following years before the schools merged to form Northland Community and Technical College in 1995.

Meanwhile, in East Grand Forks, another vocational school opened in 1971. The East Grand Forks Area Vocational and Technical Institute went through three different name changes before consolidating with five more area technical colleges in 1992 to become Northwest Technical College.

Finally, in 2003, Northwest Technical College in East Grand Forks merged with Northland Community and Technical College in Thief River Falls. Through these many consolidations and name changes, our tiny but mighty college steadily expanded into today's two-campus learning institution with a truly global reach and with opportunities for all.

Your time here will go fast. Embrace the challenge and push yourself. I encourage you to take advantage of Northland's supportive atmosphere, to reach out when you have questions, and to ask for help when you need it. You will quickly discover that everyone working here is here to help you succeed.
Sincerely,

Shari Olson, PhD

Interim President

NORTHLAND MISSION STATEMENT

Northland transforms the lives of students and our communities through a welcoming, supportive, and integrated learning environment.

NORTHLAND VISION STATEMENT

Northland will be the premiere choice for providing exceptional education that transforms lives and strengthens the communities we serve.

NORTHLAND…

…is committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against or harassed 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, gender identity, gender expression, or membership or activity in a local commission as defined by law. Harassment or Sexual Violence of any kind have no place in a learning or work environment and are strictly prohibited. Further, Northland shall work to eliminate violence in all its forms. Physical contact by designated college staff members may be appropriate if necessary to avoid physical harm to persons or property.

Lack of English language skills will not be a barrier to admissions and participation.

…reserves the right to cancel, postpone, and reschedule course offerings.

…is committed to providing equitable access to learning opportunities for all students. If you are a student with a short-term or long-term disability and need reasonable accommodation to participate in class and complete course requirements, please contact the Academic Success Center (ASC) at (218)683-8560. Students encountering difficulties in meeting their fundamental needs are encouraged to connect with Northland staff and instructors. These essential needs may include housing, mental and physical well-being, food insecurity, safety, and financial issues. Northland offers the support of a Dean of Students, Jeff Pool (218)793-2460 and a Counselor, Rebecca Johnson (218)683-8543. Students may also consult the Basic Needs Hub, and Counseling Services.

POLICY STATEMENT

The handbook and website contain policies, procedures, and information necessary for the operation of Northland Community and Technical College (Northland). Policies and procedures have been reviewed and approved by Northland. It is the intent of the college that these policies and procedures respect individual student identity, while being applied consistently and uniformly. These were developed according to the most recent rules, regulations, and data available at the time of publication, however, are subject to revision by state and federal agencies beyond the jurisdiction of the college. Changes in rules, regulations, policies, and procedures made by higher levels and agencies of government supersede college policy. All policies will be reviewed for possible revision on an annual basis.

DATA DISCLAIMER: Data contained in the Northland Community and Technical College catalog, or student handbook accurately reflects information at the time of publication, however, Northland reserves the right to make changes at any time deemed necessary.

Northland complies with Minnesota Statute 197.775 which exceeds all criteria of Title 38 United States Code Section 3679(e).

East Grand Forks Campus
2022 Central Avenue NE
East Grand Forks, MN 56721

Thief River Falls Campus
1101 Highway One East
Thief River Falls, MN 56701

Aerospace Site
13892 Airport Drive
Thief River Falls, MN 56701

Roseau Site
1212 Center St E. Suite 200
Roseau, MN 56751

Warroad Site
201 Lake Street NE
Warroad, MN 56763
Phone: 1-800-959-6282
www.northlandcollege.edu

College History

East Grand Forks Campus: The history of Northland Community and Technical College's East Grand Forks campus dates back to December 1971, when the local school district was designated for an Area Vocational Technical Institute (AVTI). The first classes of the East Grand Forks AVTI were offered in January 1973 in rented facilities. The present facility opened in April 1975.
Northland – EGF grew with expansion and partnerships. The name of the college changed several times throughout its history. One of its most prominent consolidations was as Northwest Technical College from 1992 – 2003.
In July 2003, the East Grand Forks Campus of Northwest Technical College merged with Northland Community and Technical College of Thief River Falls to become a fully comprehensive college.

Thief River Falls Campus: The history of Northland Community and Technical College's Thief River Falls campus dates back to 1949, when the Thief River Falls Area Vocation Institute opened. A few years later in 1965, the Thief River Falls State junior College also held its first classes.
The names of the two colleges changed several times throughout its history. One of the most prominent changes occurred in July of 1995 when the two colleges merged to create Northland Community and Technical College.
In July of 2003, Northland in Thief River Falls merged with the East Grand Forks campus of Northwest Technical College to become a two-campus comprehensive college.

The College Communities

East Grand Forks Community: In the heart of the Red River Valley is East Grand Forks, a lively, bustling community surrounded by Upper Midwest farm country which produces an abundance of grains, sugar beets, and potatoes each year.
Located above the juncture of the Red Lake River and the Red River of the North, East Grand Forks is known for its excellent catfish fishing, boating, and other recreational opportunities. Recreation is also available at many state park systems within a one-hour drive. Downtown East Grand Forks features the historic Whitey's, Blue Moose, Cabela's and other new businesses that serve the community.
East Grand Forks' neighbor across the Red River is Grand Forks, North Dakota. Grand Forks is the home of Grand Forks Air Force Base, Alerus Center, Ralph Engelstad Arena, and the University of North Dakota. There is a Grand Cities population of over 80,000. Grand Forks International Airport is five miles away.

Thief River Falls Community: Until 1904, an Ojibwe village of 40 families was located where the Thief River and Red Lake River meet. This is the current site of the Thief River Falls campus.
Today, Thief River Falls is the hub of northwestern Minnesota. The area abounds with a variety of activities. Thief River Falls is located on the Pine to Prairie Birding Trail and only 21 miles from the largest wildlife refuge in Minnesota. Whatever your interest – biking, camping, golfing, snowmobiling, skiing, river fishing, tubing, hunting, or just plain relaxing – it can be found in and around Thief River Falls.
The small-town atmosphere provides safe, friendly neighborhoods, affordable housing, excellent medical care, as well as a variety of shopping, restaurants, hotels, and employment opportunities for students. Thief River Falls is the regional center for manufacturing, healthcare, retail and the home of the Ralph Engelstad Arena – Thief River Falls.

Visiting Northland

College is a time for you to soar and explore. Your college experience lasts a lifetime, giving you the opportunity to learn, make life-long friendships, and prepare yourself for the future.

At Northland Community and Technical College, you'll find opportunities to excel, to actively participate in classroom discussion, to express your thoughts, and to communicate your ideas. You will experience learning through hands-on activities, internships, and work experience. You will discover new ways of thinking and gain a global perspective. You will achieve things that, up until now, you could only imagine.

Northland invites prospective students, their parents and friends to visit the campuses. The Student Services Office will arrange for you to tour the campus and visit with faculty members in the program or activity in which you are interested. Counselors and advisors will be available to answer your questions about enrollment.

Schedule your campus tour today online at Campus Tours, or by phone at 218- 683-8552.

Accreditation

Accreditation is an important credential to look for when choosing a college or university. Accreditation is an assurance to students and the public that an institution meets or exceeds standards for quality of faulty, curriculum, learner services, and fiscal stability.

Northland Community and Technical College is accredited by:

The Higher Learning Commission
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604
(800) 621-7440
www.hlcommission.org

Northland Foundation

The Northland Community & Technical College Foundation's mission is to support the college by providing opportunities for contributors to invest in and enhance the educational experience of Northland's students. The Foundation awards over $160,000 in scholarships annually. Scholarships range in value from $50 to $4,000, depending on contributions or annual growth in the individual funds. Eligibility and criteria for scholarships varies and is often established by the donors. Several scholarships were established as endowments in honor of, or in memory of individuals who have had a special commitment to the College or community. The Foundation invites anyone interested in establishing an endowment or scholarship to contact the Foundation office.

New students planning to attend Northland may apply for scholarships by completing a *Northland Foundation New Student Scholarship application*, available in January, to be eligible for scholarships awarded prior to fall semester. **Returning students** may apply for scholarships by completing a *Northland Foundation Current Student Scholarship application*, available at the start of each fall semester, to be eligible for scholarships awarded during spring semester. Students must complete applications in full and meet the deadlines established for each application to be considered for a scholarship. Applications are available of the website: Financial Aid Scholarships, or on campus.

A complete listing of scholarships is available on the website. Events and programs sponsored by the Foundation as well as opportunities for alumni to keep in contact with the College are also available.

Anyone interested in establishing a scholarship fund, contributing to an existing fund, or serving on the Board of Directors or a Foundation committee may contact the Foundation Office at 218-683-8616 or 800-959-6282, or by email, www.NCTCfoundation.com.

Program Title	Degree	Credits	EGF	TRF	Online
Accounting	A.A.S.	60	E	T	DE
Accounting Clerk - Microcomputer Applications Emphasis	Diploma	45	E		DE
Accounting Transfer Pathway	A.S.	60	E	T	DE
Administrative Professional	A.A.S.	60	E		DE
Administrative Office Specialist	Diploma	33	E		DE
Administrative Office Support	Certificate	18	E		DE
Agriculture Education	A.S.	60		T	
General Agriculture	Certificate	17		T	
Animal Science	A.A.S.	60		T	
Animal Science	Diploma	31		T	
Architectural Technology & Design	A.A.S.	69	E		
Architectural Technology & Design	Diploma	65	E		
Intro Architectural Technology & Design	Diploma	31	E		
Auto Body Collision Technology	A.A.S.	71		T	
Auto Body Collision Technology	Diploma	63		T	
Collision & Refinishing Technician	Certificate	30		T	
Sheet Metal Repair Technician	Certificate	28		T	
Automotive Service Technology	A.A.S.	73		T	
Automotive Service Technology	Diploma	58		T	
Automotive Electronics and Drivability	Certificate	18		T	
Automotive Engine Repair, Suspension, and Brakes	Certificate	21		T	
Aviation Maintenance Technology	A.A.S.	94		T	
Aviation Maintenance Technology	Diploma	82		T	
Aviation Maintenance Technician Plus	Certificate	18		T	
Business Transfer Pathway	A.S.	60	E	T	DE
Carpentry - Residential	Diploma	34	E		
Certified Production Technician	Certificate	8	E	T	
Cisco Networking	Certificate	14	E		
Computer & Network Technology	A.A.S.	60	E		
Construction Electricity	Diploma	76	E		
Construction Plumbing	Diploma	34	E		
Criminal Justice-Peace Officer Training	A.A.S.	62		T	
Criminal Justice-Peace Officer Training	Diploma	38		T	
Criminal Justice-Peace Officer Training	Certificate	21		T	
Customer Service	Certificate	16	E	T	DE
Dietetic Technician	A.A.S.	67			DE
Digital Marketing	AAS	60			DE
Digital Marketing	Certificate	24			DE
Early Childhood Education & Paraprofessional	A.A.S.	60	E		DE
Early Childhood Education & Paraprofessional	Certificate	18	E		DE
Economics Transfer Pathway	A.A.	60	E	T	DE
Electronics Technology Automated Systems	A.A.S.	60		T	
Exercise Science Transfer Pathway	A.S.	60	E	T	DE

Program Title	Degree	Credits	EGF	TRF	Online
Farm Operations & Management	Diploma	40	E		
Fire Technology	A.A.S.	60	E		
Health Sciences Broad Field	A.S.	60	E	T	DE
Heating, Ventilation, & Air Conditioning	Diploma	37	E		
Heating, Ventilation, & Air Conditioning/Construction Plumbing	A.A.S.	70	E		
History Transfer Pathway	A.A.	60	E	T	DE
IT Cybersecurity	A.A.S.	60	E		
Liberal Arts & Sciences	A.A.	60	E	T	DE
Marketing & Management	A.A.S.	60	E		DE
Mechatronics	A.A.S.	60	E		
Medical Administrative Assistant	A.A.S.	60			DE
Medical Coding Specialist	A.A.S.	60			DE
Medical Office Specialist	Diploma	45			DE
Patient Access Specialist	Certificate	27			DE
Nursing	A.S.	64	E	T	
Nursing Assistant	Certificate	3	E	T	
Practical Nursing	Diploma	44	E	T	DE
Occupational Therapy Assistant	A.A.S.	72	E		
Paramedic	A.A.S.	60	E		
Paramedic	Diploma	48	E		
Pharmacy Technology	A.A.S.	60	E		
Pharmacy Technology	Diploma	36	E		
Phlebotomy	Certificate	16	E		
Physical Therapist Assistant	A.A.S.	72	E		
Production Technologies	Certificate	16			DE
Radiologic Technology	A.A.S.	82	E		
Respiratory Therapy	A.A.S.	78	E		DE
Small Unmanned Aircraft Systems Technician	A.A.S	60		T	
Small Unmanned Aircraft Systems Field Service Tech	Diploma	34		T	
Sociology Transfer Pathway	A.A.	60	E	T	DE
Supervisory Leadership	Certificate	18	E	T	DE
Surgical Technology	A.A.S.	60	E		
UAS & Geospatial Applications	Certificate	13		T	
Uncrewed Aircraft Systems Maintenance Technician	Certificate	27		T	
Welding Process Technology	Diploma	34		T	
Welding Process Technology GMAW	Certificate	10		T	
Welding Process Technology GTAW	Certificate	10		T	
Welding Process Technology SMAW	Certificate	10		T	
Welding Technology	Certificate	30			DE
Welding Technology	Diploma	32	E		

Accounting
A.A.S. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description
The Associate of Applied Science (A.A.S.) in Accounting program provides the knowledge and skills necessary to prepare financial statements and reports for a business, including the ability to examine, analyze, interpret, and correct accounting data and records. In addition, training is provided in budget preparation, payroll preparation, and filing of quarterly/yearly state and federal reports. Finally, computerized accounting concepts and applications, as well as spreadsheet concepts and applications, are included in this program.

The required Liberal Arts courses for this program will help to develop personal and professional skills essential for career success especially in the areas of mathematics, economics, and communications.

Program Specific Requirements
All required courses must be completed with a grade of C or better to graduate.

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
ACCT 1104	Payroll	3
ACCT 1108	Busn Math-Calculators	3
ACCT 1124	Spreadsheet Concepts	3
ACCT 1128	Computerized Acct I	3
ACCT 2200	Income Tax	3
ACCT 2204	Intermediate Acct I	4
ACCT 2210	Income Tax II	3
ACCT 2214	Intermediate Acct II	4
ACCT 2221	Accounting Capstone	4
BUSN 2218	Legal Environment Busn	3
BUSN 2221	Prin Accounting I	4
BUSN 2222	Prin Accounting II	4
CPTR 1104	Intro to Computer Tech	3
CRLT 2103	Job Seeking-Keeping	1
ENGL 1111	Composition I	3
MATH 1110	College Algebra	3
PHIL 1102	Intro to Ethics	3
SPCH 1101	Intro to Public Speaking	3
	G9: Ethic/Civic Resp Elec	3

G9: Ethical/Civic Responsibility Electives

BUSN 1115	Personal Financial Mgmt	3
ECON 2202	Macroeconomics	3

Accounting Clerk - Microcomputer Applications Emphasis
Diploma - 45 Credits
*** EGF campus**
*** Distance Educ online**

Program Description
The emphasis of this program includes spreadsheets, word processing, and database management applications especially computer skills and job responsibilities of an Accounting Clerk.

Program Specific Requirements
All required courses must be completed with a grade of C or better to graduate.

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
ACCT 1104	Payroll	3
ACCT 1108	Busn Math-Calculators	3
ACCT 1124	Spreadsheet Concepts	3
ACCT 1128	Computerized Acct I	3
ACCT 2200	Income Tax	3

ADMS 1100	Keyboarding I	3
ADMS 1110	Word Processing	3
BUSN 2218	Legal Environment Busn	3
BUSN 2221	Prin Accounting I	4
BUSN 2222	Prin Accounting II	4
CPTR 1104	Intro to Computer Tech	3
CPTR 1106	Microcomputer Databases	3
CRLT 2103	Job Seeking-Keeping	1
	Program Electives	6

Program Electives

ACCT 2204	Intermediate Acct I	4
ACCT 2210	Income Tax II	3
ACCT 2214	Intermediate Acct II	4
ADMS 1114	Desktop Pub-Pres Graph	3
CPTR 1500	Intro Web Concepts	3
SSCI 1101	Human Relations	3

Accounting Transfer Pathway
A.S. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

The Accounting (Minnesota State Transfer Pathway) A.S. offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated accounting bachelor's degree programs at Minnesota State universities.

The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

Students transferring to non-system universities are advised to consult with their intended transfer institution to determine transferability of the courses in this curriculum.

Course Listing

Course #	Course Title	Crds
ACCT 1104	Payroll	3
ACCT 1124	Spreadsheet Concepts	3
ACCT 2221	Accounting Capstone	4
BUSN 2210	Prin of Management	3
BUSN 2218	Legal Environment Busn	3
BUSN 2221	Prin Accounting I	4
BUSN 2222	Prin Accounting II	4
CPTR 1104	Intro to Computer Tech	3
MKTG 2200	Prin of Marketing	3
ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3
ENGL 1111	Composition I	3
MATH 1110	College Algebra	3
MATH 2203	Statistics	4
PHIL 1102	Intro to Ethics	3
SPCH 1101	Intro to Public Speaking	3
	G6 or G7 recommended	4
	G3: Natural Sciences Elec	4

G3: Natural Science Electives

BIOL 1101	Concepts of Biology	4
BIOL 1111	Biological Prin I	4
BIOL 1120	Human Biology	4
BIOL 2260	Anatomy and Phys I	4
CHEM 1020	Intro to Chemistry	4
CHEM 1121	General Chemistry I	5
CHEM 2205	Survey Gen-Org-Bio Chm	4
CHEM 2211	Organic Chemistry I	5
NSCI 1103	Geology	4
NSCI 1123	Astronomy	4
NSCI 2203	Environmental Science	4
PHYS 1111	General Physics I	4
PHYS 2211	Physics I	5

Administrative Professional
A.A.S. - 60 Credits
*** EGF campus**
*** Distance Educ online**

Program Description

This Administrative Professional A.A.S. degree prepares students for employment as office professionals. Today many businesses rely on Administrative Professionals to coordinate and manage offices efficiently and effectively as well as create a positive office atmosphere. Students will develop skills in oral and written communication, office technology, time management, decision-making and problem-solving skills as well as listening and the interpersonal skills needed to be successful in today's business environment. The

Administrative Professional A.A.S. program helps students develop the knowledge and skills necessary to prepare for tomorrow's job market.

Program Specific Requirements

An associate of applied science degree requires a minimum of 15 general education credits selected from at least three of the ten goal areas of the Minnesota Transfer Curriculum.

All required technical and elective courses must be completed with a 2.0 GPA overall to graduate.

Students achieving assessment scores below the established minimums must register and successfully complete the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250

Course Listing

Course #	Course Title	Crds
ACCT 1100	Prin of Bookkeeping	3
ACCT 1124	Spreadsheet Concepts	3
ADMS 1100	Keyboarding I	3
ADMS 1102	Keyboarding II	3
ADMS 1110	Word Processing	3
ADMS 1116	Business Communications	3
ADMS 1121	Business Office Mgmt	3
ADMS 1124	Business Event Planning	3
ADMS 2213	Advanced Office Apps	3
ADMS 2236	Project Management	3
CPTR 1104	Intro to Computer Tech	3
MKTG 1108	Customer Relations Mgmt	3
MKTG 2410	Social Media Marketing	3
ENGL 1111	Composition I	3
SSCI 1101	Human Relations	3
	G1: Communication Elec	3
	MN Transfer Electives	6
	Program Electives	6

Program Electives

ACCT 1104	Payroll	3
ACCT 1108	Busn Math-Calculators	3
ADMS 2282	Internship	3
BUSN 2221	Prin Accounting I	4
CPTR 1106	Microcomputer Databases	3
CPTR 1132	Microcomputer Maintenance	3
MKTG 2120	Supervisory Leadership	3

G1: Communication Electives

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

Administrative Office Specialist
Diploma - 33 Credits
*** EGF campus**
*** Distance Educ online**

Program Description

This program prepares students with a full range of office knowledge and skills to successfully support management in a professional office setting. Students will develop skills in communication, human relations, software applications, office management, bookkeeping, filing, records management, and document processing. Students have the opportunity to advance to the Administrative Professional AAS degree.

Program Specific Requirements

All required technical and elective courses must be completed with a 2.0 GPA overall to graduate.

Students achieving assessment scores below the established minimums must register and successfully complete the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250

Course Listing

Course #	Course Title	Crds
ACCT 1100	Prin of Bookkeeping	3
ACCT 1124	Spreadsheet Concepts	3
ADMS 1100	Keyboarding I	3
ADMS 1102	Keyboarding II	3
ADMS 1110	Word Processing	3
ADMS 1116	Business Communications	3
ADMS 1121	Business Office Mgmt	3
ADMS 1124	Business Event Planning	3
CPTR 1104	Intro to Computer Tech	3
MKTG 1108	Customer Relations Mgmt	3
	Program Electives	3

Program Electives

ACCT 1104	Payroll	3
ACCT 1108	Busn Math-Calculators	3
ADMS 2236	Project Management	3
ADMS 2282	Internship	3
BUSN 2221	Prin Accounting I	4
CPTR 1106	Microcomputer Databases	3
CPTR 1132	Microcomputer Maintenance	3
MKTG 2120	Supervisory Leadership	3
MKTG 2410	Social Media Marketing	3
SSCI 1101	Human Relations	3

Administrative Office Support
Certificate - 18 Credits
*** EGF campus**
*** Distance Educ online**

Program Description
This program is designed to equip students with the essential skills and knowledge required to excel in supporting management within a professional office environment. Participants will develop expertise in communication, software applications, office management, bookkeeping, document processing, and customer relations. Upon completion, students will be well-prepared to pursue an Administrative Office Specialist Diploma, enhancing their qualifications and career prospects in administrative roles.

Program Specific Requirements
All required technical and elective courses must be completed with a 2.0 GPA overall to graduate.

Students achieving assessment scores below the established minimums must register and successfully complete the required developmental courses in order to meet graduation requirements. The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250

Course Listing

Course #	Course Title	Crds
ACCT 1100	Prin of Bookkeeping	3
ADMS 1100	Keyboarding I	3
ADMS 1116	Business Communications	3
ADMS 1121	Business Office Mgmt	3
CPTR 1104	Intro to Computer Tech	3
MKTG 1108	Customer Relations Mgmt	3

Agriculture Education
A.S. - 60 Credits
*** TRF campus**

Program Description
Agriculture is an important and multifaceted industry across the globe. The United States and Minnesota are known and on the forefront of teaching our future agriculturists. Agricultural Education is an opportunity to utilize your agricultural skills and talents to discover, engage and teach our future agriculturists. Agriculture Education provides the opportunity to impact lives by educating others about this vital industry and mainstay of our country.

Program Specific Requirements
The following minimum requirements must be completed:
1. All required courses must have a cumulative GPA of 2.0 or better to graduate.
2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
3. The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
AGRG 1100	Intro to Agriculture	3
AGRG 1105	Agribusiness & Records	3
AGRG 1110	Intro to Animal Science	4
AGRG 1125	Food Products	3
AGRG 1300	Plant Science	4
AGRG 1500	Careers in Ag Educ	1
AGRG 2500	Early Experience Ag Ed	1
ANSC 1350	Companion Animals	3
EDUC 2250	Intro to Education	3
BIOL 1111	Biological Prin I	4
CHEM 1020	Intro to Chemistry	4
ECON 2201	Microeconomics	3
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
PHIL 1101	Intro to Philosophy	3
PHIL 1102	Intro to Ethics	3
SOCI 1101	Intro to Sociology	3
SPCH 1101	Intro to Public Speaking	3
	G8: Global Perspect Elec	3
	G4: Math/Logical Elective	3

G4: Math/Logical Reasoning Electives

MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3

General Agriculture
Certificate - 17 Credits
*** TRF campus**

Program Description
Agriculture plays a critical role in the economy and functionality of our world. For decades, agriculture has been associated with just farming. Farming is

very crucial however, agriculture is a broadened field that contains 8 career pathways that are all a part of our Agriculture, Food and Natural Resources industries. A career in the agriculture industry requires knowledge in many facets of agricultural systems these include: agribusiness, animal, biotechnology environmental, power, structural and technical, plant, natural resources and food products & processing.

Program Specific Requirements

The following minimum requirements must be completed:

1. All required courses must have a cumulative GPA of 2.0 or better to graduate.
2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
3. The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
AGRG 1100	Intro to Agriculture	3
AGRG 1105	Agribusiness & Records	3
AGRG 1110	Intro to Animal Science	4
AGRG 1300	Plant Science	4
	G4: Math/Logical Elective	3

G4: Math/Logical Electives

MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3

Animal Science
A.A.S. - 60 Credits
*** TRF campus**

Program Description

Animal Science AAS degree allows students to explore the field of animal science with emphasis on livestock animals. Technological advances in the animal sciences have contributed to a safe, healthy, abundant, & inexpensive food supply.

Program Specific Requirements

The following minimum requirements must be completed:

1. All required courses must have a cumulative GPA of 2.0 or better to graduate.
2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
3. The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
AGRG 1100	Intro to Agriculture	3
AGRG 1105	Agribusiness & Records	3
AGRG 1110	Intro to Animal Science	4
AGRG 1125	Food Products	3
AGRG 1300	Plant Science	4
ANSC 1200	Animal Evaluation	1
ANSC 1350	Companion Animals	3
ANSC 2200	Animal Feeds-Nutrition	4
ANSC 2300	Animal Hlth-Disease	4
ANSC 2400	Livestock Management	3
ANSC 2600	Livestock Reproduction	4
ANSC 2950	Beef Production	4
ANSC 2960	Animal Anat and Phys	4
BIOL 1111	Biological Prin I	4
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
SPCH 1101	Intro to Public Speaking	3
	G4: Math/Logical Elective	3

G4: Math/Logical Reasoning Electives

MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3

Animal Science
Diploma - 31 Credits
*** TRF campus**

Program Description

Animal Science Diploma allows students to explore the field of animal science with an emphasis on livestock animals. Technological advances in the animal sciences have contributed to a safe, healthy, abundant, & inexpensive food supply.

Program Specific Requirements

The following minimum requirements must be completed:

1. All required courses must have a cumulative GPA of 2.0 or better to graduate.
2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
3. The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
AGRG 1105	Agribusiness & Records	3
AGRG 1110	Intro to Animal Science	4
ANSC 1200	Animal Evaluation	1
ANSC 2200	Animal Feeds-Nutrition	4
ANSC 2300	Animal Hlth-Disease	4
ANSC 2400	Livestock Management	3
ANSC 2600	Livestock Reproduction	4
ANSC 2950	Beef Production	4
ANSC 2960	Animal Anat and Phys	4

Architectural Technology & Design
A.A.S. - 69 Credits
*** EGF campus**

Program Description
This program is designed for students who would like enter the workforce or further their education in Architecture, Construction Management or Industrial Technology using transfer agreements with various universities. The customized curriculum allows for more liberal arts classes that are a part of the Minnesota Transfer curriculum.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
ARCH 1105	Building Technology I	4
ARCH 1111	Architectural Tech I	3
ARCH 1112	Architectural Tech II	4
ARCH 1121	CAD I	5
ARCH 1123	CAD II	5
ARCH 1125	Design Limitations	3
ARCH 1128	Environmental Design	3
ARCH 1131	Model Construction	2
ARCH 1201	Estimating Tech I	2
ARCH 2211	Architectural Tech III	3
ARCH 2212	Architectural Tech IV	4
ARCH 2213	Building Technology II	4
ARCH 2215	Building Systems	3
ARCH 2220	CAD 3D	4
ARCH 2241	Architectural Design	4
CRLT 2103	Job Seeking-Keeping	1
	MN Transfer Electives	15

Architectural Technology & Design
Diploma - 65 Credits
*** EGF campus**

Program Description
This program is designed for the student who would like to proceed directly to the work place. The curriculum is customized to add more construction-related courses to allow the student to be a more well rounded employee. The first year of the Architectural Technology and Design program involves the study of residential construction practices and computer aided drawing (CAD), using AutoCAD software and an introduction to building information modeling (BIM) and Revit, a 3D computer modeling program. Projects are drawn using both the drawing board and the computer. The second year is concerned primarily with commercial and industrial construction practices. Along with the advanced technology, students are also offered classes for a broader base of skills. These include model construction, the creation of scaled architectural presentation models, and Presentation class, where students create architectural presentation drawings using 3D software.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
ARCH 1105	Building Technology I	4
ARCH 1111	Architectural Tech I	3
ARCH 1112	Architectural Tech II	4
ARCH 1121	CAD I	5
ARCH 1123	CAD II	5
ARCH 1125	Design Limitations	3
ARCH 1128	Environmental Design	3
ARCH 1131	Model Construction	2
ARCH 1201	Estimating Tech I	2
ARCH 2211	Architectural Tech III	3
ARCH 2212	Architectural Tech IV	4
ARCH 2213	Building Technology II	4
ARCH 2215	Building Systems	3
ARCH 2220	CAD 3D	4
ARCH 2223	CAD 3D Advanced	4
ARCH 2224	Content - Project Mgmt	3
ARCH 2226	Presentation	4
ARCH 2241	Architectural Design	4
CRLT 2103	Job Seeking-Keeping	1

Intro Architectural Technology & Design
Diploma - 31 Credits
*** EGF campus**

Program Description
The Intro to Architectural Technology and Design diploma involves the study of residential construction practices and computer aided drawing (CAD), using AutoCAD software and an introduction to building information modeling (BIM) and Revit, a 3D computer modeling program. Projects are drawn using both the drawing board and the computer.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
ARCH 1105	Building Technology I	4
ARCH 1111	Architectural Tech I	3
ARCH 1112	Architectural Tech II	4
ARCH 1121	CAD I	5
ARCH 1123	CAD II	5
ARCH 1125	Design Limitations	3
ARCH 1128	Environmental Design	3
ARCH 1131	Model Construction	2
ARCH 1201	Estimating Tech I	2

Auto Body Collision Technology
A.A.S. - 73 Credits
*** TRF campus**

Program Description
Formal training in Auto Body Collision Technology is highly desirable because advances in technology in recent years have greatly changed the structure, components, and even materials used in automobiles. This program is designed for entry level education in the Auto Body Collision Repair industry. The customized curriculum allows students time for more Liberal Arts classes, which are a part of the Minnesota Transfer Curriculum. Auto Body Technicians replace or repair damaged portions of automobile bodies and frames using the latest tools and technology. They straighten bent frames, repair dents, replace body panels, and weld rust repair panels. They also replace broken glass, inspect drive train components, and perform electrical diagnostics including air bag component replacement.
Students will also sand, mask repair areas, and spray the latest automotive refinishing materials in a state of the art down draft bake booth. Graduates of the program are eligible to take the Automotive Service Excellence (ASE) certification test after graduating and one year of training in a collision repair facility.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and

successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Students entering the program should have good mechanical skills, communication skills, and the ability to follow instructions. This is a physical and sometimes dirty environment, so safety precautions are strictly enforced.

Attendance is critical due to the volume and specific information given to ensure the correct repair process. There is also a dress code requirement. Tools and safety equipment are required; a tool list is also available from an instructor.

Course Listing

Course #	Course Title	Crds
AUBO 1100	Intro to Auto Body	2
AUBO 1102	Off Car Repair	4
AUBO 1106	Plastic Welding	1
AUBO 1113	Auto Body Lab I	3
AUBO 1114	Auto Body Lab II	4
AUBO 1121	Auto Body Refinishing	6
AUBO 1123	Glass and Trim	2
AUBO 1131	Auto Body Welding I	2
AUBO 1132	Auto Body Welding II	2
AUBO 2201	Collision-Damage-Estimate	4
AUBO 2205	Unibody and Frame	4
AUBO 2208	Major Collision Lab	4
AUBO 2214	General Auto Body Lab	4
AUBO 2216	Shop Operations	2
AUBO 2221	Simulated Auto Body I	4
AUBO 2222	Simulated Auto Body II	2
AUBO 2225	Panel Replacement	2
AUBO 2228	Auto Body Mechanical	6
ENGL 1111	Composition I	3
	G4: Math/Logical Elective	3
	G5: History/Social Elec	3
	G6: Human/Fine Arts Elec	3
	MN Transfer Elective	3

Auto Body Collision Technology
Diploma - 63 Credits
*** TRF campus**

Program Description
Formal training in Auto Body Collision Technology is highly desirable because advances in technology in recent years have greatly changed the structure, components, and even materials used in automobiles. This program is designed for entry level education in the Auto Body Collision Repair industry.
Auto Body Technicians replace or repair damaged portions of automobile bodies and frames using the latest tools and technology. They straighten bent frames, repair dents, replace body panels, and weld rust repair panels. They also replace broken glass, inspect drive train components, and perform electrical diagnostics including air bag component replacement.
Students will also sand, mask repair areas, and spray the latest automotive refinishing materials in a state of the art down draft bake booth. Graduates of the program are eligible to take the Automotive Service Excellence (ASE) certification test after graduating and one year of training in a collision repair facility.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Students entering the program should have good mechanical skills, communication skills, and the ability to follow instructions. This is a physical and sometimes dirty environment, so safety precautions are strictly enforced.

Attendance is critical due to the volume and specific information given to ensure the correct repair process. There is also a dress code requirement. Tools and safety equipment are required; a tool list is also available from an instructor.

Course Listing

Course #	Course Title	Crds
AUBO 1100	Intro to Auto Body	2
AUBO 1102	Off Car Repair	4
AUBO 1106	Plastic Welding	1
AUBO 1113	Auto Body Lab I	3
AUBO 1114	Auto Body Lab II	4
AUBO 1121	Auto Body Refinishing	6
AUBO 1123	Glass and Trim	2
AUBO 1131	Auto Body Welding I	2
AUBO 1132	Auto Body Welding II	2

AUBO 2201	Collision-Damage-Estimate	4
AUBO 2205	Unibody and Frame	4
AUBO 2208	Major Collision Lab	4
AUBO 2214	General Auto Body Lab	4
AUBO 2216	Shop Operations	2
AUBO 2221	Simulated Auto Body I	4
AUBO 2222	Simulated Auto Body II	2
AUBO 2225	Panel Replacement	2
AUBO 2228	Auto Body Mechanical	6
CRLT 2103	Job Seeking-Keeping	1
HPER 1410	First Aid - CPR	1
SSCI 1101	Human Relations	3

Collision & Refinishing Technician
Certificate - 30 Credits
*** TRF campus**

Program Description
Auto Body Technicians replace or repair damaged portions of automobile bodies and frames using the latest tools and technology. They straighten bent frames, repair dents, replace body panels, weld rust repair panels, and remove and replace glass. Format training in Auto Body Collision Technology is highly desirable because advances in technology in recent years have greatly changed the structure, components, and even materials used in automobiles. This program is designed for entry level education in the Auto Body Collision Repair industry. Students will also sand, mask repair areas, and spray the latest automotive refinishing materials in a state of the art down draft bake booth.

Program Specific Requirements
Successful completion of the Sheet Metal Repair Technician Certificate is a prerequisite for the Collision and Refinishing Technician Certificate.

Course Listing

Course #	Course Title	Crds
AUBO 2201	Collision-Damage-Estimate	4
AUBO 2205	Unibody and Frame	4
AUBO 2208	Major Collision Lab	4
AUBO 2214	General Auto Body Lab	4
AUBO 2216	Shop Operations	2
AUBO 2221	Simulated Auto Body I	4
AUBO 2225	Panel Replacement	2
AUBO 2228	Auto Body Mechanical	6

Sheet Metal Repair Technician
Certificate - 28 Credits
*** TRF campus**

Program Description
Auto Body Technicians replace or repair damaged portions of automobile bodies and frames using the latest tools and technology. They straighten bent frames, repair dents, replace body panels, weld rust repair panels, and remove and replace glass. Format training in Auto Body Collision Technology is highly desirable because advances in technology in recent years have greatly changed the structure, components, and even materials used in automobiles. This program is designed for entry level education in the Auto Body Collision Repair industry. Students will also sand, mask repair areas, and spray the latest automotive refinishing materials in a state of the art down draft bake booth.

Course Listing

Course #	Course Title	Crds
AUBO 1100	Intro to Auto Body	2
AUBO 1102	Off Car Repair	4
AUBO 1106	Plastic Welding	1
AUBO 1113	Auto Body Lab I	3
AUBO 1114	Auto Body Lab II	4
AUBO 1121	Auto Body Refinishing	6
AUBO 1123	Glass and Trim	2
AUBO 1131	Auto Body Welding I	2
AUBO 1132	Auto Body Welding II	2
AUBO 2222	Simulated Auto Body II	2

Automotive Service Technology
A.A.S. - 73 Credits
*** TRF campus**

Program Description
This program is designed primarily for students who would like to further their education in Automotive Service. The customized curriculum allows for more Liberal Arts classes, which are a part of the Minnesota Transfer Curriculum.
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.

Students entering this program should have good mechanical aptitude, good communication skills, and the ability to read and comprehend service literature. Graduates of this program will have a variety of opportunities that range from driveability technician, alignment and suspension specialist, transmission specialist, service advisors and managers. Opportunities for advancement may include factory and dealer representatives, management, and self-employment.

Course Listing

Course #	Course Title	Crds
AUMO 1103	Intro to Auto Service	2
AUMO 1109	Steering and Suspension	3
AUMO 1111	Brakes	5
AUMO 1112	Ignition and Tune-up	3
AUMO 1116	Basic Electricity-Battery	3
AUMO 1118	Starting and Charging	3
AUMO 1125	Driveline-Clutch-Manual	4
AUMO 1133	Auto HVAC	3
AUMO 1134	Wheel Alignment	3
AUMO 1138	Hybrid Vehicle Systems	1
AUMO 2202	Body Electrical	3
AUMO 2204	Auto Computers	3
AUMO 2207	Fuels-Injection-Emissions	5
AUMO 2208	Engine Theory-Diagnostics	4
AUMO 2210	Driveability	4
AUMO 2212	Auto Transmission-Axle I	5
AUMO 2233	Engine Overhaul Lab	4
ENGL 1111	Composition I	3
	G4: Math/Logical Elective	3
	G5: History/Social Elec	3
	G6: Human/Fine Arts Elec	3
	MN Transfer Elective	3

Automotive Service Technology
Diploma - 58 Credits
*** TRF campus**

Program Description

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.
Students entering this program should have good mechanical aptitude, good communication skills, and the ability to read and comprehend service literature. Graduates of this program will have a variety of opportunities that range from driveability technician, alignment and suspension specialist, transmission specialist, service advisors and managers. Opportunities for advancement may include factory and dealer representatives, management, and self-employment.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
AUMO 1103	Intro to Auto Service	2
AUMO 1109	Steering and Suspension	3
AUMO 1111	Brakes	5
AUMO 1112	Ignition and Tune-up	3
AUMO 1116	Basic Electricity-Battery	3
AUMO 1118	Starting and Charging	3
AUMO 1125	Driveline-Clutch-Manual	4
AUMO 1133	Auto HVAC	3
AUMO 1134	Wheel Alignment	3
AUMO 1138	Hybrid Vehicle Systems	1
AUMO 2202	Body Electrical	3
AUMO 2204	Auto Computers	3
AUMO 2207	Fuels-Injection-Emissions	5
AUMO 2208	Engine Theory-Diagnostics	4
AUMO 2210	Driveability	4
AUMO 2212	Auto Transmission-Axle I	5
AUMO 2233	Engine Overhaul Lab	4

Automotive Electronics and Drivability
Certificate - 18 Credits
*** TRF campus**

Program Specific Requirements

Cumulative GPA 2.0 or higher and successful completion of certificate required courses.

Course Listing

Course #	Course Title	Crds
AUMO 1112	Ignition and Tune-up	3
AUMO 2202	Body Electrical	3
AUMO 2204	Auto Computers	3
AUMO 2207	Fuels-Injection-Emissions	5
AUMO 2210	Driveability	4

Automotive Engine Repair, Suspension, and Brakes
Certificate - 21 Credits
*** TRF campus**

Program Specific Requirements
Cumulative GPA 2.0 or higher and successful completion of certificate required courses.

Course Listing

Course #	Course Title	Crds
AUMO 1103	Intro to Auto Service	2
AUMO 1109	Steering and Suspension	3
AUMO 1111	Brakes	5
AUMO 1134	Wheel Alignment	3
AUMO 2208	Engine Theory-Diagnostics	4
AUMO 2233	Engine Overhaul Lab	4

Aviation Maintenance Technology
A.A.S. - 94 Credits
*** TRF campus**

Program Description
Aviation Maintenance Technology concentrates on aircraft airframe and powerplant maintenance to prepare the student to test for certification as a Federal Aviation Administration airframe and powerplant mechanic. Students receive hands-on training in modern and well-equipped facilities. More than 20 aircraft, including a Boeing 727s, two DC-9's, a Sabreliner, twin-engine turbo prop Mitsubishi MU-2, a Bell 206 turbine-powered helicopter, as well as Piper, Cessna, and Beechcraft piston-powered aircraft are used in the student's training.
After completing this degree, students can then transfer to a four-year institution to complete their Bachelors Degree requirements. Northland has articulation agreements with a number of area institutions including the University of North Dakota, St. Cloud State University, Metropoitan State University, Minnesota State University-Mankato, and Winona State University.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements. English course requirements are listed in the curriculum summary. Arithmetic assessment scores must be greater than or equal to 240 or students must complete MATH 0080 or a higher level course.

Course Listing

Course #	Course Title	Crds
AVIA 1011	Basic Electricity	5
AVIA 1021	Aviation Math	1
AVIA 1022	Aircraft Physics	1
AVIA 1023	Publication-Forms-Records	3
AVIA 1024	Operations - Service	2
AVIA 1026	Corrosion Control	1
AVIA 1027	Aircraft Drawings	1
AVIA 1028	Weight - Balance	1
AVIA 1029	Materials - Processes	3
AVIA 1030	Fluid Lines	1
AVIA 2001	Aircraft Elec Systems	2
AVIA 2008	Assembly - Rigging	2
AVIA 2018	Aircraft Inspection	2
AVIA 2023	Fabric - Finishes	3
AVIA 2025	Non-Metalic Struct	3
AVIA 2026	Sheet Metal	6
AVIA 2029	Hydraulic - Pneumatics	2
AVIA 2030	Landing Gear	2
AVIA 2032	Cabin Atmosphere	1
AVIA 2033	Aircraft Instruments	1
AVIA 2034	Communication - Nav	2
AVIA 2035	Aircraft Fuel Sys	1
AVIA 2036	Ice - Rain Sys	1
AVIA 2037	Fire Protection Sys	2
AVIA 2102	Aircraft Turbine Eng	6
AVIA 2115	Power Plant Sys 1	3
AVIA 2116	Power Plant Sys 2	4
AVIA 2121	Aircraft Recip Eng	7
AVIA 2123	Engine Instruments	1
AVIA 2125	Engine Electrical Sys	2
AVIA 2127	Ignition - Start Sys	2
AVIA 2128	Fuel Metering Sys	1
AVIA 2133	Aircraft Propellers	2
AVIA 2134	Aircraft Engine Insp	1
CRLT 2103	Job Seeking-Keeping	1
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
	G5: History/Social Elec	3
	G6: Human/Fine Arts Elec	3
	G3:Natural Sci or G4:Math	3

Aviation Maintenance Technology
Diploma - 82 Credits
*** TRF campus**

Program Description
Aviation Maintenance Technology concentrates on aircraft airframe and powerplant maintenance to

prepare the student to test for certification as a Federal Aviation Administration airframe and powerplant mechanic. Students receive hands-on training in modern and well-equipped facilities. More than 20 aircraft, including a Boeing 727s, two DC-9's, a Sabreliner, twin-engine turbo prop Mitsubishi MU-2, a Bell 206 turbine-powered helicopter, as well as Piper, Cessna, and Beechcraft piston-powered aircraft are used in the student's training.

The diploma program concentrates training on all facets of repair and inspection in electrical, pressurization, hydraulics, instruments, navigation, and engine systems.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
AVIA 1011	Basic Electricity	5
AVIA 1021	Aviation Math	1
AVIA 1022	Aircraft Physics	1
AVIA 1023	Publication-Forms-Records	3
AVIA 1024	Operations - Service	2
AVIA 1026	Corrosion Control	1
AVIA 1027	Aircraft Drawings	1
AVIA 1028	Weight - Balance	1
AVIA 1029	Materials - Processes	3
AVIA 1030	Fluid Lines	1
AVIA 2001	Aircraft Elec Systems	2
AVIA 2008	Assembly - Rigging	2
AVIA 2018	Aircraft Inspection	2
AVIA 2023	Fabric - Finishes	3
AVIA 2025	Non-Metalic Struct	3
AVIA 2026	Sheet Metal	6
AVIA 2029	Hydraulic - Pneumatics	2
AVIA 2030	Landing Gear	2
AVIA 2032	Cabin Atmosphere	1
AVIA 2033	Aircraft Instruments	1
AVIA 2034	Communication - Nav	2
AVIA 2035	Aircraft Fuel Sys	1
AVIA 2036	Ice - Rain Sys	1
AVIA 2037	Fire Protection Sys	2
AVIA 2102	Aircraft Turbine Eng	6
AVIA 2115	Power Plant Sys 1	3
AVIA 2116	Power Plant Sys 2	4
AVIA 2121	Aircraft Recip Eng	7
AVIA 2123	Engine Instruments	1
AVIA 2125	Engine Electrical Sys	2
AVIA 2127	Ignition - Start Sys	2
AVIA 2128	Fuel Metering Sys	1
AVIA 2133	Aircraft Propellers	2
AVIA 2134	Aircraft Engine Insp	1
CRLT 2103	Job Seeking-Keeping	1
SSCI 1101	Human Relations	3

Aviation Maintenance Technician Plus Certificate - 18 Credits
*** TRF campus**

Program Description

The UAS certificate will concentrate on the maintenance and repair of the components of uncrewed aircraft systems, including uncrewed aircraft (UAs), control stations (CSs), understanding the function of data links or the communication/guidance system between aircraft and control station, and a basic understanding of computer networks and their functionality within UAS. Courses are designed to create a skilled UAS Maintenance Technician with a broad understanding of commonly used UAS platforms at the functional level.

Program Specific Requirements

Students are required to have the Federal Aviation Administration (FAA) Airframe and Powerplant (A&P) Certification prior to enrolling into the program. Current NCTC Aviation Maintenance students may co-enroll.

Course Listing

Course #	Course Title	Crds
AVET 2142	Avionics	2
AVIA 1011	Basic Electricity	5
AVIA 2025	Non-Metalic Struct	3
AVIA 2034	Communication - Nav	2
UAST 2121	Advanced Composites	3
UAST 2133	Aerospace IT	3

Business Transfer Pathway
A.S. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

The business world today is facing rapid changes, creating an increased demand for well-trained

professionals to fill positions in all areas of the business industry. An Associate in Science degree builds a strong foundation of leadership and managerial skills to effectively manage people, organizations, and technology in the increasingly competitive global business world.

Northland's Business program is for students intending to seek employment after graduation and for those planning to continue their studies at a four-year college or university. In addition to established articulation agreements, this program meets the requirements of the Minnesota State Business Transfer Pathway and transfers to any Minnesota State University. The curriculum addresses contemporary business issues through courses in economics, communications, the legal environment, and provides practical knowledge in analytical disciplines such as computer science, statistics, and mathematics.

The courses required for this degree cover the basic areas of knowledge necessary for entrance into the business world and successful performance on the job. In addition, internships are available for students who desire hands-on experience in their chosen fields.

Course Listing

Course #	Course Title	Crds
ADMS 1116	Business Communications	3
BUSN 1110	Intro to Business	3
BUSN 2210	Prin of Management	3
BUSN 2218	Legal Environment Busn	3
BUSN 2221	Prin Accounting I	4
BUSN 2222	Prin Accounting II	4
CPTR 1104	Intro to Computer Tech	3
MKTG 2120	Supervisory Leadership	3
MKTG 2200	Prin of Marketing	3
ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
MATH 1110	College Algebra	3
MATH 2203	Statistics	4
	G1: Communication Elec	3
	G9: Ethic/Civic Resp Elec	3
	MN Transfer Electives	6

G1: Communications Electives

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

G9: Ethical/Civic Responsibility Electives

PHIL 1102	Intro to Ethics	3
PHIL 2240	Ethics and Business	3

Carpentry - Residential
Diploma - 34 Credits
*** EGF campus**

Program Description

This program prepares students with skills and knowledge for a career in residential carpentry. Technical and general courses provide the students theory and hands-on learning experiences. General areas of study include building codes, blueprint reading, estimating, site layout, concrete, framing, interior and exterior finish, cabinet construction and installation, and decks. The Residential Carpentry diploma program provides graduates with skills required of a carpenter in a variety of building construction settings common in both rural and metropolitan areas.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 211 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
BLDG 1114	Blueprint Reading I	2
BLDG 1120	Construction Estimating I	2
CARP 1102	Prin of Framing	3
CARP 1104	Framing I	6
CARP 1106	Footings - Foundations	2
CARP 1108	Interior Finish I	4
CARP 1110	Intro to Cabinets	3
CARP 1112	Exterior Finish I	3
CARP 2204	Concrete Technology	2
CARP 2214	Exterior Siding	2
CARP 2216	Deck Construction	2
	General Studies Elective	3

Certified Production Technician
Certificate - 8 Credits
*** EGF campus**
*** TRF campus**

Program Description

This short certificate combines four classes, for a total of eight credits, for a credential that meets requirements outlined by the Manufacturing Skill

Standards Council (MSSC) Certified Production Technician program. This certificate prepares students for entry level employment in manufacturing careers. The Manufacturing Process Technology Program prepares students for technical careers in the manufacturing industry.

Course Listing

Course #	Course Title	Crds
CMAE 1514	Safety Awareness	2
CMAE 1518	Manufacture Process-Prod	2
CMAE 1522	Quality Practices	2
CMAE 1526	Maintenance Awareness	2

Cisco Networking
Certificate - 14 Credits
*** EGF campus**

Program Description
This program prepares students to take the Cisco Certified Network Associate (CCNA) certification and also the CompTIA Network+ certification. The course work includes Cisco semesters 1 - 4. Skill development covers LAN/WAN networking technology and concepts, networking math, networking media, router configuration, switching, VLANS, routing protocols and WAN links and services. Prior experience with computer hardware, binary math, and basic electronics is desired but not required. Background in cabling is beneficial. Upon completion of this certificate the student will be able to take the Cisco CCNA and CompTIA Network+ certification exams offered though a VUE or Prometric testing center.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

All required courses for the program must be completed with a grade of C or better.

Course Listing

Course #	Course Title	Crds
CPTR 1136	Networking I	4
CPTR 1147	Networking II	4
CPTR 2226	Networking III	3
CPTR 2227	Networking IV	3

Computer & Network Technology
A.A.S. - 60 Credits
*** EGF campus**

Program Description
The Computer & Network Technology Associates degree offers students both theory and hands-on training in computer equipment servicing and networking. Computer skills development covers the hardware and software systems of current computer technology. Networking skills include switching, routing, server operating systems, directory services and much more. Many classes are built around specific industry certifications. 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.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250
Advanced Algebra Functions: 250

All required courses for the program must be completed with a grade of C or better.

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
CPTR 1110	Visual Basic Programming	3
CPTR 1128	Help Desk Concepts	3
CPTR 1132	Microcomputer Maintenance	3
CPTR 1136	Networking I	4
CPTR 1147	Networking II	4
CPTR 1148	Micro Operating Systems	3
CPTR 1171	Fund of Network Security	3

CPTR 2214	Network Operating Sys	3
CPTR 2226	Networking III	3
CPTR 2227	Networking IV	3
CPTR 2231	Unix-Linux	3
CPTR 2252	Micro Systems Project	3
CRLT 2103	Job Seeking-Keeping	1
ENGL 1111	Composition I	3
MATH 1110	College Algebra	3
PHIL 1102	Intro to Ethics	3
SPCH 1101	Intro to Public Speaking	3
	G5: History/Social Elec	3
	Program Electives	6

Program Electives

ACCT 1100	Prin of Bookkeeping	3
ACCT 1124	Spreadsheet Concepts	3
ADMS 1116	Business Communications	3
BUSN 1115	Personal Financial Mgmt	3
BUSN 2210	Prin of Management	3
BUSN 2218	Legal Environment Busn	3
CPTR 1104	Intro to Computer Tech	3
CPTR 1128	Help Desk Concepts	3
CPTR 2101	Ethical Hacking	3
CPTR 2121	Network Defense	3
CPTR 2241	Cybersecurity Analysis	3
CPTR 2249	Cybersecurity Policy	3
CPTR 2294	Internship	3
MKTG 2201	Prin of Sales	3
MKTG 2205	Prin of Retailing	3
MKTG 2306	Small Business Mgmt	3

G5: History/Social Science Electives

ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3
PSYC 1105	Intro to Psychology	3
SOCI 1101	Intro to Sociology	3

Construction Electricity
Diploma - 76 Credits
*** EGF campus**

Program Description

The Construction Electricity diploma program prepares students to build, install, maintain and repair electrical systems that provide heat, light, or power for residential, commercial and industrial structures. Technical and general courses provide students with a mix of theory and hands-on application in classroom, lab settings, and job sites. This comprehensive program includes maintenance of electrical equipment, wiring methods, blueprint reading, material selection, programmable controllers, and the National Electric Codes.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 211 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
CONE 1100	Elec Construction Safety	1
CONE 1102	Intro Elec Circuit Theory	4
CONE 1104	Intro to NEC	2
CONE 1107	Intro Residential Wiring	3
CONE 1108	Electrical Circuit Theory	4
CONE 1110	AC-DC Motors-Generators	4
CONE 1113	Residential Wiring	4
CONE 1116	Conduit-Tool Applications	2
CONE 1118	Electrical Services	3
CONE 1120	Electrical Blueprints	3
CONE 1122	Intro to Materials	1
CONE 1124	Intro Elec Blueprint Read	2
CONE 2114	National Electrical Code	2
CONE 2202	Heating-Cooling Controls	3
CONE 2205	Intro Commercial Wiring	3
CONE 2206	Intro Motor Control Applc	3
CONE 2208	Program Logic Controllers	2
CONE 2211	Electronic Motor Control	3
CONE 2212	Commercial Wiring	3
CONE 2214	Industrial Wiring	2
CONE 2216	Motor Control Application	3
CONE 2225	Transformers	2
CONE 2228	Troubleshooting	1
CONE 2230	Load Management Controls	2
CONE 2238	Low Voltage Wiring	2
CONE 2248	Code Applications	2
CONE 2251	Special Topics-Projects	3
HPER 1410	First Aid - CPR	1
MATH 1001	Technical Mathematics	3
SSCI 1101	Human Relations	3

Construction Plumbing
Diploma - 34 Credits
*** EGF campus**

Program Description

The Plumbing program prepares students to begin a career in plumbing and pipe fitting. Coursework provides technical understanding of Plumbing Technology and skills development. Coursework

integrates theory and practical experience. Through the Plumbing program, the student develops skills in water systems, piping procedures, plumbing and piping systems, residential and commercial system installations, blueprint reading and sketching, and heating systems installations. The successful graduate is eligible for employment in an advanced apprenticeship level in a variety of businesses found in rural and metropolitan areas.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 211

Course Listing

Course #	Course Title	Crds
BLDG 1102	Construction Safety	1
BLDG 1106	Grades-Cap-Elec Calc	3
BLDG 1114	Blueprint Reading I	2
HEAT 2214	Hydronic Heating Sys	4
PLBG 1104	Bldg Sewers-Drainage Sys	3
PLBG 1108	Plumbing-Piping Drawings	2
PLBG 1110	Copper Pipe Procedures	2
PLBG 1112	Plastic Pipe Procedures	2
PLBG 1114	Steel Pipe Procedures	3
PLBG 1116	Plumbing Theory-Sys	3
PLBG 1118	State Plbg Code Interpret	1
PLBG 1120	Residential Plbg Install	3
PLBG 1122	Plbg Repair-Service Work	2
	Program Elective	3

Program Elective

SSCI 1101	Human Relations	3
	MN Transfer Elective	3

Criminal Justice-Peace Officer Training
A.A.S. - 62 Credits
*** TRF campus**

Program Description

The Criminal Justice program prepares students for careers with city, state, federal, private, and other criminal justice agencies. While the program is designed primarily for peace officer careers, many students choose courses that lead to careers in other areas of the Criminal Justice system, such as public safety communications, corrections, and probation work. The program provides pre-employment education for students who want to enter the field of criminal justice at the end of two years with an Associate in Applied Science degree. The Criminal Justice program is certified by the Minnesota Board of Peace Officer Standards and Training (POST). After completing the skills training (also offered on the Northland campus) and completing a degree, students are eligible to take the state POST exam.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

All required CRJU courses and SOCI 1107 must be completed with a grade of C or better.

Requirements for CRJU 2229 Skills 1 (fall semester) and CRJU 2239 Skills 2 (spring semester)

1. 2.0 cumulative GPA.

2. Students who are on warning or probation status must have permission of the Criminal Justice Program Director to register for CRJU 2229 and CRJU 2239.

3. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).
Please see the Minnesota Peace Officer Licensing link that addresses the Minnesota Minimum Selection Standards to be licensed as a Peace Officer.

4. Completion and approval of the Minnesota Multi-Phasic Personality Inventory-2 Restructured Form (MMPI 2 RF)

5. Medical clearance from a healthcare provider stating student is physically eligible to participate in skills (see attached PHYSICIANS APPROVAL FORM)

6. CRJU 2229 and CRJU 2239 are physically challenging courses.

NOTE: The following links provide selection criteria information to prospective students who are interested in becoming a peace officer in the state of Minnesota.
Licensure Standards Diagram in color.
Questions and Answers for Advising.

Course Listing

Course #	Course Title	Crds
CRJU 1103	Juvenile Justice	3
CRJU 1106	Corrections-Probation	3
CRJU 1112	Human Behavior	3
CRJU 1113	Community and Diversity	3
CRJU 1127	Career Fitness 1	1
CRJU 2127	Career Fitness 2	1
CRJU 2200	Minnesota Statutes	3
CRJU 2206	Criminal Investigations	3
CRJU 2210	Criminal Procedures	3
CRJU 2229	Peace Officer Skills 1	6
CRJU 2239	Peace Officer Skills 2	6
HPER 2244	First Responder	3
ENGL 1111	Composition I	3
PLSC 1102	American Govt-Politics	3
PSYC 1105	Intro to Psychology	3
SOCI 1107	Intro Criminal Justice	3
	G1: Communication Elec	3
	G2: Critical Think Elec	3
	MN Transfer Electives	6

G1: Communications Electives		
SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3
G2: Critical Thinking Electives		
ENGL 1112	Composition II	3
ENGL 2207	Technical Writing	3

Criminal Justice-Peace Officer Training Diploma - 38 Credits
*** TRF campus**

Program Description
The Criminal Justice-Peace Officer Training diploma is intended to provide a Criminal Justice-Peace Officer Training degree to students who have previously completed a degree (Associates, Bachelors, or Masters) at an accredited college or university and are seeking a professional peace officer's license. This diploma would include criminal justice electives, mandated by Professional Peace Officer Education (PPOE), with the addition of the skills component as mandated for Minnesota Peace Officers.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading Comprehension: 250 Arithmetic: 240

All required CRJU courses and SOCI 1107 must be completed with a grade of C or better.

Requirements for CRJU 2229 Skills 1 (fall semester) and CRJU 2239 Skills 2 (spring semester)
1. 2.0 cumulative GPA.

2. Students who are on warning or probation status must have permission of the Criminal Justice Program Director to register for CRJU 2229 and CRJU 2239.

3. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).
Please see the Minnesota Peace Officer Licensing link that addresses the Minnesota Minimum Selection Standards to be licensed as a Peace Officer.

4. Completion and approval of the Minnesota Multi-Phasic Personality Inventory-2 Restructured Form (MMPI 2 RF)

5. Medical clearance from a healthcare provider stating student is physically eligible to participate in skills (see attached PHYSICIANS APPROVAL FORM)

6. CRJU 2229 and CRJU 2239 are physically challenging courses.

The following links provide selection criteria information to prospective students who are interested in becoming a peace officer in the state of Minnesota.
Licensure Standards Diagram in color.
Questions and Answers for Advising.

Course Listing

Course #	Course Title	Crds
CRJU 1103	Juvenile Justice	3
CRJU 1112	Human Behavior	3
CRJU 1113	Community and Diversity	3
CRJU 1127	Career Fitness 1	1
CRJU 2127	Career Fitness 2	1
CRJU 2200	Minnesota Statutes	3
CRJU 2206	Criminal Investigations	3
CRJU 2210	Criminal Procedures	3
CRJU 2229	Peace Officer Skills 1	6
CRJU 2239	Peace Officer Skills 2	6
HPER 2244	First Responder	3
SOCI 1107	Intro Criminal Justice	3

Criminal Justice-Peace Officer Training
Certificate - 21 Credits
*** TRF campus**

Program Description
The Criminal Justice-Peace Officer Training certificate is designed to accompany the A.A.S. degree. This degree does not meet the all the requirement for Peace Officer licensing for Minnesota. Students who intend to become Peace Officer in Minnesota should consult with the Program Coordinator or an academic advisor prior to selecting this degree.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

The following links provide selection criteria information to prospective students who are interested in becoming a peace officer in the state of Minnesota.
Licensure Standards Diagram in color.
Minnesota Peace Officer Licensing.
Questions and Answers for Advising.

Course Listing

Course #	Course Title	Crds
CRJU 1103	Juvenile Justice	3
CRJU 1112	Human Behavior	3
CRJU 1113	Community and Diversity	3
CRJU 2200	Minnesota Statutes	3
CRJU 2206	Criminal Investigations	3
CRJU 2210	Criminal Procedures	3
SOCI 1107	Intro Criminal Justice	3

Customer Service
Certificate - 16 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description
Most of us engage in customer service activities of some type during our normal daily routines of our personal and professional lives. However, simply being exposed to customers does not mean one understands how to do it well or how to evaluate whether one is delivering or receiving an acceptable level of customer service. This certificate is intended to provide students with a 16 credit background in the fundamental principles of quality customer service. Twelve credits will be earned relating to human relations skills, customer service skills, and communication skills (including written, oral, and listening skills). Students will also select four credits directly related to their program field of study. After successfully completing this certificate, students will be able to meet the needs of customers, patients, and clients of all kinds.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
MKTG 1108	Customer Relations Mgmt	3
MKTG 2200	Prin of Marketing	3
SSCI 1101	Human Relations	3
	G1: Communication Elec	3
	Program Electives	4

G1: Communications Electives

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

Program Electives

CPTR 1104	Intro to Computer Tech	3
CRLT 2103	Job Seeking-Keeping	1
HPER 1410	First Aid - CPR	1
MKTG 2120	Supervisory Leadership	3
MKTG 2304	Applied Sales Techniques	3

Dietetic Technician
A.A.S. - 67 Credits
*** Distance Educ online**

Program Description
The program is not accepting new students.

The Dietetic Technician Program is a 67 credit, fully online program that trains students to work either independently or with Registered Dietitians in the areas of food, nutrition, and dietetics. This program has a supervised practice component totaling 480 practicum hours. Students are required to locate supervised practice sites within their geographical area to host their supervised practice hours (DIET 2035 Community Practicum, DIET 2040 Clinical Practicum, and DIET 2045 Management Practicum). See the Dietetic Technician Program Student Policy Manual for more details on the supervised practice component of this online program.

Workers in this field promote optimum health through nutrition and are a central part of the healthcare and foodservice management teams. Dietetic Technicians work in a wide range of settings, including health care and public health, foodservice, community, and research. Graduates of this fully online program are eligible to take the Registration Examination from the Commission on Dietetic Registration (CDR). Upon passing the exam, graduates become a Dietetic Technician, Registered (DTR). For more information on becoming a Dietetic Technician Registered, please visit The Academy of Nutrition and Dietetics. For more information regarding online learning, please visit become an online student.

Program Specific Requirements
1. Complete the admissions application to NCTC.
2. Complete all required developmental courses with a C grade or better before applying to the Dietetic Technician program.
3. A cohort of 30 students will be admitted annually to the program. Students scoring the highest in the admission's rubric will be selected.
4. Completion of the Dietetic Technician program eligibility survey. The application window will be open October 1 -- 19.
5. Obtain student membership to the Academy of Nutrition and Dietetics which costs $50.
6. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in DIET2035, DIET2040, and/or DIET2045.
7. Completion and approval for clinical participation of the Minnesota Department of Human Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in DIET2035, DIET2040, and/or DIET2045.
8. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).
9. Complete all required courses for the Dietetic Technician program with a grade of C or better.

PLEASE NOTE
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

The Associate of Applied Science Degree in Dietetic Technology is awarded to students with the below:
1. The student must achieve a letter grade of C or above in each course comprising the Dietetic Technician Program.
2. The student must fulfill all program course requirements.
3. The student must complete all supervised practice assignments/hours as scheduled.
4. All degree competencies must be met.
5. Program completion must be within 150% of program length. If a student requests a leave of absence for non-academic reasons and the leave is approved, it will be for a total of one year. The student must resume attendance at the beginning of the semester in which the leave was granted and demonstrate continuous enrollment thereafter for completion. Student may be required to be re-evaluated prior to re-entry and re-entry may be dependent on available space; not to exceed class capacity. Approval for re-entry in the program following a leave of absence will not be granted if

the student was not in good academic standing prior to leave request.
6. The student must complete all requirements for graduation to sit for the Dietetic Technician Registered exam certification at time of program completion.

Course Listing

Course #	Course Title	Crds
DIET 1005	Life Cycle Nutrition	3
DIET 2000	Community Nutrition	3
DIET 2005	Food Prod & Science	4
DIET 2010	Sanitation & Safety	2
DIET 2015	Selection & Procurement	4
DIET 2020	Nutritional Care	3
DIET 2025	Medical Nutrition	4
DIET 2030	Food Service Management	4
DIET 2035	Community Practicum	2
DIET 2040	Clinical Practicum	4
DIET 2045	Management Practicum	4
MKTG 2120	Supervisory Leadership	3
BIOL 2131	Nutrition	3
BIOL 2260	Anatomy & Phys I	4
BIOL 2262	Anatomy & Phys II	4
CHEM 1020	Intro to Chemistry	4
ENGL 1111	Composition I	3
PSYC 1105	Intro to Psychology	3
SOCI 1101	Intro to Sociology	3
	G4: Math/Logical Elective	3

G4: Math/Logic Reasoning Electives:

MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3
MATH 1113	Pre-Calculus	5
MATH 1131	Applied Calculus	3
MATH 2203	Statistics	4
MATH 2231	Calculus I	4
MATH 2232	Calculus II	4
MATH 2233	Calculus III	4

Digital Marketing
A.A.S. - 60 Credits
*** Distance Educ online**

Program Description

This program prepares students to use appropriate techniques for marketing and promotion within social and digital media. Students are provided the essential skills for careers in sales, marketing, and management, including developing skills in management decision-making, interpersonal and communication skills, and problem solving. Emphasis is placed on developing skills unique to the unique approaches used within social media, mobile marketing, and analytics. Both theory and practical experience is combined throughout the program.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250, Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
ADMS 1116	Business Communications	3
BUSN 2210	Prin of Management	3
BUSN 2218	Legal Environment Busn	3
CPTR 1104	Intro to Computer Tech	3
MKTG 1108	Customer Relations Mgmt	3
MKTG 2116	Advertising	3
MKTG 2200	Prin of Marketing	3
MKTG 2300	Marketing Research	3
MKTG 2304	Applied Sales Techniques	3
MKTG 2306	Small Business Mgmt	3
MKTG 2320	Marketing Management	3
MKTG 2410	Social Media Marketing	3
MKTG 2430	Digital Marketing I	3
MKTG 2450	Digital Marketing II	3
ENGL 1111	Composition I	3
SOCI 1101	Intro to Sociology	3
SPCH 1101	Intro to Public Speaking	3
	G5: History/Social Elec	3
	MN Transfer Elective	3
	Program Electives	3

Program Electives:

ACCT 1124	Spreadsheet Concepts	3
ADMS 1114	Desktop Pub/Pres Graph	3
ADMS 1116	Business Communications	3
MKTG 2120	Supervisory Leadership	3
MKTG 2205	Prin of Retailing	3
MKTG 2900	Internship I	3

G5: History/Social Sciences Electives:

ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3

Digital Marketing
Certificate - 24 Credits
*** Distance Educ online**

Program Description
This certificate provides students the basics for preparing and conducting marketing and promotion within social and digital media. Students are provided the essential skills unique to approaches used within social media, digital marketing, and analytics. Both theory and practical experience is combined throughout the program.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
CPTR 1104	Intro to Computer Tech	3
MKTG 1108	Customer Relations Mgmt	3
MKTG 2116	Advertising	3
MKTG 2200	Prin of Marketing	3
MKTG 2300	Marketing Research	3
MKTG 2410	Social Media Marketing	3
MKTG 2430	Digital Marketing I	3
MKTG 2450	Digital Marketing II	3

Early Childhood & Paraprofessional
A.A.S. - 60 Credits
*** EGF campus**
*** Distance Educ online**

Program Description
This program includes coursework in the areas of birth through adolescent development, guidance, special needs, observation and assessment, nutrition, health and safety, professional relationships as well as exploring the role of the paraprofessional. Students learn to create, and plan instruction based on individual and group needs. Graduates will independently provide a healthy, safe, and developmentally appropriate learning environments that support children and families.

Child development courses in combination with general education courses comprise the Early Childhood & Paraprofessional AAS degree program. The courses meet Minnesota Department of Human Services educational requirements for assistant teachers and teachers in licensed child care and preschool settings, before/after-school programs, family child care program provider as well as paraprofessional/aides/assistant teacher requirements in Early Childhood Family Education (ECFE) and Early Childhood Special Education (ECSE) in school districts. Additional work experience in addition to field experiences may be required for teacher positions in licensed child care facilities as outlined in Rule 3.

Program Specific Requirements
1. All required courses for the program must be completed with a grade of C or better.
2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240
3. Individuals completing the program in Minnesota must complete MN Background Study and fingerprinting (cost approximately $10) as required by Minnesota Department of Human Services. If completing the program outside the state of Minnesota individuals will be required to meet requirements identified for that specific state. Individuals with disqualifying results will not be allowed to participate in lab or field experience coursework which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
CDEV 1103	Intro Early Education	3
CDEV 1109	Child Growth-Develop	3
CDEV 1121	Behavior Guidance	3
CDEV 1131	Creative Activities-Env	3
CDEV 1141	Hlth Wellness Nutrition	3
CDEV 2203	Observation-Assessment	3
CDEV 2209	Family-School Relations	3
CDEV 2215	Intro Language-Literacy	3
CDEV 2235	Intro Special Education	3
CDEV 2242	Infant-Toddler Program	3

CDEV 2253	Paraprofessional Role	2
CDEV 2295	Internship	3
HPER 1410	First Aid - CPR	1
ENGL 1111	Composition I	3
PHIL 1102	Intro to Ethics	3
SPCH 1101	Intro to Public Speaking	3
	G5: History/Social Elec	3
	G7: Human Diversity Elec	3
	MN Transfer Electives	9

G5: History/Social Science Electives

PSYC 1105	Intro to Psychology	3
PSYC 2201	Developmental Psychology	3

G7: Human Diversity Electives

SOCI 1102	Social Problems in US	3
SOCI 2220	Marriage and Family	3

Early Childhood & Paraprofessional Certificate - 18 Credits
*** EGF campus**
*** Distance Educ online**

Program Description
This program provides the knowledge and skills needed to work with young children and their families. Coursework in the areas of child growth & development, guidance, nutrition, health & safety, as well as learning environments provide graduates a foundation to continue their education or career in the field of early childhood education.
Completion of this 18-credit certificate meets the requirements for family childcare providers as identified in Minnesota Department of Human Services Rule 9502.

Program Specific Requirements
1. All required courses for the program must be completed with a grade of C or better.
2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240
3. Individuals completing the program in Minnesota must complete MN Background Study and fingerprinting (cost approximately $10) as required by Minnesota Department of Human Services. If completing the program outside the state of Minnesota individuals will be required to meet requirements identified for that specific state. Individuals with disqualifying results will not be allowed to participate in lab or field experience coursework which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
CDEV 1103	Intro Early Education	3
CDEV 1109	Child Growth-Develop	3
CDEV 1121	Behavior Guidance	3
CDEV 1131	Creative Activities-Env	3
CDEV 1141	Hlth Wellness Nutrition	3
SPCH 1101	Intro to Public Speaking	3

Economics Transfer Pathway
A.A. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description
The Economics Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Economics bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field. Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

Program Specific Requirements
1. Completion of course work specific to the Economics Transfer Pathway, including completion of the Minnesota Transfer Curriculum (MnTC) 40 Credits with the required distribution in MnTC Goal Areas 1-10.
2. Within the Program Electives, not more than 20 credits may be occupational coursework.
3. Developmental level coursework does not count toward the 60 credits for the Associate of Arts Degree.

4. A minimum of a 2.00 GPA within the required 40 MnTC credits.

Course Listing

Course #	Course Title	Crds
ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
MATH 1110	College Algebra	3
MATH 2203	Statistics	4
	MN Transfer Electives	21
	Program Electives	20

Electronics Technology Automated Systems
A.A.S. - 60 Credits
*** TRF campus**

Program Description

This program provides students with a broad-based introduction to the electronics, communication, and control systems. Graduates of this Associate of Applied Science (AAS) program have a solid foundation in the analog, digital, microcontroller-based and communications technologies featured in modern electronics. They are ready to serve in a wide variety of positions providing a valuable interface between technicians and electrical engineers.

Course Listing

Course #	Course Title	Crds
ETAS 1101	DC Power	3
ETAS 1103	AC Power	3
ETAS 1104	Analog Circuits	3
ETAS 1106	Digital Electronics	3
ETAS 1110	Design - Fabrication	3
ETAS 1560	Robotic Programming I	2
ETAS 2220	Microcontrollers I	4
ETAS 2221	Sensor Technology	4
ETAS 2224	Program Logic Controllers	4
ETAS 2228	New Technology	3
ETAS 2230	Motor Controls	3
ETAS 2232	Microcontrollers II	4
ETAS 2580	Hydraulics - Pneumatics	3
ENGL 1111	Composition I	3
ENGL 2207	Technical Writing	3
MATH 1110	College Algebra	3
	G5: History/Social Elec	3
	MN Transfer Elective	3
	Program Elective	3

G5: History/social Science Electives

ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3

Program Electives

BUSN 1110	Intro to Business	3
CMAE 1522	Quality Practices	2
MKTG 1108	Customer Relations Mgmt	3
MKTG 2200	Prin of Marketing	3

Exercise Science Transfer Pathway
A.S. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

Northland's Exercise Science Associate of Science (AS) degree program prepares students for transfer to baccalaureate degree programs across the state with a junior-year status. This science-based program positions a student for pursuit of several careers such as athletic director, recreational or athletic therapist, fitness trainer, exercise physiologist, or fitness tech engineer. And depending on the where you are transferring, the Exercise Science Transfer Pathway could also lead to a pre-physical therapy Bachelor of Science or prepare you for even further educational opportunities. Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

The curriculum includes instruction in the basic sciences and aspects of the subject matter related to various health and fitness occupations. Students completing the Exercise Science Associate of Science degree can take advantage of several statewide articulation agreements with Minnesota State Universities and should work with an advisor in identifying these opportunities. In addition, if a student were to decide prior to their final year of enrollment that an Associate of Arts degree would better fit their transfer needs, they may be able to complete this degree by making minor changes to their curriculum. Or, if they felt inspired to do so, with minor additions a student could graduate with a double major and earn an Associate of Arts degree in addition to the Exercise Science AS degree.

Program Specific Requirements

1. Developmental level coursework does not count toward the 60 credits for the Associate of Science Degree.
2. Transfer Universities may not accept courses that are not a letter grade of C or better within the program. Please speak with your advisor about requirements at receiving transfer institutions.

Course Listing

Course #	Course Title	Crds
HPER 1111	Intro Exercise Science	2
HPER 1127	Strength Conditioning	1
HPER 2270	Health and Wellness	3
BIOL 2131	Nutrition	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
MATH 2203	Statistics	4
PSYC 1105	Intro to Psychology	3
SPCH 1101	Intro to Public Speaking	3
	G3: Natural Sciences Elec	8
	G5: History/Social Elec	3
	G6: Human/Fine Arts Elec	3
	Program Electives	13

G3: Natural Science Electives

BIOL 1101	Concepts of Biology	4
BIOL 1111	Biological Prin I	4
BIOL 1120	Human Biology	4
CHEM 1020	Intro to Chemistry	4
CHEM 1121	General Chemistry I	5
CHEM 2205	Survey Gen-Org-Bio Chm	4

G5: History/Social Science Electives

SOCI 1101	Intro to Sociology	3
SOCI 1102	Social Problems in US	3
SOCI 2212	Sex Gender and Society	3

G6: Humanities/Fine Arts Electives

PHIL 1102	Intro to Ethics	3
PHIL 2210	Morals and Medicine	3

Program Electives

HLTH 1106	Medical Terminology	2
HLTH 2208	Pathophysiology	3
HPER 1110	Concepts of Phys Fitness	3
HPER 1140	Personal-Community Hlth	3
HPER 1182	Varsity Volleyball	1
HPER 1183	Varsity Basketball	1
HPER 1184	Varsity Baseball	1
HPER 1185	Varsity Softball	1
HPER 1186	Varsity Golf	1
HPER 1187	Varsity Wrestling	1
HPER 1410	First Aid - CPR	1
HPER 2200	Intro to Sport Mgmt	3
HPER 2201	Psychology of Sports	2
HPER 2210	Intro to Kinesiology	2
HPER 2235	Coaching Young Athletes	3
HPER 2244	First Responder	3
HPER 2250	Prevent-Care Athletic Inj	3
HPER 2281	Officiating Sports	2
OTAC 1001	Intro to OT	2

Farm Operations & Management
Diploma - 40 Credits
*** EGF campus**

Program Description

The program prepares students who are engaged in, or who are in the process of becoming established in, farming. As the business of farming continues to change, the challenge becomes one of finding the best source of good farm management education. The practical "hands on" applications taught in the Farm Operations and Management courses enable students to make sound management decisions based on financial analysis and production information, utilizing computer applications.

The program is scheduled for two abbreviated semesters from early November through late March for two consecutive years. This enables the students to be on the farm during the production year.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The minimum scores for the Next Generation Accuplacer Assessment test for the Farm Operations and Management diploma program are as follows: Reading: 225 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
AGRI 1104	Ag Economics	2
AGRI 1110	Farm Records & Budgeting	2
AGRI 1120	Crops Marketing I	2
AGRI 1130	Machinery Management	2
AGRI 1140	Cereal Production	2
AGRI 1150	Soil Maint & Fertility	3
AGRI 1160	Establishment in Farming	2
AGRI 2206	Rural Leadership	1

AGRI 2210	Farm Analysis & Finance	3
AGRI 2220	Crops Marketing II	2
AGRI 2230	Farmstead Improvement	2
AGRI 2240	Farm Computerized Records	1
AGRI 2250	Welding I	1
AGRI 2260	Agricultural Chemicals	2
AGRI 2280	Farm Tax-Estate Planning	3
AGRI 2290	Internship	1
CPTR 1104	Intro to Computer Tech	3
ENGL 1012	Applied Communications	3
	Program Electives	3

Program Electives

AGRI 1172	Corn Production	1
AGRI 1192	Soybean Production	1
AGRI 2202	Dry Bean Production	1
AGRI 2222	Sugar Beet Production	1

Fire Technology
A.A.S. - 60 Credits
*** EGF campus**

Program Description

The Fire Technology-AAS program provides an opportunity for students to obtain basic and advanced instruction in fire fighting techniques, fire prevention, rescue, and management of fire services. The major also provides instruction to become involved in all phases of the decision-making process from entry level through the company officer level, focusing on improving productivity and safety. The program consists of approximately one-third general education and two-thirds technical coursework, including classroom as well as technical hands-on training to enable the student to become familiar with all aspects of fire fighting from entry-level to advanced levels. Also included is an instructional area entitled-job skills. This instruction will be offered through students' local fire departments. Students who are not connected with a fire department will be assisted in finding a site.

Program Specific Requirements

1. All required courses for the program must be completed with a grade of C or better.

2. All students must have structural firefighting personal protective equipment, which consists of a helmet, protective hood, coat, pants, gloves, and boots.

3. Students must have an "eligible" status through the State Motor Vehicle Records Check system.

4. Current CPR certification. CPR for Health Care Providers (American Heart Association) prior to enrollment in FIRE courses.

5. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in FIRE courses.

6. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in FIRE courses.

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.
* A blended site (some classes face-to-face and some classes distance) may be used for this program.

Course Listing

Course #	Course Title	Crds
EMTB 1101	Emergency Medical Tech	6
FIRE 1000	Fire Service Principles	1
FIRE 1010	Fitness	1
FIRE 1020	Technical Rescue I	3
FIRE 1030	Technical Rescue II	3
FIRE 1040	Firefighter I	6
FIRE 1050	Fire Protection Const	2
FIRE 1060	Fire Protection Systems	2
FIRE 2000	Engine - Truck Functions	3
FIRE 2010	Fire Prevention	2
FIRE 2020	Hazardous Materials	2
FIRE 2030	Safety Survival	2
FIRE 2040	Firefighter II	3
FIRE 2050	Fire Apparatus Operator	3
FIRE 2060	Instructor I	2
FIRE 2070	Fire Behavior	2
FIRE 2080	Career Success	2
ENGL 1111	Composition I	3
ENGL 2207	Technical Writing	3
SSCI 1101	Human Relations	3
	G1: Communication Elec	3
	G4: Math/Logical Elective	3

G1: Communication Electives		
SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3
G4: Math/Logical Reasoning Electives		
MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3

Health Sciences Broad Field
A.S. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

Northland's Health Sciences Broad Field Associate of Science program prepares students for transfer to a variety of health and human service related baccalaureate degree programs. Examples include, but are not limited to nursing, social work, nutrition, corrections, health education, and exercise science. This program positions a student for pursuit of these and other high demand health and human service careers.

The curriculum includes instruction in the basic sciences and aspects of the subject matter related to various health occupations. Students completing the Health Sciences Broad Field Associate of Science degree can take advantage of several statewide articulation agreements with Minnesota State Universities and should work with an advisor in identifying these opportunities. In addition, if a student were to decide prior to their final semester of enrollment that an Associate of Arts degree would better fit their transfer needs, they may be able to complete this degree by making minor changes to their curriculum.

Program Specific Requirements

While the Health Sciences Broad Field does not require it, some health sciences programs may require a C or better in all coursework in order to graduate from that program. Check specific program for requirement details.

Course Listing

Course #	Course Title	Crds
ANTH 2202	Cultural Anthropology	3
BIOL 1111	Biological Prin I	4
BIOL 2131	Nutrition	3
BIOL 2221	Microbiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
CHEM 2205	Survey Gen-Org-Bio Chm	4
ENGL 1111	Composition I	3
HLTH 1106	Medical Terminology	2
HLTH 2002	Pharmacology	2
MATH 1110	College Algebra	3
MATH 2203	Statistics	4
PSYC 1105	Intro to Psychology	3
PSYC 2201	Developmental Psychology	3
SOCI 1101	Intro to Sociology	3
SPCH 1101	Intro to Public Speaking	3
	G6: Human/Fine Arts Elec	3
	Program Electives	6
G6: Humanities/Fine Arts Electives		
PHIL 1102	Intro to Ethics	3
PHIL 2210	Morals and Medicine	3
Program Electives		
BIOL 1112	Biological Prin II	4
EMTB 1101	Emergency Medical Tech	6
HLTH 1101	Intro Health Professions	3
HLTH 1108	Cultural Diversity	1
HLTH 1110	Nursing Assistant	3
HLTH 1140	Electronic Health Records	3
HLTH 2208	Pathophysiology	3
HPER 2250	Prevent-Care Athletic Inj	3
HPER 2270	Health and Wellness	3
OTAC 1001	Intro to OT	2
RADT 1110	Intro Rad Tech-Pat Care	3
RESP 1110	Adult Critical Care	4
SPCH 2205	Intercultural Communicati	3
SURT 1102	Intro to Surgical Tech	2

Heating, Ventilation, & Air Conditioning/Construction Plumbing
A.A.S. - 70 Credits
*** EGF campus**

Program Description

The program prepares students to begin a career in Heating, Ventilation, Air Conditioning and Plumbing. Coursework provides a technical understanding of HVAC and Plumbing technology, and prepares students with the practical skills to install, maintain, and troubleshoot such systems. The program prepares students in blueprint reading and sketching; design, fabrication, and installation of forced air and hot water heating and ventilation systems; installation of a wide range of oil and gas boilers and forced-air furnaces; installation of water systems, piping procedures, plumbing and piping systems in residential and commercial settings. Successful graduates are eligible for employment in

a variety of businesses found in rural and metropolitan areas. Successful graduates are further eligible for employment at an advanced plumbing apprenticeship level.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250

Course Listing

Course #	Course Title	Crds
BLDG 1102	Construction Safety	1
BLDG 1106	Grades-Cap-Elec Calc	3
BLDG 1114	Blueprint Reading I	2
HEAT 1101	HVAC Circuit Theory	4
HEAT 1102	Sheet Metal Design	3
HEAT 1104	Control Electricity	2
HEAT 1110	Refrig A/C - Heat Prin	3
HEAT 1128	Heat Sys Design - Install	3
HEAT 2202	Air Handling	2
HEAT 2206	Heating Sys Maintenance	2
HEAT 2210	Com Air Conditioning	2
HEAT 2214	Hydronic Heating Sys	4
HEAT 2220	HVAC Troubleshooting	3
PLBG 1104	Bldg Sewers-Drainage Sys	3
PLBG 1108	Plumbing-Piping Drawings	2
PLBG 1110	Copper Pipe Procedures	2
PLBG 1112	Plastic Pipe Procedures	2
PLBG 1114	Steel Pipe Procedures	3
PLBG 1116	Plumbing Theory-Sys	3
PLBG 1118	State Plbg Code Interpret	1
PLBG 1120	Residential Plbg Install	3
PLBG 1122	Plbg Repair-Service Work	2
SSCI 1101	Human Relations	3
	MN Transfer Electives	12

Heating, Ventilation, & Air Conditioning
Diploma - 37 Credits
*** EGF campus**

Program Description

The HVAC - Heating, Ventilation, and Air Conditioning graduate will be able to design residential and light commercial central heating and air conditioning systems according to load requirements, install, troubleshoot, and repair all residential and light commercial heating and air conditioning equipment, design, fabricate, and install forced air and hot water distribution systems using sheet metal, ductboard, copper tubing, Wirsbo tubing, Pex tubing, PVC , and other accepted materials, install a wide range of oil and gas boilers and forced-air furnaces, design, fabricate, and install home and light commercial ventilation systems, including both exhaust and fresh air make-up exchangers.

The graduate will be knowledgeable in electric theory, motor and heating-air conditioning controls and switching relays, pumps, compressors, various design variables, and code requirements. This comprehensive program of technical and general education will give the graduate knowledge and hands-on experience in both the electrical and mechanical aspects of heating, ventilation and air conditioning. This combination prepares students to build and install ductwork, and the ability to troubleshoot today's sophisticated high-efficiency heating units.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 211

Course Listing

Course #	Course Title	Crds
BLDG 1102	Construction Safety	1
BLDG 1106	Grades-Cap-Elec Calc	3
BLDG 1114	Blueprint Reading I	2
HEAT 1101	HVAC Circuit Theory	4
HEAT 1102	Sheet Metal Design	3
HEAT 1104	Control Electricity	2
HEAT 1110	Refrig A/C - Heat Prin	3
HEAT 1128	Heat Sys Design - Install	3
HEAT 2202	Air Handling	2
HEAT 2206	Heating Sys Maintenance	2
HEAT 2210	Com Air Conditioning	2
HEAT 2214	Hydronic Heating Sys	4
HEAT 2220	HVAC Troubleshooting	3
	Program Elective	3
Program Elective		
SSCI 1101	Human Relations	3
	MN Transfer Elective	3

History Transfer Pathway
A.A. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description
The History Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated History bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field. Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

Program Specific Requirements
1. Completion of course work specific to the History Transfer Pathway, including completion of the Minnesota Transfer Curriculum (MnTC) 40 Credits with the required distribution in MnTC Goal Areas 1-10.
2. Within the Program Electives, not more than 20 credits may be occupational coursework.
3. Developmental level coursework does not count toward the 60 credits for the Associate of Arts Degree.
4. A minimum of a 2.00 GPA within the required 40 MnTC credits.

Course Listing

Course #	Course Title	Crds
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
	G5: History/Social Elecs	9
	MN Transfer Electives	25
	Program Electives	20

G5: History/Social Science Electives:

HIST 1103	World History Pre-1500	3
HIST 1114	World History Post-1500	3
HIST 2201	US History Pre-1865	3
HIST 2202	US History Post-1865	3

IT Cybersecurity
A.A.S. - 60 Credits
*** EGF campus**

Program Description
The program offers students both theory and hands-on training in computer equipment servicing, networking and Cybersecurity. Computer skills development covers the hardware and software systems of current computer technology. Networking skills include switching, routing, server operating systems, directory services. Cybersecurity skills include network auditing, defense, planning, and forensics. Many classes are built around specific industry certifications.

The program prepares graduates for immediate entry-level employment in any size company utilizing computer technology. Graduates adding industry certification such as A+, Network+, Security+, Certified Ethical Hacker (CEH), and Cybersecurity Analyst (CySA+), etc. have an advantage. the program provides students with the foundation required to build a rewarding career in the continually expanding field of computer networking and cybersecurity.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250
Advanced Algebra Functions: 250

All required courses for the program must be completed with a grade of C or better.

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
CPTR 1132	Microcomputer Maintenance	3
CPTR 1136	Networking I	4
CPTR 1147	Networking II	4
CPTR 1148	Micro Operating Systems	3
CPTR 1171	Fund of Network Security	3
CPTR 2101	Ethical Hacking	3

CPTR 2121	Network Defense	3
CPTR 2214	Network Operating Sys	3
CPTR 2231	Unix-Linux	3
CPTR 2241	Cybersecurity Analysis	3
CPTR 2249	Cybersecurity Policy	3
CPTR 2252	Micro Systems Project	3
CRLT 2103	Job Seeking-Keeping	1
ENGL 1111	Composition I	3
MATH 1110	College Algebra	3
PHIL 1102	Intro to Ethics	3
SPCH 1101	Intro to Public Speaking	3
	G5: History/Social Elec	3
	Program Electives	6

G5: History/Social Science Electives

ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3
PSYC 1105	Intro to Psychology	3
SOCI 1101	Intro to Sociology	3

Program Electives

ACCT 1100	Prin of Bookkeeping	3
ACCT 1124	Spreadsheet Concepts	3
ADMS 1116	Business Communications	3
BUSN 1115	Personal Financial Mgmt	3
BUSN 2210	Prin of Management	3
BUSN 2218	Legal Environment Busn	3
CPTR 1104	Intro to Computer Tech	3
CPTR 1110	Visual Basic Programming	3
CPTR 1128	Help Desk Concepts	3
CPTR 2226	Networking III	3
CPTR 2227	Networking IV	3
CPTR 2294	Internship	3
MKTG 2201	Prin of Sales	3
MKTG 2205	Prin of Retailing	3
MKTG 2306	Small Business Mgmt	3

Liberal Arts & Sciences
A.A. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

Liberal Arts and Sciences at Northland has a three fold purpose: (1) It is designed to provide students with the coursework necessary for transfer to four-year institutions throughout the nation. (2) It has at its basis the universal principle that the liberal arts teaches people how to think and, consequently, how to learn. (3) It enables students to develop critical thinking skills that they can use to formulate their own ideas and, thus, become actively engaged in the learning process. The Liberal Arts and Sciences degree provides the first two years of most baccalaureate degrees and is designed for transfer to a four-year institution. Students who complete the Associate of Arts degree at Northland, which includes the Minnesota Transfer Curriculum, are assured of seamless transfer into Minnesota State Colleges and Universities, as well as into the University of Minnesota system, and usually are accepted into most out-of-state colleges including the University of North Dakota.

Program Specific Requirements

1. Completion of the Minnesota Transfer Curriculum (MnTC) 40 Credits with the required distribution in MnTC Goal Areas 1-10.
2. Within the Program Electives, not more than 16 credits may be occupational coursework.
3. Developmental level coursework does not count toward the 60 credits for the Associate of Arts Degree.
4. A minimum of a 2.00 GPA within the required 40 MnTC credits.

Course Listing

Course #	Course Title	Crds
	MN Transfer Curriculum Elec	40
	Program Electives	20

Marketing & Management
A.A.S. - 60 Credits
*** EGF campus**
*** Distance Educ online**

Program Description

This program prepares students to succeed in the marketplace of the 21st century. This program provides students with the essential skills necessary for a variety of careers in the sales, marketing, and management fields. Curriculum includes instruction in the following areas: sales, marketing, research, customer service, telemarketing, and small business planning. Emphasis is placed on developing skills in management decision-making, interpersonal and communication skills, problem solving, and technology skills. Particular emphasis is placed the use of computer technology.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better)

the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Note: Some programs may require assessment scores that exceed the college minimum in the areas of Arithmetic & Elementary Algebra.

Course Listing

Course #	Course Title	Crds
ACCT 1108	Busn Math-Calculators	3
BUSN 2210	Prin of Management	3
BUSN 2218	Legal Environment Busn	3
CPTR 1104	Intro to Computer Tech	3
MKTG 1108	Customer Relations Mgmt	3
MKTG 2116	Advertising	3
MKTG 2120	Supervisory Leadership	3
MKTG 2200	Prin of Marketing	3
MKTG 2300	Marketing Research	3
MKTG 2304	Applied Sales Techniques	3
MKTG 2306	Small Business Mgmt	3
MKTG 2320	Marketing Management	3
MKTG 2410	Social Media Marketing	3
ENGL 1111	Composition I	3
SPCH 1101	Intro to Public Speaking	3
	G5: History/Social Elec	3
	MN Transfer Elective	6
	Program Electives	6

G5: History/Social Science Electives

ECON 2201	Microeconomics	3
ECON 2202	Macroeconomics	3

Program Electives

ACCT 1104	Payroll	3
ACCT 1124	Spreadsheet Concepts	3
ADMS 1116	Business Communications	3
ADMS 2236	Project Management	3
BUSN 2221	Prin Accounting I	4
CPTR 1128	Help Desk Concepts	3
CPTR 1136	Networking I	4
MKTG 2430	Digital Marketing I	3
MKTG 2450	Digital Marketing II	3
MKTG 2900	Internship I	3
MKTG 2920	Internship II	3
SSCI 1101	Human Relations	3

Mechatronics
A.A.S. - 60 Credits
*** EGF campus**
*** Warroad site**

Program Description

The Mechatronics Program prepares students for technical careers in the manufacturing industry. Today's manufacturing companies look to automated equipment to increase quality and productivity. As a result careers in manufacturing demand strong technical competencies in mechanical, electrical, hydraulic and robotic systems. Courses in this program emphasize hands-on training on industrial equipment. Graduates of this program are prepared for jobs as process, maintenance, engineering, and quality control technicians.

Courses with a "MECH" prefix in the Mechatronics Program offer scheduling flexibility where students work at their own pace; allowing motivated individuals or those with prior knowledge to complete courses in a shorter time. MECH courses meet within an open or flex lab setting. Students in the Mechatronics Program are responsible for managing their own learning.

The Mechatronics Flex Labs have extended hours for students to practice and develop hands-on skills. Faculty in the Mechatronics Program are available during Flex Lab times to assist learners with questions, supervise hands-on labs, and to administer skills assessments.

Students receive credit for a course by demonstrated mastery of learner outcomes in a final skills assessment. Student who have not met assessment criteria are given feedback and continue to practice skills. Students can re-take the final skills assessment up to three times.

Course Listing

Course #	Course Title	Crds
CMAE 1514	Safety Awareness	2
CMAE 1518	Manufacture Process-Prod	2
CMAE 1522	Quality Practices	2
CMAE 1526	Maintenance Awareness	2
ETAS 1101	DC Power	3
ETAS 1560	Robotic Programming I	2
ETAS 2221	Sensor Technology	4
ETAS 2224	Program Logic Controllers	4
ETAS 2230	Motor Controls	3
ETAS 2580	Hydraulics - Pneumatics	3
MAPT 1101	Manufacturing Cmptr Apps	2
MAPT 1110	Mechanical Systems I	3
MAPT 2110	Mechanical Systems II	3
MAPT 2200	Fabrication Techniques	4

MAPT 2585	Adv Hydraulic - Pneumatic	3
MAPT 2800	Automated Systems	3
ENGL 1111	Composition I	3
ENGL 2207	Technical Writing	3
SPCH 1103	Interpersonal Communicati	3
	G4: Math/Logical Elective	3
	G5: History/Social Elec	3

G4: Math/Logical Reasoning Electives

MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3

G5: Hisotry/Social Science Electives

PSYC 1105	Intro to Psychology	3
SOCI 1101	Intro to Sociology	3

Medical Administrative Assistant
A.A.S. - 60 Credits
*** Distance Educ online**

Program Description
Medical Administrative Assistant graduates are prepared to assume many of the same responsibilities as medical office specialists. In addition, medical administrative assistants have education in topics relating to medical office management.

Program Specific Requirements
All required courses must be completed with a grade of C or better to graduate.

The program requires students to have current working knowledge of specific required courses. Courses older than 5 years will not be accepted for transfer into the program:
ADMM 1110, 1120, 1135, 1150, 1160, 1165, 2280
BIOL 2260, 2262, CPTR 1104
HLTH 1106, 2208

These courses may be waived if an applicant has recent experience working or education in the health related fields.

Computer and Web cam required. Online proctoring fees may apply.

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
ADMM 1110	Intro Health Info Mgmt	3
ADMM 1120	Medical Office Procedures	3
ADMM 1135	Medical Language Applic	4
ADMM 1150	Medical Billing-Insurance	3
ADMM 1160	CPT-HCPCS Coding	3
ADMM 1165	ICD Coding	3
ADMM 2280	Medical Office Simulation	3
ADMS 1100	Keyboarding I	3
ADMS 1116	Business Communications	3
CPTR 1104	Intro to Computer Tech	3
CRLT 2103	Job Seeking-Keeping	1
HLTH 1106	Medical Terminology	2
HLTH 2208	Pathophysiology	3
MKTG 1108	Customer Relations Mgmt	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
PSYC 1105	Intro to Psychology	3
SSCI 1101	Human Relations	3
	G1: Communication Elec	3

G1: Communication Electives:

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

Medical Coding Specialist
A.A.S. - 60 Credits
*** Distance Educ online**

Program Description
The Medical Coding Specialist program prepares students in many of the procedures associated with billing for medical services. Students receive training in medical billing processes including patient account management, diagnosis and procedure coding and medical insurance claim processing.

Thorough understanding of medical terminology, human anatomy and physiology and human disease conditions is necessary for anyone working in this field. Medical coding involves using nationally-recognized coding systems to classify procedures and diagnoses related to medical treatment. These codes provide information that is used in insurance claims processing.

Many different types of insurance programs are handled in the medical office. Students will examine insurance programs/plans such as Medicare, Medicaid & TRICARE, profit and non-profit third-party payers, workers' compensation packages and disability coverage.

Graduates of the program are eligible to complete entry-level national coding certification exams.

Program Specific Requirements
All required courses must be completed with a grade of C or better to graduate.

The program requires students to have current working knowledge of specific required courses. Courses older than 5 years will not be accepted for transfer into the program:
ADMM 1110, 1135, 1150, 1160, 1165, 2240, 2260, 2265, 2280, 2285
BIOL 2260, 2262, CPTR 1104
HLTH 1106, 2208

These courses may be waived if an applicant has recent experience working or education in the health related fields.

Computer and Web cam required. Online proctoring fees may apply.

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Accuplacer Assessment test are as follows:
Reading Comprehension: 250
Arithmetic: 240

Course Listing

Course #	Course Title	Crds
ADMM 1110	Intro Health Info Mgmt	3
ADMM 1135	Medical Language Applic	4
ADMM 1150	Medical Billing-Insurance	3
ADMM 1160	CPT-HCPCS Coding	3
ADMM 1165	ICD Coding	3
ADMM 2240	Medical Coding Ethics	3
ADMM 2260	Interm CPT-HCPCS Coding	3
ADMM 2265	Interm ICD Coding	3
ADMM 2280	Medical Office Simulation	3
ADMM 2285	Certification Review	3
CPTR 1104	Intro to Computer Tech	3
CRLT 2103	Job Seeking-Keeping	1
HLTH 1106	Medical Terminology	2
HLTH 2208	Pathophysiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
SSCI 1101	Human Relations	3
	G1: Communication Elec	3
	G5: History/Social Elec	3

G1: Communication Electives

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

G5: History/Social Science Electives

PSYC 1105	Intro to Psychology	3
PSYC 2201	Developmental Psychology	3

Medical Office Specialist
Diploma - 45 Credits
*** Distance Educ online**

Program Description
Graduates 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 office specialists have excellent communication skills and exhibit a high degree of professionalism in their work. Emphasis areas available in the major include medical insurance and coding.

Program Specific Requirements
All required courses must be completed with a grade of C or better to graduate.

The program requires students to have current working knowledge of specific required courses. Courses older than 5 years will not be accepted for transfer into the program:
ADMM 1110, 1120, 1135, 1150, 1160, 1165, 2280
BIOL 2260, 2262
HLTH 1106, 2208

These courses may be waived if an applicant has recent experience working or education in the health related fields.

Computer and Web cam required. Online proctoring fees may apply.

Students achieving assessment scores below the established minimums must register and

successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
ADMM 1110	Intro Health Info Mgmt	3
ADMM 1120	Medical Office Procedures	3
ADMM 1135	Medical Language Applic	4
ADMM 1150	Medical Billing-Insurance	3
ADMM 1160	CPT-HCPCS Coding	3
ADMM 1165	ICD Coding	3
ADMM 2280	Medical Office Simulation	3
ADMS 1100	Keyboarding I	3
ADMS 1116	Business Communications	3
CRLT 2103	Job Seeking-Keeping	1
HLTH 1106	Medical Terminology	2
HLTH 2208	Pathophysiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
SSCI 1101	Human Relations	3

Patient Access Specialist
Certificate - 27 Credits
*** Distance Educ online**

Program Description

This program prepares students to be trained specialists who handle patient encounters, patient customer service, and other areas related to the intake and processing of the patient's healthcare experience. Key topics include customer service, patient check-in, admission, registration, revenue cycle and information systems, telephone communications, scheduling, coordinating, canceling appointments, and other relevant topics.

Program Specific Requirements

All required courses must be completed with a grade of C or better to graduate.

The program requires students to have current working knowledge of specific required courses. Courses older than 5 years will not be accepted for transfer into the program:
ADMM 1110, 1120, 1135, 1150, 2280, HLTH 1106

These courses may be waived if an applicant has recent experience working or education in the health related fields.

Computer and Web cam required. Online proctoring fees may apply.

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250 Arithmetic: 240

Course Listing

Course #	Course Title	Crds
ADMM 1110	Intro Health Info Mgmt	3
ADMM 1120	Medical Office Procedures	3
ADMM 1135	Medical Language Applic	4
ADMM 1150	Medical Billing-Insurance	3
ADMM 2280	Medical Office Simulation	3
ADMS 1100	Keyboarding I	3
HLTH 1106	Medical Terminology	2
MKTG 1108	Customer Relations Mgmt	3
SSCI 1101	Human Relations	3

Nursing
A.S. - 64 Credits
*** EGF campus**
*** TRF campus**

Program Description

The AD Mobility Nursing program educates Licensed Practical Nurses (LPNs) for the role of Registered Nurse (RN). The RN role includes a broad area of human service aimed at assisting the client in attaining the highest level of health possible. Students learn how to assess, collect, and contribute to client data based on physiological, developmental, sociocultural, psychological, and spiritual needs. Students learn to provide nursing interventions to the client and significant others throughout the health-illness continuum. Students learn how to develop and implement individualized teaching plans in order to restore, maintain, and promote health. Students in the AD Mobility Nursing Program learn how to delegate, interact, and provide leadership for other members of the health team.

Practical Nursing graduates are awarded 13 PN credits towards the first year of the AD Mobility Nursing Program. After prerequisites are met, students can complete the full time program in 2 semesters (fall and spring) and the part-time program in 3 semesters (spring, fall, and spring). Students are then eligible to apply to take the national licensing examination to become a Registered Nurse (RN). Graduates of the AD Mobility Nursing Program may articulate to a Bachelor of Science degree in Nursing.

AD Mobility Nursing Program Student Policy Manual.

Program Specific Requirements

1. Application to the AD Mobility Nursing Program **Apply to Northland Community & Technical College** - If you have never been a student at NCTC, then you must apply to NCTC before completing the application to the AD Mobility Nursing Program.

Apply to the AD Mobility Nursing Program - Once a student has been accepted to the college, he/she can then apply as a candidate for the AD Mobility Nursing Program. Applications must be received between October 1 and February 28 to be considered for priority admission for the fall full time program and between March 1 and September 30 to be considered for priority spring part-time program. Students applying for admission to the AD Mobility Nursing Program are chosen competitively.

2. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements. Next Generation Accuplacer scores:
Advance Algebra Functions (AAF): 230-249 AAF
OR
Quantitative Reasoning, Algebra, and Statistics (QAS): 250-300

3. Students must complete the following courses prior to applying for the AD Mobility Nursing Program:
BIOL 2221 Microbiology
BIOL 2260 Anatomy & Physiology I
BIOL 2262 Anatomy & Physiology II
ENGL 1111 Composition I
PSYC 2201 Developmental Psychology

To increase your selection probability into the AD Mobility Nursing Program, plan ahead. Concentrate on performing well in your science classes. Complete the co-requisite sciences and other co-requisite courses early.
Co-requisite courses:
* BIOL 2256 Advanced Physiology -- You receive an extra point towards admission.
* CHEM 2205 Survey General/Organic/Bio Chemistry -- You receive 1 extra points towards admission **only** if you take **NCTC CHEM 2205** rather than an alternative chemistry.
* SPCH 1101 Intro to Public Speaking
* MN Transfer Curriculum Area G6: Any Humanities/Fine Arts Elective
* History/Social Science -- choose 1 of the following: ANTH 2202 Cultural Anthropology, PSYC 2215 Abnormal Psychology, SOCI 1101 Intro to Sociology

Selection Criteria
For information on program: review AD Mobility Student Policy Handbook

4. Students must have evidence of IV Certification competency through one of the following:
-- An Intravenous Therapy Course documented on a transcript. OR
-- A certification of completion of an approved state board of nursing IV course. OR
-- Documentation from an employer that the student is competent in IV technical skills.

5. All students must maintain a current Practical Nursing license.
New PN graduates that graduate the month prior to the start of the AD-PN Mobility Nursing Program have 6 weeks from the start of the semester to obtain their licensure.

6. Current CPR certification. CPR for Health Care Providers (America Heart Association) or CPR for Professional Rescuer (Red Cross).

7. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10). Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 fiirst year, $26 second year (if needed).

8. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45).

9. Nursing students must take the NACE I Foundations of Nursing Entrance Exam prior to the application deadline for the cohort they are applying to. A minimum score of 60% is required for program eligibility.
NACE I Foundations of Nursing has individual questions involving clients with common health problems. The nursing process (assessing, analyzing, planning, implementing and evaluating) is applied in items throughout the test. The questions include a sample of situations involving clients in health care settings with one or more of several conditions. Please see the documents below for more information.
NCTC Specific Information for NACE Foundations
NACE Foundation Study Guide Purchase
NLN Student Guide for Hyflex Proctoria Testing

10. All required courses for AD Mobility Nursing Program must be completed with a grade of C or better. Chemistry 2205 - Survey of Chemistry or other college level chemistry MUST BE successfully completed PRIOR to enrolling in your last semester of nursing courses.

11. The AD Mobility Nursing Program is a campus-based program, with the exception of NURS 2121 Psychosocial Integrity, which is offered in a fully online delivery mode. Access to a computer and the internet is required for this program as all courses are internet assisted.

12. Required a 2.5 GPA (cumulative) for program entrance and required a student to be in good academic standing.

13. NCTC Nursing Program Alignment with Other States' Educational Requirements.

Please Note:
* There is not a guarantee that a program cohort will start every semester on each site. Pending enrollment numbers, if a cohort does not start on your site of choice, you may be offered a space in the other cohort site.
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
#PN13	Practical Nursing credits	13
NURS 2110	Health Assess-Prof Skills	3
NURS 2121	Psychosocial Integrity	2
NURS 2123	Nursing Interventions I	3
NURS 2125	Clinical I	4
NURS 2131	Nursing Interventions II	3
NURS 2133	Professional Role	2
NURS 2135	Clinical II	4
BIOL 2221	Microbiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
CHEM 2205	Survey Gen-Org-Bio Chm	4
ENGL 1111	Composition I	3
PSYC 2201	Developmental Psychology	3
SPCH 1101	Intro to Public Speaking	3
	G5: History/Social Elec	3
	G6: Human/Fine Arts Elec	3

G5: History/Social Science Electives

ANTH 2202	Cultural Anthropology	3
PSYC 2215	Abnormal Psychology	3
SOCI 1101	Intro to Sociology	3

G6: Humanities/Fine Arts Electives

PHIL 1102	Intro to Ethics	3
PHIL 2210	Morals and Medicine	3

Nursing Assistant
Certificate - 3 Credits
*** EGF campus**
*** TRF campus**

Program Description
The Nursing Assistant course is a prerequisite for students planning to enroll in the Practical Nursing program. The course presents factual information and hands on skill practice through lecture, lab demonstration and practice, assigned audiovisuals, texts and handouts. The course also includes hands-on clinical experience.

The nursing assistant is a healthcare professional who works under the supervision of licensed practical nurses and/or registered nurses to perform basic patient cares and assist with activities of daily living. Nursing Assistants provide hands-on care and perform routine tasks. Nurse aides employed in nursing care facilities often are the principal caregivers, having far more contact with residents than do other members of the staff. This course introduces concepts of basic human needs in simple terms. Selected common technical

nursing skills are introduced. Principles of body mechanics are emphasized.

The nursing assistant course is intended to prepare students for practice at the Nursing Assistant level. Upon successful completion of the course, the student is eligible to take the written and skills exam to become a Certified Nursing Assistant.

Program Specific Requirements

1. Minnesota Department of Human Services Licensing Division Background Study required to be completed in week 1 of the course. Evidence of approval to provide healthcare must be on file prior to participation in the clinical portion of the course. The student will be required to pay for the cost of the background study (currently $40).
2. Immunization and health screening data must be submitted to allocated area in D2L as indicated by the instructor prior to participation in the clinical portion of the course.
3. All students must have the required nursing assistant uniform/scrubs for clinicals. More information will be provided the first day of class.
4. The course must be completed with a grade of C (80%) or better.

More information on all these items will be provided the first week of class.

Course Listing

Course #	Course Title	Crds
HLTH 1110	Nursing Assistant	3

Practical Nursing
Diploma - 42 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

Nursing is a growing field with multiple career opportunities. Practical Nursing is designed to provide the knowledge and skills necessary for students to enter the world of nursing. Licensed Practical Nurses (LPN) may provide care for persons of all ages in a variety of settings including hospitals, clinics, nursing homes, home care, hospice, camp nursing and occupational nursing.

Students in the Practical Nursing program will receive supervised experience in caring for clients in a variety of health care settings including hospital, long term care, clinic, and childcare. Students are taught to practice within the scope of practical nursing while under the supervision of a Registered Nurse.

LPN's use critical thinking and technical skills to assist clients to meet their physical and psychosocial needs. LPN's administer medications and perform treatments. LPN's use a variety of medical equipment, such as IV pumps, syringes, cardiac monitors, diagnostic testing devices and computers.

As a graduate of the Practical Nursing program, students are eligible to apply to take the National Council Licensure Exam for the Practical Nurse.

For information on the PN Distance/Hybrid program, review this questionnaire.

Program Specific Requirements

1. Complete the NCTC college admission process and declare the Practical Nursing major.

2. Satisfactory completion of developmental courses if indicated by Next Generation Accuplacer.
Advance Algebra and Functions (AAF): 230-249
OR
Quantitative Reasoning, Algebra, and Statistics (QAS): 250-300

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.

3. Application for eligibility to enroll in the PNSG course sequence should occur when the student is enrolled in their final semester of pre-PNSG courses, which are * :
-- HLTH 1110 Nursing Assistant (NA) course within last 5 years or currently on nursing assistant registry.
-- HLTH 1106 Medical Terminology
-- MATH 1003 Math Applications for Nurses
-- BIOL 2260 Anatomy & Phys I
-- BIOL 2262 Anatomy & Phys II
-- ENGL 1111 Composition I
* Students must achieve a C or higher grade in all required courses.

4. Students wishing to be considered to begin the PNSG course sequence in f**all semester --**

application window open from February 1st - March 1st.
All required information must be submitted by the application deadline. Students completing pre-PNSG courses during the summer semester will only be considered for fall semester start pending space availability.

5. Students wishing to be considered to begin the PNSG course sequence in **spring semester -- application window open from September 1st - October 1st.** All required information must be submitted by the application deadline.

6. PNSG Selection Criteria.

7. Students must have a minimum cumulative 2.5 GPA for PN program entrance and meet the college's required cumulative completion percentage standard. (NCTC policy 3070 Satisfactory Academic Progress) Students in a warning, probation, or suspension status will not be considered for PN program eligibility.

8. Achievement of a minimum cumulative score of 50 on the ATI TEAS examination. The ATI TEAS Version 7 test must be taken before the application window closes (before March 1 for fall start and before Oct. 1 for spring start).

9. Current CPR certification -- Current CPR certifications accepted include: Basic Life Support for Health Care Providers (American Heart Assn) or CPR for the Professional Rescuer (Red Cross.)

10. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) upon acceptance into the program.

11. Completion and approval for clinical participation by the Minnesota Department of Human Services Licensing Division Background Study and fingerprinting (cost approximately $10) upon acceptance into the program. Completion and approval for clinical participation by a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

12. NCTC Nursing Program Alignment with Other States' Educational Requirements.

Please Note:
***** There is not a guarantee that a program cohort will start every semester on each site (East Grand Forks, Thief River Falls & Distance). Pending enrollment numbers, if a cohort does not start on your site of choice you may be offered a space in one of the other site cohorts. Additionally, a blended site (some classes face-to-face and some classes distance) may be used pending enrollment numbers.
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
HLTH 1106	Medical Terminology	2
MATH 1003	Math Applications Nurses	2
PNSG 1250	Intro Practical Nursing	1
PNSG 1254	Nursing Foundations	4
PNSG 1258	Psychosocial	2
PNSG 1262	Nursing Concepts I	5
PNSG 1266	Clinical Care I	1
PNSG 1270	Transition to Practice	1
PNSG 1274	Maternal-Newborn	1
PNSG 1279	Invasive Nrsing Therapies	3
PNSG 1283	Nursing Concepts II	5
PNSG 1287	Clinical Care II	4
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3

Occupational Therapy Assistant
A.A.S. - 72 Credits
*** EGF campus**

Program Description
Occupational Therapy (OT) is the use of everyday life activities (occupations) with individuals who have limitations. These limitations may include physical or mental health and developmental or learning abilities. Individuals may also be limited by poverty and cultural differences or the aging process. OT is used to prevent disability, and maintain health in the areas of work, play, leisure, education, communication interaction and activities of daily living.

The Occupational Therapy Assistant (OTA) program includes general and technical courses and supervised fieldwork experiences. The Level II

Fieldwork experience must be completed within 18 months of finishing the OTAC academic courses. The Level II Fieldwork courses, OTAC 2225 and OTAC 2235, may be taken in the 2nd summer semester or the 3rd fall semester.

Enrollment in the OTA program may be limited due to the availability of fieldwork sites. Acceptance by the College does not constitute acceptance into the OTA program. Students are considered to be "Pre-OTA" until they have been accepted to enroll in OTA courses. Interested students must complete an OTA program application in order to be considered for enrollment in the OTA program. Students interested in enrolling in this major are encouraged to contact OTA faculty to find out specific requirements for admission into this program.

Graduates of the program will be eligible to sit for the national certification examination for the Occupational Therapy Assistant, Administered by the National Board for Certification in Occupational Therapy (NBCOT) One Bank Street Suite 300, Gaithersburg, MD 20878 (301) 990-7979. After successful completion of the exam, the graduate will be a Certified Occupational Therapy Assistant (COTA). In addition, most states require licensure to practice; however, state licenses are usually based on the results of the NBCOT certification examination. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Program results from the National Board for Certification in Occupational Therapy (NBCOT) can be found online at https://secure.nbcot.org/data/schoolstats.aspx

Program Specific Requirements

1. Complete the NCTC college admission process and declare the Occupatonal Therapy Assistant major.

2. Students must complete an OTA program application in order to be considered for enrollment in OTAC 1115 or higher.

3. Applicants must complete a ATI TEAS for Allied Health (AH).

4. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) all required developmental courses in order to be admitted into the OTA program. The program minimum scores for the Next Generation Accuplacer Assessment test are as follows:
Reading: 250
Arithmetic: 240

5. All applicants must have completed or current enrollment in the below courses when submitting a program application:
BIOL 2260 Anatomy and Physiology I
HLTH 1106 Medical Terminology
OTAC 1001 Intro to OT
PSYC 2201 Developmental Psychology
All required courses for the program must be completed with a grade of C or better.

6. Current CPR certification. CPR for Health Care Providers (American Heart Association) or CPR for Professional Rescuer (Red Cross) certification is required prior to entering OTAC 2000 level courses.

7. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) upon enrollment in OTAC courses.

8. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) upon enrollment in OTAC courses. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year.

9. The Level II Fieldwork courses (OTAC 2225 and OTAC 2235) may be taken in the 2nd summer semester or the 3rd fall semester.

10. For more information please read the OTA Program Handbook and Policy Manual.

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
HLTH 1106	Medical Terminology	2

OTAC 1001	Intro to OT	2
OTAC 1115	Disability-Disease Proc	2
OTAC 1130	OTA Foundations	4
OTAC 1145	Scholarship I	1
OTAC 1155	Movement for Occupations	3
OTAC 2015	Ped Community Practice	2
OTAC 2025	Ped Physical Health	5
OTAC 2035	Ped Psychosocial	5
OTAC 2045	Scholarship II	2
OTAC 2115	Adult Community Practice	2
OTAC 2125	Adult Physical Health	5
OTAC 2135	Adult Psychosocial	5
OTAC 2145	Scholarship III	1
OTAC 2155	Professional Topics	2
OTAC 2225	Physical Health Fieldwork	6
OTAC 2235	Psychosocial Fieldwork	6
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
PSYC 2201	Developmental Psychology	3
PSYC 2215	Abnormal Psychology	3

Paramedic
A.A.S. - 60 Credits
*** EGF campus**

Program Description

Graduates of the Paramedic Associate in Applied Science degree program will be qualified and skilled professionals in the field of Emergency Medical Services as Paramedics. The Paramedic is a person who works in the exciting, expanding field of Emergency Medical Services (EMS). This degree incorporates theoretical knowledge with extensive hands on, clinical application and experience. The specialization and advanced education and training in the care and transport of the critically ill and injured can mean the difference between life and death. Paramedic A.A.S. degree graduates typically have more employment opportunities as well as enhanced potential for upward progression in the career of pre-hospital care.

Program Specific Requirements

1. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in EMTP1130. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

2. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in EMTP1130.

3. Current American Heart Association (AHA) BLS Provider level CPR is required prior to, or by the end of the first week of the EMTB1101.

4. Current Minnesota Emergency Medical Technician (EMT) license is a prerequisite for the Paramedic courses.

5. All required courses for the program must be completed with a grade of C or better.

6. Admission into the Paramedic courses requires the completion of BIOL 2260, BIOL 2262, HLTH 1106, EMTB 1101 with current MN EMT licensure, EMTP 1130 or equipvalent work expereince AS WELL AS the course application form to be filled out and submitted to the program director in order to reserve a seat in the courses. The cover letter explains the application process.

7. Advanced Placement into the Paramedic Program will be evaluated on a case-by-case basis. Items that will be considered will include, but may not be limited to, prior Paramedic coursework complete, skill validations, clinical experiences and liberal arts coursework.

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.
* A blended site (some classes face-to-face and some classes distance) may be used for this program.

Course Listing

Course #	Course Title	Crds
EMTB 1101	Emergency Medical Tech	6
EMTP 1130	BLS Ambulance Clinical	1
EMTP 1200	Intro to EMS	1
EMTP 1205	EMS Trauma Care	1
EMTP 1210	EMS Pharmacology	1
EMTP 1215	EMS Med Emergencies	3
EMTP 1220	EMS Cardiac Care	1

EMTP 1225	EMS Special Populations	1
EMTP 1230	EMS HazMat	1
EMTP 1235	Paramedic Skills	2
EMTP 1240	Paramedic Assessment 1	2
EMTP 1300	Paramedic Clinical	5
EMTP 1305	Paramedic Field Exp	3
EMTP 1400	Paramedic Assessment 2	3
EMTP 1405	ACLS-PALS-PHTLS	3
EMTP 1410	Paramedic Capstone	6
HLTH 2208	Pathophysiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
MATH 1110	College Algebra	3
SSCI 1101	Human Relations	3

Paramedic
Diploma - 48 Credits
*** EGF campus**

Program Description

Graduates of the Paramedic program will be qualified and skilled professionals in the field of Emergency Medical Services as Paramedics. The Paramedic (EMT-P) is a person who works in the exciting, expanding field of Emergency Medical Services (EMS). This degree incorporates theoretical knowledge with extensive hands on, clinical application and experience. Thespecialization and advanced education and training in the care and transport of the critically ill andinjured can mean the difference between life and death. Paramedic graduates typically have more employment opportunities as well as enhanced potential for upward progression in the career of pre-hospital care.

Program Specific Requirements

1. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements.
The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

2. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in EMTP1130. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

3. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in EMTP1130.

4. Current American Heart Association (AHA) BLS Provider level CPR is required prior to, or by the end of the first week of the EMTB1101.

5. Current Minnesota Emergency Medical Technician (EMT) license is a prerequisite for the Paramedic courses.

6. All required courses for the program must be completed with a grade of C or better.

7. Admission into the Paramedic courses requires the completion of BIOL 260, BIOL 2262, HLTH 1106, EMTB 1101 with current MN EMT licensure, EMTP 1130 or equipvalent work expereince AS WELL AS the course application form to be filled out and submitted to the program director in order to reserve a seat in the courses. The cover letter explains the application process.

8. Advanced Placement into the Paramedic Program will be evaluated on a case-by-case basis. Items that will be considered will include, but may not be limited to, prior Paramedic coursework complete, skill validations, clinical experiences and liberal arts coursework.

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.
* A blended site (some classes face-to-face and some classes distance) may be used for this program.

Course Listing

Course #	Course Title	Crds
EMTB 1101	Emergency Medical Tech	6
EMTP 1130	BLS Ambulance Clinical	1
EMTP 1200	Intro to EMS	1
EMTP 1205	EMS Trauma Care	1
EMTP 1210	EMS Pharmacology	1

EMTP 1215	EMS Med Emergencies	3
EMTP 1220	EMS Cardiac Care	1
EMTP 1225	EMS Special Populations	1
EMTP 1230	EMS HazMat	1
EMTP 1235	Paramedic Skills	2
EMTP 1240	Paramedic Assessment 1	2
EMTP 1300	Paramedic Clinical	5
EMTP 1305	Paramedic Field Exp	3
EMTP 1400	Paramedic Assessment 2	3
EMTP 1405	ACLS-PALS-PHTLS	3
EMTP 1410	Paramedic Capstone	6
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4

Pharmacy Technology
A.A.S. - 60 Credits
*** EGF campus**

Program Description
The Pharmacy Technician works as an assistant to a Registered Pharmacist, assisting or relieving the Pharmacist in routine technical and clerical duties and functioning in strict accordance with standard written procedures and guidelines under the supervision of the professional Pharmacist. A.A.S. graduates have enhanced potential for upward progression in the career of Pharmacy, as the general education component gives the student a well-rounded foundation of knowledge. Students, using their own laptop computers, learn how to access patient profiles, input drug orders, and print prescription labels. They learn how to fill prescriptions and aseptic technique for intravenous drug admixture in the College's state-of-the art teaching lab.

Program Specific Requirements
1. Appropriate Next Generation Accuplacer scores or successful completion of ENGL 0095, MATH 0098 before entering any PHRM courses.

2. Students who have completed BIOL2260 and BIOL2262 may substitute both courses for BIOL1004.

3. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in PHRM courses. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

4. All required courses for the program must be completed with a grade of C or better.

5. Completion of the College Health Screening & Immunization information requirements.

6. Current Basic Life Support (BLS) for Health Care Providers (American Heart Association) certification prior to enrollment in PHRM 2010 and 2012.

7. Refer to the Program Handbook for time limits on transfer of technical and general education credits and for specific program progression policies.

Please Note:
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
CPTR 1104	Intro to Computer Tech	3
HLTH 1106	Medical Terminology	2
HLTH 1108	Cultural Diversity	1
PHRM 1001	Fund Concepts of Pharmacy	1
PHRM 1002	Pharmacy Calculations	2
PHRM 2001	Pharmacy Prin-Prac I	4
PHRM 2002	Pharmacy Prin-Prac II	5
PHRM 2004	Professional Prac-Law	3
PHRM 2010	Experiential-Hospital	3
PHRM 2012	Experiential-Retail	3
BIOL 2221	Microbiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
CHEM 1020	Intro to Chemistry	4
ENGL 1111	Composition I	3
MATH 1110	College Algebra	3
PSYC 1105	Intro to Psychology	3
SSCI 1101	Human Relations	3
	G1: Communication Elec	3
	MN Transfer Elective	3

G1: Communication Electives:

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

Pharmacy Technology
Diploma - 36 Credits
*** EGF campus**

Program Description
The Pharmacy Technician works as an assistant to a Registered Pharmacist, assisting or relieving the Pharmacist in routine technical and clerical duties and functioning in strict accordance with standard written procedures and guidelines under the supervision of the professional Pharmacist Students, using their own laptop computers, learn how to access patient profiles, input drug orders, and print prescription labels. They learn how to fill prescriptions and aseptic technique for intravenous drug admixture in the College's state-of-the art teaching lab.

Program Specific Requirements
1. Appropriate Next Generation Accuplacer scores or successful completion of ENGL 0095, MATH 0098 before entering any PHRM courses.

2. Students who have completed BIOL2260 and BIOL2262 may substitute both courses for BIOL1004.

3. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in PHRM courses. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

4. All required courses for the program must be completed with a grade of C or better.

5. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in PHRM courses.

6. Current Basic Life Support (BLS) for Health Care Providers (American Heart Association) certification prior to enrollment in PHRM 2010 and 2012.

7. Refer to the Program Handbook for time limits on transfer of technical and general education credits and for specific program progression policies.

Please Note:
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
BIOL 1004	Intro Anatomy and Phys	3
HLTH 1106	Medical Terminology	2
PHRM 1001	Fund Concepts of Pharmacy	1
PHRM 1002	Pharmacy Calculations	2
PHRM 2001	Pharmacy Prin-Prac I	4
PHRM 2002	Pharmacy Prin-Prac II	5
PHRM 2004	Professional Prac-Law	3
PHRM 2010	Experiential-Hospital	3
PHRM 2012	Experiential-Retail	3
CHEM 1020	Intro to Chemistry	4
SSCI 1101	Human Relations	3
	MN Transfer Elective	3

Phlebotomy
Certificate - 16 Credits
*** EGF campus**

Program Description
Phlebotomists are healthcare professionals who, under the supervision of physicians and other healthcare professionals, perform blood collection procedures using a variety of intrusive techniques. The phlebotomist is primarily responsible for collecting blood and body fluid specimens from patients for the purpose of laboratory analysis.

Phlebotomists are an integral member of a healthcare team and must be well-trained in all aspects of collection and transport of specimens to be used in the diagnoses, treatments, and prevention of diseases.

The Phlebotomist program integrates theoretical, practical and interpersonal skills providing the basis for the graduate to work as an effective entry-level phlebotomist in a variety of healthcare delivery systems.

Students will learn sample requirements for various clinical laboratory departments, make judgments regarding possible sample discrepancies, use

appropriate equipment for the collection of samples, use venipuncture and capillary puncture techniques, apply specimen transport and process techniques, understand quality assurance and safety techniques, and become aware of the medical and legal implications of blood and body fluids collection. Graduates will be prepared to take a national certification examination.

Program Specific Requirements

1. Students must complete the Phlebotomy program application.

2. Students who have completed BIOL 2260 and BIOL 2262 may substitute both courses for BIOL 1004.

3. Students must have current working knowledge of required sciences. Courses older than 5 years may not be accepted for transfer into the program: BIOL 1004 and HLTH 1106.

4. All requirements for graduation, including BIOL 1004, CRLT 2103, HLTH 1106, HLTH 1108, SSCI 1101:
(a) must be completed prior to the start of PHLB 1106 or
(b) must be currently enrolled within the same semester that the student enrolls in PHLB 1106 (please ensure that the schedule does not conflict with PHLB courses).

5. No minimum Accuplacer score required.

6. PHLB 1104, PHLB 1105, and PHLB 1106 must be completed concurrently in the same semester. If a student does not pass one of these courses, they will need to retake them all the following year to complete the program.

7. All required courses for the Phlebotomy Program must be completed with a grade of C or better.

8. The NHA (National Healthcare Association) certification exam is given as part of the PHLB 1106 curriculum. Students must achieve a passing grade on this test to pass the course and complete the program.

9. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to program entry. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

10. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in PHLB 1104.

11. Current CPR certification. CPR for Health Care Providers (American Heart Association) or CPR for Professional Rescuer (Red Cross) prior to entering PHLB 1106. Certification must be kept current for the duration of enrollment in this program.

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
BIOL 1004	Intro Anatomy and Phys	3
CRLT 2103	Job Seeking-Keeping	1
HLTH 1106	Medical Terminology	2
HLTH 1108	Cultural Diversity	1
PHLB 1104	Phlebotomy Procedures	2
PHLB 1105	Phlebotomy Lab Skills	1
PHLB 1106	Clinical Phlebotomy Inter	3
SSCI 1101	Human Relations	3

Physical Therapist Assistant
A.A.S. - 74 Credits
*** EGF campus**

Program Description

Physical Therapist Assistants (PTAs) work under the direction and supervision of a Physical Therapist. PTA's perform various physical therapy services specified in the plan of care developed by the Physical Therapist. These services include data collection, treating patients with exercise and other treatment procedures, administering physical agents/modalities, and reporting patient responses to the Physical Therapist. The curriculum consists of: basic science coursework, technical coursework, including laboratory activities and practice, and clinical education experiences in a variety of healthcare settings.

Program Specific Requirements

1. Completion of the admissions application to NCTC.

2. Completion of the PTA Program Application.

3. All required developmental courses must be completed before applying to the PTA program.

4. TEAS V for Allied Health (AH) can be taken a maximum of two times per academic year (defined as August through July). Adjusted individual total score of at least 60%. FAQ about TEAS V for AH and program admissions.

5. Current CPR certification. CPR for Health Care Providers (American Heart Association) or CPR for the Professional Rescuer (Red Cross) prior to enrollment in PTAS1120.

6. All required courses for the program must be completed with a grade of C or better.

7. Students must have current working knowledge of required sciences. Courses older than 5 years may not be accepted for transfer into the program: BIOL 2260, BIOL 2262. This may be waived if an applicant has recent experience working as a licensed healthcare provider.

8. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in PTAS1120.

9. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to enrollment in PTAS 1120. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
HLTH 1106	Medical Terminology	2
PTAS 1101	Introduction to PTA	3
PTAS 1105	Fundamentals of PTA	4
PTAS 1108	PTA Pathophysiology	2
PTAS 1110	Physical Agents	4
PTAS 1114	Clinical Kinesiology	3
PTAS 1116	Therapeutic Exercise I	2
PTAS 1120	Clinical Introduction	1
PTAS 1130	Clinical Education I	4
PTAS 2101	Orthopedics for PTA	2
PTAS 2105	Neurology for PTA	5
PTAS 2111	Therapeutic Exercise II	3
PTAS 2115	Advanced Techniques	4
PTAS 2125	PTA Ethics and Issues	2
PTAS 2140	Clinical Education II	5
PTAS 2150	Clinical Education III	5
PTAS 2160	Professional Integration	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
PSYC 1105	Intro to Psychology	3
	G1: Communication Elec	3
	G4: Math/Logical Elective	3

G1: Communication Electives:

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

G4: Math/Logical Reasoning Electives:

MATH 1106	Trigonometry	2
MATH 1110	College Algebra	3
MATH 1113	Pre-Calculus	5
MATH 1131	Applied Calculus	3
MATH 2203	Statistics	4
MATH 2231	Calculus I	4
MATH 2232	Calculus II	4
MATH 2233	Calculus III	4

Production Technologies
Certificate - 16 Credits
*** Distance Educ online**

Program Description

This 16 credit certificate introduces students to production technologies and information to start on a manufacturing career pathway. In the eight courses, topics include:

* Technical mathematics
* Introductory computer skills
* Print interpretation
* Manufacturing processes
* Quality control

* Maintenance
* Safety
* Career Success Skills

These classes are entirely online and do not require any on-site lab work.

Course Listing

Course #	Course Title	Crds
CMAE 1502	Technical Mathematics	3
CMAE 1506	Intro to Computers	2
CMAE 1510	Print Reading	2
CMAE 1514	Safety Awareness	2
CMAE 1518	Manufacture Process-Prod	2
CMAE 1522	Quality Practices	2
CMAE 1526	Maintenance Awareness	2
CMAE 1528	Career Success Skills	1

Radiologic Technology
A.A.S. - 82 Credits
*** EGF campus**

Program Description

The Radiologic Technology **Program Application timeline is Nov 1 - Feb 1.**
All applicants are responsible for assuring their application was received and they were notified by email upon receipt.

Radiologic Technology Program Mission and Goals.

The Radiologic Technology program prepares students to perform various radiologic procedures through didactic as well as clinical experiences. The student Radiologic Technologist instructs and positions patients, manipulates radiographic equipment, adjusts exposure factors, provides radiation protection for patient, self, and others, evaluates the quality of images, and carries out activities associated with quality control. The student Radiologic Technologist carries out these functions under the supervision, or upon the direction of a registered Radiologic Technologist and Radiologist, a physician specializing in radiography for diagnosis and treatment.

The Radiologic Technology program is a five semester, 21-month, accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). In addition to providing a quality education in the field of radiography, our program incorporates values and attitudes congruent with the professional standards and ethics as outlined by the American Registry of Radiologic Technologists.

Program Effectiveness Data.

In addition to the sequential classroom requirements outlined in the program curriculum, student radiographers clinically rotate at six clinical education sites. These designated clinical education sites provide students with a wide variety of both inpatient and outpatient imaging services designed to enhance graduate work-readiness skills in imaging and patient care.

Graduates of the Radiologic Technology program are eligible for the national certification exam administered by the American Registry of Radiologic Technologists. Successful completion of this exam qualifies the graduate as a Registered Radiologic Technologist. Please visit www.arrt.org for eligibility requirements.

Field Description/Work Environment

Radiologic Technologists (R.T.'s) work in a variety of healthcare settings such as hospitals, physicians' offices or outpatient clinics. Radiographers also provide mobile imaging in surgery, emergency room and patient room settings. R.T.'s are responsible for achieving accurate positioning of patients and body structures ensuring that they provide radiologists with quality diagnostic images. Radiologic Technologists work closely with radiologists. A Radiologist is a physician that is responsible for interpreting radiographic images in order to diagnose patient conditions.

Program Specific Requirements

APPLICATION PROCESS. All applicants must document Hepatitis B vaccination or completion of a minimum of two vaccines by the application deadline of February 1st. Please keep in mind the first two vaccines are in sequence of one month apart so applicants must plan according to comply. Please visit the NCTC webpage regarding ALL program immunization requirements.

1. Completion of the NCTC admissions application. All applicants must apply and be accepted to NCTC. The application can be completed at any time or contact admissions at 1-800-959-6282.

2. Completion of the Radiologic Technology program application. **The program application window will be open November 1 - February 1**

each year. Students cannot complete a program application prior to or after these dates.
* November 1st -- the official program application will be available for download.
* **Completed program application must be emailed to Debra Beland, Program Director**.
* February 1st -- application window closes at the end of the day. All college transcripts are due, and any course substitution paperwork completed.
* March -- students selected will be notified by mail the first part of March.
Check program website for updates.

3. All applicants must provide documentation of completion or current enrollment in the below courses when submitting a program application;
* BIOL 2260 Anatomy and Physiology I
* HLTH 1106 Medical Terminology
* MATH 1110 College Algebra
* CHEM 1020 Intro to Chemistry 4 cr

Course substitute for CHEM 1020 --
-- CHEM 2211 5 cr
OR
-- CHEM 1121 5 cr **AND** 1122 5 cr. *CHEM 1121 alone does not satisfy program requirements*.

4. Current CPR certification. CPR for Health Care Providers (American Heart Association) prior to the start of fall semester.

5. All required courses for the program must be completed with a grade of C or better.

6. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to the start of fall semester.

7. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) prior to the start of fall semester. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

Please Note:
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
HLTH 1106	Medical Terminology	2
RADT 1110	Intro Rad Tech-Pat Care	3
RADT 1114	Radiographic Proc I	4
RADT 1119	Clinical Radiography I	5
RADT 1122	Radiographic Physics	3
RADT 1124	Radiographic Proc II	4
RADT 1127	Image Production - Eval	3
RADT 1128	Clinical Radiography II	5
RADT 1135	Advanced Imaging	2
RADT 1138	Clinical Radiography III	6
RADT 2217	Imaging Equipment-QA	3
RADT 2218	Clinical Radiography IV	8
RADT 2220	Radiation Biology-Protect	2
RADT 2228	Clinical Radiography V	7
RADT 2234	Radiographic Pathology	2
RADT 2240	Registry Prep	2
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
CHEM 1020	Intro to Chemistry	4
MATH 1110	College Algebra	3
PSYC 1105	Intro to Psychology	3
	G6: Human/Fine Arts Elec	3

G6: Humanities/Fine Arts Electives

PHIL 1102	Intro to Ethics	3
PHIL 2210	Morals and Medicine	3

Respiratory Therapy
A.A.S. - 78 Credits
*** EGF campus**
*** Distance Educ online**

Program Description
As a Respiratory Therapist you can hold an exciting position on the health care team. Under the supervision of a physician, the Respiratory Therapist is responsible for oxygen and gas therapy, care of patients with cardiopulmonary problems including cardiopulmonary arrest, delivery of aerosolized medication, chest physiotherapy, obtaining and analyzing arterial blood gas specimens, pulmonary function testing, maintenance of patients in need of mechanical ventilators, and education of patients and families.

The Respiratory Therapist program is a Hyflex program. Students can participate in the theory components in person, online via zoom, or online asynchronously. There are required meeting times that student must attend in person for lab and clinical.

Program Specific Requirements

1. Appropriate Accuplacer scores or successful completion of ENGL0095, MATH0098 must be completed before entering any RESP courses.

2. Completion of the RESP program application.

3. TEAS V for Allied Health (AH) FAQ sheet adjusted individual total score of at least 45%. Review the directions on how to create an account.

4. Annual enrollment into the Respiratory Therapist semesters 1-6 courses is limited to 24 students per semester.
-- Acceptance into the Respiratory Therapist program is based upon eligibility for and successful online registration into all semester 1 Respiratory Therapist coursework.
-- Students are encouraged to declare Respiratory Therapist as their major and to meet with an academic advisor prior to registering for Respiratory Therapist classes to be sure that they meet all requirements.

5. Once the online registration capacity of 24 students enrolled in RESP courses is reached, any student wanting to enroll into the respiratory therapist coursework will be encouraged to register online into the electronic waiting lists.
-- Students are also encouraged to take advantage of this time to take non-respiratory coursework to improve their chances of success in RESP course work.

6. Students on the waiting lists are encouraged to check online registration and their email, as students may drop from registration or eligibility at any time up to the first week of the semester.

7. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10) upon program entry. Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

8. A IBM compatible laptop computer is recommended for semesters four through six.

9. All required courses for the program must be completed with a grade of C or better.

10. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to enrollment in RESP courses.

11. Current CPR certification. CPR for Health Care Providers (American Heart Association) or CPR for Professional Rescuer (Red Cross) is required prior to enrollment in semesters 2-6 of RESP courses.

Please Note:

* Prior to enrollment in Respiratory Therapist coursework, students are encouraged to read the Respiratory Therapist Program Handbook. If there are any questions or concerns related to the information in this document please contact the Program Director, Heather Koland.
* Students are encouraged to complete general education coursework prior to enrollment in Respiratory Therapist coursework. There is no set limit to the number of students enrolled with the college who have Respiratory Therapist as their major.
* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
HLTH 1106	Medical Terminology	2
RESP 1104	Non Acute Resp Care	4
RESP 1110	Adult Critical Care	4
RESP 1120	Cardio Physiology-Assess	3
RESP 1126	Clinical I	1
RESP 2207	Clinical II	2
RESP 2211	Clinical III	2
RESP 2212	Diagnostic Procedures	3
RESP 2230	ACLS	1
RESP 2232	Pediatric AdvLife Support	1
RESP 2236	Neonatal Resuscitation Pr	1
RESP 2242	Neo-Peds Critical Care	4
RESP 2244	Integrated Pract I	1
RESP 2246	Neonatal Internship I	1

RESP 2250	Internship I	5
RESP 2252	Advanced Critical Care	4
RESP 2254	Internship II	5
RESP 2260	Neonatal Internship II	1
RESP 2262	Internship III	3
RESP 2264	Integrated Pract II	1
RESP 2276	Adv Prac Registry Review	3
RESP 2278	Patient Ed - Wellness	2
BIOL 2221	Microbiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
ENGL 1111	Composition I	3
	G3: Natural Sciences Elec	4
	G5: History/Social Elec	3
	G6: Human/Fine Arts Elec	3

G3: Natural Science Electives

CHEM 1020	Intro to Chemistry	4
CHEM 1122	General Chemistry II	5
CHEM 2211	Organic Chemistry I	5

G5: History/Social Science Electives

PSYC 1105	Intro to Psychology	3
PSYC 2201	Developmental Psychology	3
PSYC 2215	Abnormal Psychology	3

G6: Humanities/Fine Arts Electives

PHIL 1101	Intro to Philosophy	3
PHIL 1102	Intro to Ethics	3
PHIL 2210	Morals and Medicine	3

Small Unmanned Aircraft Systems Technician
AAS - 60 Credits
*** TRF campus**

Program Description

The sUAS A.A.S. will concentrate on the maintenance, repair and operation of the components of small unmanned aircraft systems to include: motor controls, sensor technologies, small electronics, computer hardware, Local Area Networks (LAN) understanding the function of data links or the communication/guidance system between vehicle and control interfaces (line of sight), and within UAS. Additionally, students will learn how to properly plan and execute flight operations. Courses are designed to create a skilled sUAS Field Service Technician with a broad understanding of commonly used UAS platforms at the functional level, an in-depth understanding of the components of those systems and the knowledge necessary to conduct safe and efficient flight operations.

Program Specific Requirements

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250, Advanced Algebra and Functions: 250

Course Listing

Course #	Course Title	Crds
AVIA 1011	Basic Electricity	5
CPTR 1132	Microcomputer Maintenance	3
CRLT 2103	Job Seeking/Keeping	1
ETAS 1560	Robotic Programming I	2
ETAS 2220	Microcontrollers I	4
ETAS 2221	Sensor Technology	4
ETAS 2230	Motor Controls	3
GINT 2403	GIS Interoperability	3
IMAG 1101	Remote Sensing	3
IMAG 1103	Imagery Software/Mapping	4
UAST 2110	Foundations of UAS	3
UAST 2180	sUAS Ground School	3
UAST 2190	sUAS Lab	3
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
ENGL 2207	Technical Writing	3
MATH 2203	Statistics	4
	MN Transfer Elective	6

Small Unmanned Aircraft Systems Field Service Tech
Diploma - 34 Credits
*** TRF campus**

Program Description

The sUAS diploma will concentrate on the maintenance, operations and applications of small unmanned aircraft systems to include: electronics, computer hardware, local area networks, understanding the function of data links or the communication/guidance system between vehicle and control interfaces and within the sUAS and conducting safe flight operations in the National Airspace System. Courses are designed to create a skilled sUAS Field Service Technician with a broad understanding of sUAS at the functional and operational level.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements. English course requirements are listed in the curriculum summary. Arithmetic assessment scores must be greater than

or equal to 240 or students must complete MATH 0080 or a higher level course.

Course Listing

Course #	Course Title	Crds
AVIA 1011	Basic Electricity	5
CPTR 1132	Microcomputer Maintenance	3
ENGL 1111	Composition I	3
ETAS 2220	Microcontrollers I	4
GINT 2403	GIS Interoperability	3
IMAG 1101	Remote Sensing	3
IMAG 1103	Imagery Software/Mapping	4
UAST 2110	Foundations of UAS	3
UAST 2180	sUAS Ground School	3
UAST 2190	sUAS Lab	3

Sociology Transfer Pathway
A.A. - 60 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

The Sociology Transfer Pathway AA offers students a powerful option: the opportunity to complete an Associate of Arts degree with course credits that directly transfer to designated Sociology bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field. Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

Program Specific Requirements

1. Completion of course work specific to the SociologyTransfer Pathway, including completion of the Minnesota Transfer Curriculum (MnTC) 40 Credits with the required distribution in MnTC Goal Areas 1-10.
2. Within the Program Electives, not more than 17 credits may be occupational coursework.
3. Developmental level coursework does not count toward the 60 credits for the Associate of Arts Degree.
4. A minimum of a 2.00 GPA within the required 40 MnTC credits.

Course Listing

Course #	Course Title	Crds
ENGL 1111	Composition I	3
ENGL 1112	Composition II	3
SOCI 1101	Intro to Sociology	3
SOCI 1102	Social Problems in US	3
SOCI 2220	Marriage and Family	3
	MN Transfer Electives	28
	Program Electives	17

Supervisory Leadership
Certificate - 18 Credits
*** EGF campus**
*** TRF campus**
*** Distance Educ online**

Program Description

This program prepares students to supervise people in work environments where active participation in decision-making is required of all employees. Some of the courses will be offered online only.

Program Specific Requirements

All required courses for the program must be completed with a grade of "C" or better.

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The college minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 250

Course Listing

Course #	Course Title	Crds
ADMS 1116	Business Communications	3
BUSN 2210	Prin of Management	3
MKTG 2120	Supervisory Leadership	3
	G1: Communication Elec	3
	Program Electives	6

G1: Communication Electives

SPCH 1101	Intro to Public Speaking	3
SPCH 1103	Interpersonal Communicati	3

Program Electives

BUSN 1110	Intro to Business	3
BUSN 2218	Legal Environment Busn	3
MKTG 2200	Prin of Marketing	3
SSCI 1101	Human Relations	3

Surgical Technology
A.A.S. - 60 Credits
*** EGF campus**

Program Description

Program Goal: The Surgical Technology program will prepare entry-level Surgical Technologists who are competent in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to enter the profession.

The Surgical Technology program prepares students to assist the surgeon, anesthesiologist, and professional registered nurse as an integral member of the direct patient care team before, during, and after surgical intervention. The graduate practitioner will possess the knowledge base and technical skills to demonstrate the principles of sterile technique, demonstrate the invasive procedural steps necessary to correct anatomical pathology, prepare equipment, instruments, supplies, and sutures used for surgical procedures, assist the surgeon throughout the operative procedure, incorporate values and attitudes congruent with professional standards and ethics, and perform in the role of first scrub, second assistant, supervised circulator, and first assistant.

Students will obtain clinical experience at Altru Hospital in Grand Forks ND, Sanford Hospital in Fargo ND and Fargo VA Healthcare System. Students are required to complete a minimum of 120 surgical cases during the clinical training for successful completion of the program, as approved by the ARC/STSA.

Graduates of the program are eligible to take the National Certifying Examination for Surgical Technologists to become a Certified Surgical Technologist (CST). The exam is administered by the National Board of Surgical Technology and Surgical Assisting (NBSTSA), the credentialing organization. The NBSTSA awards a certificate, after successful completion of the examination; the individual will be nationally certified.

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA).

Program Specific Requirements

Individuals who intend to apply to the program must:

1. Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements. The college minimum scores for the Next Generation Accuplacer Assessment test are as follows:
Reading: 250
Advanced Algebra and Functions: 250 (College Algebra) OR Advanced Algebra and Functions: 230 (Contemporary Math) OR Quantiative Reasoning, Algebra and Statistics: 250 (Contemporary Math)

2. Complete all required developmental and general education courses before beginning the final program semester.

3. The program requires students to have current working knowledge of required sciences. Courses older than 5 years may not be accepted for transfer into the program: BIOL 2221, BIOL 2260, BIOL 2262, HLTH 1106, HLTH 2002, HLTH 2208. This may be waived if an applicant has recent experience working or education in the health -- science fields.

4. SURT 1102 Intro to Surgical Tech is offered in an online format only. Check the Distance Education schedule when registering.

5. Current CPR certification. CPR for Health Care Providers (American Heart Association) or CPR for Professional Rescuer (Red Cross) prior to the start of the fall semester of the second year of the Surgical Technology Program. Certification must be kept current for the duration of enrollment in this program.

6. Completion of the College Health Screening & Immunization information requirements through Castle Branch (cost $45) prior to the beginning of the final fall semester.

7. Completion and approval for clinical participation of the Minnesota Department of Humans Services Licensing Division Background Study and fingerprinting (cost approximately $10). Completion and approval for clinical participation of a National Background Study through Castle Branch. Cost $45.75 first year, $26 second year (if needed).

Please Note:

* Health and Human Services students must comply with both Minnesota law and clinical facility requirements related to immunizations and background screenings.
* Students who do not comply with the required health and immunization requirements may not be permitted to attend clinical which **WILL** affect program progression and completion.

Course Listing

Course #	Course Title	Crds
HLTH 1106	Medical Terminology	2
HLTH 2002	Pharmacology	2
HLTH 2208	Pathophysiology	3
SURT 1102	Intro to Surgical Tech	2
SURT 2204	Operating Room Theory	4
SURT 2208	Operating Room Practices	6
SURT 2212	Operative Procedures	5
SURT 2216	Clinical I	6
SURT 2220	Clinical II	7
BIOL 2221	Microbiology	3
BIOL 2260	Anatomy and Phys I	4
BIOL 2262	Anatomy and Phys II	4
PSYC 1105	Intro to Psychology	3
PSYC 2201	Developmental Psychology	3
	G4: Math/Logical Elective	3
	G9: Ethic/Civic Resp Elec	3

G4: Math/Logical Reasoning Electives

MATH 1102	Contemporary Math	3
MATH 1110	College Algebra	3

G9: Ethic/Civic Respponsibility Electives

PHIL 1102	Intro to Ethics	3
PHIL 2210	Morals and Medicine	3

UAS & Geospatial Applications
Certificate - 13 Credits
*** TRF campus**

Program Description

The UAS and Geospatial Applications program prepares students to integrate small uncrewed aircraft systems into their workflows. This includes preparing students to take the Part 107 exam, process imagery, use flight and photogrammetry software and understand the basics of remote sensing.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of C or better) the required developmental courses in order to meet graduation requirements. English course requirements are listed in the curriculum summary. Arithmetic assessment scores must be greater than or equal to 240 or students must complete MATH 0080 or a higher level course.

Course Listing

Course #	Course Title	Crds
IMAG 1101	Remote Sensing	3
IMAG 1103	Imagery Software-Mapping	4
UAST 2110	Foundations of UAS	3
UAST 2180	sUAS Ground School	3

Uncrewed Aircraft Systems Maintenance Technician
Certificate - 27 Credits
*** TRF campus**

Program Description

The UAS certificate will concentrate on the maintenance and repair of the components of uncrewed aircraft systems to include: uncrewed aircraft (UAs), control stations (CSs), understanding the function of data links or the communication/guidance system between aircraft and control station, and a basic understanding of computer networks and their functionality within UAS. Courses are designed to create a skilled UAS Maintenance Technician with a broad understanding of commonly used UAS platforms at the functional level.

Program Specific Requirements

Students are required to have the Federal Aviation Administration (FAA) Airframe and Powerplant (A&P) Certification prior to enrolling into the program. Current NCTC Aviation Maintenance students may co-enroll.

Course Listing

Course #	Course Title	Crds
AVET 2142	Avionics	2
AVIA 1011	Basic Electricity	5
AVIA 2025	Non-Metalic Struct	3
AVIA 2034	Communication - Nav	2
UAST 2110	Foundations of UAS	3

UAST 2121	Advanced Composites	3
UAST 2133	Aerospace IT	3
UAST 2150	Control Stations	3
UAST 2161	UAS Aviation Maint Tech	3

Welding Process Technology
Diploma - 34 Credits
*** TRF campus**

Program Description
The Welding Process Technology diploma was designed in cooperation with regional manufacturing companies. The program prepares the student for a career in a welding or welding related field. The program integrates theory, safety, and applications of technical welding training.

The Welding Process Technology program in Thief River Falls offers scheduling flexibility where students work at their own pace allowing motivated individuals or those with prior knowledge to complete courses at a faster pace. The WELD courses in Thief River Falls meet within an open or flex lab setting. The TRF welding lab will have extended hours that allows for the student to practice and develop hands-on skills. Faculty in the TRF Welding program are available during these flex lab hours to assist learners with questions and to administer skills assessments. Students enrolled in the Thief River Falls WELD courses will be responsible for managing their own learning.

Through coursework, the student will develop fundamental knowledge of metals, welding processes, safety, and related equipment applications. The student will become proficient in the following welding and cutting processes: Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Oxy-Acetylene Cutting (OAC), Plasma Arc Cutting (PAC), and Carbon Arc Cutting (CAC).

This diploma consists of 3 stackable certificates that each specialize on a specific process - SMAW, GMAW, and GTAW. By completing the full diploma, the students will be able to apply for graduation in all four credentials.

Program Specific Requirements
Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Students must pass WELD 1100 Weld Orientation before being able to proceed through the remaining program courses.

Course Listing

Course #	Course Title	Crds
CRLT 2103	Job Seeking-Keeping	1
WELD 1100	Weld Orientation	1
WELD 1110	Blueprint Reading-Symbols	2
WELD 1220	SMAW 1	2
WELD 1230	SMAW 2	2
WELD 1240	SMAW 3	2
WELD 1320	GMAW 1	2
WELD 1330	GMAW 2	2
WELD 1340	GMAW 3	2
WELD 1420	GTAW 1	2
WELD 1440	GTAW 2	2
WELD 1450	GTAW 3	2
WELD 1510	FCAW 1	2
WELD 1610	Fabrication	3
WELD 1710	Manual Cutting	2
WELD 1720	CNC Fundamentals-CAD	2
WELD 1730	CNC Cutting	1
WELD 1810	Qualifications	2

Welding Process Technology GMAW
Certificate - 10 Credits
*** TRF campus**

Program Description
The Welding Process Technology GMAW certificate is designed for those students that want to concentrate on the Gas Metal Arc Welding (GMAW). A process commonly referred to as wire-feed welding. Students that complete the GMAW certificate will be proficient in GMAW on carbon steel, aluminum, and stainless-steel sheet, plate, and tube/pipe.

This certificate is comprised of courses taken from the Welding Process Technology diploma and may be earned in conjunction with the diploma.

The Welding Process Technology program in Thief River Falls offers scheduling flexibility where students work at their own pace allowing motivated

individuals or those with prior knowledge to complete courses at a faster pace. The WELD courses in Thief River Falls meet within an open or flex lab setting. The TRF welding lab will have extended hours that allows for the student to practice and develop hands-on skills. Faculty in the TRF Welding program are available during these flex lab hours to assist learners with questions and to administer skills assessments. Students enrolled in the Thief River Falls WELD courses will be responsible for managing their own learning.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Students must pass WELD 1100 Weld Orientation before being able to proceed through the remaining program courses.

Course Listing

Course #	Course Title	Crds
CRLT 2103	Job Seeking-Keeping	1
WELD 1100	Weld Orientation	1
WELD 1110	Blueprint Reading-Symbols	2
WELD 1320	GMAW 1	2
WELD 1330	GMAW 2	2
WELD 1340	GMAW 3	2

Welding Process Technology GTAW Certificate - 10 Credits
*** TRF campus**

Program Description

The Welding Process Technology GTAW certificate is designed for those students that want to concentrate on the Gas Tungsten Arc Welding (GTAW). A process commonly referred to as tig welding. Students that complete the GTAW certificate will be proficient in GTAW on carbon steel, aluminum and stainless-steel sheet, plate, and tube.

This certificate is comprised of courses taken from the Welding Process Technology diploma and may be earned in conjunction with the diploma.

The Welding Process Technology program in Thief River Falls offers scheduling flexibility where students work at their own pace allowing motivated individuals or those with prior knowledge to complete courses at a faster pace. The WELD courses in Thief River Falls meet within an open or flex lab setting. The TRF welding lab will have extended hours that allows for the student to practice and develop hands-on skills. Faculty in the TRF Welding program are available during these flex lab hours to assist learners with questions and to administer skills assessments. Students enrolled in the Thief River Falls WELD courses will be responsible for managing their own learning.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Students must pass WELD 1100 Weld Orientation before being able to proceed through the remaining program courses.

Course Listing

Course #	Course Title	Crds
CRLT 2103	Job Seeking-Keeping	1
WELD 1100	Weld Orientation	1
WELD 1110	Blueprint Reading-Symbols	2
WELD 1420	GTAW 1	2
WELD 1440	GTAW 2	2
WELD 1450	GTAW 3	2

Welding Process Technology SMAW Certificate - 10 Credits
*** TRF campus**

Program Description

The Welding Process Technology SMAW certificate is designed for those students that want to concentrate on the Shielded Metal Arc Welding (SMAW). A process commonly referred to as stick welding. Students that complete the SMAW certificate will be proficient in SMAW on carbon steel sheet, plate, and pipe.

This certificate is comprised of courses taken from the Welding Process Technology diploma and may be earned in conjunction with the diploma.

The Welding Process Technology program in Thief River Falls offers scheduling flexibility where students work at their own pace allowing motivated individuals or those with prior knowledge to complete courses at a faster pace. The WELD courses in Thief River Falls meet within an open or flex lab setting. The TRF welding lab will have extended hours that allows for the student to practice and develop hands-on skills. Faculty in the TRF Welding program are available during these flex lab hours to assist learners with questions and to administer skills assessments. Students enrolled in the Thief River Falls WELD courses will be responsible for managing their own learning.

Program Specific Requirements

Students achieving assessment scores below the established minimums must register and successfully complete (with a grade of "C" or better) the required developmental courses in order to meet graduation requirements.

The program minimum scores for the Next Generation Accuplacer Assessment test are as follows: Reading: 225 Arithmetic: 240

Students must pass WELD 1100 Weld Orientation before being able to proceed through the remaining program courses.

Course Listing

Course #	Course Title	Crds
CRLT 2103	Job Seeking-Keeping	1
WELD 1100	Weld Orientation	1
WELD 1110	Blueprint Reading-Symbols	2
WELD 1220	SMAW 1	2
WELD 1230	SMAW 2	2
WELD 1240	SMAW 3	2

Welding Technology
Certificate - 30 Credits
*** Distance Educ online**

Program Description

The Welding Technology Certificatee includes seven production technologies courses that provide foundational manufacturing skills and six courses with advanced welding skill topics including: print reading and interpreting symbols, Oxyfuel welding, SMAW (Shielded Metal Arc Welding), GMAW (Gas Metal Arc Welding), FWAW (Flux Cored Arc Welding), GTAW (Gas Tungsten Arc Welding), and metallurgy. Hands-on experience is gained through on-site labs. This certificate will prepare students for entry-level positions and provide a foundation for additional education on a career advancement pathway.

Course Listing

Course #	Course Title	Crds
CMAE 1502	Technical Mathematics	3
CMAE 1506	Intro to Computers	2
CMAE 1510	Print Reading	2
CMAE 1514	Safety Awareness	2
CMAE 1518	Manufacture Process-Prod	2
CMAE 1522	Quality Practices	2
CMAE 1526	Maintenance Awareness	2
CMAE 1560	Interpret Welding Symbols	2
CMAE 1562	Oxyfuel Welding	3
CMAE 1564	Shielded Metal Arc Weldin	3
CMAE 1566	Gas Metal Arc Weld/Flux C	3
CMAE 1568	Gas Tungsten Arc Welding	3
CMAE 1570	Metallurgy	1

Welding Technology
Diploma - 32 Credits
*** EGF campus**

Program Description

The Welding Technology program is accredited by the American Welding Society and prepares students for a career in welding. The program integrates theory and application of technical and general courses. Coursework provides the student with information and skill development in a variety of welding processes. Through coursework, the student develops fundamental knowledge of metals, welding processes, safety and related equipment applications. The student learns several different arc and gas welding processes and joins various types of metal while perfecting hand skills. In addition, students learn safe practice and proper maintenance on all equipment.
Graduates from this diploma program will be qualified to work in a variety of settings that are found both in rural and metropolitan areas.

Course Listing

Course #	Course Title	Crds
HPER 1410	First Aid - CPR	1
WELD 1102	Weld Fundamentals	3

WELD 1104	Basic SMAW	4
WELD 1106	Flux Cored Arc Welding	2
WELD 1110	Blueprint Reading-Symbols	2
WELD 1112	Advanced SMAW	4
WELD 1114	Basic Fabrication	4
WELD 1116	Gas Shielded Processes	5
WELD 1120	SMAW Pipe	3
WELD 1124	Cutting Processes	1
SSCI 1101	Human Relations	3

Course Number	Course Name	Credit	Lec/Lab/OJT

ACCT 1100 Prin of Bookkeeping 3 cr 3/0/0
This course covers the basic accounting cycle for service and merchandising businesses. Topics include the analyses of business transactions, recording and posting transactions, payroll procedures and the preparation of financial reports. Prerequisite(s): None

ACCT 1104 Payroll 3 cr 3/0/0
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, time cards, employee earnings records, and government payroll reports. Prerequisite(s): None

ACCT 1108 Busn Math-Calculators 3 cr 3/0/0
This course covers how to make common business-related math calculations, and to apply the calculations to accounting and other business functions, using the touch system on the microcomputer ten-key pad. Prerequisite(s): None

ACCT 1124 Spreadsheet Concepts 3 cr 3/0/0
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): CPTR1104

ACCT 1128 Computerized Acct I 3 cr 3/0/0
This course is an introduction to computerized accounting applications and software used in the business industry. Topics include general ledger accounting, payroll procedures, accounts receivable, accounts payable, inventory and depreciation. Prerequisite(s): CPTR1104, BUSN2221

ACCT 2100 Accounting Special Topics 1 cr 0/1/0
Supervised individual study and research in student's special field of interest. The student will propose the investigation desired and, in conjunction with the instructor, develop the scope of work to be completed. Written report required. Prerequisite(s): BUSN2222

ACCT 2200 Income Tax 3 cr 3/0/0
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, deductions for adjusted gross income, business income and expenses, business tax credits and payment of estimated taxes. Prerequisite(s): None

ACCT 2203 VITA Service 1 cr 1/0/0
This course trains students in the preparation of federal and state income tax returns for individuals. Emphasis is placed on return preparation with the use of TaxWise. The course is offered in conjunction with the Internal Revenue Service sponsored Volunteer Return Preparation Program—as such, students will not sign completed tax returns.
Relief from liability for the students and NCTC is provided by the Volunteer Protection Act of 1997, PL 105-19. Prerequisite(s): None

ACCT 2204 Intermediate Acct I 4 cr 4/0/0
This course is a comprehensive study of accounting theory and concepts with an analysis of the influence on financial accounting by various boards, associations, and governmental agencies. Topics include the income statement, balance sheet, statement of cash flows, and various asset groups. Prerequisite(s): BUSN2222

ACCT 2208 Cost Accounting 3 cr 3/0/0
This course covers accounting for materials, labor, and factory overhead in a manufacturing entity. Other topics include cost accounting systems, accounting for scrap, spoiled goods, by-products, and joint products, budgeting, standard cost accounting, and cost analysis. Prerequisite(s): BUSN2222

Course Number	Course Name	Credit	Lec/Lab/OJT

ACCT 2210 Income Tax II 3 cr 3/0/0
This course provides an explanation and interpretation of the Internal Revenue Code as applied to partnerships and corporations. Topics include business income and expense, depreciation, business tax credits, and basis calculations. Prerequisite(s): ACCT2200

ACCT 2214 Intermediate Acct II 4 cr 4/0/0
This course is a continuation of a comprehensive study of accounting theory and concepts. Topics include various asset, liabilities and owners' equity—contributed capital and retained earnings. Other topics may be included. Prerequisite(s): ACCT2204

ACCT 2221 Accounting Capstone 4 cr 4/0/0
The course builds on foundational accounting knowledge and includes essential information for students to master prior to entering the field of accounting. Students will demonstrate their mastery of accounting knowledge through completion of practice sets. It will also expose students to one or more new topics in accounting which may include governmental/non-profit accounting, audit, forensic accounting, or partnership accounting. Prerequisite(s): ACCT1104, BUSN2222

ACCT 2240 Accounting Internship 3 cr 0/0/3
This course provides students with actual work experiences in accounting careers. A competency-based internship plan is developed for each student. Prerequisite(s): Advisor approval

ADMM 1110 Intro Health Info Mgmt 3 cr 2/1/0
This course is a study of recordkeeping practices in hospitals and physician's offices. Emphasis is placed on hospital and medical staff organization, patient record content, release of patient information, forms control and design, indexes and registers, reimbursement, regulatory and accrediting agencies, and alternate healthcare delivery systems. The student will learn about the role of the health information professional and how the American Health Information Management Association's (AHIMA) role is integral to the healthcare delivery system. Prerequisite(s): None

ADMM 1120 Medical Office Procedures 3 cr 2/1/0
This course covers medical office tasks performed by the medical office assistant. Medical topics covered include health care careers, legal and ethical responsibilities, medical appointments, telephone techniques, health information management, and medical office management. Prerequisite(s): None. Corequisite: HLTH1106

ADMM 1130 Medical Transcription 4 cr 2/2/0
This course is an introduction to transcription of dictated medical reports used in a variety of medical facilities. Emphasis is placed on proper formatting, building transcription proficiency, and application of medical transcription style as defined by the Association of Healthcare Documentation Integrity (AHDI). Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, and Keyboarding skill of 40 wpm.

ADMM 1135 Medical Language Applic 4 cr 4/0/0
This course covers appropriate usage of medical language in written documentation. Authentic medical documentation will be reviewed. Proofreading for spelling errors, analysis of content, and proper pronunciation of medical language are emphasized. A solid foundation of medical terminology is necessary for success in this class. Prerequisite(s): HLTH1106

ADMM 1150 Medical Billing-Insurance 3 cr 2/1/0
This course provides information related to medical billing and health insurance. Topics covered include billing and procedures in the medical office, types of health insurance coverage, insurance claim processes and related ethical and legal issues. Prerequisite(s): None.

ADMM 1160 CPT-HCPCS Coding 3 cr 2/1/0
This course is designed to prepare students to assign Current Procedural Coding Terminology (CPT) and HCPCS (Healthcare Common Procedure Coding System) codes for services provided in a medical office and other outpatient facilities with entry level proficiency. Course topics include CPT and HCPCS Level II coding,

and legal and ethical issues related to outpatient coding practices. Prerequisite(s): HLTH1106, BIOL2260, BIOL2262

ADMM 1165 ICD Coding 3 cr 2/1/0
This course is an introduction to diagnosis coding and hospital procedure coding for billing and insurance purposes. Topics include the basis for classifying and indexing diagnoses and hospital procedures 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): HLTH1106, BIOL2260, BIOL2262

ADMM 2230 Adv Medical Transcription 4 cr 1/3/0
Advanced Transcription is a continuation of ADMM1130 Medical Transcription with emphasis placed on independent practice techniques used in a medical transcription setting. This course is designed to improve proofreading and editing skills and provides an introduction to speech recognition technology. The course focuses on proper formatting, appropriate terminology and development of transcription proficiency. Prerequisite(s): ADMM1130

ADMM 2240 Medical Coding Ethics 3 cr 3/0/0
This course develops the student's sense of ethical and civic responsibility by identifying and analyzing circumstances in which ethical dilemmas occur specific to medical coding and reimbursement. Students will apply professional standards through a variety of case studies and examples within professional settings. Prerequisite(s): None. Corequisites: ADMM1160, ADMM1165

ADMM 2250 Inpatient Billing 3 cr 3/0/0
This course is designed to transition the learner's knowledge of billing and coding concepts to billing and coding in a hospital environment. The course provides an introduction to the hospital environment, billing process, and reimbursement methodologies. Discussion on the relationship between billing, coding, documentation, claims forms and reimbursement is presented to provide an overall view of the connection between various elements in the billing process. Prerequisite(s): ADMM1150, ADMM1160, ADMM1165

ADMM 2260 Interm CPT-HCPCS Coding 3 cr 2/1/0
This course is a continuation of ADM1160 and emphasizes coding in a medical office and other outpatient care facilities. The course utilizes practical examples to reinforce coding principles. Course topics include Current Procedural Terminology and Healthcare Common Procedure Coding System (CPT/HCPCS), and legal and ethical issues related to outpatient coding practices. Prerequisite(s): ADMM1160

ADMM 2265 Interm ICD Coding 3 cr 2/1/0
This course is a continuation of ADMM1165 with developmental practice to increase proficiency in International Classification of Diseases (ICD) coding. The course will apply coding knowledge by abstracting information from patient records for billing and insurance purposes. The course utilizes practical examples to reinforce coding principles. Prerequisite(s): ADMM1165

ADMM 2280 Medical Office Simulation 3 cr 0/3/0
This course is a hands-on medical simulation course that covers a variety of administrative tasks and bridges the gap between classroom and work experience. It provides an internship/externship-like experience in a medical office. Prerequisite(s): None

ADMM 2285 Certification Review 3 cr 2/1/0
This course provides a comprehensive review of topics including coverage of anatomy, medical terminology, pathophysiology, as well as concepts, guidelines, and rules of medical coding. It also provides the necessary tools to understand how to break each case down and translate services, procedures, and diagnoses into the most appropriate codes for reimbursement. There is an emphasis on application of skills within a medical setting. Prerequisite(s): ADMM1160, ADMM1165

Course Number	Course Name	Credit	Lec/Lab/OJT

ADMS 1100 Keyboarding I 3 cr 2/1/0
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. Speed, accuracy, formatting concepts, and proofreading skills are stressed. The student will utilize comprehensive word processing software. Prerequisite(s): None

ADMS 1102 Keyboarding II 3 cr 2/1/0
This course continues the development of advanced keyboarding techniques. Emphasis is on the touch method, advanced formatting concepts, and the continued development of accuracy, speed, proofreading, editing, critical thinking, and decision-making skills. The student will utilize comprehensive word processing software. Prerequisite(s): ADMS1100

ADMS 1110 Word Processing 3 cr 2/1/0
This course gives students an in-depth understanding of the word processing techniques needed to facilitate the production, documentation, storage, and relay of information. The course will stress increased proficiency in the computer production of a variety of business documents. Prerequisite(s): CPTR1104

ADMS 1114 Desktop Pub-Pres Graph 3 cr 2/1/0
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 collaborative learning in planning, designing, and evaluating business documents and presentations. Prerequisite(s): None

ADMS 1116 Business Communications 3 cr 2/1/0
This course covers composing, editing, and proofreading memos, letters, and other business documents. The principles of grammar, punctuation, spelling, and word use are applied. Emphasis is on purpose, content, planning, writing, and formatting of these documents. The application of teamwork and critical thinking skills is included in the course. Prerequisite(s): Successful completion of ENGL0095 or appropriate assessment score.

ADMS 1121 Business Office Mgmt 3 cr 2/1/0
This course covers office procedures relevant to a traditional office and new procedures relevant to an electronic automated office. Topics include work organization, time management, ergonomics, records management, scheduling, organizing meetings, processing mail, telephone procedures, arranging travel, and exposure to the role and responsibilities of an administrative professional. Prerequisite(s): None.

ADMS 1124 Business Event Planning 3 cr 3/0/0
This course aims to enable students to acquire general knowledge about business event planning and become familiar with management techniques and strategies required for the successful planning, promotion, implementation, and evaluation of special events. Prerequisite(s): None

ADMS 1128 Records-Database Mgmt 3 cr 2/1/0
This course is an introduction to the procedures and rules for indexing and storing documents. It also includes an introduction to the procedures for document management and records storage systems. Prerequisite(s): CPTR1104

ADMS 2213 Advanced Office Apps 3 cr 2/1/0
This course provides the student the opportunity to demonstrate the use of a centralized computer system for both actual and simulated business applications. Areas covered include document management, advanced applications in word processing, database, spreadsheets, and presentation software. Also covered is skill development using email software to effectively manage email, contacts, calendars/scheduling, create tasks and notes as well as customize, integrate, and archive email components. Prerequisite(s): ACCT1124, ADMS1100, CPTR1104.

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

ADMS 2236 Project Management 3 cr 3/0/0
This course is intended to teach the students an introduction to project management theory and application. This course enables students to discover the strategic role of projects in organizations, how projects are prioritized, tools, and techniques used to plan and schedule projects. Course objectives are that students will develop an understanding of concepts, processes, and knowledge areas critical to successful project completion, along with the development of their project plan. Prerequisite(s): None

ADMS 2243 Software Spt Internship 3 cr 0/0/3
The software support specialist internship provides students with a purposeful occupational experience in the software support career field. A training plan is created for each student in conjunction with the training site. The advisor coordinates and monitors the progress of the internship. One credit of internship is equal to 48 hours of career-related employment. Prerequisite(s): Advisor approval

ADMS 2282 Internship 3 cr 0/0/3
This course provides students a purposeful occupational experience in the Administrative Support careers field. Each internship is an individualized experience. A training plan is created for each student in conjunction with the training site to provide experience related to the skills and knowledge acquired in the program. Prerequisite(s): Student must have completed or be registered for all required courses in the major and have advisor approval.

AGRG 1100 Intro to Agriculture 3 cr 3/0/0
Students will learn and understand different facets of the Agriculture, Food and Natural Resources (AFNR). Students will explore the AFNR community at the local, state, national and world wide levels. Prerequisite(s): None

AGRG 1105 Agribusiness & Records 3 cr 3/0/0
This course introduces the business of agriculture and computerized record keeping. Students will be introduced to basic management concepts and the types of agribusinesses. This is an applied course of record keeping and financial statements. Students will utilize computerized records (cash and accrual accounting), manage inventories and generate financial documents. Prerequisite(s): None

AGRG 1110 Intro to Animal Science 4 cr 3/1/0
General principles of the livestock industry with emphasis on management, breeding, feeding, ethics and care of dairy cattle, horses, beef cattle, sheep, swine, poultry, companion animals, and exotic livestock. Prerequisite(s): None

AGRG 1125 Food Products 3 cr 3/0/0
This course will provide a general over view and principles of agriculture products and their relation to the food industry. Students will learn about the transportation, processing, packaging, whole sale to retail, preservation, quality factors, food law and regulations, food safety and sanitation and environmental concerns, issues of the food industry agricultural products. Prerequisite(s): None

AGRG 1300 Plant Science 4 cr 3/1/0
(Fulfills MNTC Area: 10_ This course will introduce students to basic plant science. Plant growth, development and physiology of row crops, small grains, grasses, legumes, fruits, vegetables, floriculture will be covered. Soil and water conservation and how it relates to Agriculture, Food and Natural Resources will be explored. Prerequisite(s): None

AGRG 1500 Careers in Ag Educ 1 cr 1/0/0
Observe schools, Extension offices, Farm Business Management programs, and agricultural oriented businesses to learn about work/workplace in agricultural education. Prerequisite(s): None

AGRG 2500 Early Experience Ag Ed 1 cr 1/0/0
Observe schools, Extension offices, Farm Business Management programs, and agricultural oriented businesses to learn about work/workplace in agricultural education. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

AGRI 1104 Ag Economics 2 cr 2/0/0
This course introduces the general concepts of contemporary economics in the agricultural world. Students will study the effects of microeconomics, macroeconomics, and supply and demand on the farm business. Prerequisite(s): None

AGRI 1110 Farm Records & Budgeting 2 cr 0/2/0
In this course, students enter a case farm into an approved farm accounting book including monthly transactions and a simple farm financial analysis. Students will complete budgets for the coming year using actual numbers from his/her own farm using various formats. Prerequisite(s): None

AGRI 1120 Crops Marketing I 2 cr 2/0/0
This course acquaints students with an understanding of market forces and their relationship to price establishment of agricultural crops. Students will track prices and develop a price chart to help in marketing crops produced on their farm. Prerequisite(s): None

AGRI 1130 Machinery Management 2 cr 2/0/0
This course introduces students to machinery management and the typical problems which could determine profit and loss. How much machinery, what size, how acquired, alternatives to owning, and machine costs are all studied in machinery management. Prerequisite(s): None

AGRI 1140 Cereal Production 2 cr 2/0/0
This course acquaints students with the latest management practices and research findings in the production of cereal crops. Prerequisite(s): None

AGRI 1150 Soil Maint & Fertility 3 cr 2/1/0
This course provides students an understanding of soil types, textures, and plant nutrients in relation to plant growth. Fertilizer materials are studied in depth. Soil test results are interpreted and fertilizer recommendations are made based upon the soil test results. Basic land surveying, including land descriptions, land measurements, and drainage, is also included. Prerequisite(s): None

AGRI 1160 Establishment in Farming 2 cr 2/0/0
This course acquaints students with concepts of establishing a farm business. The course assists students in utilizing the resources available to them. Prerequisite(s): None

AGRI 1172 Corn Production 1 cr 1/0/0
The course acquaints students with the latest management practices and research findings in production of corn. The students will study varieties, weed control, insect control, diseases, and economics of producing corn. Prerequisite(s): None

AGRI 1192 Soybean Production 1 cr 1/0/0
This course acquaints students with the latest management practices and research findings in the production and marketing of soybeans. Prerequisite(s): None

AGRI 2202 Dry Bean Production 1 cr 1/0/0
This course acquaints students with the latest management practices and research findings in the production and marketing of dry edible beans. Prerequisite(s): None

AGRI 2206 Rural Leadership 1 cr 1/0/0
In this course, students will learn principles of basic leadership skills, including parliamentary procedure, public speaking, knowledge of government operations and personnel. Prerequisite(s): None

AGRI 2210 Farm Analysis & Finance 3 cr 1/2/0
This course is a study of the general principles in farm accounting and financial analysis. Students will complete a case accounting problem and complete all necessary analyses for understanding financial statements. Students will be exposed to the different credit agencies available and what they have to offer to beginning

farmers. They will learn what is required of them to obtain credit. Communication between lender and the farmer is also discussed. Students will solve different types of loan problems. Prerequisite(s): AGRI1110

AGRI 2220 Crops Marketing II 2 cr 2/0/0
This course acquaints students with the tools available to market farm commodities and to develop a marketing plan. The course covers the current management practices of conditioning, storage and handling of agricultural commodities. Prerequisite(s): None

AGRI 2222 Sugar Beet Production 1 cr 1/0/0
The course acquaints students with the latest management practices and research findings in production of sugar beets. The students will study varieties, weed controls, insect control, diseases, and economics of producing sugar beets. Prerequisite(s): None

AGRI 2230 Farmstead Improvement 2 cr 1/1/0
This course introduces the students to the basic objectives in laying out a farmstead. The fundamentals of electricity are studied, including safety and adequacy of farm and home electric power distribution. Students will complete practical wiring exercises, diagram circuits, and design a farm shop. Prerequisite(s): None

AGRI 2240 Farm Computerized Records 1 cr 0/1/0
This course provides hands-on experience with accounting programs. Students enter a case problem into the computer using the appropriate accounting software available to manage farm records. Prerequisite(s): AGRI1110

AGRI 2250 Welding I 1 cr 0/1/0
This course covers welding shop and personal safety. Students will be introduced to proper methods and techniques of operating shielded metal arc welding (SMAW), gas metal arc welding (GMAW), oxy-acetylene welding (OAW), oxy-acetylene cutting, and brazing, along with Plasma cutting equipment, which will be helpful in the operation and maintenance of farm equipment. Prerequisite(s): None

AGRI 2260 Agricultural Chemicals 2 cr 2/0/0
This course introduces students to agricultural chemicals, their uses, characteristics, equipment involved and safety during chemical use. Prerequisite(s): None

AGRI 2280 Farm Tax-Estate Planning 3 cr 3/0/0
This course covers a study of the general principles involved in Farm Tax Management and methods available to transfer the farm business to the next generation. Prerequisite(s): None

AGRI 2290 Internship 1 cr 0/0/1
This course provides students with the practical application of a research project or practice. Each internship is an individualized project. The student, under the supervision of the instructor, will research a new product or practice, apply it to a farming operation, and report on the project to the other students enrolled in the course. Prerequisite(s): None

ANSC 1200 Animal Evaluation 1 cr 0/1/0
This course will investigate animal conformation, form to function, breed characteristics and type. Evaluation of their body makeup in relationship to food products such as meat and dairy. Prerequisite(s): None

ANSC 1350 Companion Animals 3 cr 3/0/0
This course will cover the essentials of companion animal care. Students will study terminology, breeds, handling, safety, selection, nutrition, health and disease, genetics, and reproduction of companion animals. Prerequisite(s): None

ANSC 2200 Animal Feeds-Nutrition 4 cr 3/1/0
This course provides basic information about the fundamentals of ruminant and non ruminant nutrition. Students will examine the essential nutritional requirements of livestock, classifications, identification and evaluation of

feed grains/forages, bushel weights, nutritional characteristics of feedstuffs, comparative study of digestive system of farm animals, ration formulation, and feed processing methods. Prerequisite(s): AGRG1110

ANSC 2300 Animal Hlth-Disease 4 cr 3/1/0
This class will review concepts of health and disease with emphasis on prevention through health plans and enhancing immunity. Influence of environment and other stressors on health and disease. Zoonotic diseases will be covered. Emphasis will be placed on preventive health. Prerequisite(s): AGRG1110

ANSC 2400 Livestock Management 3 cr 2/1/0
This course will examine planning, evaluating, managing and creating livestock facilities, handling equipment and rangeland based on proven field practices and technological advances. Environmental livestock concerns will be addressed in this class. Prerequisite(s): AGRG1110

ANSC 2600 Livestock Reproduction 4 cr 3/1/0
Students will examine the science of reproduction, artificial insemination, and lactation. Focus on anatomy and physiology of the endocrine and reproductive systems of both male and female. Principles of reproductive health, natural and artificial insemination, estrus/heat, pregnancy, parturition (birth) and aftercare. Anatomy and physiology of the mammary gland and the lactation cycle will also be covered. Prerequisite(s): None

ANSC 2950 Beef Production 4 cr 3/1/0
This course will review basic beef production and management which includes the cow-calf and feedlot operations. Beef production will include the incorporation of economics, farm management, records, health and production science in management plans. Prerequisite(s): AGRG1110

ANSC 2960 Animal Anat and Phys 4 cr 3/1/0
Students will examine anatomy/physiology of several species ranging from companion animals, wildlife and livestock. Organization of body from cells into tissues/organs to systems. Identification, function, development and comparison/contrast of different species and their systems. Identify pathological conditions which relate to the bodies systems. Prerequisite(s): AGRG1110

ANTH 2201 Phys Anthropology-Archaeo 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 10) This course is a study of humans as biological beings subject to the processes of evolution through an investigation of fossil evidence using archaeological methods. Differences and similarities among primates and variation in modern human populations in the New and Old Worlds will be investigated. Prerequisite(s): None

ANTH 2202 Cultural Anthropology 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course is a study of the richness of human cultural diversity and the creativity of adaptation strategies to the physical and social environments. Particular attention is directed to the methods used in cultural anthropology and to the functions and diversity of social institutions such as family, religious, economic, and political organization, as well as other major cultural features. Prerequisite(s): None

ARCH 1105 Building Technology I 4 cr 2/2/0
This course introduces students to residential drafting practices. Students will gain knowledge in acceptable standards of architectural drafting and working knowledge of light construction, including terminology, methods of construction, and the functions of various building materials. Prerequisite(s): None.

ARCH 1111 Architectural Tech I 3 cr 1/2/0
This course introduces students to the equipment and procedures used in drafting, including its application to a basic residential floor plan. This will give students the basic knowledge required of an architectural draftsperson. Prerequisite(s): None

ARCH 1112 Architectural Tech II 4 cr 2/2/0
This course introduces students to advanced concepts related to light frame construction. Students will become familiar with the layout of residential working drawings, with an emphasis on the drawing and specifications required in residential construction. Prerequisite(s): ARCH1105, ARCH1111, ARCH1121

ARCH 1121 CAD I 5 cr 4/1/0
This course is an introduction to computer aided design (CAD). Assignments will provide practical application of drawing tools and commands as they pertain to architectural drafting. This course teaches fundamental skills that students will use in other classes throughout this program. Prerequisite(s): None

ARCH 1123 CAD II 5 cr 3/2/0
A continuation of CAD I, students will receive advanced training on recent releases of AutoCAD to provide experience in developing technical drawings related to field of architecture. This course will cover the advanced drawing, editing, paperspace, and external reference commands. This course will also introduce students to building information modeling (BIM) using 3D drawing software for residential architectural drawings. Prerequisite(s): ARCH1111, ARCH1121

ARCH 1125 Design Limitations 3 cr 2/1/0
This course teaches the understanding and proper use of various ruling authorities which may redirect their design solutions. Emphasis is on studying the International Building Code, American National Standards Institute (ANSI) Accessibility Standards, the American Disabilities Act (ADA) and more. Prerequisite(s): None

ARCH 1128 Environmental Design 3 cr 1/2/0
This course will help students understand the importance of environmental issues and how to use them in their design process. This will allow them to put to use natural forces to help mold a building that is sensitive to the environment. Prerequisite(s): None

ARCH 1131 Model Construction 2 cr 0/2/0
This course teaches the student to construct architectural models using architectural standards and techniques with various materials. This course assists students in expressing their creative concepts. Prerequisite(s): None

ARCH 1201 Estimating Tech I 2 cr 1/1/0
This course gives students a basic understanding of the estimator's place in the construction process. Students will learn about the basic layout of contract documents and the fundamentals of estimating, including take-offs of materials used in light-frame structures. There will be emphasis on accurate analyses of working drawings. Students should have a basic understanding of construction methods and techniques. Prerequisite(s): ARCH1105, ARCH 1111

ARCH 2211 Architectural Tech III 3 cr 1/2/0
This course introduces students to commercial architectural drafting and detailing practices. Students will apply concepts of architectural drafting to the design and drafting of commercial building details and layouts. Students will be required to draw a set of commercial contract drawings using computer aided drafting (CAD). Prerequisite(s): ARCH1105, ARCH1112, ARCH1123

ARCH 2212 Architectural Tech IV 4 cr 1/3/0
In this course students will apply principles of architectural drafting and design to create a set of working drawings for a multi-family dwelling. There will be an emphasis on code compliance, proper drafting techniques, and level of completion to industry standards as it applies to multi-family buildings. Prerequisite(s): ARCH1123, ARCH2211, ARCH2213

ARCH 2213 Building Technology II 4 cr 2/2/0
This course is designed to give students advanced skill and knowledge in commercial architectural drafting and design. Students will prepare construction details applicable to commercial construction using practices and principles of building construction and related terminology. Prerequisite(s): ARCH1105, ARCH1123

ARCH 2215 Building Systems 3 cr 1/2/0
This course delivers an introduction to mechanical, electrical, and plumbing systems (MEP), as well as structural elements, to provide students with general knowledge of how these systems fit into the building design. The

study of the Construction Specification Instuitute's (CSI) Masterformat is also included in this course. Prerequisite(s): ARCH1111, ARCH1112, ARCH1121, ARCH1123

ARCH 2220 CAD 3D 4 cr 1/3/0
This course expands on the fundamentals of building information modeling (BIM) and 3D modeling. Students will create residential construction documents using 3D modeling software. Prerequisite(s): ARCH1123

ARCH 2223 CAD 3D Advanced 4 cr 2/2/0
This course is a continuation of ARCH 2220 CAD 3D. This course also covers the advanced aspects of the software regarding custom template and family creation. Prerequisite(s): ARCH1121, ARCH2220

ARCH 2224 Content - Project Mgmt 3 cr 2/1/0
This course will introduce students to project management software. This course will also examine creating custom content in a 3d drawing software and specifics regarding the Computer Aided Design (CAD)/3d drawing software interchange. Prerequisite(s): ARCH1121, ARCH1123

ARCH 2226 Presentation 4 cr 2/2/0
This course is designed for using software to model and render design images. Upon completion, the user will be able to navigate through and utilize the 3D modeling software program to create architectural presentation drawings. Prerequisite(s): None

ARCH 2241 Architectural Design 4 cr 2/2/0
This course covers the basics of architectural design and terminology. This enables students to converse with architects and other design professionals regarding the design process. Prerequisite(s): ARCH1111, ARCH1112, ARCH1121, ARCH1123

ARCH 2295 Portfolio 1 cr 0/1/0
The development of a portfolio may be used for job interviews and acceptance to universities. In this competitive work environment students need to be a step above the competition in their pursuit of employment. The compilation of a portfolio is the most professional way to accomplish this. Students will be better prepared for the interview process through this course. This is a culmination of student's work throughout the 2 years. Prerequisite(s): Course to be taken in the final spring semester before they graduate.

ARTS 1101 Art Appreciation 3 cr 3/0/0
(Fulfills MNTC Area: 2, 6, 8) Art Appreciation discusses the background, meanings, symbolism, trends and styles of art. Additionally, artistic methodology and techniques are also covered. The student discovers what is embodied in a work of Art as well as to stimulate individual creativity. Prerequisite(s): None

ARTS 1112 Life Drawing 3 cr 0/3/0
(Fulfills MNTC Area: 6) Life Drawing builds upon the techniques introduced in Drawing I and introduces students to the techniques and traditions of figurative drawing. Students are exposed to the work of artists known for their work with the human figure. Students will be working from live models and focusing specifically on issues directly relating to figure drawing. Prerequisite(s): ARTS1111

ARTS 1114 Foundation Drawing I 3 cr 1/2/0
(Fulfills MNTC Areas: 2, 6) This course introduces students to the basic techniques and traditions of drawing. Students are exposed to the work of artists and are guided through a wide variety of drawing experiences and applications. Prerequisite(s): None

ARTS 1122 Digital Imaging 3 cr 2/1/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to digital tools and graphic imaging technology emphasizing digital art and concepts. It provides a study of the capabilities of a variety of digital software and hardware for artistic purposes. Students will acquire, identify, and demonstrate the use of terminology, technical abilities, basic visual elements of art and principles of design common to digital artwork. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

ARTS 1127 Foundation 2D Design 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to the basic elements of art (line, shape, form, color, texture, value, space, and time) and how they are used in conjunction with the principles of design to create and develop two-dimensional compositions. This course is designed to give students a good foundation upon which they can build their artistic skills and further their creative aspirations. Prerequisite(s): None

ARTS 1128 Foundation 3D Design 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to the basic elements of art and how they are used in conjunction with the principles of design to create and develop three-dimensional compositions. This course is designed to give students a good foundation upon which they can build their artistic skills and further their creative aspirations. Prerequisite(s): None

ARTS 1130 Intro to Photography 3 cr 2/1/0
(Fulfills MNTC Areas: 2, 6) This course is designed to meet the needs of students who wish to utilize photography recreationally as well as serving as an introduction to those wishing to use photography to further their own artistic, scientific, or technical goals. In addition, students will have the opportunity to learn basic camera operation, the developing and printing of black and white film, and basic composition as it relates to artistic and narrative photography. Prerequisite(s): None

ARTS 1131 Digital Photography 3 cr 1/2/0
(Fulfills MNTC Areas: 2, 6) This class is a foundation-level course in digital photography and digital image capturing. Topics covered include basic camera use, lighting, computer techniques and imaging software relative to the manipulation and correction of digital images. Prerequisite(s): None

ARTS 1156 Intro to Painting 3 cr 1/2/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to the materials, methods, and techniques of painting which includes contemporary and historical approaches, as well as the theoretical bases of 20th and 21st century fine art painting. Prerequisite(s): None

ARTS 1157 Intro to Printmaking 3 cr 1/2/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to the materials, methods, and techniques of fine art printmaking, which may include mono-printing, etching, relief printing, and lithography. It also includes contemporary and historical approaches, as well as the theoretical bases of 20th and 21st century fine art printmaking. Prerequisite(s): None

ARTS 1233 Foundation Art History I 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 8) This course provides an investigation of civilization and of the history of art from Pre-Historic through the Gothic period in both the East and West. The historic and symbolic natures of the works of art will be explored and the behavioral patterns and value systems of various cultures will be revealed through art and architecture. Prerequisite(s): None

ARTS 1234 Foundation Art History II 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 7) This course provides an investigation of civilization and of the history of art from the Renaissance through the contemporary in both the East and West. The historic and symbolic natures of the works of art will be explored and the behavioral patterns and value systems of various cultures will be revealed through art and architecture. Prerequisite(s): None

ARTS 2006 Foundation Drawing II 3 cr 0/3/0
(Fulfills MNTC Areas: 2, 6) A continued study and application of more advanced techniques and traditions of drawing. Students are exposed to more work of artists and guided through a wider variety of drawing experiences and applications, with an emphasis on color drawing materials. Prerequisite(s): ARTS1114

ARTS 2007 Painting II 3 cr 0/3/0
(Fulfills MNTC Areas: 2, 6) A continued study and application of more advanced techniques and traditions of painting. Students are exposed to more work of artists and guided through a wider variety of painting

experiences and applications. Emphasis will be on personal areas of interest and portfolio establishment. Prerequisite(s): ARTS1156

ARTS 2160 Intro to Sculpture 3 cr 1/2/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to the materials, methods, aesthetics, and techniques of sculpture. Prerequisite(s): None

ARTS 2210 Intro to Ceramics 3 cr 1/2/0
(Fulfills MNTC Areas: 2, 6) This course is an introduction to ceramic materials and processes. An exploration of hand building, wheel throwing, decorating, glazing, and firing techniques creating functional and non-functional art forms. Prerequisite(s): None

AUBO 1100 Intro to Auto Body 2 cr 2/0/0
This course is the study of occupational safety, shop operation procedures, power and hand tool use, shop equipment applications, fasteners, measuring instruments, service literature and general service knowledge and skills. Prerequisite(s): None

AUBO 1102 Off Car Repair 4 cr 1/3/0
This course teaches students sheet metal repair processes used for minor auto body repairs. Instruction includes the use of tools and auto body industry equipment. Students also learn skills of body filler/fiberglass repair along with corrosion protection. Environmental standards will be introduced. Prerequisite(s): None

AUBO 1106 Plastic Welding 1 cr 0/1/0
This course covers the identification and safe repair of interior/exterior automotive plastics and overall refinishing techniques for plastic surfaces. Prerequisite(s): None

AUBO 1113 Auto Body Lab I 3 cr 0/3/0
This course is a lab course in which students will build proficiency in basic auto body skills achieved in prior courses. Welding, sheet metal repair, corrosion protection, rust repair, body filler and fiberglass repair will be addressed. Prerequisite(s): None. Corequisite: AUBO1131

AUBO 1114 Auto Body Lab II 4 cr 0/4/0
This course is a lab course in which students will build proficiency in auto body skills of refinishing, corrosion protection, rust repair, moveable glass repair, and welding. Prerequisite(s): AUBO1113

AUBO 1121 Auto Body Refinishing 6 cr 2/4/0
This course teaches surface preparation for spot reapirs, blending techniques, overall refinishing, paint mixing, and color matching. This course will also cover buffing procedures, pinstriping, and vehicle reconditioning for customer delivery. Prerequisite(s): None

AUBO 1123 Glass and Trim 2 cr 1/1/0
This course teaches students safe procedures for the removal, replacement and repair of movable glass. It also covers the application of various methods of attachments on auto body trim and hardware. Prerequisite(s): None

AUBO 1131 Auto Body Welding I 2 cr 1/1/0
This course introduces the student to welding safety, welding, and cutting fundamentals. The course provides the theory of welding and the training to develop the necessary skills to cut and weld materials in a variety of positions using various methods. Prerequisite(s): None

AUBO 1132 Auto Body Welding II 2 cr 1/1/0
This course is a lab course in which students will build proficiency in welding skills and also introduces aluminum welding. Prerequisite(s): AUBO1131

Course Number	Course Name	Credit	Lec/Lab/OJT

AUBO 2201 Collision-Damage-Estimate 4 cr 2/2/0
This course teaches students to correctly repair collision damage. It emphasizes tie-down clamping techniques, analyzing extended damage, measuring, and pulling procedures to repair direct and indirect damage on open and closed panels. All vehicles that enter the shop will be given an estimate of repair either written or computerized. Prerequisite(s): Completion of first year Auto Body Collision Technology.

AUBO 2205 Unibody and Frame 4 cr 2/2/0
This course teaches students safe repair of unitized and conventional frame vehicles. Instruction will include tie down and clamping techniques, measuring and clamping procedures to repair damage. Stationary glass removal and replacement are taught. Prerequisite(s): Completion of first year Auto Body Collision Technology.

AUBO 2208 Major Collision Lab 4 cr 0/4/0
This course is a lab course in which students build proficiency in their auto body repair skills. Content for this lab is chosen from among the skills already gained in other courses. Emphasis in the course is on major collision repair. Students will also be expected to exhibit attitudes and work habits that employers expect of their employees. Prerequisite(s): AUBO2205

AUBO 2214 General Auto Body Lab 4 cr 0/4/0
This course is a lab course in which students will build proficiency in their auto body skills. Content for this lab is chosen from among the skills already gained in other courses. Emphasis in this course is on unibody and frame repair. Students will also be expected to exhibit the attitudes and work habits that employers expect of their employees. Prerequisite(s): AUBO1132

AUBO 2216 Shop Operations 2 cr 2/0/0
This course teaches proper autobody shop management procedures and collision damage estimating, utilizing both collision manuals and computer estimation. Prerequisite(s): Completion of first year Auto Body Collision Technology.

AUBO 2221 Simulated Auto Body I 4 cr 1/3/0
This course provides a work-place like setting for students to refine their knowledge and skills with the materials, methods, and refinishing techniques used in the repair and restoration of damaged automobile bodies. The students will also practice proper procedures for repair and refinishing, as well as use manufacturers' manuals and parts catalogues to estimate and repair damage to vehicles and maintain accurate records of completed auto body work. Emphasis will be placed on time management skills and attitudes expected in the workplace. Prerequisite(s): Completion of first year Auto Body Collision Technology.

AUBO 2222 Simulated Auto Body II 2 cr 0/2/0
This course provides a work-place setting for students to further refine their auto body repair skills. Students will complete service work as if in a professional auto body shop, and the emphasis will be on auto body and frame repairs frequently requested in a modern body shop. Speed and quality work against the time clock and flat rate shop conditions will be simulated as much as possible. Students will also be expected to exhibit the attitudes and work habits that are expected in the workplace. Prerequisite(s): Completion of first year Auto Body Collision Technology.

AUBO 2225 Panel Replacement 2 cr 1/1/0
This course covers the replacement of damaged panels using current industry procedures. Prerequisite(s): Completion of first year Auto Body Collision Technology.

AUBO 2228 Auto Body Mechanical 6 cr 3/3/0
This course teaches the procedures required to check and diagnosis of the air bag systems, including computers, sensors, and seat belt restraints. It also 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. It also teaches students the removal and replacement of mechanical and electrical parts in front and/or rear wheel drive vehicles. Prerequisite(s): Completion of first year Auto Body Collision Technology.

Course Number	Course Name	Credit	Lec/Lab/OJT

AUMO 1103 Intro to Auto Service 2 cr 1/1/0
This course teaches the procedures for general automotive service. General maintenance and inspection of common service areas are emphasized including: exhaust and lubrication systems, shop safety, and the use of automotive tools and equipment. It also covers general service product knowledge.This course includes the procedures for general automotive service.Students will learn the characteristics of hazardous/infectious wastes and demonstrate safe handling, storage, and disposal. Prerequisite(s): None

AUMO 1109 Steering and Suspension 3 cr 1/2/0
This course teaches suspension systems using leaf and coil springs, MacPherson struts, torsion bars, and wheel balance. It also covers the principles of operation, disassembly, checks and adjustments of power and manual steering gears, and manual/power rack/pinion systems. Prerequisite(s): AUMO1103

AUMO 1111 Brakes 5 cr 3/2/0
This course teaches principles of brakes, hydraulic system fundamentals, disc and drum brakes, parking brakes and power assist units. Emphasis is on operation, diagnosis and repair of various types of braking systems. Prerequisite(s): AUMO1103

AUMO 1112 Ignition and Tune-up 3 cr 1/2/0
This course teaches the theory and principles of operation for ignition systems used in non-computerized automotive engines. Diagnosis, adjustments and repair of component parts and the introduction of engine analyzers will also be covered. Prerequisite(s): AUMO1103

AUMO 1116 Basic Electricity-Battery 3 cr 2/1/0
This course provides an overview of essential automotive electrical systems, with an introduction to theory and preliminary troubleshooting techniques. Prerequisite(s): AUMO 1103

AUMO 1118 Starting and Charging 3 cr 1/2/0
This course teaches battery construction, service, and testing. This course also presents theory/function of cranking motors and charging systems. Failure analysis and repair according to manufacturer's procedures will be followed. Prerequisite(s): AUMO1103

AUMO 1125 Driveline-Clutch-Manual 4 cr 2/2/0
This course will include the study of power train components including: drive axles, propeller shafts, clutches, clutch service, and the operation of manual transmissions. Practical training will include: axle shaft, propeller shaft, transmission and differential disassembly, proper reassembly, malfunction diagnosis, adjustments and repairs. Prerequisite(s): AUMO1103

AUMO 1133 Auto HVAC 3 cr 1/2/0
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 systems. Prerequisite(s): AUMO1103

AUMO 1134 Wheel Alignment 3 cr 1/2/0
This course teaches the theories and principles of wheel alignment. Also covered is inspection of suspension-related components related to the performance of quality wheel alignment. Students are required to check and adjust wheel alignment angles, such as: castor, camber, and toe on various suspension systems. Prerequisite(s): AUMO1103

AUMO 1138 Hybrid Vehicle Systems 1 cr 1/0/0
This course will cover the safety issues and differences between hybrid drive vehicles. The basic theory of the components used in various hybrid will also be described. Prerequisite(s): AUMO1103

AUMO 2202 Body Electrical 3 cr 1/2/0
This course teaches diagnosis and repair of interior/exterior lighting, safety devices, and comfort systems. The students will use wiring diagrams to pinpoint body electrical malfunctions. Prerequisite(s): AUMO1103, AUMO1116

AUMO 2204 Auto Computers 3 cr 2/1/0
This course covers the theory and operating principles of automotive computers, sensors, and control devices. The course prepares students for analysis by utilizing modern automotive computer scanners in studying sensor input, processor function, and output controls to the various devices controlling the modern automobile. Analog/digital inputs and outputs will be studied and analyzed. Prerequisite(s): AUMO1103, AUMO1116

AUMO 2207 Fuels-Injection-Emissions 5 cr 3/2/0
This course teaches the theory and principles of automotive fuel systems, including carburetors, fuel pumps, fuel tanks and filters. This course also teaches fuel injection and emission system theories. The principles of operation, component testing, and servicing will be studied. Emphasis will be on computer control of fuel delivery for single, multi-port, and sequential fuel injection systems. Component function, troubleshooting, testing, replacement of failed parts, and adjustments will be performed. Prerequisite(s): AUMO1103

AUMO 2208 Engine Theory-Diagnostics 4 cr 4/0/0
This course covers fundamentals of engine operation and repair and maintenance. Procedures for diagnosis with usage of proper equipment for analysis of data, as compared to manufacturer's specifications, to determine engine condition and repair. Troubleshooting with specialized equipment is required. Prerequisite(s): AUMO1103

AUMO 2210 Driveability 4 cr 2/2/0
This course develops skill in diagnosis, testing, and correction of problems related to engine performance. Servicing of individual vehicle systems are performed. Prerequisite(s): AUMO1103, AUMO1112, AUMO2207

AUMO 2212 Auto Transmission-Axle I 5 cr 2/3/0
This course teaches the theory of operation of automatic transmissions and transaxles and the related components. The fundamentals of service of the components of the transmissions will be introduced and practiced in this course. Basic failure analysis will be introduced. Prerequisite(s): AUMO1103

AUMO 2231 Independent Study Lab 1-3 3 cr 0/1-3/0
This course allows students lab time to work on skills in the auto trade. Prerequisite(s): AUMO1103

AUMO 2233 Engine Overhaul Lab 4 cr 0/4/0
Students will disassemble, rebuild, measure, evaluate, assemble, and adjust engines and their components. Projects will be approved by instructors. Prerequisite(s): AUMO1103

AVET 2142 Avionics 2 cr 1/1/0
This course offers students a working knowledge of principles required to transfer information between various components of uncrewed aircraft systems. Radio frequency propagation methods for transmission and reception of various aviation communication and data link systems will be covered. Prerequisite(s): AVET2132, AVIA 2014.

AVIA 1011 Basic Electricity 5 cr .75/4.25/0
This course will cover basic alternating current (AC) and direct current (DC) electricity, electron theory, Ohms Law, electrical circuit calculations, multi-meter function and use in AC/DC circuits. Also AC/DC electrical circuit diagrams and typical components used and battery inspection and servicing will be covered. Prerequisite(s): None

AVIA 1021 Aviation Math 1 cr 1/0/0
This course will review the principles of applied mathematical functions, covering signed numbers, roots, exponents, simple equations, geometry, algebra and their applications to the Aviation Maintenance Technician. Prerequisite(s): None

AVIA 1022 Aircraft Physics 1 cr 1/0/0
Aviation physics will provide the understanding of energy, matter, principles of simple machines, sound, fluids, heat dynamics aircraft structures, basic theory of flight and how they relate to aircraft mechanics. Prerequisite(s): None

AVIA 1023 Publication-Forms-Records 3 cr 1.5/1.5/0
This course will familiarize the student with federal aviation publications to include Federal Aviation Regulations (FAR), Airworthiness Directives (AD), advisory materials, specification and Type Certificate Data Sheets (TCDS), aircraft maintenance records, inspection reports, discrepancy reports, corrective action sign-offs, and all required maintenance and inspection record entries in the aircraft log books. Also included will be aircraft manufacturer's publications to include maintenance manuals, parts manuals, and all service related manufacturer supplied publications. Human factors and effects on aviation maintenance will be covered. Prerequisite(s): None

AVIA 1024 Operations - Service 2 cr 1.5/.5/0
This course will cover procedures used for aircraft ground operations to include servicing, towing, starting, taxing, shut down, and securing aircraft. Also covered are the proper identification and selection of fuel and identification of ground operation hazards. Prerequisite(s): None

AVIA 1026 Corrosion Control 1 cr 0/1/0
This course will cover procedures used to clean aircraft and identify, remove, and treat corrosion found on aircraft. Prerequisite(s): None

AVIA 1027 Aircraft Drawings 1 cr 1/0/0
This course will provide a familiarization with aircraft drawings, identifying drawing information and symbols to include electrical schematics and sketches of repairs and alterations. Use of blueprint information and interpreting information from typical charts and graphs for aircraft will be covered. Prerequisite(s): None

AVIA 1028 Weight - Balance 1 cr 0/1/0
This course will cover aircraft weight and balance information to include locating aircraft datums, weighing aircraft, calculating aircraft weight and balance, determining aircraft center of gravity limits, calculating weight and balance information after an equipment change and revising all aircraft records, to include flight manual or POH (Pilot Operating Handbook) weight and balance information, aircraft log book sign off for weight and balance, and other record keeping as required. Prerequisite(s): None

AVIA 1029 Materials - Processes 3 cr 2.5/.5/0
This course will cover the various methods of nondestructive testing, inspection and checking of welds, and basic heat-treating. Also the identification, selection, installation and securing of aircraft hardware and performing precision measurements using special tools will be covered. Prerequisite(s): None

AVIA 1030 Fluid Lines 1 cr .75/.25/0
This course will cover the identification, construction and inspection of aircraft rigid and flexible fluid lines and fittings, also the removal, installation and securing of rigid and flexible fluid lines installed in aircraft. Prerequisite(s): None

AVIA 1801 Aviation Make-Up 1 cr .5/.5/0
This course is designed to create the opportunity for students to make-up required classroom and lab activities in accordance with Federal Aviation Administration mandatory 100% attendance requirements. Prerequisite(s): None

AVIA 2001 Aircraft Elec Systems 2 cr 1/1/0
This course will familiarize the student with aircraft electrical systems and components used. The inspection, operational tests, trouble shooting, servicing and repair of aircraft electrical systems and components will be covered. Prerequisite(s): AVIA1011

Course Number	Course Name	Credit	Lec/Lab/OJT

AVIA 2008 Assembly - Rigging 2 cr 1/1/0
This course will familiarize the student with the major parts and assembly of an aircraft and helicopter. The student will also become familiarized with flight control removal and installation and rigging procedures used for aircraft and helicopters. Prerequisite(s): None

AVIA 2018 Aircraft Inspection 2 cr .50/1.5/0
The student will become familiarized with the procedures used to perform an airframe inspection, required servicing and maintain an aircraft in an airworthy condition. Prerequisite(s): AVIA1011, AVIA1023, AVIA2001, AVIA2008, AVIA2030.

AVIA 2023 Fabric - Finishes 3 cr 1.75/1.25/0
This course will cover procedures used for aircraft fabric covering, inspection, testing and repair of aircraft fabric and fiberglass covering materials inspection and repair. Discuss wood structures, including inspection techniques, tools, and practices for wood structures. This course will also cover finishing materials used on aircraft, the application of materials used and inspection and repair of aircraft finishes. Prerequisite(s): None

AVIA 2025 Non-Metalic Struct 3 cr 1.5/1.5/0
This course will cover non-metallic aircraft structures to include, inspection, repair and fabrication procedures. Prerequisite(s): None

AVIA 2026 Sheet Metal 6 cr 1/5/0
This course will familiarize the student with typical sheet metal structures, inspection, repair and fabrication of structures. Tools, special fasteners, rivets and installation procedures will be covered. This course will also familiarize the student with welding equipment, types of welds, welding procedures, and welding safety. Prerequisite(s): None

AVIA 2029 Hydraulic - Pneumatics 2 cr 1/1/0
This course will cover aircraft hydraulic and pneumatic power systems and the inspection, maintenance and servicing of these types of systems. Prerequisite(s): None

AVIA 2030 Landing Gear 2 cr 1/1/0
This course will familiarize the student with aircraft landing gear. Inspection, servicing and maintenance procedures will be covered for fixed and retractable landing gear systems. Tires, wheels, brakes and steering systems and components will also be covered. This course will also familiarize the student with aircraft position and warning systems and the components in the systems to include the inspection, checking, servicing, trouble shooting and repair of aircraft position and warning systems and components. Prerequisite(s): None

AVIA 2032 Cabin Atmosphere 1 cr 0/1/0
This course will familiarize the student with cabin atmosphere control systems, to include oxygen systems, pressurization systems, heating and cooling systems and air cycle machines used in various types of aircraft. Inspection, checking, trouble shooting, servicing and repair of these systems will also be covered. Prerequisite(s): None

AVIA 2033 Aircraft Instruments 1 cr 1/0/0
This course will familiarize the student with the identification and operation of aircraft flight instruments. Also covered will be the inspection, checking, trouble shooting, servicing and repair of aircraft flight instrument systems. Prerequisite(s): None

AVIA 2034 Communication - Nav 2 cr 1.75/.25/0
This course will familiarize the student with aircraft communication systems and aircraft navigation systems. The inspection, checking, trouble shooting, servicing and repair of these systems will also be covered. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

AVIA 2035 Aircraft Fuel Sys 1 cr .75/.25/0
This course will familiarize the student with aircraft fuel systems and components used. Also inspection, checking, trouble shooting, servicing and repair of fuel systems and components will be covered. Prerequisite(s): None

AVIA 2036 Ice - Rain Sys 1 cr 0/1/0
This course will familiarize the student with the ice and rain control systems and components used on aircraft. The inspection, checking, servicing, trouble shooting and repair of the systems and components will be covered. Prerequisite(s): None

AVIA 2037 Fire Protection Sys 2 cr 1.75/.25/0
This course will familiarize the student with aircraft fire detection, smoke detection, carbon monoxide and fire extinguishing systems and components to include the inspection, check, service trouble shooting and repair of the systems and components. Prerequisite(s): None

AVIA 2102 Aircraft Turbine Eng 6 cr 2/4/0
This course will familiarize the student theory of operation and the maintenance practices used to inspect, check, troubleshoot, service and repair aircraft gas turbine engines. Prerequisite(s): None

AVIA 2115 Power Plant Sys 1 3 cr 1.5/1.5/0
This course will familiarize the student with the lubrication systems found in aircraft reciprocating engines and gas turbine engines. Maintenance practices used for the inspection, check, troubleshooting, servicing and repair of the systems or components will be covered. Prerequisite(s): None

AVIA 2116 Power Plant Sys 2 4 cr 1.25/2.75/0
This course will familiarize the student with aircraft fire detection and extinguishing systems, theory of operation and procedures for inspection, check, troubleshooting, servicing and repair of the systems. This course will familiarize the student with aircraft induction systems, induction system components found on reciprocating engines and gas turbine engines. Inspection, check, troubleshoot, service and repair of induction systems and components will be covered. This course will familiarize the student with reciprocating engine cooling systems and components to include the inspection, check, servicing, repair, and troubleshooting of cooling systems and components. This course will familiarize the student with reciprocating engine exhaust systems and the inspection, check, service, repair and troubleshooting of reciprocating engine exhaust systems and components. Also gas turbine engine exhaust and thrust reversing systems operations, inspection, check, service, repair and troubleshooting will be covered. Prerequisite(s): None

AVIA 2121 Aircraft Recip Eng 7 cr 1.75/5.25/0
This course will familiarize the student with the theory of operation and maintenance practices used to inspect, check, troubleshoot, service and repair aircraft reciprocating engines. Prerequisite(s): None

AVIA 2123 Engine Instruments 1 cr 0/1/0
This course will familiarize the student with engine indicating systems, components used and inspection, check, troubleshooting, service and repair requirements for the indicating systems used in reciprocating engine aircraft and gas turbine engine powered aircraft. Prerequisite(s): None

AVIA 2125 Engine Electrical Sys 2 cr 1.75/.25/0
This course will familiarize the student with engine electrical systems and the maintenance practices used for the inspection, check, troubleshooting, servicing and repair of engine electrical systems. Prerequisite(s): AVIA1011

AVIA 2127 Ignition - Start Sys 2 cr 1.75/.25/0
This course will familiarize the student with aircraft ignition systems for reciprocating engines and gas turbine engines and aircraft starting systems will be covered. Prerequisite(s): None

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

AVIA 2128 Fuel Metering Sys 1 cr 0/1/0
This course will familiarize the student with fuel metering systems for reciprocating engines and gas turbine engines. Maintenance practices for inspection, check, adjust, troubleshoot, service and repair for metering systems will be covered. Prerequisite(s): None

AVIA 2133 Aircraft Propellers 2 cr 1.75/.25/0
This course will familiarize the student with aircraft propellers, theory of operation, propeller control systems, propeller synchronizing and ice control systems. Propeller inspection, checking, servicing, repair, troubleshooting and propeller removal and installation will be covered. Prerequisite(s): None

AVIA 2134 Aircraft Engine Insp 1 cr 0/1/0
This course will familiarize the student with aircraft engine conformity, engine type certificate data sheets and inspection requirements for performing a 100 hour and annual inspection, writing-up discrepancies and corrective action and completing all required maintenance record sign-offs. Prerequisite(s): AVIA1023, AVIA2102, AVIA2121.

BIOL 1004 Intro Anatomy and Phys 3 cr 3/0/0
This course assists students in developing a basic understanding of the normal structure and function of the human body. Prerequisite(s): None

BIOL 1101 Concepts of Biology 4 cr 3/1/0
(Fulfills MNTC Areas: 3, 10) Introduces non-science majors to the basic concepts of biology. Topics will include, but are not limited to, cell structure and function, genetics, hereditary and evolution, the diversity of life; including plants, animals, and microorganisms, and ecology. Lecture and lab Prerequisite(s): None

BIOL 1111 Biological Prin I 4 cr 3/1/0
(Fulfills MNTC Areas: 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 1112 Biological Prin II 4 cr 3/1/0
(Fulfills MNTC Areas: 3, 10) This is an introductory level course that introduces the concepts of macroevolution, the 6 kingdoms system of classification, comparative study of representatives of the 6 kingdoms with special emphasis on plants and animals, the concept of biomes, and the role of human activities and their affects on the ecological balance of the biosphere. This course includes 3 lecture hours and 2 lab hours per week. Prerequisite(s): None

BIOL 1120 Human Biology 4 cr 3/1/0
(Fulfills MNTC Areas: 3, 10) This course is intended for non-science majors. This course is an introductory level course where students study the biological basics of human structures and functions. Emphasis of the course will be with references to reproduction, heredity, development, nutrition, disease, and social implications of human biological principles. This course includes 3 lecture hours and 2 lab hours per week. Prerequisite(s): None

BIOL 1131 Intro to Natural Resource 3 cr 3/0/0
(Fulfills MNTC Area: 10) This course is an overview of the complexities involved in the managing of our natural resources, emphasizing North America. In addition, the course will familiarize students with natural resource issues and agencies, and the function and responsibilities those agencies have. Prerequisite(s): None

BIOL 2131 Nutrition 3 cr 3/0/0
(Fulfills MNTC Area: 3) This course provides an introduction to nutritional dietary requirements and their mechanisms of digestion, absorption, and metabolism. It also addresses the principles of nutrition throughout the human life cycle, and diet modification necessitated by specific health problems. Other topics to be covered include sports nutrition, weight control, eating disorders, diet and disease, and current nutritional fads.

Throughout the course a lab like experience will be used to analyze and interpret topics covered. Prerequisite(s): None

BIOL 2221 Microbiology 3 cr 2/1/0
(Fulfills MNTC Area: 3) This course is an introduction to fundamental theories, principles and methods of microbiology. Structure, effects of physical factors, and inhibition and killing of microorganisms will be studied. Microbial interactions with humans and their immune systems are introduced. Students are familiarized with concepts in environmental microbiology, evolution and microbial species diversity as well as the necessary laboratory techniques needed to study those organisms. Prerequisite(s): None

BIOL 2235 Biology Internship 3-6 3 cr 0/0/3-6
This course is a practical learning experience in a biological environment, providing field application in the student's area of interest. Prerequisite(s): 30 college credits completed and instructor permission.

BIOL 2260 Anatomy and Phys I 4 cr 3/1/0
(Fulfills MNTC Area: 3) Students study the structure, function, and disease processes of cellular physiology, homeostasis, integumentary, respiration, lymphatics, immunity, heart, blood, joints, skeletal and muscular systems in the human body. Prerequisite(s): None

BIOL 2262 Anatomy and Phys II 4 cr 3/1/0
(Fulfills MNTC Area: 3) This is an advanced course that acquaints students with the structure, function, and disease processes of nerve tissue, central nervous, endocrine, digestion, nutrition, urinary, reproduction, development and genetic systems in the human body. Prerequisite(s): None

BLDG 1102 Construction Safety 1 cr 1/0/0
This course provides students with an understanding of occupational safety practices, basic requirements, purpose and enforcement of general safety rules. Prerequisite(s): None

BLDG 1106 Grades-Cap-Elec Calc 3 cr 3/0/0
This course covers the application of mathematics to plumbing and HVAC calculations in applying code regulations pertaining to plumbing, heating, and cooling installation. Students will use formulas common to the plumbing and HVAC industry. Prerequisite(s): None

BLDG 1114 Blueprint Reading I 2 cr 2/0/0
This course provides students with a working knowledge of blueprints and specifications. Student gain an understanding of blueprints, interprets and applies this knowledge to job situations. Prerequisite(s): None

BLDG 1120 Construction Estimating I 2 cr 1/1/0
This course covers the mathematical procedures used in material estimating and completing quantity take-offs for building projects. Prerequisite(s): None

BUSN 1110 Intro to Business 3 cr 3/0/0
This course is an introductory survey of the major areas of business and its environment. The course is designed to explain the environment and language of business. The course will examine the major functional areas of business: accounting, finance, marketing and management. The course will explore social, ethical, and global issues that impact businesses. Prerequisite(s): None

BUSN 1115 Personal Financial Mgmt 3 cr 3/0/0
(Fulfills MNTC Area: 9) This course emphasizes the importance of personal financial management. The course will explore issues in individual financial planning and budgeting, management of money, and protection against losses. Topics covered will include retirement planning, tax planning, credit management, and time value of money. Making the most of available financial resources through informed decisions about saving, investing, borrowing, and use of insurance to manage risks is also covered. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

BUSN 2210 Prin of Management 3 cr 3/0/0
This course is designed to expose students 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

BUSN 2218 Legal Environment Busn 3 cr 3/0/0
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 employer/employee relationships. Prerequisite(s): None

BUSN 2221 Prin Accounting I 4 cr 4/0/0
This course is an introduction to the fundamental accounting concepts and principles used to analyze and record business transactions for sole proprietors and corporations. Topics include the accounting cycle for a service and merchandising business, accounting and analysis of: cash, accounts receivable, inventory, short and long-term liabilities, and property, plant and equipment. Students will also prepare the basic financial statements. Prerequisite(s): None

BUSN 2222 Prin Accounting II 4 cr 4/0/0
This course provides an introduction to the role of financial and managerial information in planning and control decisions, and the role of the management accountant in the organization. It emphasizes the concepts and practices of management accounting including cost behaviors, contribution margins, job, and process costing, budgeting, standard costs and variance analysis, cost-volume-profit analysis, and other managerial accounting best practices for decision making and control. Prerequisite(s): BUSN2221

CARP 1102 Prin of Framing 3 cr 3/0/0
This course provides an understanding of the principles of floor, wall, stair and roof framing. Prerequisite(s): None

CARP 1104 Framing I 6 cr 0/6/0
This course provides experience in constructing basic floor frames, wall frames, stair frames, ceiling and roof frames. Prerequisite(s): none

CARP 1106 Footings - Foundations 2 cr 1/1/0
This course prepares students with the knowledge and skills necessary to complete site layout, footings, and foundations for residential construction. Prerequisite(s): None

CARP 1108 Interior Finish I 4 cr 1/3/0
This course provides an understanding of the materials used for interior finishing, plus hands-on experience in the application of these materials. Prerequisite(s): None

CARP 1110 Intro to Cabinets 3 cr 1/2/0
This course covers basic kitchen design, cabinet planning, sizing, and construction joints necessary for fabrication of a quality cabinet. Students will learn how to fit and install laminate countertops. Students will also install upper, base, and vanity cabinets in the house project. Prerequisite(s): None

CARP 1112 Exterior Finish I 3 cr 1/2/0
This course provides students with a basic knowledge of exterior finishes to building construction and installation. During the course, students will install various wall sidings, soffits, and fascia coverings. Prerequisite(s): None

CARP 2204 Concrete Technology 2 cr 0/2/0
This course prepares students with the knowledge and skills necessary to complete concrete flat work, which may include basement floors, garage floors, driveways, and sidewalks for residential construction. Prerequisite(s): None

CARP 2214 Exterior Siding 2 cr 0/2/0
This course provides students the opportunity to install common window and exterior door units, exterior trim, and exterior wall finish materials. Prerequisite(s): None

CARP 2216 Deck Construction 2 cr 0/2/0
This course provides students with the opportunity to apply the knowledge and techniques necessary to select materials and construct decks, railings and stairs according to a predetermined plan. Prerequisite(s): None

CDEV 1103 Intro Early Education 3 cr 2/1/0
This course will explore career opportunities with early childhood education and investigate a variety of early childhood programs for children ages birth through eight. It will examine job requirements, duties, regulations, and personal characteristics of successful workers in the field of early childhood education. In addition, this course will guide the student in obtaining skills needed to maintain a safe and healthy child development setting. Prerequisite(s): None

CDEV 1109 Child Growth-Develop 3 cr 3/0/0
This course provides an overview of development of children from conception through age eight, with emphasis in the following areas: physical, cognitive, language, creative, and social emotional development. It identifies the link between development and learning and the roles and responsibilities of parents, educators, and caregivers in creating developmentally appropriate learning experiences. It integrates theory with developmentally appropriate practice in home, center-based, and school settings. Prerequisite(s): None

CDEV 1121 Behavior Guidance 3 cr 3/0/0
This course provides students an introduction to positive child guidance techniques for children birth to age eight. Students will explore factors that influence behavior such as: environment, development, and relationships. The course identifies strategies to create safe learning environments that promote trust and positive interactions between children and teachers. Prerequisite(s): CDEV1103, CDEV1109

CDEV 1131 Creative Activities-Env 3 cr 2/1/0
This course provides an exploration of home, center or school environments for children birth through age eight. Students explore the environment's role in creating developmentally appropriate learning experiences for children. Students will create developmentally appropriate learning activities for children birth to age eight. Prerequisite(s): CDEV1103, CDEV1109

CDEV 1141 Hlth Wellness Nutrition 3 cr 3/0/0
This course provides an exploration of safe and healthy home or center learning environments for children, birth through school-age. The learner will examine and plan developmentally and culturally appropriate learning activities and centers, as well as explore topics such as preventing illness, preventing accidents, handling emergencies, meeting children's basic nutritional needs, child abuse, and current health related issues. Prerequisite(s): None

CDEV 2203 Observation-Assessment 3 cr 2/1/0
This course provides students with the opportunity to observe and assess children's development. Under the supervision of an instructor, the student observes, records, interprets, and develops plans to strengthen the development of children birth to age eight. Student will construct a child study based on assessments gathered throughout the course of the semester for one specific child. Prerequisite(s): CDEV1121, CDEV1131

CDEV 2209 Family-School Relations 3 cr 3/0/0
This course covers the relationship between the caregiver and the child's family. It will explore strategies to maintain professional relationships with co-workers, parents, and outside organizations. Cultural diversity/dynamics, bias, public education, housing, employment, crime, health care, legal services, and social services will be explored. Prerequisite(s): None

CDEV 2215 Intro Language-Literacy 3 cr 3/0/0
This course is an overview of early language acquisition on how literacy is best developed and what activities early childhood educators can do to promote the foundation for literacy development. Prerequisite(s): None

CDEV 2235 Intro Special Education 3 cr 2/1/0
This course examines student exceptionalities and the impact on learning. Students integrate knowledge of developmental needs, developmentally appropriate environments, and effective teaching methods for children with exceptionalities in an early childhood environment. Prerequisite(s): CDEV2203

CDEV 2242 Infant-Toddler Program 3 cr 2/1/0
This course provides an overview of infant/toddler learning experiences, in either home or center-based settings. Students integrate knowledge of developmental needs, developmentally appropriate environments, and effective caregiving and teaching methods. Prerequisite(s): CDEV1109

CDEV 2250 Sign Language I 1 cr 0/1/0
This course will provide an introduction to basic American Sign Language vocabulary, fingerspelling, numbers and Deaf Culture. Expressive and receptive dialogue exercises and activities are incorporated. Prerequisite(s): None

CDEV 2251 Sign Language II 1 cr 0/1/0
This course will provide increased understanding of American Sign Language vocabulary, grammar and use of non-manual markers. Expressive and receptive dialogue exercises and fundamental aspects of Deaf Culture are incorporated. This course is a continuation of Level 1 with greater emphasis on expressive signing skills. Prerequisite(s): CDEV2251

CDEV 2253 Paraprofessional Role 2 cr 2/0/0
This course covers the basic services that a Paraprofessional will provide for children in a classroom setting. Areas covered are professionalism, clerical duties, understanding of children with disabilities, formal and informal communications, classroom management and record keeping and identifying the needs of remedial students. Prerequisite(s): None

CDEV 2295 Internship 3 cr 0/0/3
This course provides an opportunity to apply acquired knowledge and skill in an early childhood education. Students create and implement a variety of learning experiences that are developmentally appropriate, culturally sensitive, and that promote student success. Students will journal and self-reflect. Prerequisite(s): Instructor Approval

CHEM 1020 Intro to Chemistry 4 cr 3/1/0
(Fulfills MNTC Area: 3) This course provides students 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. Prerequisite(s): MATH0094, or MATH0098, or appropriate Math assessment score.

CHEM 1121 General Chemistry I 5 cr 4/1/0
(Fulfills MNTC Area: 3) General chemistry principles including the study of elements, stoichiometry, atomic theory, solids, liquids, gases, chemical bonding, molecular structure and reactions. The course consists of 4 lecutre credits and 1 lab credit. Prerequisite(s): MATH0094 or MATH0098 or appropriate Math assessment score.

CHEM 1122 General Chemistry II 5 cr 4/1/0
(Fulfills MNTC Area: 3) This course covers the properties of aliphatic and aromatic compounds, including the major classes of biological compounds, and the theories, nomenclature, functional groups, synthesis, and mechanisms to account for their chemical properties. Prerequisite(s): CHEM1121

CHEM 2205 Survey Gen-Org-Bio Chm 4 cr 3/1/0
(Fulfills MNTC Area: 3) This is a comprehensive survey course covering the basics of general chemistry to introduce organic chemistry and biochemistry needed for the advanced physiology course. Prerequisite(s): MATH0090 or appropriate Math assessment score.

Course Number	Course Name	Credit	Lec/Lab/OJT

CHEM 2211 Organic Chemistry I 5 cr 4/1/0
(Fulfills MNTC Area: 3) This course is the study of properties of aliphatic (carbon) compounds and the theories, nomenclature, functional groups, synthesis and mechanisms to account for their chemical properties. Prerequisite(s): CHEM1122.

CHEM 2212 Organic Chemistry II 5 cr 4/1/0
(Fulfills MNTC Area: 3) This course is the study of properties of aliphatic and aromatic compounds, including the major classes of biological compounds, and the theories, nomenclature, functional groups, synthesis, and mechanisms to account for their chemical properties. Prerequisite(s): CHEM2211

CMAE 1502 Technical Mathematics 3 cr 3/0/0
This is an introductory technical math course. This 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): None

CMAE 1506 Intro to Computers 2 cr 2/0/0
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): None

CMAE 1510 Print Reading 2 cr 2/0/0
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): None

CMAE 1514 Safety Awareness 2 cr 2/0/0
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): None

CMAE 1518 Manufacture Process-Prod 2 cr 2/0/0
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): None

CMAE 1522 Quality Practices 2 cr 2/0/0
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): None

CMAE 1526 Maintenance Awareness 2 cr 2/0/0
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): None

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

CMAE 1528 Career Success Skills 1 cr 1/0/0

This is an introductory career success skills course. The primary goals of this course are to help individuals acquire a solid foundation in the basic skills for a successful career. This course will identify the skills important to business 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): None

CMAE 1556 Analog Circuits 3 cr 2/1/0

Covers diodes, power supplies, transistor operation, biasing and specifications along with amplifier configuration and applications. It also covers amplifier operation, applications and related circuitry. Troubleshooting, design and circuit analysis are emphasized. On-site lab requirement. Prerequisite: CMAE 1552. Prerequisite(s): CMAE 1552

CMAE 1560 Interpret Welding Symbols 2 cr 2/0/0

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 the skills necessary to fabricate individual component parts of welded structures. Written and fundamental tests will be administered in accordance with the American Welding Society (AWS) standards and the appropriate correlating code books (AWS A2.4).

Course Outcomes:

1. Interpret basic elements of a drawing or sketch.
2. Interpret welding symbol information and placement guidelines.
3. Describe Nondestructive Examination (NDE) methods and symbol use.
4. Calculate weight and cost of welding consumables and materials.
5. (ILO: 1) Prepare an applicable bill of materials (BOM). Prerequisite(s): None

CMAE 1562 Oxyfuel Welding 3 cr 1.5/1.5/0

This course covers the use of oxyfuel equipment while welding, cutting, brazing, and using the Plasma Arc Cutting (PAC) and Air Carbon Arc Cutting (CAC-A) processes. There will also be an introduction to laser cutting equipment. Time will be spent discussing safety while developing skills using thermal welding and cutting processes. Welding and brazing will be performed in the flat and horizontal positions. All cutting will be performed in the flat position. Written and fundamental tests will be completed in accordance with American Welding Society AWS codes and standards.

Course Outcomes:

1. Demonstrate the proper use of Personal Protective Equipment (PPE) during welding.
2. Demonstrate safety habits consistent with industry standards and college policy.
3. Operate oxyacetylene welding and cutting equipment according to industry standards and ractices.
4. Differentiate oxyacetylene fusion welding, brazing, and soldering processes.
5. Determine weld joints, positions, and types to perform oxyfuel welds.
6. Differentiate plasma cutting (PAC), laser cutting, and air carbon arc (CAC-A) processes.
7. Demonstrate cutting operations with oxyfuel hand torch, motorized track torch, carbon arc cuttin CAC-A , and CMC lasma arc cuttin consistent with indust standards.
8. (IL0: 3) Examine the oxyacetylene welding and cutting applications used in current indust ractices. Prerequisite(s): None

CMAE 1564 Shielded Metal Arc Weldin 3 cr 1.5/1.5/0

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.

Course Outcomes:

1. Examine the SMAW applications used in current industry practices.
2. Demonstrate safety habits consistent with industry standards and college policy.
3. Operate SMAW equipment according to industry standards and practices.

4. Differentiate SMAW setup requirements and techniques from other welding processes.
5. Identify factors that affect electrode selection,
6. Determine weld quality by following procedures for visual inspections of welds in accordance with American Welding Societ AWS standards.
7. Perform welds in the flat, horizontal, vertical, and overhead positions with appropriate electrodes.
8. (IL0: 5) Demonstrate the proper use of Personal Protective Equipment (PPE) during welding. Prerequisite(s): None

CMAE 1566 Gas Metal Arc Weld/Flux C 3 cr 1.5/1.5/0

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.

Course Outcomes:

1. Demonstrate the proper use of Personal Protective Equipment (PPE) during welding.
2. Demonstrate safety habits consistent with industry standards and college policy.
3. Operate GMAW and FCAW equipment according to industry standards and practices
4. Examine the GMAW and FCAW applications used in current industry practices,
5. Differentiate GMAW and FCAW setup requirements and techniques from other welding processes.
6. Identify the common shielding gases, metals, and electrodes utilized with GMAW and FCAW processes.
7. Interpret arc welding symbols and codes in accordance with American Welding Society AWS standards.
8. Determine weld quality by following procedures for visual inspections of welds in accordance with American Welding Societ AWS standards.
9. Perform welds in the flat, horizontal, vertical, and overhead positions utilizing GMAW and FCAW.
10. (IL0: 4) Apply the appropriate power settings to specific types of modes of transfer,
    Prerequisite(s): None

CMAE 1568 Gas Tungsten Arc Welding 3 cr 1.5/1.5/0

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.

Course Outcomes:

1. Demonstrate the proper use of Personal Protective Equipment (PPE) during welding.
2. Demonstrate safety habits consistent with industry standards and college policy.
3. Operate GTAW equipment according to industry standards and practices.
4. Differentiate GTAW setup requirements and techniques from other welding processes,
5. Evaluate the various types of power sources, types of current, and applications utilized in GTAW.
6. Demonstrate the different methods of adding filler metal when utilizing GTAW.
7. Examine the GTAW applications used in current industry practices,
8. Demonstrate proper electrode preparation for desired weld characteristics based on ferrous and nonferrous metals.
9. Demonstrate welds in the flat, horizontal, vertical, and overhead positions utilizing GTAW aligned with industy codes and practices.
10. (ILO: 2) Analyze the metallurgical properties of ferrous and nonferrous metals using industy recognized terminoloy. Prerequisite(s): None

CMAE 1570 Metallurgy 1 cr 1/0/0

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 Socie AWS codes and standards.
Course Outcomes:
1. Summarize, using metallurgical terminology, the types of tests performed on metals to determine their metal properties.
2. Apply knowledge of material properties and the effect of heat treatment in specific welding applications.
3. (ILO: 2) Identify variables to determine the proper metal for specific applications using industy classifications.
Prerequisite(s): None

CMST 1101 Intro to Public Speaking 3 cr 3/0/0

(Fulfills MNTC Areas: 1, 2) This course develops students' capacities for effective oral communication with public audiences. Students will study public speaking concepts and practice practical skills. Students will select topics and supporting materials, prepare and organize speeches, utilize appropriate communication practices in various contexts, and evaluate oral communication. Prerequisite(s): None

CMST 1103 Interpersonal Comm 3 cr 3/0/0

(Fulfills MNTC Areas: 1, 2) This class introduces theories, methods, and applications of interpersonal communication. Students study interpersonal communication within cultures and individuals, in managing conflict and relationships, and processes of perception. Students will apply course concepts to practical life experiences. Prerequisite(s): None

CMST 1111 Small Group Communication 3 cr 3/0/0

(Fulfills MNTC Area: 1, 9) This course explores both practical and theoretical aspects of small group communication. Students will practice leading and participating in groups within various settings. Emphases will be placed on problem solving and the roles of communication and power within small groups. Prerequisite(s): None

CMST 2201 Oral Interp Literature 3 cr 3/0/0

(Fulfills MNTC Area: 6) This course introduces students to techniques of oral interpretation of literature and to convey to an audience both the intellectual and emotional content of the various literacy forms, including expository and narrative prose, poetry, and drama, with an emphasis on the performance of the work. Prerequisite(s): None

CMST 2205 Intercultural Comm 3 cr 3/0/0

(Fulfills MNTC Areas: 7, 8) The course examines the attitudes, beliefs, and values of people through intercultural communication. The course cultivates, promotes, and increases understanding and effective communication with people outside one's own immediate culture. This course reflects the expanding global marketplace/village, including its challenges for communicators. Prerequisite(s): None

CMST 2222 Intro to Media Literacy 2 cr 2/0/0

(Fulfills MNTC Area: 6) This course surveys basic principles and skills for engaging, understanding, and analyzing media such as photographs, music, television and film, games, and digital media. Students are responsible for theoretical and practical readings as well as assigned media. Students in this course learn to actively participate in both individual instances of media and media's overarching historical and modern impact on social engagement. Prerequisite(s): None

CONE 1100 Elec Construction Safety 1 cr 1/0/0

This course provides students with an understanding of occupational safety practices, basic requirements, purpose and enforcement of general safety rules. This course meets the requirements of the Minnesota Department of Labor and Industry standards for the Construction Electricity program. Prerequisite(s): None

CONE 1102 Intro Elec Circuit Theory 4 cr 2/2/0

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

This introductory course provides students with 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 (NEC). Prerequisite(s): None

CONE 1104 Intro to NEC 2 cr 2/0/0

This course provides students with an introduction to electrical material used in industry and also the National Electrical Code. The student develops basic skills and understanding of the National Electrical Code (NEC) book and how it applies to electrical applications in the field. Prerequisite(s): None

CONE 1107 Intro Residential Wiring 3 cr 1/2/0

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 (NEC) standards. Prerequisite(s): Corequisites: CONE1100, HPER1410

CONE 1108 Electrical Circuit Theory 4 cr 2/2/0

This course provides the student with an understanding of complex RLC circuits, single-phase and three-phase transformer connections and calculations. Prerequisite(s): CONE1102

CONE 1110 AC-DC Motors-Generators 4 cr 2/2/0

This course provides a fundamental understanding of AC and DC motor generator theory and basic skills. This course includes types, construction, operation, installation, and maintenance of AC and DC motors and generators. Prerequisite(s): CONE1100, HPER1410

CONE 1113 Residential Wiring 4 cr 2/2/0

This course provides students with expanded technical understanding and skills necessary for residential wiring. Students will be provided with experience for installations common to residential structures including general receptacles, lighting and designated circuit layout and installation. Prerequisite(s): CONE1107

CONE 1116 Conduit-Tool Applications 2 cr 0/2/0

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): CONE1100

CONE 1118 Electrical Services 3 cr 2/1/0

This course covers requirements and installation of service entrance equipment. Topics included are service materials, installation procedures, meters, service and conduit sizes, panel types, bonding, grounding and overcurrent protection. Prerequisite(s): Corequisites: CONE1100, CONE1104

CONE 1120 Electrical Blueprints 3 cr 2/1/0

Student will read commercial blueprints with an emphasis on electrical circuitry including lighting, power, service, feeders, and special systems. The course also introduces the student to Computer Aided Drafting (CAD) drawings. Prerequisite(s): CONE1124

CONE 1122 Intro to Materials 1 cr 0/1/0

This course provides students with an introduction to electrical material used in industry. Students develop basic skills and understanding of the material and how it applies to electrical applications in the field. Prerequisite(s): None

CONE 1124 Intro Elec Blueprint Read 2 cr 1/1/0

This course provides students with a working knowledge of residential blueprints and specifications. Students gain an understanding of blueprints, then interprets and applies this knowledge to the electrical industry. Prerequisite(s): None

CONE 2114 National Electrical Code 2 cr 2/0/0

This course provides students with 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): None

CONE 2202 Heating-Cooling Controls 3 cr 1/2/0

This course introduces basic electric heating, gas, oil, and heat pump and cooling system installation and control. Topics included are installing wiring for heating and air conditioning systems, replacing controls, measuring instruments, and schematic interpretation. Prerequisite(s): CONE1107, CONE1116, or instructor approval.

CONE 2205 Intro Commercial Wiring 3 cr 1/2/0

This course examines the material and design aspects of commercial wiring. Topics included are raceways, boxes, design requirements for conduit layouts, circuit overcurrent protection and lighting. Prerequisite(s): CONE1100, CONE1104, CONE1122.

CONE 2206 Intro Motor Control Applc 3 cr 2/1/0

This course provides an understanding of motor control symbols, line diagrams, contractors, starters, and operating circuits. Lab procedures demonstrate components, circuitry, and operation learned in theory. Measured data is recorded and interpreted. Prerequisite(s): CONE1108, CONE1110

CONE 2208 Program Logic Controllers 2 cr 1/1/0

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(s): CONE1112, or instructor approval.

CONE 2211 Electronic Motor Control 3 cr 2/1/0

This course provides application of basic theory and operation to electronic motor control including semi-conductor, rectifiers, regulators, and amplifiers. Prerequisite(s): CONE1100, CONE1108

CONE 2212 Commercial Wiring 3 cr 1/2/0

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(s): CONE1100. Corequisite: CONE2205

CONE 2214 Industrial Wiring 2 cr 1/1/0

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. It also covers the study of the National Electrical Code relating to these topics. Prerequisite(s): CONE1100, CONE2114

CONE 2216 Motor Control Application 3 cr 1/2/0

This course provides an advanced understanding of circuits controlling motors. Topics include jogging, braking, plugging, reduced voltage starting, phase loss protection, latching relays, time delay relays, and safety requirements. Lab procedures demonstrate components, circuitry, and operation learned in theory. Measured data is recorded and interpreted. Prerequisite(s): CONE2206

CONE 2225 Transformers 2 cr 0/2/0

This course covers the concepts of transformer operation. Single-phase and three-phase (polyphase) transformer operation and installation methods are explored. Included in the course are the following topics: transformer operation, transformation relationships, transformer losses, transformer types, transformer testing, series and parallel operation, connections, instrument transformers, and maintenance procedures. National Electrical Code requirements for transformer installations are applied. Prerequisite(s): CONE1108

CONE 2228 Troubleshooting 1 cr 0/1/0
This course provides an application of principles of construction electricity to a variety of situations for the purpose of identifying and solving electrical problems. Emphasis is placed on electrical circuits pertaining to commercial, industrial and motor control applications. Prerequisite(s): 36 CONE credits

CONE 2230 Load Management Controls 2 cr 1/1/0
This course provides an understanding of load management control for power company off-peak systems. Time clock, radio, ripple and demand controller wiring is covered. Prerequisite(s): CONE1107, CONE1108

CONE 2238 Low Voltage Wiring 2 cr 1/1/0
This course provides students with an understanding of installation procedures and National Electrical Code requirements for coax, telephone, fire alarm, security, fiber optic, cat 4, cat 5, and other low-voltage wiring systems. Prerequisite(s): None

CONE 2248 Code Applications 2 cr 1/1/0
This course applies the principles of the National Electrical Code (NEC) to job specific situations. Prerequisite(s): CONE1104, CONE2114

CONE 2251 Special Topics-Projects 3 cr 0/3/0
The student works with an advisor and instructor to develop a contract with specific goals in areas deemed applicable to the construction electricity industry and the students' career plans. This opportunity may be limited by conditions such as instructor/lab/material availability. Prerequisite(s): 12 CONE credits

CPTR 1100 Computer Basics 1 cr 1/0/0
This course is an introduction to Windows, network, Internet, e-mail and word processing. Students will also be introduced to other practical computer applications. Prerequisite(s): None

CPTR 1104 Intro to Computer Tech 3 cr 3/0/0
This course covers the operation of the personal computer including both hardware and software concepts. It includes an overview of a professional computer operating system, word processing, spreadsheets, presentation software, database management, e-mail usage, and Internet operations. Prerequisite(s): None

CPTR 1106 Microcomputer Databases 3 cr 2/1/0
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(s): None

CPTR 1110 Visual Basic Programming 3 cr 2/1/0
This course provides a basic understanding of Visual Basic Programming. It covers language basics and program structure. Topics include graphical interface design and development, control properties, event-driven procedures, scope, variables, functions and data base access. Students learn to program from stated problem or specifications, applying structural programming methods to produce results that are accurate, reliable and maintainable. Prerequisite(s): None

CPTR 1128 Help Desk Concepts 3 cr 2/1/0
This course covers all aspects of the Help Desk and the Help Desk industry. A solid foundation will be provided upon which students, who desire to enter the Help Desk industry, or strive to advance in the industry, can build their skills and knowledge. Prerequisite(s): None

CPTR 1132 Microcomputer Maintenance 3 cr 2/1/0
This course covers the various software and hardware needed to support the installation and service of microcomputers. Software examples would be commands used to format disks, create sub-directories, copy disks, and editors to create batch files. The various hardware components that make up the microcomputer will be described. Normal operation conditions are discussed and demonstrated. With the help of software diagnostic

tools a microcomputer will be installed or diagnosed, repaired and retested for normal operation after the repair, before placing in-service. Prerequisite(s): None

CPTR 1136 Networking I 4 cr 3/1/0
This course will provide the student with an understanding of the 7-layer open systems interconnect (OSI) model and how the model relates to internet connectivity. Instruction includes basic network media such as wireless, fiber optic and copper and correct wiring techniques using industry standards. The importance of documentation and design criteria are included with an initial discussion on how networking protocols relate to network communication. Prerequisite(s): None

CPTR 1138 Information Systems 2 cr 2/0/0
This course is an introduction to information systems used in a variety of organization types. Topics included an overview of the history of communications and information systems. Students are introduced to the many career opportunities available and the processes used in the development of information system using the system development life cycle. Prerequisite(s): None

CPTR 1147 Networking II 4 cr 3/1/0
This course will continue to provide students with classroom and laboratory experience to empower them to enter the computer networking field. Instruction includes how to configure routers and switches for enhanced functionality, security, and resilience. Students will be able to configure and troubleshoot switches implementing virtual local area networks (VLANs), Virtual Trunking Protocol (VTP), Spanning Tree Protocol (STP), and port security features. Students will also be able to configure and resolve common issues with routers, inter-virtual local area network (VLAN) routing, routing protocols and their topologies in both Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6) networks. Prerequisite(s): CPTR1136

CPTR 1148 Micro Operating Systems 3 cr 2/1/0
This course covers the most current operating systems. Students will be managing hardware, configuring and managing I/O and disk drives, resource administration, configuring and managing security and optimizing system performance. Students will also be exposed to virtual computing environments. Prerequisite(s): None

CPTR 1171 Fund of Network Security 3 cr 2/1/0
This course will provide students with classroom and laboratory experience in basic security principles, establishing security baselines, and using current attack and defense techniques and technologies. Students will learn how to establish and manage security policies and procedures. Instruction includes how to harden a network to resist attacks, protect basic and advanced communications, and use cryptography and Public Key Infrastructure (PKI) to defend against attackers. Prerequisite(s): CPTR1136

CPTR 1500 Intro Web Concepts 3 cr 2/1/0
This course covers the basics of web site design and layout with emphasis on the Internet as an interactive communications medium. It includes hyper text markup language (HTML), terminology, and graphic formatting. Students will learn some of the most important topics including Web site design and layout, creating and revising a Web pages, using lists, hyperlinks, pictures, task lists, and other similar skills. Students are expected to have a basic knowledge of the use of a microcomputer. Prerequisite(s): None

CPTR 2101 Ethical Hacking 3 cr 2/1/0
This course looks specifically at how attackers target networks, what tools attackers use, and how these techniques can be used by ethical hackers to assess the vulnerability of a network. (This course does not teach network defense.) This course introduces concepts, terminology, and issues, and provides hands-on activities applying a variety of tools and hacking techniques to provide experience in testing the security of a network, and conducting reliable security audits. This course covers the objectives of the Certified Ethical Hacker (CEH) certification exam. Prerequisite(s): CPTR1147, CPTR1171, CPTR 2214

CPTR 2121 Network Defense 3 cr 2/1/0
This course is designed to be an introduction into the field of network defense. It brings together all basic concepts, terminology, and issues, along with the practical skills essential to network defense. This course covers core topics such as practical applications of firewalls, intrusion detection systems, encryption

fundamentals, operating system hardening, defending against virus attacks, Trojan horses and spyware, ransomware, malware, security policies and security standards. The course also addresses more specialized issues, including cryptography, industrial espionage and encryption - including public/private key systems, digital signatures, and certificates. Prerequisite(s): CPTR1147, CPTR1171, CPTR2214

CPTR 2214 Network Operating Sys 3 cr 2/1/0
This course teaches functions of a network operating system so students can effectively maintain and manage a network. Students learn how to establish and oversee the operations of a network, create logins, design and establish directory structures, and implement security. This course will have students install and operate a Windows network. Prerequisite(s): CPTR1148

CPTR 2226 Networking III 3 cr 2/1/0
This course will continue to provide students with classroom and laboratory experience to empower them to enter the computer networking field. The focus of this course is on the architecture, components, and operations of routers and switches in a larger and more complex networks, WAN Technologies, and intent based networking concepts. The student will learn how to configure routers and switches for advanced functionality. Instruction includes how to configure and troubleshoot common issues with Open Shortest Path First (OSPF), Network Address Translation (NAT), Internet Service Provider (ISP) connectivity, and Virtual Private Networks (VPN). Students will also investigate Simple Network Management Protocol (SNMP), and Network Virtualization and Automation. Prerequisite(s): CPTR1147

CPTR 2227 Networking IV 3 cr 2/1/0
This course will continue to provide students with classroom and laboratory experience to empower them to enter the computer networking field. The focus of this course is the practical application of network technologies in projects simulating real world environments. Students working individually and in teams will use lab hardware to configure and expand the network infrastructure of a small business. Topics include how to configure and troubleshoot network devices and resolve common issues with networking protocols. Students will also apply the knowledge and skills needed to implement networks, trunking, etherchannel, vlans, DMZs, VPNs, Firewalls, and Dynamic Routing Protocols In addition, students will prepare for the Cisco Certified Network Associate (CCNA) Exam. Prerequisite(s): CPTR2226

CPTR 2231 Unix-Linux 3 cr 2/1/0
This course offers students an in-depth introduction into a popular operating system in today's business world. The overall goal of this course is to provide students with an understanding of Unix/Linux fundamentals. Prerequisite(s): None

CPTR 2241 Cybersecurity Analysis 3 cr 2/1/0
This course covers the entire lifecycle of incident response, including preparation, data collection, data analysis, and remediation. It also provides a thorough understanding of security operations, cyber defense analysis, cyber defense infrastructure support, how to respond to and manage incidents of breach and effectively assess and manage current and future vulnerabilities. This course covers the objectives of the Cybersecurity Analyst (CySA+) certification exam. Prerequisite(s): CPTR2101, CPTR2121

CPTR 2242 Java Programming 3 cr 2/1/0
In this course, students utilize the Java programming language to create both Internet applets and applications. Prerequisite(s): None

CPTR 2249 Cybersecurity Policy 3 cr 2/1/0
This course prepares students to master modern information security regulations and frameworks, and learn specific best-practice policies for key industry sectors, including finance, health care, online commerce and small business. Prerequisite(s): CPTR2101, CPTR2121

CPTR 2252 Micro Systems Project 3 cr 1/2/0
Students utilize the content of previous data communication and microcomputer courses to design and implement a microcomputer/networking solution to a business need. Hardware and software projects may

include designing, installing, upgrading, or expanding. Students may work on individual and/or group projects. Prerequisite(s): CPTR1147, CPTR2214

CPTR 2294 Internship 3 cr 0/0/3
This course provides students with on-the-job experiences in microcomputer and/or networking support. A competency-based training plan will be developed for each student and the employer. Prerequisite(s): CPTR1132, CPTR1147, CPTR1148

CRJU 1103 Juvenile Justice 3 cr 3/0/0
This course emphasizes the origin, development, organization, theoretical perspective, functions, and jurisdiction of the Juvenile Justice System in America, with emphasis on the MN Juvenile Justice System. Topic areas include: processes and detention of juveniles; constitutional protections extended to juveniles; case disposition, juvenile statutes and court procedures relative to juvenile offenders, laws and procedures regarding child abuse, child neglect, juvenile records and juvenile court process. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): None

CRJU 1106 Corrections-Probation 3 cr 3/0/0
This course will examine the historical and contemporary correctional theories and programs with emphasis on the current organizational structure. Probation, parole, and alternatives to incarcerations will also be explored. Prerequisite(s): None

CRJU 1112 Human Behavior 3 cr 3/0/0
This course is an academic, in-depth examination of the knowledge, skills, and abilities required to fulfill duties, functions, and responsibilities related to conflict management, persons in crisis and critical events, victims of crime, and evolving social issues, such as gangs, drugs, and terrorism. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): None

CRJU 1113 Community and Diversity 3 cr 3/0/0
This course provides a practical overview of key issues, questions, and concepts related to peace officer interactions with communities. Topic areas include ethics, leadership, discretion, diversity, community policing, problem-solving, and communication. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): None

CRJU 1127 Career Fitness 1 1 cr 0/1/0
This course is designed for students to develop physical fitness of the body for health, wellness, and social well-being. Exercise programs and techniques are taught to improve cardiovascular fitness, flexibility, and body composition. Students will be introduced to various methods of improving and/or maintaining cardiovascular fitness throughout this course. Prerequisite(s): None

CRJU 2127 Career Fitness 2 1 cr 0/1/0
This course is designed for students to enhance physical fitness of the body for health, wellness, and social well-being. Exercise programs and techniques are taught to improve cardiovascular fitness, flexibility, and body composition. Students will be introduced to various methods of improving and/or maintaining cardiovascular fitness to have the ability and confidence to cope with presented physical situations. Prerequisite(s): None

CRJU 2200 Minnesota Statutes 3 cr 3/0/0
This is a course in substantive law, including the elements of major crimes and their possible legal defenses and is a Peace Officer Standards and Training requirement for the Law Enforcement degree. This course is intended for a student pursuing law enforcement who needs to know more about topics related to criminal and traffic codes in Minnesota within their role and responsibilities as a patrol officer. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): SOCI1107

CRJU 2206 Criminal Investigations 3 cr 3/0/0
This course will cover the methodologies of criminal investigations. Every facet of the investigation will be covered, from the preliminary investigation to the court proceeding. It will also cover evidence recognition, collection, and preservation. There will be a segment devoted to police reports and required Minnesota forms.

Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): SOCI1107

CRJU 2210 Criminal Procedures 3 cr 3/0/0
This course examines the history of the United States Constitution and the role it plays in democracy and constitutional limitations on government authority over private citizens. Examination of the peace officer's role in the system as it relates to the procedural handling of a criminal case. Also examined in this course are rules of evidence, criminal defenses, civil liability, courtroom testimony and the government's authority to stop, detain, search, and seize. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): SOCI1107

CRJU 2229 Peace Officer Skills 1 6 cr 3/3/0
This course is offered to students who have successfully completed the Criminal Justice courses which contain the Peace Officer Standards and Training objectives and are planning to take the state licensing exam. This course contains hands-on learning experiences in evidence collection, use of force, patrol procedure, firearms. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): Corequisites: CRJU 1127 or instructor approval.

CRJU 2239 Peace Officer Skills 2 6 cr 3/3/0
This course is offered to students who have successfully completed the Criminal Justice courses which contain the Peace Officer Standards and Training objectives and are planning to take the state licensing exam. This course contains hands-on learning experiences in driving, defensive tactics, advanced patrol procedure, advanced firearms. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): CRJU2229

CRJU 2295 Internship 3 cr 0/0/3
This is a practical learning experience in criminal justice in the area of the student's interest. This course is usually scheduled after the student has completed one full year of course work. Coordinator and agency approval is required. Students are not guaranteed an internship. Prerequisite(s): 24 credits completed and/or instructor approval.

CRLT 0100 Service Learning 0 cr
All students need to complete eight hours of service learning in the form of service to the community through volunteering, except the following:
Students who have earned NCTC credits prior to fall 2017.
Students who are active or have completed military service.
Students who are eligible for reverse transfer.
Students completing an online program.
Students who are transferring a Service Learning course in from an accredited college or university.
Transfer students who need less than 24 credits to earn their NCTC associate degree.
Students who will graduate from an Associate level program while enrolled as a PSEO student.
Students enrolled in employer sponsored programs.
If a student qualifies for one of these exemptions, the Substitute/Transfer Course Equivalency Waiver form must be completed and submitted to the Registrar. Prerequisite(s): None

CRLT 1103 Career Explorations 1 cr 1/0/0
This course is designed to promote the development of lifelong career exploration and decision making of the student using various assessments, and career planning strategies. The goal is to expand the exploration of personal interests, skills and work values to guide the student in identifying potential major/career possibilities and in making deliberate career choices throughout their lifetime. Prerequisite(s): None

CRLT 2103 Job Seeking-Keeping 1 cr 1/0/0
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

DIET 1005 Life Cycle Nutrition 3 cr 3/0/0
This course covers the normal nutritional needs of individuals through the life span, from gestation through geriatrics, specifically addressing pregnancy, lactation, infancy, childhood, adolescence, adult and later years. Social, economic, educational, and physiological factors and their effects on nutritional status will be discussed. Prerequisite(s): BIOL2131

DIET 2000 Community Nutrition 3 cr 3/0/0
Students will learn of nutrition programs in the community, including programs to serve infants, children, and the elderly. Socio-cultural and ethnic food consumption issues will be reviewed. Educational methods for instruction of individuals and groups will be covered. Program planning and proposal writing will be included. Prerequisite(s): BIOL2131, DIET1005

DIET 2005 Food Prod & Science 4 cr 2/2/0
This course provides the fundamentals of food preparation, equipment use, culinary vocabulary, with laboratory activities that emphasizes theory applications and a look at factors that influence changes that occur in foods during preparation. Prerequisite(s): None

DIET 2010 Sanitation & Safety 2 cr 2/0/0
This course covers the topic of ensuring food safety by understanding the major bacteria and viruses responsible for foodborne illness. Students will identify strategies to prevent foodborne illness and cross contamination by proper storage, handling, and preparing of food items, as well as proper sanitation of workspaces and equipment. Prerequisite(s): None

DIET 2015 Selection & Procurement 4 cr 4/0/0
This course covers purchasing, receiving, storing, issuing, preparing, servicing, formulating specifications, judging food quality, selecting products to meet specific needs, and developing security measures as it relates to the appropriate workplace. Prerequisite(s): None. Co-requisite: DIET2005.

DIET 2020 Nutritional Care 3 cr 3/0/0
This course provides students with an understanding of the nutrition care process and the role of the dietetic technician within this process. Skills needed to complete parts of the nutrition care processes are developed. The profession of dietetics and the role of the professionals within the field are explored. Prerequisite(s): BIOL2131, BIOL2262, CHEM1020. Co-requisite: DIET2025

DIET 2025 Medical Nutrition 4 cr 4/0/0
This course provides students with an understanding of the role of medical nutrition in the treatment of disease. The diseases discussed will include: diabetes, cardiovascular disease, gastrointestinal disease, cancer, kidney and renal disease. Prerequisite(s): BIOL2131, BIOL2262, CHEM1020. Co-requisite: DIET2020

DIET 2030 Food Service Management 4 cr 2/2/0
This course will provide a comprehensive overview of food management within an institutional setting, including such principles as menu planning, food preparation, personnel management, sanitation and safety, food distribution, human resources, marketing, equipment use, and hands-on management of quantity food production. Prerequisite(s): MKTG2120, DIET2005, DIET2010, DIET2015

DIET 2035 Community Practicum 2 cr 0/0/2
This course provides industry supervised experience in a variety of community health care and community nutrition settings where students have the opportunity to apply classroom theories to actual operations. Prerequisite(s): DIET2000

DIET 2040 Clinical Practicum 4 cr 0/0/4
This course is designed to provide an opportunity for students to gain extensive supervised clinical patient care experience in a nursing home and hospital setting. The student needs experience in both a hospital and nursing

home to complete the practicum. The student must complete 192 hours including both the hospital and the nursing home; 95 hours in each if possible. Prerequisite(s): DIET2020, DIET2025.

DIET 2045 Management Practicum 4 cr 0/0/4
This course is designed as an industry supervised, hands-on opportunity for the students to work and develop skills in a healthcare food service system. Competent practitioners in food service management recognize the importance of a foundation in quality and quantity food production, which is emphasized through a hands-on approach in this course Principles of food service management and sanitation are applied. Prerequisite(s): DIET2030.

ECON 1110 Prin of Economics 3 cr 3/0/0
(Fulfills MNTC Area: 5) This course is a basic study of economics with an emphasis on microeconomics and macroeconomic principles to help students understand economic problems related to scarcity and how economies allocate scarce resources. Prerequisite(s): None

ECON 2201 Microeconomics 3 cr 3/0/0
(Fulfills MNTC Area: 5) This course is a study of price systems that direct the production and consumption of goods and services with a major emphasis placed on understanding the behavior of individual households, firms, and industries. Prerequisite(s): None

ECON 2202 Macroeconomics 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course is a study of National economies with an emphasis on such problems as the rate of unemployment, the changing level of prices, the nation's total output of goods and services and international monetary policies and exchange rate. Prerequisite(s): None

EDUC 2250 Intro to Education 3 cr 3/0/0
This course is designed to explore the teaching profession in early childhood, elementary, middle, and secondary schools. Course topics include the history of education , philosophy of education, student diversity, social problems students face, effective instruction and classroom management, curriculum issues and influences, governmental roles in public education, and the professional and ethical responsibilities of teachers. This course also introduces students to nationally recognized standards for the preparation of teachers. Students will complete classroom field experience in each of the four grade level configurations (Pre-K – 12) for a total of 40 hours. Students will discuss related literature and experiences, participate in peer teaching, role-playing, and simulation activities, and explore teacher responsibilities. Additionally, students will create artifacts for use in a professional portfolio. Background checks are required prior to participation in field experience. Prerequisite(s): ENGL1111

ELTR 2311 Electronic Components I 3 cr 3/0/0
This course will cover the fundamentals of alternating current/direct current (AC/DC) electricity progressing through a lecture sequence of passive resistive and reactive components in series, parallel. and series-parallel configurations. It will also address the basic circuits and mathematics required in digital electronics through exploration of basic logic gates and combination circuits, display circuits, memory dircuits, and various interface curcuits. Prerequisite(s): None

ELTR 2313 Electronic Components II 3 cr 3/0/0
The following electronic principles will be reviewed: Diode Theory, Diode Circuits, Zener Diode and Regulator, Bipolar Transistors, Transistor Biasing, Voltage Amplifiers, Power Amplifiers, Emitter Followers, and JFETS & MOSFETS. This course will cover the use of industrial codes in the electronic designs of the world, to include such devices as: UJTs, SCRs, Diacs, and Triacs. It also reviews sensing devices and circuits. It will also address the fundamentals of radio frequency oscillators, amplitude modulation/demodulation, and AM/FM receiver circuitry. Prerequisite(s): ELTR2311

ELTR 2315 Applied Marketing 3 cr 3/0/0
This course provides the student with the opportunity to integrate the knowledge and concepts learned in previous courses as applied to a specific occupational setting through the use of projects, reports and discussions with peers. It will introduce the student to the meaning of marketing and its importance to

organizations, focus on relationship marketing, and introduce the student to the variables of an organizations marketing strategy. Prerequisite(s): ELTR2313

ELTR 2317 Microcontrollers 3 cr 3/0/0
This course is designed to provide a student with the basic understanding of how a microcontroller operates. The course begins with the history of the microcontroller followed by studying microcontroller block diagrams. The programming language used by the microcontroller will be studied and used in the class. Interfacing of external sensors and industrial controls that were studied in previous courses will be incorporated into the final class project. The course will be capped off with an overview of popular microcontrollers and how to select a microcontroller and development tools. Prerequisite(s): ELTR2311

ELTR 2319 Electronic Assembly 2 cr 2/0/0
This course covers the theory and techniques necessary for assembly of electronic cables, connectors, and equipment through proper utilization of standard/specialized tools and equipment. Different cable connector requirements are studied. Soldering and crimping of components and connectors is practiced. Fiber optic technology will be studied. Basic telephone wiring will be studied. Prerequisite(s): ELTR2311

ELTR 2321 Sensor Technology 3 cr 3/0/0
This course is designed to provide the student a basic understanding of sensors and industrial controls. The sensors studied in this course are optical, pressure, temperature, proximity, data, and flow sensors. There will be research done on the web to find spec sheets for designated sensors. Prerequisite(s): None

ELTR 2323 Systems Integration 2 cr 2/0/0
The course is designed to cover the theoretical and practical application of robotics. Begining with some detailed analysis of a typical robotic system functional block diagram. Learn how robotics involve all of the major principles of electronics: sensors, data conversion, signal conditioning, closed loop controls, power circuits, actuators, digital communication, axis positioning, and intelligent microcontroller control. This course will tie the theory back into hands-on application with robotic training units. Understanding how robotic controls work, and how electronic functions are integrated to become a useful system will be covered. Prerequisite(s): ELTR2319, ELTR2321

EMTB 1101 Emergency Medical Tech 6 cr 3/3/0
The Emergency Medical Technician (EMT) course follows the current National Standard Curriculum. This course will include all skills and classroom information necessary to provide emergency care at the Basic Life Support (BLS) level. Upon successful completion of the EMT course of instruction, students will be eligible to take the State/National Written and Practical Examinations. Completion and approval for clinical participation of the MN Department of Human Services Licensing Division Background Study. Current CPR certification. CPR for Health Care Providers (American Heart Association) prior to the end of the first week of EMTB1101. All required courses for the program must be completed with a grade of C or better. Completion of the college Health Screening & Immunization form. Prerequisite(s): AHA Healthcare Provider CPR Certification required within the first week of class.

EMTP 1130 BLS Ambulance Clinical 1 cr 0/0/1
This course introduces students to the BLS and ALS ambulance operations. Students observe the operations, procedures, and cares provided by prehospital personnel. Completion and approval for clinical participation of the MN Department of Human Services Licensing Division Background Study. All required courses for the program must be completed with a grade of C or better. Completion of the college Health Screening & Immunization form. Prerequisite(s): Current MN EMT-Basic license or certification.
Co-requisite: EMTB1101

EMTP 1200 Intro to EMS 1 cr 1/0/0
Upon completion of this course the students will have an understanding of the history and Emergency Medical Systems (EMS), EMS operation, legal considerations, ethical/moral issues, documentation considerations and other topics. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license, and EMTP1130 or equivalent work experience.

EMTP 1205 EMS Trauma Care 1 cr 1/0/0

Upon completion of this course the student will be able to assess, identify and manage traumatic injuries in the pre-hospital environment at an advanced level of care. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license, and EMTP1130 or equivalent work experience.

EMTP 1210 EMS Pharmacology 1 cr 1/0/0
Upon completion of this course the student will be able to identify various medications utilized in the pre-hospital environment along with their indications, physiological effects, contraindications and side effects. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license, and EMTP1130 or equivalent work experience.

EMTP 1215 EMS Med Emergencies 3 cr 3/0/0
Upon completion of this course the student will be able to assess, identify and manage various medical conditions to include pulmonary, neurologic, endocrine, immunology, infectious diseases, gastrointestinal toxicology, hematology, environmental and behavioral/psychiatric complaints in the pre-hospital environment at an advanced level of care. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license, and EMTP1130 or equivalent work experience.

EMTP 1220 EMS Cardiac Care 1 cr 1/0/0
Upon completion of this course the student will be able to assess, identify and manage emergency cardiac conditions in the pre-hospital environment at an advanced level of care. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license, and EMTP1130 or equivalent work experience.

EMTP 1225 EMS Special Populations 1 cr 1/0/0
Upon completion of this course the student will be able to assess, identify and manage various medical conditions of patients in the geriatric, pediatric, obstetrics/gynecology (OB/GYN), and other special needs populations in the pre-hospital environment at an advanced level of care. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license, and EMTP1130 or equivalent work experience.

EMTP 1230 EMS HazMat 1 cr 1/0/0
This course covers hazardous materials operational level for Emergency Medical Services (EMS) personnel. Prerequisite(s): EMTB1101 with current EMT license/higher license.

EMTP 1235 Paramedic Skills 2 cr 0/2/0
Upon completion of this course the student will be able to apply and utilize various advanced pre-hospital skills to include, but not limited to Intravenous (IV) therapy, med administration, endotracheal intubation (adult & pediatric), cricothyrotomy (adult & pediatric), intraosseous placement, chest decompression and cardiac monitor operation/electrical interventions. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license and EMTP1130 or equivalent work experience.

EMTP 1240 Paramedic Assessment 1 2 cr 0/2/0
During this course the student will be involved in scenarios depicting various pre-hospital responses, assessing and managing various types of simulated patients at an advanced level of care in the pre-hospital environment. Prerequisite(s): BIOL2260, BIOL2262, HLTH1106, EMTB1101 with current MN EMT license and EMTP1130 or equivalent work experience.

EMTP 1300 Paramedic Clinical 5 cr 0/0/5
This course allows the student to apply skills and knowledge gained in a clinical setting with actual patients, working alongside of professional health care providers. This course covers clinical areas that may include (but may not be limited to) Operating Room, Cardiac Cath Lab, Respiratory Therapy, Emergency Department, Intensive Care Unit(s), Psychiatry, Labor & Delivery, Neonatal Intensive Care Unit, and Pediatrics. Prerequisite(s): EMTP1200, EMTP1205, EMTP1210, EMTP1215, EMTP1220, EMTP1225, EMTP1230, EMTP1235, EMTP1240.

EMTP 1305 Paramedic Field Exp 3 cr 0/0/3
This course introduces students to an Advanced Life Support (ALS) ambulance service. Students will demonstrate the operations, procedures and care provided by Paramedics in the field. Students will be involved

with Basic Life Support (BLS) and ALS patient care and treatment provided under the supervision of a staff Paramedic. Prerequisite(s): EMTP1200, EMTP1205, EMTP1210, EMTP1215, EMTP1220, EMTP1225, EMTP1230, EMTP1235, EMTP1240.

EMTP 1400 Paramedic Assessment 2 3 cr 0/3/0
During this course the student will be involved in scenarios depicting various pre-hospital responses, assessing and managing various types of simulated patients at an advanced level of care in the pre-hospital environment. Prerequisite(s): EMTP1130, EMTP1300, EMTP1305.

EMTP 1405 ACLS-PALS-PHTLS 3 cr 3/0/0
Upon successful completion of this course the student will be awarded certifications in American Heart Association (AHA) Advanced Cardiac Life Support (ACLS), AHA Pediatric Advanced Life Support (PALS) and National Association of Emergency Medical Technician¿s Advanced Pre-Hospital Trauma Life Support (PHTLS). Prerequisite(s): EMTP1300, EMTP1305.

EMTP 1410 Paramedic Capstone 6 cr 0/0/6
This course is the Capstone Event for the Paramedic program. It covers the application of advanced level skills and knowledge in the evaluation and care of the pre-hospital patient. The student will be involved in providing patient care as a team member and as a team leader under the direct supervision of a staff. Prerequisite(s): EMTP1300, EMTP1305.

EMTP 1415 FF-Paramedic Capstone 6 cr 0/0/6
This course is the Capstone Event for the Firefighter/Paramedic program. It covers the application of advanced level skills and knowledge in the evaluation and care of the pre-hospital patient. Students will be involved in providing patient care as a team member and as a team leader. The students will also perform fire suppression, rescue and other daily duties required as a firefighter. The student will perform these tasks under the direct supervision of department staff. Prerequisite(s): EMTP1300, EMTP1305.

ENGL 0095 Reading and Writing 3 cr 3/0/0
This course is designed for students with Accuplacer Reading scores below 250. The course covers the following concepts in reading and writing: main ideas and supporting details, understanding the writing process, relationships, inferences, distinguishing fact from opinion, determining purpose and tone, evaluating arguments, and developing / demonstrating essay-level skills in response to assigned readings and topics. Students who complete this course with a C or better will fulfill their developmental reading and writing requirements. Prerequisite(s): None.

ENGL 1012 Applied Communications 3 cr 3/0/0
This course is designed to teach the basics of style and substance in oral and written communications. It will allow students to gain confidence in preparing, practicing, and evaluating written and oral work; provide insights into the thinking process in general, as well as insights into the thinking process which produces clear, creative, and logical speeches and composition; and understand the vital role communication has in the world of work. Prerequisite(s): Appropriate Writing assessment score.

ENGL 1111 Composition I 3 cr 3/0/0
(Fulfills MNTC Areas: 1, 2) The course is an introduction to college-level writing, focusing on descriptive, narrative, and expository essays. One essay will be a research paper using an appropriate documentation format. Prerequisite(s): ENGL0095 or appropriate Reading assessment score.

ENGL 1112 Composition II 3 cr 3/0/0
(Fulfills MNTC Areas: 1, 2) This course offers continued emphasis on composition, with concentration on research methods and writing of the research paper, using an appropriate documentation format. Prerequisite(s): ENGL1111

ENGL 1126 Intro to Literature 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes the reading of literature, such as poetry, short stories and drama, and the writing of critical essays. Prerequisite(s): None

ENGL 2100 Intro to Literary Studies 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course introduces students to the basic elements of literary study, including literary analysis, critical interpretation, and theoretical approaches. The couse introduces students to literary theory and its applications, offers framework for understanding the historical evolution of literary studies, and introduces students to a range of approaches to the study of texts. Prerequisite(s): None

ENGL 2203 Creative Writing 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes directive practice in writing biography/autobiography, children's stories, short stories, poetry, and drama. Prerequisite(s): ENGL0095

ENGL 2207 Technical Writing 3 cr 3/0/0
(Fulfills MNTC Area: 2) This course covers forms, procedures, and techniques of collecting and presenting data for both formal and informal reports. Prerequisite(s): ENGL1111

ENGL 2221 Women's Literature 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6) This course is designed to introduce the student to images of women in literature by reading and analyzing works from diverse era and cultures. Students will read from a variety of genres including stories, poetry, novels, and essays written by women with the goal of analyzing the portrayal of women as daughters, sisters, friends, wives, and mothers. Prerequisite(s): None.

ENGL 2231 Literature and Film 3 cr 3/0/0
(Fulfills MNTC Area: 6) Students will analyze and compare literature and film in order to understand the scope and variety of the human experience and the techniques used by authors and directors to capture that experience. The analysis and comparison will be done using standard bibliographic citation methods and critical analysis of the literary works and films. Genres that will be considered include westerns, comedy, action, quest, horror, feminist, classical, and science fiction. Prerequisite(s): None.

ENGL 2241 American Lit Pre-1865 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course is a survey of literature from the Colonial period to the middle of the 19th century. Prerequisite(s): None

ENGL 2242 American Lit Post-1865 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course is a survey of literature from mid-19th century to the present. Prerequisite(s): None

ENGL 2248 Multicultural Literature 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 7) This course is a study of multicultural literature to gain an understanding and an awareness of the cultural diversity in the United States. It looks at the conflicts and motivations, successes and failures of those different ethnic origins, economic backgrounds and religious beliefs. Prerequisite(s): None

ENGL 2251 British Lit Pre-1785 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course is a broad survey of English literature from the Old English period to the Restoration period in the 18th century. Prerequisite(s): None

ENGL 2252 British Lit Post-1785 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course is a broad survey of English literature from the Romantic period to the present. Prerequisite(s): None

ENGL 2258 World Literature 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 8) This course includes the reading of literature, such as poetry, fiction, drama, and nonfiction from the rich literary tradition of Asia, India, the Arabic world, the Americas, Europe, and Africa. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

ENGL 2261 Intro to Drama 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes reading various plays from several periods and genres and analyzing their cultural contexts, genres, structures, characters, dialogue, themes, symbols and motifs, and staging. Prerequisite(s): None

ENGL 2262 Intro to Film 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes reading and discussing the elements of film, as well as writing about it. Prerequisite(s): None

ENGL 2263 Intro to Short Stories 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes reading and discussing the elements of short stories, as well as writing about them. Prerequisite(s): None

ENGR 1100 Intro Civil Engineering 3 cr 2/1/0
This course is designed for students entering the civil engineering field. Topics covered are, goals and professionalism of a civil engineering technician, terminologies used in the industry, various types of equipment utilized and the duties required of a civil engineering technician. Prerequisite(s): None

ENGR 1105 Intro Mechanical Design 3 cr 3/0/0
This course is designed for students entering the mechanical engineering technology field. Topics covered are terminologies, geometric principles, manufacturing processes, materials, machine design concepts and engineering drawing basics used in industry, and the duties required for a mechanical engineering technician. Prerequisite(s): None

ENGR 1125 Engineering CAD I 5 cr 3/2/0
This course is designed for students with little or no background in computer-aided design (CAD). Students will review the Microsoft Windows environment and be introduced to computer-aided design features. Prerequisite(s): ENGR1105

ENGR 1130 CAD II 4 cr 2/2/0
This computer-aided design (CAD) course is designed for students entering the civil engineering field. Background in Microsoft Windows is preferred but not required. Students will be introduced to civil design software and will apply concepts of site planning, topography, mapping and digital terrain models. Prerequisite(s): ARCH1121

ENGR 1135 Engineering CAD II 4 cr 2/2/0
This computer-aided design (CAD) course is designed for students entering the mechanical engineering technology field. Students will use solid modeling software to create parts, drawings and assemblies. Prerequisite(s): ENGR1125

ENGR 1140 CAD III 4 cr 2/2/0
This computer-aided design (CAD) course is designed for students with little or no background in computer aided drawing. Background in Microsoft Windows is preferred but not required. Students will be introduced to manufacturing industry specific software and be introduced to 3D Modeling features. Prerequisite(s): ARCH1121

ENGR 1145 Adv Engineering CAD 4 cr 2/2/0
This computer-aided design (CAD) course is designed for students with experience in solid modeling. Students will utilize manufacturing industry specific software and become proficient with creating models, assemblies, templates, drawings, and basic Geometric Design and Tolerancing (GD&T). Prerequisite(s): ENGR1135

ETAS 1101 DC Power 3 cr 2/1/0
This course covers the basic principals in direct current (DC) electric circuits including series, parallel and complex circuit analysis, Ohm's Law, meters, conductors, insulators, resistors, batteries, and magnetism. The use and understanding of test equipment for circuit analysis is stressed. Course equivalent Distance 360 Program CMAE1550. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

ETAS 1103 AC Power 3 cr 2/1/0
This course covers investigation of alternating current (AC) and its behavior in resistive, inductive and reactive series, parallel, and series/parallel circuits; use of test instrumentation; and electromagnetic induction. Course equivalent Distance 360 Program CMAE1552. Prerequisite(s): ETAS1101

ETAS 1104 Analog Circuits 3 cr 2/1/0
This course covers diodes, power supplies, transistor operation, biasing, and specifications along with amplifier configuration and applications. It also covers operational amplifier operation, applications, and related circuitry. Troubleshooting, design, and circuit analysis are emphasized. Course equivalent Distance 360 Program CMAE 1556. Prerequisite(s): ETAS1101, ETAS1103

ETAS 1105 Applied Electronics 3 cr 1/2/0
This course provides an overview of direct current, alternating current, digital logic, and semiconductor principles. Students will progress through lab modules witt emphasize hands-on measurements and evaluation of electrical circuits. Prerequisite(s): None

ETAS 1106 Digital Electronics 3 cr 2/1/0
This is a first course in Digital Electronics. The primary goals of this course are to help individuals acquire a fundamental knowledge of digital electronics, Boolean algebra, digital devices, analog to digital conversion and digital to analog conversion, and how to apply their knowledge and skills through problem solving, simulation and practical projects. Course equivalent Distance 360 Program CMAE 1554. Prerequisite(s): None

ETAS 1110 Design - Fabrication 3 cr 0/3/0
This course covers the tools and techniques used to design electronic products. Through a series of hands-on projects students will design and fabricate circuit boards using low volume techniques. Electronic symbols and package sizes along with various electrical connectors will be studied. Students will be introduced to 3D mechanical design software to model 3D parts, create 3D assemblies and produce accurate mechanical drawings. Prerequisite(s): None

ETAS 1510 Measuring Tools 2 cr 2/0/0
This course is composed of understanding basic elements utilized in a total quality environment in business and industry. Students will examine all aspects of basic measuring concepts and procedures used in industry. Prerequisite(s): None

ETAS 1560 Robotic Programming I 2 cr 1/1/0
This course provides a general overview of the functions of robotic equipment. In addition to the history of robotics, students will investigate emerging applications for robotic technology. This class will sample various equipment and programming languages used in mobile and industrial robotics. Prerequisite(s): ETAS2220

ETAS 2220 Microcontrollers I 4 cr 2/2/0
This course teaches students about microcontrollers by providing hands-on training. The block diagram, data and address busses, control lines and instruction set of microcontroller and associated systems will be studied. The theory needed to interface the microcontroller to external devices will also be studied. Students will program the microcontroller to do various input/output operations. This knowledge of the theory and hardware design of the micro-controller based system will be used in conjunction with programming to interface with external devices. Prerequisite(s): None

ETAS 2221 Sensor Technology 4 cr 3/1/0
This course covers control devices such as uni-junction transistor (UJTs), silicon controlled rectifier (SCRs), Diacs and Tiacs. It also covers sensing devices and circuits such as photoelectric sensors, temperature control devices, proximity sensors, position sensors, and proportional and sequential control circuits. Emphasis is on data research and documentation, circuit design, and technical report writing. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

ETAS 2224 Program Logic Controllers 4 cr 3/1/0
This course provides an introduction to programmable logic controllers (PLCs) with an emphasis on hardware and ladder logic programming. Students will utilize PLC wiring diagrams, input and output devices, timers, counters, and other ladder logic elements to create PLC controlled applications. Prerequisite(s): ETAS1106

ETAS 2228 New Technology 3 cr 2/1/0
This capstone course will allow students to investigate new and emerging technologies used in the electronics and automated systems industry. Students will design and build project(s) using these new technologies, as well as technology learned in earlier courses. Prerequisite(s): ETAS2220, ETAS2221, ETAS2224

ETAS 2230 Motor Controls 3 cr 2/1/0
This course introduces the learner to motor control components and provides them with a basic knowledge of control circuitry. The learner will build on his/her experiences from Basic Electricity by designing, building, and troubleshooting more complex circuits. Devices such as contactors, motor-starters, relays, timers, mechanical, and proximity switches are used. Electronic motor controls and programmable devices such as variable frequency drives are introduced and in this course. Course equivalent Distance 360¢ª Program CMAE1558. Prerequisite(s): ETAS1106

ETAS 2232 Microcontrollers II 4 cr 2/2/0
This course provides experience interfacing various peripheral devices with microcontrollers as well as experience using ”C” programming language. Students will progress through course topics by first examining example designs and programs. Provided with a detailed description of operation and a list of components, students will create functional microcontroller systems. This course emphasizes the use of product data sheets / manuals, circuit design, programming, debugging and troubleshooting. Prerequisite(s): ETAS2221

ETAS 2580 Hydraulics - Pneumatics 3 cr 2/1/0
This course examines the components of pneumatics and hydraulic systems, including the practical use and theory of each type of system and the integration of components. The course will also study prints and the symbols used to document pneumatics and hydraulic systems. Prerequisite(s): None

FIRE 1000 Fire Service Principles 1 cr 1/0/0
This course provides an overview of the broad spectrum of the fire service, from the selection process, fire and emergency services careers, the fire and rescue problem in the United States, history and future of the fire service, and the chemistry and physics of fire, to fire prevention, training, department administration, and emergency incident management. It will also familiarize students with the primary duties of the modern fire department, including fire suppression, fire prevention, public education, emergency medical service, hazardous materials response, wildland fires, and swift water and urban search and rescue. Prerequisite(s): None

FIRE 1010 Fitness 1 cr 0/1/0
This course enhances the students' knowledge on fire service fitness, health, and wellness. In this course, students will gain knowledge of basic exercise science, nutrition, fitness assessment, exercise programming, instructional and spotting technique. Prerequisite(s): None

FIRE 1020 Technical Rescue I 3 cr 1/2/0
This course covers most of the operational objectives and some technician objectives for Rope Rescue, Confined Space Rescue, and Trench & Excavation Rescue as set out in National Fire Protection Agency 1670, Operations and Training for Technical Search and Rescue Incidents. Students will demonstrate the ability to work in these types of incidents from the operational perspective. This is a hands-on class and will be limited in size to maintain a safe teaching and working environment. Prerequisite(s): None

FIRE 1030 Technical Rescue II 3 cr 1/2/0
This course covers most of the operational objectives for Water and Ice Rescue, Vehicle Rescue and Structural Collapse as set out in National Fire Protection Agency 1670, Operations and Training for Technical Search and Rescue Incidents. Students will demonstrate the ability to work in these types of incidents from the operational perspective. This is a hands-on class and will be limited in size to maintain a safe teaching and working environment. Prerequisite(s): FIRE1020

Course Number	Course Name	Credit	Lec/Lab/OJT

FIRE 1040 Firefighter I 6 cr 1/5/0
This course covers the objectives of the Minnesota State Fire Certification Board for certification as a Firefighter I. The Minnesota State Fire Certification board objectives are based on the National Fire Protection Association's (NFPA) 1001 Standard on Fire Fighter Professional Qualifications. This will prepare students to function at or above the minimum level of training for entry into a fire protection career field. Prerequisite(s): None

FIRE 1050 Fire Protection Const 2 cr 2/0/0
This provides the components of building construction related to firefighter and life safety. The elements of construction and design of structure are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Prerequisite(s): None

FIRE 1060 Fire Protection Systems 2 cr 2/0/0
This course provides a comprehensive and concise overview of the design and operation of alarm and detections systems, automatic fire sprinkler systems, special hazard fire protection systems, and security and emergency response systems. Prerequisite(s): None

FIRE 2000 Engine - Truck Functions 3 cr 1/2/0
This course covers the basic objectives of engine company work including the proper supply and use of water to fight fires and emphasizes that the engine companies should be focused on three major tactical priorities on the fire ground: life safety, extinguishment, and property conservation. And the basic objectives of ladder company work including the assignments of conducting a primary search, rescuing victims, forcing entry, and conducting proper ventilation techniques. Prerequisite(s): FIRE 1020

FIRE 2010 Fire Prevention 2 cr 1/0/1
This course provides a comprehensive and concise overview of the history and philosophy of fire prevention, the agencies and organization involved in the field today, and the regulatory aspects and functions associated with plan review, inspection, fire protection systems testing, and fire investigation. It also covers the elements of public education and community risk reduction, as well as the logistics of record keeping, staffing, and financial management. Students will also perform two separate 8 hour shifts of ride alongs with a career inspection and code enforcement professional. Prerequisite(s): None

FIRE 2020 Hazardous Materials 2 cr 1/1/0
This course teaches the necessary skills to protect oneself, fellow responders, and the public from exposure in a hazardous materials incident. Students will learn how to recognize and identify the presence of hazardous materials, the proper protective clothing to use, accepted decontamination procedures, how to establish an Incident Command System, and the proper standard operating procedures to maintain safety at the incident scene. The course follows chapters 4, 5, 6, and 7 of the National Fire Protection Association 472 standard, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Incidents. Prerequisite(s): None

FIRE 2030 Safety Survival 2 cr 1/1/0
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change through the emergency services. Prerequisite(s): FIRE 1040

FIRE 2040 Firefighter II 3 cr 1/2/0
This course covers the objectives based on the National Fire Protection Association's (NFPA) 1001 Standard on Fire Fighter Professional Qualifications chapter 5 Fire fighter II and NFPA 1410 Standard on Training for Emergency Operations in a scenario-based environment. This will prepare students to function at or above the minimum level of training for entry into a fire protection career field. The student will function as a member of a team to accomplish emergency scene goals and objectives. Prerequisite(s): FIRE 1040

FIRE 2050 Fire Apparatus Operator 3 cr 1/2/0
This course covers the objectives based on the National Fire Protection Association's (NFPA) 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications. It will define the main types of firefighting apparatus,

such as pumpers, aerial apparatus, rescue vehicles, and other support apparatus typically found in the fire service. It provides an overview of apparatus construction, especially fire pumps, apparatus operation, preventive maintenance, and water flow calculations. This course will also serve as an introduction to the duties and responsibilities of a fire apparatus operator. A large portion of this class will involve actual operation of fire apparatus. Prerequisite(s): None

FIRE 2060 Instructor I 2 cr 2/0/0
This course teaches individuals entering teaching or instructing situations the basic skills necessary to function effectively in a classroom or drill ground setting. Given a lesson outline and resources, the student will present the prepared materials in a classroom and or hand on training session. Prerequisite(s): None

FIRE 2070 Fire Behavior 2 cr 2/0/0
This course explores the theories and fundamentals of how and why fires start, spread, and are controlled. Prerequisite(s): None

FIRE 2080 Career Success 2 cr 1/0/1
This course will prepare the student for success in acquiring and maintaining a career in the fire service. Students will be exposed to several different experiences and areas of fire suppression while riding with a paid, full time fire department. They will also develop a cover letter and resume, prepare for written and oral examinations, and be presented with information in preparation of a career in the fire and emergency field. Prerequisite(s): None

FIRE 2263 Adv Vehicle-H2O Rescue 3 cr 1/2/0
This course covers the Technician Level information for Vehicle and Machinery Rescue and Water and Ice Rescue as set out in National Fire Protection Association (NFPA) 1670, Operations and Training for Technical Search and Rescue and NFPA 1006 Standard for Technical Rescuer Professional Qualifications. At the completion of this training, students should be capable of hazard recognition, equipment use, and techniques necessary to operate and supervise a vehicle/machinery and water or ice rescue incident. This course will provide students the ability to work most vehicle extrication, and water or ice scenes with an excellent level of confidence. This will be a hands-on course and will be limited in size in order to maintain a safe teaching and working environment. Prerequisite(s): EMTB1101, FIRE1130, FIRE1165

FIRE 2265 Adv Trench-Struc Rescue 3 cr 1/2/0
This course covers the Technician Level information for Structural Collapse and Trench Collapse Rescue as set out in the National Fire Protection Association (NFPA) 1670, Operations and Training for Technical Search and Rescue and NFPA 1006, Standard for Technical Rescuer Professional Qualifications. At the completion of this training, students will be capable of hazard recognition, equipment use, and techniques necessary to operate / supervise a structural collapse / trench rescue incident. This course provides students the ability to work on most of these incidents from a technician's perspective with confidence. This is a hands-on course and will be limited in size in order to maintain a safe teaching and working environment. Prerequisite(s): EMTB1101, FIRE1130, FIRE1165

FIRE 2267 Adv Con Space-Rope Rescue 3 cr 1/2/0
This course covers the Technician Level information for Confined Space and Rope Rescue as set out in National Fire Protection Association (NFPA) 1670, Operations and Training for Technical Search and Rescue and NFPA 1006, Standard for Technical Rescuer Professional Qualifications. At the completion of this training, students will be capable of hazard recognition, equipment use, and techniques necessary to operate at and supervise a confined space / rope rescue incident. This course provides students the ability to operate these types of incidents from a rescue technician's perspective with confidence. This is a hands-on course and will be limited in size in order to maintain a safe teaching and working environment. Prerequisite(s): EMTB1101, FIRE1130, FIRE1165

FYEC 1111 Pathways to Success 1 cr 1/0/0
The course is designed to promote both academic and personal success. Students will use tools, share techniques, and learn the strategies necessary to capitalize on opportunities and overcome challenges to achieve success throughout a lifetime of learning. Topics include personal responsibility, study skills, goal

setting, time management, personal well-being, and so on. Liberal Arts students should take the course during their first semester. Prerequisite(s): None

GEOG 2241 Physical Geography 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 10) This course emphasizes environmental elements of natural origin. Areas of concentration include soils, rocks, climates, the hydrosphere, plant and animal life, atmospheric conditions and their interrelatedness. Special attention will be devoted to natural and man-made disasters and their effects on natural life cycles. Prerequisite(s): None

GEOG 2242 Cultural Geography 3 cr 3/0/0
(Fulfills MNTC Areas: 7, 8) This is a survey of the impact the human species is having on the physical environment and how geographic habitat shapes human life quality and survival. Prerequisite(s): None

GINT 2403 GIS Interoperability 3 cr 2/1/0
This course is a study of Geographic Information Systems (GIS) that will give students exposure and hands on experience with a variety of Geospatial Information Technology (GIT) systems. Students will be able to identify different types of GIT systems and their interoperability. Students will analyze and apply GIT to industry applications. Prerequisite(s): None

GTEC 1108 Internet Literacy Skills 1 cr 1/0/0
This course prepares students in basic information literacy skills. It includes practical techniques for Internet browsing and searching; how to find, evaluate, manage and use information from various information resources, including online databases and the World Wide Web. It also includes information about social networking services and their role in the creation and sharing of information. Prerequisite(s): CPTR1100, or instructor approval

HEAT 1101 HVAC Circuit Theory 4 cr 2/2/0
This introductory course provides students with the knowledge of electrical theory including atomic structure, Ohm's Law, and electrical circuits as used in heating and cooling installations and appliances. Prerequisite(s): None

HEAT 1102 Sheet Metal Design 3 cr 2/1/0
This course covers sheet metal equipment, tools, materials, and layout procedures for the beginner to construct and install ductwork. Design fundamentals will be interpreted and installation procedures will be practiced in lab activities. Prerequisite(s): None

HEAT 1104 Control Electricity 2 cr 1/1/0
This course provides the student with an understanding of electromagnetism, sign wave principles, and resistive, inductive, capacitive and resonant circuits as related to the National Electrical Code. Prerequisite(s): Corequisite: HEAT1101

HEAT 1110 Refrig A/C - Heat Prin 3 cr 3/0/0
This course covers refrigeration theory of domestic refrigeration and introduction theory to commercial refrigeration and residential heating and air conditioning equipment, including controls and accessories. Prerequisite(s): None

HEAT 1128 Heat Sys Design - Install 3 cr 1/2/0
This course provides students with a technical understanding of heating system design and installation. Topics include heat loss calculations, heating systems selection and design, installation techniques, testing procedures, and operation of heating systems. Prerequisite(s): None

HEAT 2202 Air Handling 2 cr 1/1/0
In this course the dynamics of handling fluid masses of air will be studied. The focus will be on moving and replacing air at given velocities, quantities, and temperatures. Prerequisite(s): HEAT1104

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

HEAT 2206 Heating Sys Maintenance 2 cr 1/1/0
This course will demonstrate the correct guidelines within which a heating system is most efficient and longest lived. Students will also learn and practice the service techniques necessary to correct routine deficiencies in operation. Customer services and satisfaction will be covered, including maintenance contracts. Prerequisite(s): HEAT1104

HEAT 2210 Com Air Conditioning 2 cr 1/1/0
This course covers the operating principles and service procedures for commercial air conditioning systems. Students will perform common maintenance procedures, system operational tests, and will service components and system controls. Prerequisite(s): None

HEAT 2214 Hydronic Heating Sys 4 cr 2/2/0
This course covers the design, installation and maintenance of hot water heating in residential and light commercial applications. Special emphasis is on the basic concepts involved in delivering maximum comfort to the customer. Various heat sources, calculations, heat loading, and engineering goals are provided with specific examples. The relationship between heat and heat flow with water temperature and flow requirements are demonstrated with various mathematical examples. Prerequisite(s): HEAT1128 or PLBG1110

HEAT 2220 HVAC Troubleshooting 3 cr 1/2/0
This course builds student confidence in troubleshooting heating, ventilating, air conditioning systems and motor control circuits. While in the course, students learn troubleshooting techniques using simulators and computer-generated simulators and actual air conditioning equipment. Prerequisite(s): HEAT1110

HIST 1101 West Civ Pre-1500 4 cr 4/0/0
(Fulfills MNTC Areas: 5, 8) This course is a survey from the beginnings of the earliest human civilizations starting with ancient Egypt and Mesopotamia. Topics include the rise and collapse of ancient Greece and Rome, the barbarian invasions, medieval civilization and the rise of Islam. The course will conclude with upheavals of the middle ages such as the black death, witch crazes and colonial exploration. Prerequisite(s): None

HIST 1102 West Civ Post-1500 4 cr 4/0/0
(Fulfills MNTC Areas: 5, 8) This course is a survey of the rapid spread of Western influence through colonialism, the scientific revolution, absolute power concentrations, revolutions and the rise of capitalism, socialism and communism. The rise of modern nationalism and fascism, world wars and genocide, our nuclear and environmental dilemma will also be covered. Prerequisite(s): None

HIST 1103 World History Pre-1500 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course is a survey from the beginnings of the earliest human Civilizations to 1500 CE. Topics include the cultural, religious, economic, political, ecological, and social aspects of World Civilizations. This course will examine the ancient civilizations of Mesopotamia, Egypt, Greece and Rome, the Islamic World, Medieval Europe, West Africa, China, India, Southeast Asia, Oceania, and the Pre-Columbian Americas. Prerequisite(s): None

HIST 1114 World History Post-1500 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course is a survey from the Columbian Exchange to the present era (ca. 1500 to the present). Topics include colonialism, changes in religious patterns, Renaissance and Reformation Europe, the French Revolution, the Industrial Revolution, nationalism, the world wars, disintegration of colonial empires, the Cold War, and globalization. This course is a global and cross-cultural study of the modern period of world history. Prerequisite(s): None

HIST 2125 World Wars 1914-1945 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course explores the context, course, and consequences of the First and Second World Wars. Topics include the beginning of fascist and totalitarian states in Europe, nationalism in Asia, the impact of economic depression, the battlefield and home-front, the Holocaust, development of atomic weaponry. The course will trace diplomatic and military developments in the contexts of underlying political, social, cultural, and economic changes in a modernizing and post-war world. Prerequisite(s): None

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

HIST 2201 US History Pre-1865 3 cr 3/0/0

(Fulfills MNTC Areas: 5, 7) This course is an introduction to the early exploration, by Europeans, of what is now the United States. Topics covered include the ways of life in the early colonial days, factors leading to independence, the Revolutionary War, drawing up the Constitution, the strange war the new Nation did not win, the Age of Jackson, and the U.S. Civil War with its tragic aftermath of failed reconstruction. Prerequisite(s): None

HIST 2202 US History Post-1865 3 cr 3/0/0

(Fulfills MNTC Areas: 5, 7) This course is a survey of the post-Civil War United States from the Indian Wars and Wild West through the Progressive Era, The Roaring 20's, the Great Depression, two World Wars, the Cold War and its aftermath. Prerequisite(s): None

HIST 2210 Minnesota History 3 cr 3/0/0

(Fulfills MNTC Area: 5) This course provides an analysis of Minnesota's past beginning with geologic factors that influenced our heritage, an overview of Native Americans, and developments to the present. Areas covered include the period of French exploration and the fur trade, English domination, Minnesota from territorial status on through modern statehood. Prerequisite(s): None

HIST 2213 Civil War-Reconstruction 3 cr 3/0/0

(Fulfills MNTC Area: 5) The single greatest dividing point in the United States history was the Civil War. This conflict not only resulted in the deaths of over 600,000 people, but also eliminated a way of life, not only in the South but in the North as well. The immediate result of the Civil War was Reconstruction. Prerequisite(s): None

HIST 2215 American Indian Studies 3 cr 3/0/0

(Fulfills MNTC Areas: 5, 7) This course is a study of the history of the American Indian, especially the Plains Native Americans of the Upper Midwest from the pre-historic period to the end of the Indian Wars in 1890. The course will also include an introduction to legal issues, culture, and lifestyles as they relate to Native Americans. Prerequisite(s): None

HIST 2231 US Women's History 3 cr 3/0/0

(Fulfills MNTC Areas: 5, 7) This course is a survey of the history of women, across cultural boundaries, in the United States from the Colonial era to modern times. Students will analyze how race, class, age, and belief systems influence women's experiences and the way in which historical events often affect women and men differently. Constraints imposed on women will be examined in both the private and public realm. Economic and cultural barriers will be identified in the search to attain political, social, legal, economic, and sexual autonomy. Prerequisite(s): None

HIST 2250 American Minorities 3 cr 3/0/0

(Fulfills MNTC Areas: 5, 7) This course is an introduction to the roles and experiences of selected minority groups in the development of the American nation. Emphasis will be on the study of African Americans and Native Americans from early European contact to the present. Prerequisite(s): None

HIST 2299 Travel-Field Experience 3 cr 1-3/0/0

This course allows students to enhance their knowledge of a specific academic subject by traveling to a location and learning firsthand about the cultural, geographical, historical, or other characteristics of that area. Before departure on the trip, students will be required to attend one or more orientation sessions. Prerequisite(s): None

HLTH 1101 Intro Health Professions 3 cr 3/0/0

This course provides the opportunity to explore allied health professions and will prepare the students with the necessary knowledge and skills to make an informed decision in choosing a health field program of study. The students will learn about the requirements, roles and responsibilities of various occupations in the health field through faculty presentations, resource exploration and interviews. Students will explore the various ethical, legal and financial factors influencing the healthcare system and the settings where health professionals are

employed. Students will be encouraged to further their knowledge in a particular health career through participation in a shadowing experience or interview of a health professional. Prerequisite(s): None

HLTH 1105 Intro Cardiovascular Tech 3 cr 2/1/0
This course is designed to introduce students to Cardiovascular Technology as a profession. The course covers credentialing process, national standards, team roles, safety and basic cardiovascular assessment. The course will also include exercise stress testing and cardiac rehabilitation as well as observation of the cardiac catheterization laboratory. Prerequisite(s): None

HLTH 1106 Medical Terminology 2 cr 2/0/0
This course covers prefixes, suffixes, and word roots used to compose medical terms. Students learn to spell, pronounce, define, analyze, and formulate terminology related to body structure, disease, diagnosis, and treatment. Medical abbreviations are also covered. Prerequisite(s): None

HLTH 1108 Cultural Diversity 1 cr 1/0/0
This course examines the significance that culture has upon health beliefs and practices in our society. It emphasizes the "cultural sensitivity" component of the health care delivery system. Prerequisite(s): None

HLTH 1110 Nursing Assistant 3 cr 1/2/0
This course introduces concepts of basic human needs in simple terms. Students learn to assist residents in activities of daily living. Selected common technical nursing skills are introduced. Principles of body mechanics are emphasized. This course is intended to prepare for practice at the Nursing Assistant level. Prerequisite(s): Accuplacer scores: Reading 225, Arithmetic 240 (Math Lvl 1)

HLTH 1114 Intro Electrocardiography 2 cr 1/1/0
This course includes basic cardiac structure and development of the conduction system. Identification of the following patterns will be covered: sinus, atrial, junctional, ventricular, atrioventricular blocks, pacemaker and changes seen with electrolyte imbalance. An introduction to the 12 lead interpretation will be given. Content covered will include acute myocardial infarction recognition and localization, bundle branch blocks, atrial and ventricular hypertrophies, pericarditis and various changes seen with disease processes. Prerequisite(s): BIOL2260, BIOL2262, HLTH2002

HLTH 1120 Office Radiography 2 cr 2/0/0
This course teaches care providers the art and science of radiography. Emphasis is on x-ray production, basic radiation biology, radiation safety, film handling and processing and quality control. Prerequisite(s): None

HLTH 1126 Therapeutic Communication 2 cr 2/0/0
This course introduces students to strategies necessary to encourage therapeutic / helping relationships between health professionals and patients. Verbal and nonverbal communication techniques, therapeutic communication methods and common communication barriers will be explored. Specific communication strategies for various age groups and patient populations will be included. Prerequisite(s): None

HLTH 1140 Electronic Health Records 3 cr 2/1/0
This course covers the history, benefits, standards, functionality, security, and confidentiality as well as the impact of Electronic Health Records (EHR) in the healthcare environment. Students will have hands-on experience using EHR software to complete common work tasks in the health care setting. Prerequisite(s): None.

HLTH 2002 Pharmacology 2 cr 2/0/0
This course introduces students to basic pharmacological concepts, drug legislation, and drug categories. Emphasis is on commonly used drugs and their effects on body systems. Drug reference utilization is included. Prerequisite(s): Suggested: BIOL2260 or BIOL1004

HLTH 2208 Pathophysiology 3 cr 3/0/0

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): A grade of C or better in either BIOL1004 or BIOL2260 and BIOL2262, ENGL0095

HPER 1101 Bowling 1 cr 0/1/0

This course is available for those students who are interested in learning the life-long fundamental skills of bowling. Emphasis will be placed on proper footwork approach, delivery, scoring, history, and rules. Prerequisite(s): None

HPER 1108 Martial Arts 1 cr 0/1/0

Jujutsu is the traditional Japanese unarmed self-defense system of the Samurai warriors. This course teaches students the basic techniques of Jujutsu as well as the history and traditions associated with the art. Students will have the opportunity to attain Asian-accredited ranks in this course. This class is rigorous and physically demanding. Prerequisite(s): None

HPER 1110 Concepts of Phys Fitness 3 cr 3/0/0

This course introduces students to all of the components of physical fitness. Students will learn the benefits, methods and aspects of exercise. Students will also be introduced to methods and guidelines of fitness testing and programming. Other topics will include issues such as weight control, nutrition, and exercise of various special populations. Prerequisite(s): None

HPER 1111 Intro Exercise Science 2 cr 2/0/0

Explore the variety of educational and career pathways in the fields of Physical Education, Exercise Science, and Sport. After examining historical and philosophical foundations, students will explore professional expectations and opportunities in numerous careers such as teaching, coaching, fitness training, sport management, and many more. Prerequisite(s): None

HPER 1122 Yoga 1 cr 0/1/0

Yoga is a practice that has physical and emotional benefits. Students in this course will learn and perform various Yoga and relaxation/breathing techniques and a method to improve posture, flexibilty, balance and relieve stress. Prerequisite(s): None

HPER 1127 Strength Conditioning 1 cr 0/1/0

Students participate in strength training activities and learn to develop strength training programs to improve muscle strength and/or muscle endurance. Students are taught proper use of various strength training equipment with emphasis placed on technique. Prerequisite(s): None

HPER 1140 Personal-Community Hlth 3 cr 3/0/0

This course updates students on the problems that face everyone in the area of Personal and Community Health. Possible topics covered include: mental health, drugs, fitness, nutrition, sexuality, consumer education, environmental health, and death education. Prerequisite(s): None

HPER 1182 Varsity Volleyball 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and attend all practices and games as well as participate in activities which include individual, small, and large group work. Eligible based on NJCAA Rules, MCCC Regulations, and Pioneer Athletic Student Handbook. Course may be repeated for credit. Prerequisite(s): None

HPER 1183 Varsity Basketball 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and attend all practices and games as well as participate in activities which include individual, small, and large group work. Eligible based on NJCAA Rules, MCCC Regulations, and Pioneer Athletic Student Handbook. Course may be repeated for credit. Prerequisite(s): None

HPER 1184 Varsity Baseball 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and attend all practices and games as well as participate in activities which include individual, small, and large group work. Eligible based on NJCAA Rules, MCCC Regulations, and Pioneer Athletic Student Handbook. Course may be repeated for credit. Prerequisite(s): None

HPER 1185 Varsity Softball 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and attend all practices and games as well as participate in activities which include individual, small, and large group work. Eligible based on NJCAA Rules, MCCC Regulations, and Pioneer Athletic Student Handbook. Course may be repeated for credit. Prerequisite(s): None

HPER 1186 Varsity Golf 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and attend all practices and games as well as participate in activities which include individual, small, and large group work. Eligible based on NJCAA Rules, MCCC Regulations, and Pioneer Athletic Student Handbook. Course may be repeated for credit. Prerequisite(s): None

HPER 1187 Varsity Wrestling 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and attend all practices and games as well as participate in activities which include individual, small, and large group work. Eligible based on NJCAA Rules, MCCC Regulations, and Pioneer Athletic Student Handbook. Prerequisite(s): None

HPER 1188 Clay Target 1 cr 0/1/0

This course concentrates on the techniques and skills needed to shoot clay targets. Proper handling of the firearm, proper shooting procedure, and scoring will be taught in this class through participation in practices and competition events. Each student is expected to participate and attend all practices and competitions as well as participate in activities which include individual, small, and large group work. Eligibility will be based on Minnesota College Athletic Conference (MCAC) regulations and the Pioneer Athletic Student Handbook. Course may be repeated for credit. The course is required to participate on the Trap Shooting Team. There is a service charge to participation. Prerequisite(s): None.

HPER 1410 First Aid - CPR 1 cr 1/0/0

This course teaches American Heart Association First Aid course content and American Heart Association Basic Life Support Provider level. Prerequisite(s): None

HPER 2182 Varsity Volleyball II 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and demonstrate leadership in all practices and games as well as activities which include individual, small, and large group work. Prerequisite(s): HPER1182

HPER 2183 Varsity Basketball II 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and demonstrate leadership in all practices and games as well as activities which include individual, small, and large group work. Prerequisite(s): HPER1183

HPER 2184 Varsity Baseball II 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and demonstrate leadership in all practices and games as well as activities which include individual, small, and large group work. Prerequisite(s): HPER1184

HPER 2185 Varsity Softball II 1 cr 0/1/0

This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and demonstrate leadership in all practices and games as well as activities which include individual, small, and large group work. Prerequisite(s): HPER1185

Course Number	Course Name	Credit	Lec/Lab/OJT

HPER 2187 Varsity Wrestling II 1 cr 0/1/0
This course is available to members of the varsity team and non-varsity members with the instructor's permission. Each student is expected to participate and demonstrate leadership in all practices and games as well as activities which include individual, small, and large group work. Prerequisite(s): HPER1187

HPER 2200 Intro to Sport Mgmt 3 cr 3/0/0
This course will introduce students to the growing field of sport management. The responsibilities and competencies needed for a career in sport management will be presented. The course will examine the major areas of sport management including leadership, ethics, marketing, communications, budget and finance, economics, and governance. Prerequisite(s): None

HPER 2201 Psychology of Sports 2 cr 2/0/0
This course is an introduction to the psychological aspects of sport and exercise. Emphasis is on the theoretical, conceptual and applied aspects of human sport and exercise performance. Students will investigate the integration of the psychosocial, cognitive and biological components of performance. Prerequisite(s): None

HPER 2210 Intro to Kinesiology 2 cr 2/0/0
This course introduces students to the study of anatomy in relation to human movement. Students will identify major bones, their landmarks, major muscle origins, insertions and actions. Prerequisite(s): None

HPER 2235 Coaching Young Athletes 3 cr 3/0/0
The course focuses on specific topics concerning the coach and athlete, in the areas of administration, philosophy, psychology, sociology and sports physiology. It helps to develop a coaching philosophy and basic understanding of athletic administration and organization. Prerequisite(s): None

HPER 2244 First Responder 3 cr 3/0/0
This course is intended for persons who are responsible for giving emergency care to the sick and injured. This course fulfills the first aid requirements as required by the Minnesota Peace Officer Standards and Training Board. This course provides two certificates: American Heart Healthcare Provider (valid for two years) and Minnesota Emergency Medical Services Regulatory Board First Responder certification. Prerequisite(s): None

HPER 2250 Prevent-Care Athletic Inj 3 cr 2/1/0
This course provides information on the prevention and treatment of athletic injuries. Topics covered include principles of athletic conditioning, theory and practice of taping and bracing, and rehabilitation techniques, emergency situations, injury assessment and recognition and management of specific athletic injuries. Classroom situations allow students hands-on experience. Prerequisite(s): None. BIOL2260 recommended.

HPER 2270 Health and Wellness 3 cr 3/0/0
This course gives students an insight into the why, what, and how we can develop a healthy lifestyle. Students will develop a personal plan of action that includes nutrition, physical fitness, stress management, emotional, and spiritual well being. Prerequisite(s): None

HPER 2281 Officiating Sports 2 cr 2/0/0
This course is intended for those students who plan to become officials and/or coaches. It is also inteneded for those presently in the field who would like to be updated on the rules and techniques of officiating and learn these skills prior to becoming a coach. Prerequisite(s): None

HUMN 1101 Intro to Humanities 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6) This course serves as a general introduction to the role that humanities play in shaping humanity's conception of itself and society. This course serves to expand students' knowledge of the human condition and human cultures, especially the values expressed in works of human imagination and thought. This course also covers thinking skills by developing thinkers who are able to unify factual, creative, rational, and value-sensitive modes of thought. Prerequisite(s): None

IMAG 1101 Remote Sensing 3 cr 3/0/0

This course offers students an in-depth look at sensors and platforms used to collect over imagery. Students will learn electromagnetic radiation principles and the history of imagery collection. In this course, radar, lidar, panchromatic, multispectral, hyperspectral, and infrared remote sensing principles for imagery analysis will be introduced. Prerequisite(s): None

IMAG 1103 Imagery Software-Mapping 4 cr 4/0/0
This course will teach imaging software utilization in order to analyze and compare aerial images, maps, charts, and other geospatial data. Students will learn to use imagery interpretation techniques required to create specific workflows, coordinate multiple data sources, and integrate full spectrum geospatial tools. Additionally, students will interpret precise locations through the basic fundamentals of geodetic datum systems. They will learn imagery software exploitation skills and present findings in a professional, comprehensible report. Prerequisite(s): None

JOUR 1101 Mass Communications 3 cr 3/0/0
(Fulfills MNTC Area: 9) This course is an introduction to the ways news is gathered, written, and disseminated. Also emphasized are the history, nature, and functions of traditional news media such as newspapers, the broadcast media, and the internet, as well as communications agencies. Prerequisite(s): None

JOUR 1102 Intro Journalism 3 cr 3/0/0
This course is an introduction to journalistic writing formats used for the basic news story in newspapers. Also discussed will be news elements and values, news gathering methods, interviewing techniques, and an introduction to feature and human interest journalism formats. Basic layout and design as well as headline writing will be included. Prerequisite(s): ENGL1111, or permission of instructor.

JOUR 1181 College Publications 1 cr .5/.5/0
This seminar-type course is offered to students who have ability or potential ability to write for newspapers or other news media. It offers guidance in gathering news, writing, make-up, layout, headlines, advertising and photography used in publishing the College's campus newspaper. Also, computer software used for desktop publishing is taught in this course. May be repeated for credit. Prerequisite(s): Instructor Permission

MAPT 1101 Manufacturing Cmptr Apps 2 cr 2/0/0
This course covers various computer applications used to support manufacturing activities including maintenance, scheduling, project management, bill of materials generation, and data analysis. Spreadsheet and database management applications will be used for data analysis and the creation of graphs and charts. Students will use computer applications for project management to create Gantt charts, schedule resources and plan preventative maintenance tasks. Prerequisite(s): None

MAPT 1110 Mechanical Systems I 3 cr 1/2/0
This class introduces simple machines and mechanical advantage including levers, inclined planes, wheels, axles and pulleys. Concepts will be demonstrated by analyzing various machines in a series of laboratory experiments. Safe rigging and moving of heavy equipment will be covered. Prerequisite(s): None

MAPT 2110 Mechanical Systems II 3 cr 1/2/0
This course focuses on the industrial application of mechanical principles including bearings, screws, gears, pulleys, and levers. In the lab students will perform maintenance and repair tasks while analyzing equipment for factors such as speed, force, and torque relationships. Electric motor and drive systems will be emphasized. Additional topics include coupling, alignment, lubrication, and preventative maintenance. Prerequisite(s): MAPT1110

MAPT 2200 Fabrication Techniques 4 cr 1/3/0
This hands-on course teaches students the safe operation of common fabrication and maintenance equipment. This course provides an introduction to the drill press, table saw, sheet metal shear, brake, metal lathe, vertical mill, band saw, grinders, wire feed welders, and numerous hand tools. Students will reference mechanical drawings, practice basic measurement and layout techniques, fabricate materials, and use measurement tools to determine if the items meet the desired specifications. Prerequisite(s): None

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

MAPT 2585 Adv Hydraulic - Pneumatic 3 cr 2/1/0
This course examines electronic control of hydraulic and pneumatic systems. Students will troubleshoot solenoid operated directional control valves, proportional control systems, and various sensors. Pumps blowers, and vacuum systems will also be covered. Prerequisite(s): ETAS2224, ETAS2580

MAPT 2800 Automated Systems 3 cr 1/2/0
This course focuses on the diagnosis and repair of electro-mechanical systems. Industrial systems are comprised of motor controls, variable speed frequency drives, servo motors, programmable logic controllers, sensors, hydraulics, mechanical systems, and computer integration. Students will develop skills in troubleshooting and maintaining complex industrial systems. Prerequisite(s): MAPT2110, ETAS2224, ETAS2230

MATH 0080 Math Foundations 3 cr 3/0/0
This course helps students improve basic math skills and apply these skills to a variety of occupational programs and experiences. Topics include fractions, decimals, percents, ratios and proportions, powers and roots, and signed numbers. To successfully complete this course, students must achieve a grade of “C” or higher. Prerequisite(s): None

MATH 0090 Introductory Algebra 3 cr 3/0/0
This course is an introduction to algebraic concepts. Topics covered include absolute value, algebraic expressions and equations, polynomials, factoring, properties of exponents, application problems, and an introduction to functions. To successfully complete this course, students must achieve a grade of "C" or higher. Prerequisite(s): MATH0080 or appropriate Math assessment score.

MATH 0094 Pre-College Algebra 4 cr 4/0/0
This course is designed for those students with some algebraic background. This course covers basic polynomial operations, graphing linear equations and inequalities, solving systems of linear equations, writing equations of lines, rational expressions and equations, roots and radicals in expressions and equations, complex numbers, and solving quadratic equations. To successfully complete this course, students must achieve a grade of “C” or higher. Prerequisite(s): MATH0080 or appropriate Math assessment score.

MATH 0098 Intermediate Algebra 3 cr 3/0/0
This course covers graphing linear equations and inequalities, solving systems of linear equations, writing equations of lines, rational expressions and equations, roots and radicals in expressions and equations, complex numbers, and solving quadratic equations. To successfully complete this course, students must achieve a grade of “C” or higher. Prerequisite(s): MATH0090 or appropriate Math assessment score.

MATH 0103 Math Applic Nurse Support 1 cr 1/0/0
This course examines basic mathematical concepts as they apply to the nursing program. The course includes a review of mathematical operations, and measurement conversions. The course focuses on the skills and concepts needed for success in Math 1003. Prerequisite(s): None

MATH 0110 College Algebra Support 2 cr 2/0/0
Focuses on the skills and concepts needed for success in Math 1110. This course is for students concurrently enrolled in Math 1110. Students will receive extra support in arithmetic, algebra, problem solving, technology, and study skills. Prerequisite(s): appropriate Math assessment score. Corequisite: MATH 1110.

MATH 1001 Technical Mathematics 3 cr 3/0/0
This course examines basic mathematical topics as they apply to applications in a technical program. As such, specific topics and applications will vary depending on the target audience. The course includes a review of basic mathematical operations, simple equations, and measurement conversions using the dimensional analysis method. It then continues with the development of algebraic and/or trigonometric skills as they apply to that particular technical setting. Most concepts will be applied through course-specific problems. Prerequisite(s): MATH0080 or appropriate Math assessment score.

Course Number	Course Name	Credit	Lec/Lab/OJT

MATH 1003 Math Applications Nurses 2 cr 2/0/0
This course examines basic mathematical concepts as they apply to the nursing program. The course includes a review of mathematical operations, and measurement conversions. Specific skills covered include medication dosage calculations, fluid replacement, intravenous drug calculations, and titration of medications. Prerequisite(s): MATH 0080 with a C or better or appropriate Math assessment score.

MATH 1102 Contemporary Math 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 4) This is a Liberal Arts math course for students who wish to acquire a broad background in mathematics without taking a traditional math course. Content area includes but not limited to critical thinking, problem solving, symbolic logic, number theory, algebra, geometry, probability, and statistics. Prerequisite(s): MATH0090 or appropriate Math assessment score.

MATH 1106 Trigonometry 2 cr 2/0/0
(Fulfills MNTC Area: 4) This is a course designed to provide students with an adequate foundation in trigonometric functions, identities, solutions of triangles, inverse trigonometric functions, equations, complex numbers, and polar coordinates. Prerequisite(s): MATH0094, or MATH0098, or appropriate Math assessment score.

MATH 1110 College Algebra 3 cr 3/0/0
(Fulfills MNTC Area: 4) This course covers basic algebraic operations, linear and quadratic equations and inequalities, variation, functions and their graphs, binomial expansion, theory of equations, rational equations, conic sections, exponential and logarithmic functions, and systems of equations. Prerequisite(s): MATH0094, or MATH0098, or appropriate Math assessment score.

MATH 1111 College Algebra 4 cr 4/0/0
(Fulfills MNTC Area: 4) This course covers basic algebraic operations, linear and quadratic equations and inequalities, variation, functions and their graphs, binomial expansion, theory of equations, rational equations, conic sections, exponential and logarithmic functions, and systems of equations. Prerequisite(s): MATH0094, or MATH0098, or appropriate MATH assessment score.

MATH 1113 Pre-Calculus 5 cr 5/0/0
(Fulfills MNTC Area: 4) This is a first-year course designed for students who wish to enter the calculus track. Content includes equations and inequalities, polynomial and rational functions, exponential and logarithmic functions, analytic trigonometry, analytic geometry, and conic sections. Prerequisite(s): MATH0094, or MATH0098, or appropriate Math assessment score.

MATH 1131 Applied Calculus 3 cr 3/0/0
(Fulfills MNTC Area: 4) This course is an introductory conceptual calculus course with an overview of differential and integral calculus. Prerequisite(s): A grade of C or better in MATH1110 or MATH1113.

MATH 2203 Statistics 4 cr 4/0/0
(Fulfills MNTC Area: 4) This course covers the basic concepts of elementary statistics, including descriptive statistics, elementary probability, probability distributions, confidence intervals, hypothesis testing, correlation, chi-square tests, ANOVA, statistical inference, and linear and multiple regression. Prerequisite(s): A grade of C or better in MATH0094 or MATH0098 or MATH1102; or appropriate Math assessment score.

MATH 2231 Calculus I 4 cr 4/0/0
(Fulfills MNTC Area: 4) This course is a first in a sequence of courses designed to cover limits, continuity, differentiation and integration of algebraic and trigonometric functions, and applications of derivatives. Prerequisite(s): (MATH1106 and MATH1110), or MATH1113, or appropriate Math assessment score.

MATH 2232 Calculus II 4 cr 4/0/0
(Fulfills MNTC Area: 4) This course is a second in sequence of courses designed to cover differentiation and integration of transcendental functions, techniques of integration, applications of integration, sequences and series, polar coordinate system, and parametric curves. Prerequisite(s): MATH2231

Course Number	Course Name	Credit	Lec/Lab/OJT

MATH 2233 Calculus III 4 cr 4/0/0
(Fulfills MNTC Area: 4) This is the third in a sequence of courses covering calculus of several variables, partial differentiation, multiple integration, and vector calculus. Prerequisite(s): MATH2232

MKTG 1108 Customer Relations Mgmt 3 cr 3/0/0
Customer relationship management 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

MKTG 2116 Advertising 3 cr 3/0/0
This course acquaints 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

MKTG 2120 Supervisory Leadership 3 cr 3/0/0
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

MKTG 2200 Prin of Marketing 3 cr 3/0/0
This course introduces students to the dynamic field of marketing. This course is a comprehensive study of the traditional marketing principles and concepts and their application to a changing business world. Prerequisite(s): None

MKTG 2201 Prin of Sales 3 cr 3/0/0
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. Prerequisite(s): None

MKTG 2205 Prin of Retailing 3 cr 3/0/0
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

MKTG 2300 Marketing Research 3 cr 3/0/0
This course covers market research principles and procedures that are necessary for marketing professionals to be successful. Topics covered include survey methods and techniques, problem identification, data collection techniques, sample type and size, presentation of findings and using the internet as a source. Prerequisite(s): MKTG2200

MKTG 2304 Applied Sales Techniques 3 cr 2/1/0
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. Students apply strategies in sales communications, customer oriented selling, and sales management. Prerequisite(s): None

MKTG 2306 Small Business Mgmt 3 cr 2/1/0
This course provides a summary of many of the major issues faced by anyone starting a small business. Prerequisite(s): None

MKTG 2320 Marketing Management 3 cr 2/1/0
This course provides an overview of the critical aspects of marketing management. Emphasis is placed on applying marketing principles and strategies through case analysis and the development of a marketing plan. Prerequisite(s): MKTG2200

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

MKTG 2410 Social Media Marketing 3 cr 3/0/0
This course introduces students to the social media marketing field. This course is a comprehensive study of the online marketing principles and concepts and their application to a changing business world. Prerequisite(s): None

MKTG 2430 Digital Marketing I 3 cr 3/0/0
This course introduces students to digital marketing field. It will provide the basics and background needed to successfully complete Digital Marketing II. Prerequisite(s): None. Corequisite: MKTG2116

MKTG 2450 Digital Marketing II 3 cr 3/0/0
This course is a comprehensive study of the digital marketing principles and concepts and their application to a changing business world. It will allow the student to apply the concepts and critically analyze the digital marketing message and communication. Prerequisite(s): MKTG2430

MKTG 2900 Internship I 3 cr 0/0/3
For this course, projects, reports, and discussions are coordinated to relate to students' employment situations. Employment in an approved wholesale/retail marketing occupation, training verification, and evaluation are required of each student. A maximum of nine internship credits will apply toward graduation. Prerequisite(s): None

MKTG 2920 Internship II 3 cr 0/0/3
For this course, projects, reports, and discussions are coordinated to relate to students' employment situations. Employment in an approved wholesale/retail, marketing, customer relations occupation, training verification, and evaluation are required of each student. A maximum of nine internship credits will apply toward graduation. Prerequisite(s): None

MUSC 1110 Understanding Music 3 cr 3/0/0
(Fulfills MNTC Area: 6) Music is part of our daily lives and yet most people don't know how to discuss it. The intent of this introductory course is to give students the tools and the terms to describe what they are hearing when exposed to new music or when describing the music heard every day. This will be done by exploring music experienced in our daily lives through dance, celebrations, or movies. Music will come from Western Art Music, from across the globe, and through American popular music. Prerequisite(s): None

MUSC 1210 Rock Music thru Time 3 cr 3/0/0
(Fulfills MNTC Area: 6, 7) This introductory course focuses on American Rock music starting in the 1950's through to today and spends time on what led to the birth of Rock n Roll as well as its global offspring, especially from England. Music will be discussed within the social and historical context of diverse cultures in America and the development of diverse musical aesthetics with particular emphasis placed on the impact that African American men and women had on its development. Prerequisite(s): None

MUSC 1250 Music of Black America 3 cr 3/0/0
(Fulfills MNTC Area: 6, 7) This course focuses on the indelible impact the African musical and cultural aesthetic has had on the formation of America's contemporary music and popular culture. From its West African roots to today's Hip Hop, the course will examine Black American music including spirituals, blues, jazz, black symphonic and concert music, gospel, R&B, soul, funk, and rap through an exploration of the music, artistry, and the social dynamics of American society. This course is for all levels of musical ability, knowledge, and familiarity. Prerequisite(s): None

MUSC 1581 Chamber Choir 1 cr 0/1/0
Choral music from a variety of different styles, periods and cultures is prepared for public performance. At least one major performance is given a semester. Opportunities for solo and small ensemble work within the choir are available. This course may be repeated for credit. Prerequisite(s): None.

MUSC 1583 Community Band 1 cr 0/1/0

Instrumental music from a variety of different styles, periods and cultures is prepared for public performance. At least one major performance is given a semester. Opportunities for solo and small ensemble work within the band are available. This course may be repeated for credit. Prerequisite(s): None

MUSC 1587 Community Choir 1 cr 0/1/0
Choral music from a variety of different styles, periods and cultures is prepared for public performance. At least one major performance is given a semester. Opportunities for solo and small ensemble work within the choir are available. This course may be repeated for credit. Prerequisite(s): None

MUSC 1589 Special Ensemble 1 cr 0/1/0
Students will participate in various music performance ensembles including but not limited to African Drum Ensemble, Celtic Music Group, Recorder Ensemble, Vocal Jazz Ensemble well as Pep Band and Adult Beginner Band. At least one major performance is given a semester. Ensembles offered will be dictated by student interest and performance opportunities. This course may be repeated for credit. Prerequisite(s): None

MUSC 1610 Hands-on Music Basics 3 cr 3/0/0
(Fulfills MNTC Area: 6) This introductory course uses hands-on methods to learn music reading, writing, and analysis. Instruction is designed to develop knowledge of basic music notation and terminology. Knowledge of rhythm, key and time signatures, major and minor scales, and chord structure is demonstrated through class singing and percussion equipment, as well as entry level recorder, guitar, and piano. No performance occurs outside of class and learning is only done for personal enjoyment and class assessment. Prerequisite(s): None.

MUSC 1650 Group Guitar Lessons 2 cr 2/0/0
This course is a hands-on learning experience for students with no previous training in guitar. The course will cover the basics of guitar technique, the fundamentals of reading and playing chords, reading sheet music, and playing melodies on the guitar. Students are not required to do solo performances in this class. School equipment is available for all students. Prerequisite(s): None

MUSC 2110 Appreciating Jazz 3 cr 3/0/0
(Fulfills MNTC Area: 6, 7) Jazz is the first music created in America by Americans and reflective of American aesthetics and yet most people aren't aware of its connection to the country or its people. Students will be guided through the evolution of jazz by listening to representative examples and learning about its African and European heritages. The majority of jazz history is discussed and tied into relevant historical events and social context with an emphasis placed on listening to key music examples and learning about the pioneers who forged this American art form. Prerequisite(s): None.

MUSC 2250 Music of Latin America 3 cr 3/0/0
(Fulfills MNTC Area: 6, 8) This course explores the variety of music found throughout Central and South America as well as the Caribbean. Due to its syncretic (blended) nature, Latin music encompasses a wide variety of styles and cultures. Students will learn about many musical genres associated with specific countries and ethnic groups including indigenous and traditional music and expanding into today's popular music. This is an enjoyable, nonthreatening way to learn a little bit about the world and its people. Prerequisite(s): None

MUSC 2251 Private Voice Lessons 1 cr 1/0/0
This course is designed for students who wish to study vocal techniques in a private lesson situation. One thirty-minute lesson a week for 15 weeks is provided. Students are responsible for setting up lesson time before the semester begins. It may be repeated for credit. Prerequisite(s): None

MUSC 2261 Private Piano Lessons 1 cr 1/0/0
This course is designed for students who wish to study piano techniques in a private lesson situation. One thirty-minute lesson a week for 15 weeks is provided. Students are responsible for setting up lesson time before the semester begins. It may be repeated for credit. Prerequisite(s): None

MUSC 2271 Private Instrument Lesson 1 cr 1/0/0

This course is designed for students who wish to study instrumental techniques in a private lesson situation. One thirty-minute lesson a week for 15 weeks is provided. Students are responsible for setting up lesson time before the semester begins. It may be repeated for credit. Prerequisite(s): None

MUSC 2510 Music Around the World 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 8) Music exists in every culture ever studies. This class looks at a variety of culture groups from around the world, studying music pieces within the context of the groups' beliefs, uses, and purposes for that music as well as its historical, religious, or political context. Music terminology will be introduced to describe what is heard including addressing the basic music elements (rhythm, harmony, timbre, melody, and texture) and several new instruments that will be investigated throughout the course. This is an enjoyable, nonthreatening way to learn a little bit about the world around you and its people. Prerequisite(s): None

NSCI 1103 Geology 4 cr 3/1/0
(Fulfills MNTC Areas: 3, 10) This class is an introductory course in physical geology. Topics include a survey of common rocks and minerals, and an investigation of the geologic forces at work in our physical environment, including erosion, volcanoes, earthquakes and flooding. The class also investigates the geologic history of the earth and geological structure as illustrated in topographical mapping. Prerequisite(s): None

NSCI 1123 Astronomy 4 cr 3/1/0
(Fulfills MNTC Area: 3) This is a survey course in descriptive and modern astronomy, including a study of solar system and stellar formation, star and galaxy evolution, cosmology and study of the universe. Lecture and lab. Prerequisite(s): None

NSCI 2203 Environmental Science 4 cr 3/1/0
(Fulfills MNTC 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. This will allow for discussion and analysis of current topics related to those issues. Lecture and lab. Prerequisite(s): None

NURS 2110 Health Assess-Prof Skills 3 cr 2/1/0
This course uses classroom instruction, small group discussion and lab experiences to develop students' abilities to utilize the nursing process as a framework for completing holistic nursing assessments, identifying health needs across the life span, and developing individualized interventions. Theory emphasizes the principles and rationales of professional nursing skills necessary to problem solve relative to diverse situations. Prerequisite(s): Admission to AD RN program.

NURS 2121 Psychosocial Integrity 2 cr 2/0/0
This course describes and examines psychosocial issues, human responses to illness and theories related to the development of mental health and illnesses. Utilizing the therapeutic communication process, students will learn to assist patients as they adapt to alterations in health. Psycho-pharmacological and other therapeutic interventions are considered in the nursing care of patients/clients experiencing mental health concerns. Prerequisite(s): Admission to AD RN program.

NURS 2123 Nursing Interventions I 3 cr 2/1/0
This course builds on concepts, knowledge and skills introduced in practical nursing programs and the supporting sciences. A major focus is on the independent, delegated and collaborative nursing interventions administered to restore the individual back to homeostasis. Specific health topics include pain, genetics, fluid and electrolytes, respiratory, gastrointestinal, immune disorders, and surgery. Prerequisite(s): Admission to AD-RN Mobility Nursing program. Pre or Corequisite: college level Chemistry course, NURS2110.

NURS 2125 Clinical I 4 cr 0/4/0
This course prepares students to function in the clinical setting as professional nurses with emphasis on utilization of the nursing process and therapeutic relationships. Prerequisite(s): Admission to AD RN program, Co/prerequisites: NURS2110, NURS2121, NURS2123, and CHEM2205.

Course Number	Course Name	Credit	Lec/Lab/OJT

NURS 2131 Nursing Interventions II 3 cr 2/1/0
This course is designed to build on concepts, knowledge and skills introduced in Nursing Interventions I and the supporting sciences. A major focus is on the independent, delegated and collaborative nursing interventions administered to restore the individual to homeostasis. Specific health topics include cardiovascular, hematological, neuroendocrine, renal, reproductive health, and obstetrical disorders. Prerequisite(s): NURS2110 and CHEM2205.

NURS 2133 Professional Role 2 cr 2/0/0
This course addresses the integration and application of professional skills necessary for effective transition into the role of Registered Nurse (RN). Emphasis is placed on role transition and licensure success. Prerequisite(s): NURS2110, NURS2121, NURS2125. Corequisite: NURS2131, NURS2135

NURS 2135 Clinical II 4 cr 0/4/0
This course prepares students to function in the clinical setting as professional nurses with emphasis on advanced nursing skills, leadership and team building capabilities. Prerequisite(s): NURS2110, NURS2125. Corequisite: NURS2133.

OTAC 1001 Intro to OT 2 cr 2/0/0
This course provides an introduction to the profession of occupational therapy. The history, philosophical base and educational requirements, licensure and certification requirements of the profession are discussed. An introduction to basic concepts such as occupation in context to promote health and prevention, role of Occupational Therapist (OT) and Occupational Therapy Assistant (OTA) , professional associations, and professional relationships are covered. The course covers the Occupational Therapy Practice Framework, the Occupational Therapy therapeutic process, activity analysis, adaptation and grading. Ethics and Standards of Practice will be introduced. Prerequisite(s): None

OTAC 1115 Disability-Disease Proc 2 cr 2/0/0
This course will examine normal development from infancy to adulthood. Emphasis will be on clinical conditions commonly referred to Occupational Therapy that interrupt development and engagement in occupation throughout the lifespan. Basic theories related to remediation of body structure and function through engagement in occupation will be discussed. Emphasis is placed on independent and active learning with emphasis on developing skills for lifelong learning. Students will be provided opportunities to work collaboratively intra-professionally. Students will be evaluated and will evaluate themselves on their professional behavior through-out the semester to assist them in developing and enhancing their professionalism as a health professional. Prerequisite(s): OTAC1001, PSYC2201, BIOL2260, HLTH1106.

OTAC 1130 OTA Foundations 4 cr 3/1/0
This course focuses on the foundational skills needed to practice as an occupational therapy assistant. Students will be able to explain the occupational therapy process, differentiate between the roles of an Occupational Therapy Assistant (OTA) and an Occupational Therapist (OT), and complete professional documentation. Students will participate in independent and active learning with emphasis on developing skills for lifelong learning. Students will understand evaluation in both physical and psychosocial areas and will identify evidence-based practice and occupation-based treatment ideas in both physical and psychosocial areas. Students will be provided opportunities to work collaboratively inter-professionally and intra-professionally and will gain the foundational skills necessary to develop professional behaviors to be successful as an occupational therapy assistant. Prerequisite(s): OTAC1001, BIOL2260, HLTH1106, PSYC2201

OTAC 1145 Scholarship I 1 cr 1/0/0
This course will allow students to develop the necessary skills needed to locate appropriate resources, interpret, and apply this knowledge to the practice of occupational therapy. This course focuses on skills needed to be a consumer of research and promotes the use of Evidence Based Practice (EBP) throughout the occupational therapy process. Foundations for ethical reasoning are built and concepts of collaboration will be introduced. Opportunities for independent and active learning are provided throughout the course with emphasis on skills for lifelong learning. Involvement in the OTA Club is also a requirement of this course. Prerequisite(s): OTAC1001, PSYC2201, BIOL2260, HLTH1106.

OTAC 1155 Movement for Occupations 3 cr 1/2/0

This course focuses on learning about muscle function, muscle strength, muscle endurance, functions of joints and bones, innervations and the movement needed to allow people to complete their everyday occupations. Students will examine types of muscle contractions and joint movements during occupation based activities through muscle activity analysis. The students will identify evidence based practice treatment ideas for various health conditions that affect the neuromusculoskeletal system. The students will have opportunities for independent and active learning through-out the course with emphasis on skills for lifelong learning. Prerequisite(s): OTAC1001, PSYC2201, BIOL2260, HLTH1106.

OTAC 2015 Ped Community Practice 2 cr 1/1/0

This course focuses on children and adolescent's through early adulthood populations engaging in occupations in context. The role of occupational therapy within community systems is addressed. Emerging roles of occupational therapy assistants (OTA) in the community are explored as well as the roles of the OTA versus the role of the Occupational Therapist (OT). Students complete labs in community practice and are required to articulate the role of occupational therapy to individuals in the community settings Emphasis is placed on independent and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively, inter-professionally and intra-professionally and to develop and enhance professionalism as a health professional. Prerequisite(s): OTAC1115

OTAC 2025 Ped Physical Health 5 cr 2/2/1

This course focuses on occupational therapy evaluation, treatment, and implementation from birth to young adult. Normal development and interruption of physical function with this age group will be explored. This population will be evaluated, occupation based evidence based practice will be identified and implemented. Roles of occupational therapy assistants (OTA) and the role of the Occupational Therapist (OT) in the Occupational Therapy process are explored. Emphasis is placed on independent and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively inter-professionally and intra-professionally and to develop and enhance professionalism as a health professional. Students will be required to complete one level 1 fieldwork experience in a Physical Health setting with corresponding age group. Prerequisite(s): OTAC1130

OTAC 2035 Ped Psychosocial 5 cr 2/2/1

This course focuses on normal development and impairment of global and specific mental function for individuals from birth through early adulthood. Occupational therapy evaluation, treatment, and implementation, normal development and interruption of function with this age group will be explored. This population will be evaluated and occupation based evidence based practice will be identified and implemented. Roles of occupational therapy assistants (OTA) and the role of the Occupational Therapist (OT) in the Occupational Therapy process are covered. Emphasis is placed on independent and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively intra-professionally and to develop and enhance professionalism as a health professional. Students will be required to complete one level 1 fieldwork experience in a setting with the focus on psychosocial and social factors that influence engagement in occupation with corresponding age group. Prerequisite(s): OTAC1130

OTAC 2045 Scholarship II 2 cr 2/0/0

This course requires students to evaluate and interpret professional resources to assist in developing their clinical reasoning skills. The students will utilize the skills learned in Scholarship I to analyze and critique scholarly work and apply this information to Occupational Therapy (OT) practice. Application of ethical principles and behavior are used in the analysis of scholarly work and the exploration of emerging practice areas in OT. Emphasis is placed on independent and active learning. Involvement in the OTA Club is also a requirement of this course. Prerequisite(s): OTAC1145

OTAC 2115 Adult Community Practice 2 cr 1/1/0

This course focuses on early adulthood through senescence populations engaging in occupations in context. The role of occupational therapy within community systems is addressed. Emerging roles of occupational therapy assistants (OTA) in the community are explore as well as the roles of the OTA versus the role of the Occupational Therapist (OT) in the community. Students complete labs in community practice and are required to articulate the role of occupational therapy to individuals in the community settings. Emphasis is placed on independent

and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively inter-professionally and intra-professionally and to develop and enhance professionalism as a health professional. Prerequisite(s): OTAC2015

OTAC 2125 Adult Physical Health 5 cr 2/2/1
This course focuses on occupational therapy evaluation, treatment, and implementation from young adulthood through senescence. Normal development and interruption of physical function with this age group will be explored. This population will be evaluated, occupation based evidence based practice will be identified and implemented. Roles of occupational therapy assistants (OTA) and the role of the Occupational Therapist (OT) in the Occupational Therapy process are explored. Emphasis is placed on independent and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively, inter-professionally and intra-professionally and to develop and enhance professionalism as a health professional. Students will be required to complete one level 1 fieldwork experience in a physical health setting with corresponding age group. Prerequisite(s): OTAC2025

OTAC 2135 Adult Psychosocial 5 cr 2/2/1
This course focuses on normal development and impairment of global and specific mental function for individuals from early adulthood through senescence. Occupational therapy evaluation, treatment, implementation, normal development and interruption of function with this age group will be explored. This population will be evaluated and occupation based evidence based practice will be identified and implemented. Roles of occupational therapy assistants (OTA) and the role of the Occupational Therapist (OT) in the Occupational Therapy process are covered. Emphasis is placed on independent and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively intra-professionally and to develop and enhance professionalism as a health professional. Students will be required to complete one level 1 fieldwork experience in a setting with the focus on psychological and social factors that influence engagement in occupation with corresponding age group. Prerequisite(s): OTAC2035

OTAC 2145 Scholarship III 1 cr 1/0/0
This course allows the student to further promote scholarship through professional development and by the integration of academic learning in the completion of a capstone project. The students will utilize the skills learned in Scholarship I and II to analyze and critique scholarly work, apply this information to Occupational Therapy (OT) practice, and present this information utilizing professional and ethical behavior via a capstone project. Emphasis is placed on independent learning to promote skills to develop students into lifelong learners. Involvement in the OTA Club is also a requirement of this course. Prerequisite(s): OTAC2045

OTAC 2155 Professional Topics 2 cr 2/0/0
This course focuses on Occupational Therapy (OT) professional ethics, values and responsibilities. The course covers development of personal and professional development plans, resumes, and promotion of the profession. Emphasis is placed on independent and active learning with focus on developing skills for lifelong learning. This course provides an opportunity to work collaboratively intra-professionally and to develop and enhance professionalism as a health professional. Prerequisite(s): None

OTAC 2225 Physical Health Fieldwork 6 cr 0/0/6
The student will participate in an eight week supervised clinical experience in a physical health setting. Knowledge and skills learned from previous courses are applied when working with clients and staff in a clinical setting. Students are supervised by an Occupational Therapist (OT) and/or an Occupational Therapy Assistant (OTA) and will have opportunities to work intra and inter professionally throughout the 8 week fieldwork. Students will share their knowledge of evidence based practice with others during their placement to promote lifelong learning. Prerequisite(s): OTAC2125

OTAC 2235 Psychosocial Fieldwork 6 cr 0/0/6
The student will participate in an eight week supervised clinical experience in a setting where they will be addressing the psychosocial aspects of the clients. Knowledge and skills learned from previous courses are applied when working with clients and staff in a clinical setting. Students are supervised by an Occupational Therapist (OT) and/or an Occupational Therapy Assistant (OTA) and will have opportunities to work intra and

inter professionally throughout the 8 week fieldwork. Students will share their knowledge of evidence based practice with others during their placement to promote lifelong learning. Prerequisite(s): OTAC2135

PHIL 1101 Intro to Philosophy 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6) This course is a general introduction to the approach, questions, and schools of the philosophic tradition through an examination of various issues central to our understanding of the nature of knowledge, reality, and the good human life. Prerequisite(s): None

PHIL 1102 Intro to Ethics 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6, 9) This course is a general introduction to ethics. The course examines theoretical explanations of the nature of morality and the moral assessment of actions, agents, and states of affairs. It also applies these explanations to contemporary moral issues. Prerequisite(s): None

PHIL 1111 Philosophy of Religion 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 8) The philosophical study of religion includes identifying concepts central to religious traditions and examining arguments concerning philosophical issues that arise within religious contexts. Some examples of core concepts and issues that may be discussed are the nature of religious experience, the rationality of religious belief, and the ethical implications of religious views. Prerequisite(s): None

PHIL 2000 Logic 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 4) This course is a general introduction to logic, focusing on logical concepts (such as validity and consistency) and formal logical systems. Students learn how to apply concepts and work proofs in the formal systems and how to translate between the formal systems and English. Prerequisite(s): MATH0080 or appropriate Math assessment score.

PHIL 2210 Morals and Medicine 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 6, 9) This course is a general introduction to ethical 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 within 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

PHIL 2220 Environmental Ethics 3 cr 3/0/0
(Fulfills MNTC Areas: 2, 9, 10) This course provides a broad introduction to ethical issues relating to the environment and human's impact on it. The course examines several general theoretical approaches to moral problems and applies those explanations to issues of local, national, and global concern. Examples of such issues include, but are not limited to, management of natural resources, climate change, sustainability, energy production and use, pollution and waste, genetic modification, and animal rights. Prerequisite(s): None

PHIL 2240 Ethics and Business 3 cr 3/0/0
(Fulfills MNTC Area: 8, 9) This course is a general introduction to ethical issues as they arise in the practice of business for owners and workers, as well as the impact those practices have on our culture and everyday lives. In addition to developing an understanding of moral theories and principles, students develop an understanding of how moral theories and principles relate to their lives through the study relevant moral issues. Examples of such topics include, but are not limited to, corporate social responsibilities, globalization, employee responsibilities, discrimination in the workplace, affirmative action, intellectual property issues, whistle blowing, and the ethics and impact of advertising. Prerequisite(s): None

PHLB 1104 Phlebotomy Procedures 2 cr 2/0/0
This course covers an understanding of ethical codes of the health care system, basic operation and organizational structure of a laboratory, effective communication skills, knowledge of phlebotomy methods and procedures, safety practices, quality assurance, organizational skills and sample collection criteria necessary to be successful as a phlebotomist. Students enter patient, or donor, information, often interfaced with computers, and communicate with the entire health care team and public to ensure quality care for patients and donors. Prerequisite(s): None. Corequisite: PHLB1105, PHLB1106

PHLB 1105 Phlebotomy Lab Skills 1 cr 0/1/0
This course covers the laboratory skills required of a phlebotomist. Students will apply current laboratory safety and infection control practices while performing routine clinical laboratory specimen collection and processing. Waived laboratory testing will also be performed. Prerequisite(s): None. Corequisite: PHLB1104, PHLB1106

PHLB 1106 Clinical Phlebotomy Inter 3 cr 0/0/3
The clinical internship will implement skills learned in the Phlebotomy Procedures course. Students are assigned to an affiliated hospital or clinic laboratory. Prerequisite(s): None. Corequisite: PHLB1104, PHLB1105

PHRM 1001 Fund Concepts of Pharmacy 1 cr 1/0/0
This course introduces students to the organization and function of the hospital and retail pharmacy. Emphasis is placed upon the duties and responsibilities of the pharmacy technician. Prerequisite(s): ENGL0095, MATH0098, or appropriate assessment scores.

PHRM 1002 Pharmacy Calculations 2 cr 2/0/0
This course introduces the student to the calculations required to accurately prepare patient medication for distribution. Prerequisite(s): ENGL0095, MATH0098, or appropriate assessment scores.

PHRM 2001 Pharmacy Prin-Prac I 4 cr 2/2/0
This course covers drug names, classifications and mechanisms of action, the use of computers in pharmacy and their practical applications. Students will be introduced to hospital and retail dispensing techniques as well as basic customer service. Prerequisite(s): ENGL0095, MATH0098, or appropriate assessment scores.

PHRM 2002 Pharmacy Prin-Prac II 5 cr 2/3/0
This course covers intravenous drug admixture, total parenteral nutrition compounding, critical care intravenous admixture, and unit dose medication dispensing to nursing units. Emphasis is placed upon medication storage and stability, diabetic supplies, and chemotherapy storage and admixture. Prerequisite(s): PHRM1001, PHRM1002, PHRM2001

PHRM 2004 Professional Prac-Law 3 cr 2/1/0
This course introduces pharmacy law and subjects pertaining to professional practice, including compounding products, resumes and interviewing, and reimbursement for pharmacy services. Prerequisite(s): PHRM1001, PHRM1002, PHRM2001

PHRM 2010 Experiential-Hospital 3 cr 0/0/3
This supervised instructional experience in the clinical setting introduces students to tasks performed by the pharmacy technologist. Prerequisite(s): All required courses.

PHRM 2012 Experiential-Retail 3 cr 0/0/3
This supervised instructional experience in the clinical setting introduces students to tasks performed by the pharmacy technologist. Prerequisite(s): All required courses.

PHYS 1111 General Physics I 4 cr 3/1/0
(Fulfills MNTC Area: 3) This is the first of the introductory physics sequence with laboratory. This course gives a general theoretical and practical introduction to physics. Topics include: mechanics and gravitation, work and energy, heat and thermodynamics, vibrations and waves, electricity and magnetism, light and optics. A background in trigonometry is necessary. Prerequisite(s): Appropriate Math assessment score.

PHYS 1112 General Physics II 4 cr 3/1/0
(Fulfills MNTC Area: 3) This is a continuation of the introductory physics sequence with laboratory. Topics include: mechanics and gravitation, work and energy, heat and thermodynamics, vibrations and waves, electricity and magnetism, light and optics. Prerequisite(s): PHYS1111

Course Number	Course Name	Credit	Lec/Lab/OJT

PHYS 2211 Physics I 5 cr 4/1/0
(Fulfills MNTC Area: 3) This course is the first of the calculus-based physics sequence with laboratory. Topics of the sequence include: mechanics and gravitation, work and energy, heat and thermodynamics, vibrations and waves, electricity and magnetism, light and optics. Prerequisite(s): MATH2231 or concurrent

PHYS 2212 Physics II 5 cr 4/1/0
(Fulfills MNTC Area: 3) This course is a continuation of the calculus-based physics sequence with laboratory. Topics of the sequence include: mechanics and gravitation, work and energy, heat and thermodynamics, vibrations and waves, electricity and magnetism, light and optics. Prerequisite(s): PHYS2211

PLBG 1104 Bldg Sewers-Drainage Sys 3 cr 1/2/0
This course covers practical experience in the installation of sewers and drain piping by learning methods for 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. Corequisites: PLBG1108, PLBG1110, PLBG1112

PLBG 1108 Plumbing-Piping Drawings 2 cr 1/1/0
This course provides students with the technical understanding and skills in blueprint reading and product spec sheets needed by plumbers. Topics include drawing interpretation, isometric sketches of piping installations, and drafting mechanical plans of piping for residential construction. Prerequisite(s): None. Corequisites: PLBG1104, PLBG1110, PLBG1112

PLBG 1110 Copper Pipe Procedures 2 cr 1/1/0
This course provides students with the technical knowledge and skills for completing copper and crossed-linked polyethylene (PEX) piping procedures. Topics include safety, appropriate usage, properties of copper/PEX, sizes and weights of pipe, tubing, and fittings including flared and compression types, soldering and brazing techniques for copper pipework and PEX crimp fittings. Prerequisite(s): None. Corequisites: PLBG1104, PLBG1108, PLBG1112

PLBG 1112 Plastic Pipe Procedures 2 cr 1/1/0
This course provides students with an understanding and skills for completing plastic piping procedures. Topics include safety, joining drainage, waste, vent, water and distribution piping, chemical usage, and applicable Minnesota State Plumbing Code for plastic piping procedures. Prerequisite(s): None. Corequisites: BLDG1102, BLDG1106, BLDG1114, PLBG1104, PLBG1108, PLBG1110

PLBG 1114 Steel Pipe Procedures 3 cr 2/1/0
This course provides students with an understanding and skills for completing steel pipe and corrugated stainless steel gas pipe procedures. Topics include appropriate usage, fittings, safety, tools, equipment, and skill development in cutting, threading, fabricating steel piping systems, and termination of corrugated stainless steel piping. Prerequisite(s): BLDG1102

PLBG 1116 Plumbing Theory-Sys 3 cr 2/1/0
This course provides students with principles and experience for plumbing systems. Topics include construction and testing of sanitary drains, vent systems, and storm drains, installation of piping and fixtures for water supply, function and operation of fixtures and appliances in modern plumbing systems. Prerequisite(s): BLDG1102

PLBG 1118 State Plbg Code Interpret 1 cr 1/0/0
This course provides students 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

PLBG 1120 Residential Plbg Install 3 cr 0/3/0
This course provides students with practical experience in the safe installation of drain, waste, and vent piping systems, residential plumbing fixtures and appliances. Prerequisite(s): BLDG1102

PLBG 1122 Plbg Repair-Service Work 2 cr 1/1/0
This course provides students with practical experiences in repair, maintenance, and servicing of plumbing systems common to a variety of settings. Prerequisite(s): BLDG1102

PLSC 1101 Intro Political Science 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course acquaints students with basic concepts of the study of government and politics. Students will examine political institutions, structures and governmental processes from a global perspective as well as the issues and ideologies that have influenced international politics during the twentieth century. Prerequisite(s): None

PLSC 1102 American Govt-Politics 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 9) This course is a study of the structure and functions of government at the national level and the relationship of the government to other social institutions and to the individual. Federalism, constitutionalism, interest groups, the media, parties and campaigns are among the topics that will be addressed. Prerequisite(s): None

PLSC 1103 State-Local Government 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 9) Governmental forms and practices among the many states and localities are compared and analyzed. Particular attention is placed upon Minnesota political structures, practices and current issues. Prerequisite(s): None

PLSC 1181 Student Senate 1 cr
This course introduces students to student government and its function in a college setting. Prerequisite(s): None

PLSC 2202 International Relations 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course acquaints students with general principles and processes operating in contemporary global politics. Considerable attention is devoted to current international affairs. Prerequisite(s): None

PLSC 2204 Comparative Governments 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 8) This course is an analytical evaluation of the various structures of governments around the world including parliamentary, federated, centralized and decentralized systems. Special emphasis is placed on the manner in which these governments compare with the government of the United States. Considerable attention will be devoted to current international events. Prerequisite(s): None

PLSC 2221 Civil Liberties 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 9) This course is the history of the U.S. Constitution. Civil Liberties is a course designed to examine the relationship through time between the government and the individual as proposed under the U.S. Constitution. Topics will include freedom of expression, freedom of religion, the right to privacy, equal protection of the laws, and the right to vote. The focus of the course will include the review of U.S. Supreme Court decisions in which constitutional protections are interpreted. Prerequisite(s): None

PNSG 1250 Intro Practical Nursing 1 cr 1/0/0
This course introduces the student to critical thinking, decision making, and priority setting skills that are essential for the success of a practical nurse. Additional topics covered will be nutrition and growth and development across the life span. Prerequisite(s): Pre-requisites: Acceptance into the NCTC Practical Nursing Program, HLTH1106, HLTH1110, MATH1003, BIOL2260, BIOL2262, ENGL1111. Corequisites: PNSG1254, PNSG1258, PNSG1262, PNSG1266.

PNSG 1254 Nursing Foundations 4 cr 3/1/0
This course provides an introduction to theoretical foundation for focused assessment and nursing skills to diverse populations. The student is given an opportunity to demonstrate these skills in the laboratory setting. The key concepts of teamwork and collaboration, safety, quality improvement, professional identity /behavior, client/relationship centered care, nursing judgment/evidence based practice, managing care of the individual client skills, and informatics/technology are introduced. The skills included are: vital signs, oxygen saturation,

focused physical assessment, infection control, end-of-life and documentation. Prerequisite(s): Prerequisites: Admission to NCTC Practical Nursing Program, BIOL2260, BIOL2262, ENGL1111, HLTH1110, HLTH1106, MATH1003. Corequisites: PNSG1250, PNSG1258, PNSG1262, PNSG1266.

PNSG 1258 Psychosocial 2 cr 2/0/0
This course introduces the students to concepts of mental health and illness. Topics covered include therapeutic communication, and maladaptive behaviors related to psychiatric, emotional, and mental disorders. Prerequisite(s): Prerequisites: Acceptance into NCTC Practical Nursing Program, HLTH1110, HLTH1106, MATH1003, BIOL2260, BIOL2262, ENGL1111. Corequisites: PNSG1250, PNSG1254, PNSG1262, PNSG1266.

PNSG 1262 Nursing Concepts I 5 cr 3/2/0
This course introduces the health/illness concepts the Practical Nursing (PN) curriculum is based on, and the nursing concepts utilized in the provision of basic nursing care to a diverse population. The course incorporates the nursing process and evidenced based care. Application of pathophysiology, nutrition and pharmacology are applied to specific exemplars. Concepts included are fluid and electrolytes/acid base balance, gas exchange, perfusion, immunity/inflammation/infection, tissue integrity, elimination, mobility, sensory perception/intracranial pressure, metabolism/hormone regulation and client education/promotion. Introductory exemplars related to nursing care are addressed within each concept. Skills included are: blood glucose monitoring, medication administration, specimen collection, wound care and/or dressing change, wound drainage, remove wound/suture/staples/drainage devices, irrigation of eyes/nose/ears, insert/maintain/remove urinary catheter, ostomies, set up sterile field, and catheter irrigation. Prerequisite(s): Prerequisites: Admission to NCTC Practical Nursing Program, BIOL2260, BIOL2262, ENGL111, HLTH1106, MATH1003, HLTH1110.
Corequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1266.

PNSG 1266 Clinical Care I 1 cr 0/1/0
This course creates an opportunity to provide safe and efficient care within the scope of practice for practical nursing. Students will apply the foundational nursing concepts utilized in the provision of basic nursing care to a diverse population. The course incorporates the nursing process and evidenced based care. Students are expected to apply knowledge and skills gained from required previous courses to the clinical setting. Prerequisite(s): Prerequisites: Admission to NCTC Practical Nursing Program, BIOL2260, BIOL2262, ENGL1111, HLTH1110, HLTH1106, MATH1003, Current Healthcare Provider/Professional Rescuer CPR. Corequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1262.

PNSG 1270 Transition to Practice 1 cr 1/0/0
This course provides students with an overview of the scope of nursing practice within health care systems. Focused areas include: professionalism, healthcare organizations, leadership, National Council Licensing Exam - Practical Nursing (NCLEX-PN) preparation, and resume development. Transition to the graduate practical nursing role and continuing education will also be incorporated. Prerequisite(s): Prerequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1262, PNSG1266. Corequisites: PNSG1274, PNSG1279, PNSG1283, PNSG1286.

PNSG 1274 Maternal-Newborn 1 cr 1/0/0
This course develops students' awareness of individual health needs relating to maternal-newborn health and the role of the nurse in healthcare. Focus areas will be on pregnancy and immediate needs of the newborn through thirty days of age. Prerequisite(s): Prerequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1262, PNSG1266. Corequisites: PNSG1270, PNSG1279, PNSG1283, PNSG1286.

PNSG 1279 Invasive Nrsing Therapies 3 cr 1/2/0
This course focuses on the skills and knowledge needed by the practical nurse in areas of advanced invasive therapies. Course information is presented through the use of assigned readings, lectures and demonstrations. Concepts included are: fluid and electrolytes, nutrition, infection/inflammation/immunity and gas exchange. Evaluation of students' objective mastery and skills competency will be achieved through students' successful completion of assignments, tests, and return demonstration. Skills included are: IV skills (insertion, maintenance, removal, medications), NG, feeding tubes, enteral tubes, chest tube drainage, and care for client with trach.

Prerequisite(s): Prerequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1262, PNSG1266. Corequisites: PNSG 1270, PNSG1274, PNSG1283, PNSG1286.

PNSG 1283 Nursing Concepts II 5 cr 5/0/0
This course builds on the foundational knowledge gained from prerequisite nursing courses. Outcomes focus on expanding students¿ knowledge and exposing them to concepts of increased complexity. The course incorporates the nursing process and evidenced based care. Application of pathophysiology, nutrition and pharmacology are applied to specific exemplars. Concepts included are: fluid and electrolytes/acid base balance, gas exchange, perfusion, immunity/inflammation/infection, tissue integrity, elimination, mobility, metabolism/hormone regulation, sensory perception/intracranial pressure, reproductive, cellular regulation, and client education/promotion. Advanced exemplars related to nursing care are addressed within each concept. Prerequisite(s): Prerequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1262, PNSG1266. Corequisites: PNSG1270, PNSG1274, PNSG1279, PNSG1286.

PNSG 1287 Clinical Care II 4 cr 0/4/0
This course creates an opportunity to provide safe and efficient care within the scope of practice for practical nursing. Experiences in the clinical setting are designed to promote, maintain, and restore optimal health for individual clients across the life span with basic to complex health care needs in a variety of settings. Students will assist with caring for clients in a diverse population. The course incorporates the nursing process, and applies nursing judgment and evidenced based care. Students will apply knowledge and skills gained from required courses to the clinical setting. Prerequisite(s): Prerequisites: PNSG1250, PNSG1254, PNSG1258, PNSG1262, PNSG1266, Current Healthcare Provider/Professional Rescuer CPR. Corequisites: PNSG1270, PNSG1274, PNSG1279, PNSG1283.

PSYC 1105 Intro to Psychology 3 cr 3/0/0
(Fulfills MNTC Area: 5) This course is an introduction and overview of the field of psychology. It will cover the history and contemporary research in the field. The course will also examine the biological, psychological, and social aspects of human behavior. Prerequisite(s): None

PSYC 2201 Developmental Psychology 3 cr 3/0/0
(Fulfills MNTC Area: 5) This class studies the physical, behavioral, and emotional development of the individual through the life span, with a focus on the theories and stages of development. This course is open to all students. Prerequisite(s): PSYC1105 is strongly recommended prior to enrolling in this course.

PSYC 2215 Abnormal Psychology 3 cr 3/0/0
(Fulfills MNTC Area: 5) This course provides an examination of major personality maladjustment and disorganization with primary emphasis on causes, diagnostic criteria, and treatment approaches. Prerequisite(s): PSYC1105 or PSYC2201

PTAS 1101 Introduction to PTA 3 cr 3/0/0
This course introduces the student to the field of Physical Therapy by covering the history, legalities and ethics of the profession as they relate to the healthcare system. The role/responsibilities of physical therapists and physical therapist assistants, development of the team approach in health care delivery, philosophies of rehabilitation, patient relationships, and the psychosocial impact of disability will be covered. The scope of practice of the physical therapist assistant (PTA) and physical therapy documentation is emphasized. Prerequisite(s): Admission into PTA Program

PTAS 1105 Fundamentals of PTA 4 cr 2/2/0
In this course, students are provided a foundation in physical therapy assessment, interventions and basic patient care skills including vital signs, transfer training, and gait training. Students will have laboratory time to apply, practice, and demonstrate the technical skills taught. Prerequisite(s): Admission into PTA Program

PTAS 1108 PTA Pathophysiology 2 cr 2/0/0
This course focuses on common disorders and diseases affecting the body's organ systems. Etiology, diagnosis, signs, symptoms, common lab values, and implications for physical therapy treatment will be included. Students

will also have an interprofessional opportunity to discuss a patient case study with other healthcare students. Prerequisite(s): BIOL2260, PTAS1101, PTAS1105

PTAS 1110 Physical Agents 4 cr 2/2/0
This course prepares the student for safe and effective application of physical agents for patient treatment. Mechanisms of action, indication, precautions, contraindications, and treatment procedures will be covered for the following: superficial heat, cryotherapy, external compression, ultrasound, biofeedback, massage, traction, hydrotherapy, and electrical stimulation. Pain, skin assessment, and wound care using electrotherapy will also be included. Prerequisite(s): BIOL2260, PTAS1101, PTAS1105

PTAS 1114 Clinical Kinesiology 3 cr 2/1/0
Building upon Anatomy and Physiology I, this course provides a basic understanding of normal human body movement as related to skeletal, articular, neurological, and muscular systems. Biomechanical principles related to human movement, manual muscle testing, and goniometry will also be addressed. Prerequisite(s): BIOL2260, PTAS1101, PTAS1105

PTAS 1116 Therapeutic Exercise I 2 cr 1/1/0
This course studies the physiological effects of exercise on the musculoskeletal, cardiovascular, and pulmonary systems. Physical therapy interventions to improve strength, balance, and flexibility are demonstrated, applied, and practiced in lab. Prerequisite(s): BIOL2260, PTAS1101, PTAS1105

PTAS 1118 Clinical Skills Review 1 cr 1/0/0
This course is intended to enhance clinical problem-solving and provide an opportunity for students to practice skills with instructor guidance and feedback through patient scenarios. This elective course can be taken for a variety of reasons: review of previous course skills; review or practice of new/concurrent course skills; enhancement of clinical problem solving; program re-entry, or a program plan of action. This course can be repeated up to a maximum of 3 credits. Prerequisite(s): Currently enrolled in PTA program.

PTAS 1120 Clinical Introduction 1 cr 0/0/1
Knowledge, skills, and attitudes learned during technical courses will be applied to direct patient/client management in selected outpatient and long term care settings during a 48-hour part time clinical experience. This course integrates Physical Therapist Assistant (PTA) coursework with the objective of students providing quality care with uncomplicated patients and a high degree of supervision and guidance. Prerequisite(s): PTAS1101, PTAS1105, evidence of current CPR certification

PTAS 1130 Clinical Education I 4 cr 0/0/4
Skills, knowledge and attitudes learned in all first year Physical Therapist Assistant (PTA) courses will be applied to direct patient care in selected clinical settings over a full-time four week and four day period. Emphasis will be placed on the clinical application and integration of the knowledge and skills learned during the first year of the PTA program with the objective of students providing quality care with uncomplicated to complex patients and a degree of supervision and guidance that will vary with the complexity of the patient or the environment. Prerequisite(s): PTAS1120

PTAS 2101 Orthopedics for PTA 2 cr 2/0/0
This course focuses on orthopedic injuries/disorders, musculoskeletal tissue healing, and related physical therapy interventions. Prerequisite(s): PTAS1130

PTAS 2105 Neurology for PTA 5 cr 3/2/0
This course provides information, discussion, and treatment considerations for pediatric and adult neurological diagnoses. Assessment techniques and treatment interventions will be applied in lab scenarios for a variety of neurological diagnoses. This course also presents normal and abnormal developmental processes which affect an individual throughout the life span with an emphasis on integrating aspects of human development to the field of physical therapy. Prerequisite(s): PTAS1130

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

PTAS 2111 Therapeutic Exercise II 3 cr 2/1/0
This course presents more advanced forms of therapeutic exercise and physical therapy interventions such as cardiac rehab, soft tissue mobilization, taping, and aquatic therapy. Exercise programs for special populations, including geriatrics, is also included. Prerequisite(s): PTAS1130

PTAS 2115 Advanced Techniques 4 cr 2/2/0
Theory and usage of advanced physical therapy interventions is the focus of this course. Interventions such as postural drainage, rehabilitation for amputations, spinal stabilization, and work hardening will be presented. Specific interventions for women's health will also be discussed. Prerequisite(s): PTAS1130

PTAS 2125 PTA Ethics and Issues 2 cr 2/0/0
This course includes ethical and legal issues regarding physical therapy, basic principles of management, supervisory processes, healthcare reimbursement, and quality assurance activities including chart audits. Prerequisite(s): PTAS1130

PTAS 2140 Clinical Education II 5 cr 0/0/5
Skills, knowledge and attitudes learned in all Physical Therapist Assistant (PTA) courses will be applied to direct patient care in selected clinical settings over a full-time six week period. Emphasis will be placed on the clinical application and integration of the knowledge and skills learned during the PTA program with the objective of students providing quality care with uncomplicated to complex patients and a degree of supervision and guidance that will vary with the complexity of the patient or the environment. Prerequisite(s): PTAS2101, PTAS2105, PTAS2111, PTAS2115, PTAS2125

PTAS 2150 Clinical Education III 5 cr 0/0/5
Skills, knowledge and attitudes learned in all Physical Therapist Assistant (PTA) courses will be applied to direct patient care in selected clinical settings over a six week period. Emphasis will be placed on the clinical application and integration of the knowledge and skills learned during the PTA program with the objective of students providing quality care with uncomplicated to complex patients and a degree of supervision and guidance that will vary with the complexity of the patient or the environment. Students are expected to be responsible for patient care compatible to the role and entry level skills of the PTA. Prerequisite(s): PTAS2101, PTAS2105, PTAS2111, PTAS2115, PTAS2125

PTAS 2160 Professional Integration 3 cr 3/0/0
Lecture and discussion will incorporate student's experiences from Physical Therapist Assistant (PTA) Clinic Education II and III. All aspects of patient care will be addressed and case study presentations will be utilized to facilitate problem solving skills. Prerequisite(s): PTAS2101, PTAS2105, PTAS2111, PTAS2115, PTAS2125

RADT 1105 RADT Re-evaluation 1-5cr 5 cr
This course is designed to train and evaluate the preparedness of a program student to return to the program after an extended absence. Prerequisite(s): Acceptance into Radiologic Technology program.

RADT 1110 Intro Rad Tech-Pat Care 3 cr 3/0/0
This course covers an introduction to the career of Radiologic Technology including credentialing requirements, ethics and professionalism associated with the field. The course will cover the basics of radiation protection, radiographic quality and equipment associated with common radiographic procedures. Basics of patient care will be covered which will include the procedure for vital signs assessment, aseptic technique, medical emergencies, and basic pharmacology. Ethical behavior and ethical issues in healthcare will also be covered. Prerequisite(s): None

RADT 1114 Radiographic Proc I 4 cr 2/2/0
This course provides students with the knowledge necessary to perform radiographic procedures relative to the thoracic and abdominal organs, upper extremities, lower extremities, shoulder girdle and pelvic girdle. The function and related procedures of the digestive and hepatobiliary systems will also be covered. Emphasis will be on radiographic terms, anatomy, positioning, manipulation of radiographic equipment and accessories, and related patient care considerations. Prerequisite(s): Acceptance into Radiologic Technology program. BIOL2260, CHEM1020, HLTH1106, MATH1110.

RADT 1119 Clinical Radiography I 5 cr 0/0/5
This course is the first clinical component of five. The student is assigned to a variety of clinical education sites to provide opportunities to apply the basic theoretical principles of radiography and patient care to the practical experience in the clinical setting. Students will be assigned weekend and p.m. shift work which provides opportunity to assist and perform trauma/mobile procedures and enables them to assess the various shift atmospheres. Students will assist and perform radiographic procedures covered in RADT1114, under the direction of a qualified radiographer. The student will develop professional attributes with patients and the healthcare team and apply work ethics in the clinical setting. The radiography program faculty monitors the progress and performance of students with weekly evaluations and competency assessments. Prerequisite(s): Acceptance into Radiologic Technology program. BIOL2260, CHEM1020, HLTH1106, MATH1110.

RADT 1122 Radiographic Physics 3 cr 3/0/0
This course presents the basic principles that govern radiation physics. Topics include a historical review of the development of imaging technologies, the nature of electromagnetic radiation, atomic structure, x-ray production and interactions of x-rays with matter. An introduction to the major components of modern x-ray equipment design and operation as it relates to the control of x-ray beam characteristics will be discussed. This course is designed to provide a foundation of knowledge regarding the principles that govern radiographic technique, patient exposure and image quality can be built. Prerequisite(s): BIOL2260, CHEM1020, HLTH1106, MATH1110

RADT 1124 Radiographic Proc II 4 cr 2/2/0
This course provides students with the knowledge necessary to perform radiographic procedures relative to the urinary system, the bony thorax, skull and facial bones, sinuses and the vertebral column. Emphasis will be on radiographic terms, anatomy, positioning, manipulation of radiographic equipment and accessories, and patient care considerations related to radiography of the urinary system, bony thorax, and vertebral column. This course will cover techniques of venipuncture and the administration of contrast media as it relates to imaging the urinary system. Prerequisite(s): RADT1119

RADT 1127 Image Production - Eval 3 cr 2/1/0
This course provides students with knowledge of the factors that control and influence image quality. Topics include the components of digital imaging as they relate to image formation, and display. The principles of exposure that affect image quality and the criteria for evaluating these factors will be presented. Students will be introduced to image processing and acquisition errors that affect image quality and technical factors associated with controlling patient exposure. Prerequisite(s): RADT1119

RADT 1128 Clinical Radiography II 5 cr 0/0/5
This course is the second clinical component of five. The student is assigned to a variety of clinical education sites providing opportunities to progress with exam competencies. The student continues to demonstrate proficiency in competencies from Clinical I and proficiency in selection of radiographic technique, patient care, radiation protection, general radiographic procedures and image evaluation. The student develops competencies in exams covered in RADT1124. Students will be assigned weekend and p.m. shift work which provides opportunity to assist and perform trauma/mobile procedures and enables them to assess the various shift atmospheres. Clinical experience with pediatric and trauma procedures is strongly encouraged to promote proficiency as the student progresses. The development of critical thinking and problem solving skills are expected. The student demonstrates professional attributes with patients and the healthcare team and applies work ethics in the clinical setting. The radiography program faculty monitors the progress and performance of students with weekly evaluations and competency assessments. Prerequisite(s): RADT1119

RADT 1135 Advanced Imaging 2 cr 2/0/0
This course introduces students to mobile fluoroscopic procedures in the surgical setting. Emphasis will include c-arm equipment components, manipulation and operation, safety practices and working in the sterile environment. In addition, content of this course is designed to introduce imaging modalities and treatment. Topics discussed will include equipment basics, procedural preparations, types of radiations and dose differences as well indications for performance of the imaging procedures. A review of body systems previously covered as they relate to modalities will be included. This course is designed to provide students with a

foundation of knowledge in preparation for scheduled observations in the clinical setting. Pathways for educational and certification requirements for modalities will be discussed. The advanced imaging content areas covered include: Surgical imaging, Nuclear Medicine (NM), Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET), Sonography, Mammography, Radiation Therapy, Angiography, Artificial Intelligence (AI) and Bone Densitometry. Prerequisite(s): RADT1128

RADT 1138 Clinical Radiography III 6 cr 0/0/6
This course is the third clinical component of five. The student is assigned to a variety of clinical education sites to provide opportunities to maintain proficiency in completed competencies as well as progress with additional competencies. Demonstration of increased proficiency, accuracy and efficiency in routine radiographic procedures is expected. The student demonstrates competency in radiographic technique, patient care, radiation protection, general procedures and image evaluation. Increased proficiency in critical thinking and problem solving skills are expected. Students will be assigned weekend and p.m. shift work, providing opportunity to enhance their skills in trauma/mobile radiography. Students will observe in interventional radiography and computed tomography. The student demonstrates professional attributes with patients and the healthcare team and applies work ethics in the clinical setting. The radiography program faculty monitors the progress and performance of students with weekly evaluations and competency assessments. Prerequisite(s): RADT1128

RADT 2217 Imaging Equipment-QA 3 cr 3/0/0
This course covers content that will provide students with an understanding of the components, principles and operation of digital systems. Factors that impact image acquisition, display, archiving and retrieval will be discussed. In addition, content related to special imaging methods of fluoroscopy, tomography and mobile radiography will be discussed. Students will gain understanding of the display, archival and retrieval systems associated with digital imaging and communication. The principles of quality control measures will be discussed, to include common quality control testing for imaging equipment and accessories. Prerequisite(s): RADT1138

RADT 2218 Clinical Radiography IV 8 cr 0/0/8
This course is the fourth clinical component of five. This clinical course provides students the opportunity to function more independently in all areas of radiography. Students will demonstrate enhanced learning in previously completed competencies with continuing experience in trauma/mobile radiography, and pediatric work. Students will demonstrate the ability and desire to work more independently while adhering to program and professional ethical guidelines. Emphasis is placed on increasing proficiency in trauma and mobile radiography as well as c-arm procedures. Students will be assigned weekend and p.m. shift work which will continue to provide experiences with trauma/mobile radiographic procedures. Students will observe in additional imaging modalities. Students will be provided the opportunity to rotate within additional modalities to gain knowledge of the basics with imaging equipment and procedures in such modalities. Prerequisite(s): RADT1138

RADT 2220 Radiation Biology-Protect 2 cr 2/0/0
This course is a study of radiation exposure to biologic tissue. Consideration is given to factors affecting cell response to acute and chronic radiation exposure. Principles of radiation protection and responsibilities of the radiographer are presented. Effective dose limits and regulatory policies are also discussed. Prerequisite(s): RADT2218

RADT 2228 Clinical Radiography V 7 cr 0/0/7
This is the final clinical course of the program. This course emphasizes student independence, discretion, and judgment while performing required exam competencies. Students demonstrate work-readiness skills in all aspects of exam performance and patient care. Students are provided opportunities to observe in additional imaging modalities. Program faculty evaluates students for assurance of all completed competencies as outlined in the American Registry of Radiologic Technologists (ARRT) clinical requirements. Prerequisite(s): RADT2218

RADT 2234 Radiographic Pathology 2 cr 2/0/0

This course provides students with the concepts of disease and its effects on the human body. Pathology and diseases as they relate to various radiographic procedures and radiographs will be discussed. Prerequisite(s): RADT1138

RADT 2240 Registry Prep 2 cr 2/0/0
This course is a review of the American Registry of Radiologic Technologists (ARRT) registry content specifications designed to prepare students for the national certification exam. Students will analyze their learning through class activities as well as mock registry exams. Prerequisite(s): RADT2218

RESP 1104 Non Acute Resp Care 4 cr 3/1/0
This course includes cognitive concepts and psychomotor skills in the areas of gas physics, gas therapy, humidity/aerosol/bronchial hygiene therapy, and respiratory pharmacology. Prerequisite(s): MATH0098 or appropriate Math assessment score.

RESP 1110 Adult Critical Care 4 cr 3/1/0
This course includes cognitive concepts and psychomotor skills in the areas of airway management, arterial blood gases, noninvasive ventilation, and mechanical ventilation. This course will also include how to perform literature searches on related critical care topics in mechanical ventilation and how to prepare a literature review paper. Prerequisite(s): RESP1104, RESP1120, RESP1126

RESP 1120 Cardio Physiology-Assess 3 cr 3/0/0
This course is designed to present basic cardiopulmonary assessment focusing upon the adult respiratory anatomy and physiology, system integration which allows for maintenance of and homeostasis. Also included is the study of oxygenation, lung mechanics and ventilation, pulmonary function testing, electrocardiogram (ECG) interpretation and arterial blood gases (ABG) interpretation Prerequisite(s): MATH0098 or appropriate Math assessment score.

RESP 1126 Clinical I 1 cr 0/0/1
This is a beginning clinical course that provides supervised instructional experience in the clinical setting. It is designed to apply knowledge acquired in the classroom and laboratory to the development and performance of competencies associated with professionalism, medical gas administration, aerosol therapy, hyperinflation therapy, bronchial hygiene, and respiratory pharmacology. Prerequisite(s): MATH0098 or appropriate Math assessment score.

RESP 2207 Clinical II 2 cr 0/0/2
This course provides supervised instructional experience in the clinical setting. It is designed to apply knowledge acquired in RESP 1104 & 1110 to the development, performance, and computerized documentation of competencies associated with medical gas administration, aerosol therapy, hyperinflation therapy, bronchial hygiene, and respiratory pharmacology, airway management, infection control, noninvasive ventilation and to further develop competencies acquired in RESP 1126. Prerequisite(s): RESP1104, RESP1120, RESP1126

RESP 2211 Clinical III 2 cr 0/1/1
This course provides supervised instructional clinical. It is designed to apply and maintain knowledge acquired in the classroom and laboratory to the development and performance of final/summative level competencies associated with medicated aerosol therapy, medical gas administration, infection control, patient chest assessment, bronchial hygiene, airway management and cardiopulmonary diagnostics. Prerequisite(s): RESP1110, RESP2207, RESP2212

RESP 2212 Diagnostic Procedures 3 cr 2/1/0
This course includes introductory cognitive concepts and laboratory skills in pulmonary function testing, airflow measurement, arterial blood gas analysis, and chest radiography interpretation as well as preparation of a publishable paper. Prerequisite(s): RESP1104, RESP1120, RESP1126

RESP 2230 ACLS 1 cr 1/0/0
This course will result in the awarding of Advanced Cardiac Life Support certification from the American Heart Association. It covers all aspects of treating cardiac patients at the advanced level to include basic and advanced

airway control, cardiac rhythm interpretation, medication administration, and post resuscitation management. Prerequisite(s): RESP2244, RESP2250, RESP2252

RESP 2232 Pediatric AdvLife Support 1 cr 1/0/0
This course follows the course standards of the American Heart Association for Pediatric Advanced Life Support (PALS). The course leads to the awarding of certificates of successful completion. Prerequisite(s): RESP2242, RESP2244, RESP2250, RESP2252

RESP 2236 Neonatal Resuscitation Pr 1 cr 1/0/0
This course follows the course standards of the American Academy for Pediatrics for Neonatal Resuscitation Program (NRP). The course leads to the awarding of a certificate of successful completion. Prerequisite(s): RESP2242, RESP2244, RESP2250

RESP 2242 Neo-Peds Critical Care 4 cr 3/1/0
This course includes the cognitive and psychomotor concepts necessary for performance of the Respiratory Care Practitioner in the areas of neonatal and pediatric patient care. Areas of focus include the use of case study scenarios in the application of assessment skills, respiratory care diagnostics and therapies. Prerequisite(s): RESP2211

RESP 2244 Integrated Pract I 1 cr 0/1/0
This supervised instructional lab course is designed to teach and promote Final/Summative level skills in routine and critical care patient assessment, therapy recommendations and modifications, mechanical ventilation and hemodynamic monitoring competencies associated with patient respiratory care skills acquired in Internship I. Prerequisite(s): RESP2211

RESP 2246 Neonatal Internship I 1 cr 0/0/1
This is as hospital preceptor supervised instructional internship intended to allow the student to practice and promote independent lab skills in the neonatal intensive care unit practicing patient assessment, therapy recommendations and modifications, mechanical ventilation and care of the critically ill neonatal patient. Prerequisite(s): RESP2242, RESP2244, RESP2250, RESP2252

RESP 2250 Internship I 5 cr 0/0/5
This course provides the student with an expanded preceptor supervised clinical internship. This clinical experience provides for the assurance of proficiency in gas therapy, airway care, basic patient assessment, bronchial hygiene procedures, and mechanical ventilation procedures using electronic medical record charting. In addition, students assist the physician with special procedures and accompany the medical director on daily patient rounds. Prerequisite(s): RESP2211

RESP 2252 Advanced Critical Care 4 cr 3/1/0
This course explores the role of the Respiratory Care Practitioner in caring for the advanced critical care patient. Emphasis will be placed upon the assessment and care of the intensive care unit (ICU) patient. Prerequisite(s): CHEM1020, RESP2211

RESP 2254 Internship II 5 cr 0/0/5
This is a preceptor-supervised clinical internship. This clinical experience provides for the assurance of proficiency in gas therapy, airway care, basic patient assessment, bronchial hygiene procedures, and mechanical ventilation procedures using electronic medical record charting.. In addition, students assist the physician with special procedures and accompany the medical director on daily patient rounds. Prerequisite(s): RESP2242, RESP2244, RESP2250, RESP2252

RESP 2260 Neonatal Internship II 1 cr 0/0/1
This is a preceptor-supervised instructional internship intended to allow the student to practice and promote independent lab skills in neonatal intensive care unit practicing patient assessment, therapy recommendations and modifications, mechanical ventilation and care of the critically ill neonatal patient. Prerequisite(s): RESP2246, RESP2254, RESP2264, RESP2276, RESP2278

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

RESP 2262 Internship III 3 cr 0/0/3
This is a preceptor-supervised instructional internship intended to allow the student to practice and promote independent lab skills and attributes characteristic of a professional respiratory care practitioner in the adult critical care and surgical setting; neonatal and pediatric or other chosen specialty area. Prerequisite(s): RESP2246, RESP2254, RESP2264, RESP2276, RESP2278

RESP 2264 Integrated Pract II 1 cr 0/1/0
This supervised instructional lab course is designed to teach and promote Final/Summative level skills, focusing on critical care patient assessment, therapy recommendations and modifications, mechanical ventilation and hemodynamic monitoring competencies associated with patient respiratory care skills acquired in Internship II. Prerequisite(s): RESP2242, RESP2244, RESP2250, RESP2252

RESP 2276 Adv Prac Registry Review 3 cr 2/1/0
This course is designed to provide the advanced practitioner students with an opportunity to review, demonstrate and document their summative mastery of the cognitive areas relating to the Advanced Respiratory Care Practitioner. Students' assessment skills will be needed to recommend diagnostic tests and special procedures, evaluate recommended tests and procedures, and recommend modifications. Prerequisite(s): RESP2242, RESP2244, RESP2250, RESP2252

RESP 2278 Patient Ed - Wellness 2 cr 2/0/0
This course includes cognitive concepts and affective skills required to be certified and perform patient education in the in-patient and out-patient healthcare environments. Prerequisite(s): RESP2242, RESP2244, RESP2250, RESP2252

SOCI 1101 Intro to Sociology 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 7) This course introduces students to the sociological perspective and the basic concepts of sociology to enhance understanding of the larger society and its influence on the individual. Prerequisite(s): None

SOCI 1102 Social Problems in US 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 7) Contemporary social problems in the United States are examined from a variety of theoretical and value perspectives in relation to our society. Prerequisite(s): None

SOCI 1107 Intro Criminal Justice 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 9) This course is an introduction to the American Criminal Justice System, including the police, courts, and correctional systems. Minnesota Peace Officer Standards and Training (POST) objectives are included in each learner outcome (P.O). Prerequisite(s): None

SOCI 2212 Sex Gender and Society 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 7) This course is a critical evaluation of the social construction of gender and the resulting inequality. The relationship of sex and gender, past and present theories of difference, and social movements will be analyzed. Particular emphasis is placed on developing an awareness of the effect of traditional and changing gender roles in understanding social relationships and related phenomena. Prerequisite(s): None

SOCI 2215 Criminology 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 9) The course includes the study of crime as a form of deviant behavior, the nature and extent of crime, and the past and present theories of crime. Prerequisite(s): None

SOCI 2220 Marriage and Family 3 cr 3/0/0
(Fulfills MNTC Areas: 5, 7) This is a basic course in diversity and changes in intimacy, courtship, dating, marriage, and family life, and the family as a social institution. A primary objective of this course is to provide students with factual and cross-cultural information relevant to human behavior in intimate relationships. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT

SPAN 1101 Beginning Spanish I 4 cr 4/0/0
(Fulfills MNTC Area: 8) This course introduces the basic elements of the Spanish Language. It includes practice in pronunciation, listening comprehension, elementary conversation, grammar, reading, writing and culture. It provides students with practical vocabulary in culturally authentic contexts and activities and cultural materials that emphasize communicative and cultural competency. Prerequisite(s): None

SPAN 1102 Beginning Spanish II 4 cr 4/0/0
(Fulfills MNTC Area: 8) This course introduces the basic elements of the Spanish Language. It includes practice in pronunciation, listening comprehension, elementary conversation, grammar, reading, writing and culture. It provides students with practical vocabulary in culturally authentic contexts and activities and cultural materials that emphasize communicative and cultural competency. Prerequisite(s): SPAN1101, or instructor approval

SPAN 1120 Hispanic Cultures 3 cr 3/0/0
(Fulfills MNTC Areas: 6, 10) This course is a comparative study of Hispanic cultures and societies exploring geographical, historical, environmental, and religious issues, as well as the regional customs and interpersonal relations of the Hispanic world. This course is taught in English. Prerequisite(s): None

SPAN 2201 Intermed Spanish I 4 cr 4/0/0
(Fulfills MNTC Area: 8) This course is a comprehensive review of oral and written Spanish, including a study of Spanish literature, music, the fine arts and other cultural information relating to the target language. Prerequisite(s): SPAN1102, or instructor approval

SPAN 2202 Intermed Spanish II 4 cr 4/0/0
(Fulfills MNTC Area: 8) This course is a comprehensive review of oral and written Spanish, including a study of Spanish literature, music, the fine arts and other cultural information relating to the target language. Prerequisite(s): SPAN2201, or instructor approval

SPAN 2222 Spanish for Professions 3 cr 3/0/0
This is a course in conversational Spanish for the workplace. Students will learn vocabulary specific to their field of study and basic grammatical concepts to support the development of conversational skills in Spanish. Students will also practice non-verbal communication skills as a tool for cross-cultural communication. Prerequisite(s): None

SPCH 1101 Intro to Public Speaking 3 cr 3/0/0
(Fulfills MNTC Areas: 1, 2) This course develops students' capacities for effective oral communication with public audiences. Students will study public speaking concepts and practice practical skills. Students will select topics and supporting materials, prepare and organize speeches, utilize appropriate communication practices in various contexts, and evaluate oral communication. Prerequisite(s): None

SPCH 1103 Interpersonal Communicati 3 cr 3/0/0
(Fulfills MNTC Areas: 1, 2) This class introduces theories, methods, and applications of interpersonal communication. Students study interpersonal communication within cultures and individuals, in managing conflict and relationships, and processes of perception. Students will apply course concepts to practical life experiences. Prerequisite(s): None

SPCH 1111 Small Group Communication 3 cr 3/0/0
(Fulfills MNTC Area: 1, 9) This course explores both practical and theoretical aspects of small group communication. Students will practice leading and participating in groups within various settings. Emphases will be placed on problem solving and the roles of communication and power within small groups. Prerequisite(s): None

SPCH 2201 Oral Interp Literature 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course introduces students to techniques of oral interpretation of literature and to convey to an audience both the intellectual and emotional content of the various literacy forms, including expository and narrative prose, poetry, and drama, with an emphasis on the performance of the work. Prerequisite(s): None

SPCH 2205 Intercultural Communicati 3 cr 3/0/0
(Fulfills MNTC Areas: 7, 8) The course examines the attitudes, beliefs, and values of people through intercultural communication. The course cultivates, promotes, and increases understanding and effective communication with people outside one's own immediate culture. This course reflects the expanding global marketplace/village, including its challenges for communicators. Prerequisite(s): None

SPCH 2222 Intro to Media Literacy 2 cr 2/0/0
(Fulfills MNTC Area: 6) This course surveys basic principles and skills for engaging, understanding, and analyzing media such as photographs, music, television and film, games, and digital media. Students are responsible for theoretical and practical readings as well as assigned media. Students in this course learn to actively participate in both individual instances of media and media's overarching historical and modern impact on social engagement. Prerequisite(s): None

SPTC 1111 Special Topics 3 cr 3/0/0
Special topics is a course that addresses a current or timely topic, that is known to be a one-time offering, or a course that is in a pilot phase before being offered on an ongoing basis. The Special Topics course offerings can vary from term to term. Special topics courses may be team taught. Prerequisite(s): None

SSCI 1101 Human Relations 3 cr 3/0/0
(Fulfills MNTC Areas: 1, 2) This course allows students to gain an awareness of and improve upon personal and professional relationships, especially those appropriate to the workplace. This course also examines students' current levels of self-awareness, communication skills, and abilities to adapt to a dynamic workforce. Students will assess their abilities to prevent or resolve conflicts, to gain self-efficacy, and their skills to form and to maintain healthy, productive, and professional relationships needed to contribute to their career success and quality of life they envision for themselves. The self-awareness and self-growth gained in this course will allow students to make decisions that are right for them in terms of needs, goals, values, and career success. Prerequisite(s): None

SURT 1102 Intro to Surgical Tech 2 cr 2/0/0
This introductory course orients the learner to the Surgical Technology profession and develops the fundamental concepts and principles of the role of the surgical technologist in the operating room. Areas of focus include general aspects of professional behavior, role, and aspects of the physical environment, universal precautions, instruments, aseptic technique, operating room design, the surgical team, surgical pharmacology, anesthesia and patient care concepts. Prerequisite(s): None

SURT 2200 ST Skills Revalidation 2 cr 0/2/0
This course is designed to train and evaluate the preparedness of a program student to return to the program after extended absence. Prerequisite(s): Admitted to the Surgical Tech program.

SURT 2204 Operating Room Theory 4 cr 4/0/0
This course provides theory of essential information necessary to function efficiently in a surgery department. The course prepares students to function in the role of a responsible, knowledgeable surgical technologist. It encompasses a comprehensive knowledge of aseptic technique. Prerequisite(s): None

SURT 2208 Operating Room Practices 6 cr 1/4/1
This clinical laboratory course provides practical application in the lab and clinical setting of information essential to function independently as a surgical technologist. Prerequisite(s): None. Corequisite: SURT2204

SURT 2212 Operative Procedures 5 cr 5/0/0
This course covers a basic reference for the humane and technological surgical care of patients during surgical intervention. Prerequisite(s): SURT2204, SURT2208

Course Number **Course Name** **Credit** **Lec/Lab/OJT**

SURT 2216 Clinical I 6 cr 0/0/6
This course provides supervised occupational experience in the clinical setting. It is designed to apply knowledge acquired in the classroom and laboratory to the development and performance of competencies associated with operating room policy and procedure. Prerequisite(s): SURT2208

SURT 2220 Clinical II 7 cr 0/0/7
This course provides supervised occupational experience in the clinical setting. It is designed to apply knowledge acquired in the classroom and laboratory to the development and performance of competencies associated with operating room policy and procedure. Prerequisite(s): None. Corequisite: SURT2216

THTR 1102 Beginning Acting 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes a consideration of established styles and theories of acting with an emphasis on actual presentation of monologues and scenes for critique. It includes analysis of the role, stage movement, and vocal mechanics necessary for the effective projection of a dramatic characterization. Prerequisite(s): None

THTR 1181 Theater Participation 1 cr 0/1/0
This course involves active participation in stage productions as stage manager, actor, or as a crew member for set construction, lighting crew, properties crew, publicity crew, or box office. It may be repeated for credit. Prerequisite(s): None

THTR 2201 History of Film 3 cr 3/0/0
(Fulfills MNTC Area: 6) This course includes a history of film, its inventors, pioneers, and development. This course will trace the development of film chronologically, and the different elements of film will be explored: photography, composition, movement, editing, sound and other technical areas, and acting. Prerequisite(s): None

UAST 2110 Foundations of UAS 3 cr 3/0/0
This course offers students a history and overview of the development of unmanned aircraft vehicles, systems, payloads, and current Unmanned Aircraft System (UAS) applications in the field. The goal of this course is to allow the student to understand the basic components of the UAS to include: workplace safety practices, aircraft documentation, UAS operations, and maintenance theories. Prerequisite(s): None

UAST 2119 Advanced Composites II 1.5 cr .5/1/0
This course provides students with classroom training and lab exercises to successfully identify and repair structural composite components. Proper use of PPE, secondary bonding, repair of components with complex curves, making and use of molds will be covered. Prerequisite(s): AVIA2005, UAST2118

UAST 2121 Advanced Composites 3 cr 1.5/1.5/0
This course provides students with classroom training and lab exercises to successfully identify and repair non-metallic portions of aircraft components. The course will utilize composite material and equipment specific for the use in the aviation industry. Prerequisite(s): AVIA2025

UAST 2133 Aerospace IT 3 cr 2/1/0
This course will provide the student with an understanding of internet and intranet connectivity, the various software and hardware needed to support the installation and service of microcomputers and networks. Instruction includes basic network media such as wireless, fiber optic and copper and correct wiring techniques using industry standards, the various hardware components that make up the microcomputer. Normal operation conditions are discussed and demonstrated. With the help of software diagnostic tools, a microcomputer and network will be installed or diagnosed, repaired and retested for normal operation after the repair, before placing in-service. Prerequisite(s): None

UAST 2150 Control Stations 3 cr 2/1/0
This course offers students a working knowledge of principles required to maintain and operate components of unmanned aircraft systems (UAS) control stations (CS). The student will develop a comprehensive

understanding of how an unmanned aircraft (UA) is controlled via the CS. Prerequisite(s): AVET 2131, CPTR 1131

UAST 2161 UAS Aviation Maint Tech 3 cr 1/2/0
The goal of this course is to ensure the student possesses the basic competencies to maintain the UAS to include the following components: propulsion, fueling system, electrical, flight control systems and operational system checks, ground support, and handling equipment. Prerequisite(s): None

UAST 2180 sUAS Ground School 3 cr 3/0/0
This course serves as a preparation for the Federal Aviation Administration (FAA) Private Pilot knowledge test. Course content includes, but is not limited to: FAA regulations, weather, radio communications and navigation, safety, aerodynamics, airspace, and emergency procedures. Prerequisite(s): None

UAST 2190 sUAS Lab 3 cr 0/3/0
This course offers students the opportunity to assemble, program and flight test a small unmanned aerial system (sUAS). The goal of this course is to allow the student to understand each component in a sUAS and how each functions as a part of the whole system. Students will apply basic flight principles, wiring practices, electronics knowledge and common operational concepts to successfully complete this course. Prerequisite(s): AVIA1105, CPTR1136, UAST2180

UAST 2200 On Job Training 1 cr 0/0/1
This course is designed for the small unmanned aerial system (sUAS) field service technician student to gain valuable experience while developing skills in an industry setting. The student and instructor will develop a training plan to further develop skills previously learned, as they are appropriate for their work site. Students must spend 48 hours working in an approved supervised occupational setting. Prerequisite(s): None

WELD 1100 Weld Orientation 1 cr 1/0/0
This course is designed to introduce welding students to, and/or properly use the following: personal protective equipment (PPE), shop procedures, welding and related processes safety procedures, navigate college and program online features, download and save documents relative to the program. Students must pass WELD 1100 Weld Orientation before being able to proceed through the remaining program courses. Prerequisite(s): None

WELD 1102 Weld Fundamentals 3 cr 1/2/0
This course provides a basic understanding of the scope and importance of welding in our society, welding safety, basic joints, positions, processes and procedures. An introduction to shielded metal arc welding (SMAW) (stick), gas metal arc welding (GMAW) (wire), and oxy-acetylene processes will be covered, utilizing lab exercises and classroom lecture. Prerequisite(s): None

WELD 1104 Basic SMAW 4 cr 1/3/0
This introductory course provides skill development in performing the Shielded Metal Arc Welding (SMAW) process in all positions and many joint types on mild steel. Prerequisite(s): None

WELD 1106 Flux Cored Arc Welding 2 cr 1/1/0
In this course, students apply knowledge of the Flux Cored Arc Welding (FCAW) process and develop skills to successfully complete groove welds on mild steel in all positions. This welding process is commonly used in manufacturing, construction and repair settings. Prerequisite(s): None

WELD 1110 Blueprint Reading-Symbols 2 cr 2/0/0
This course provides an understanding of blueprints used within welding technology settings. Students also develop skills for reading, understanding, and interpreting weld symbols. Prerequisite(s): None

WELD 1112 Advanced SMAW 4 cr 0/4/0
This advanced course includes welding thicker mild steel plate in all positions using a variety of electrode groups. Students complete welding tests in accordance with the AWS D1.1 Structural Welding Code. Prerequisite(s): WELD1104

WELD 1114 Basic Fabrication 4 cr 2/2/0
This course provides knowledge of equipment and procedures used for metal fabrication. Students apply theory and use skills learned in previous courses to design or produce a selected project utilizing blueprints, working drawings, and a variety of materials. Prerequisite(s): WELD1110 or MFPT1520

WELD 1116 Gas Shielded Processes 5 cr 1/4/0
This course provides students with technical understanding of welding safety, fundamentals, equipment, and shielding gasses using both ferrous and non-ferrous metals. Gas Metal Arc Welding (GMAW) and Gas Tungsten Arc Welding (GTAW) will be covered in this course. Prerequisite(s): WELD1102

WELD 1120 SMAW Pipe 3 cr 0/3/0
In this course, students apply knowledge of the Shielded Metal Arc Welding (SMAW) process and develop skills to complete groove welds on pipe in all positions. This type of welding is an advanced level skill and is commonly used in manufacturing, construction and repair settings. Prerequisite(s): None

WELD 1121 Oxy-Acetylene Weld-Cut 2 cr 1/1/0
This course covers the technical understanding of the oxy-acetylene welding (OAW) process, safety, and set-up. The proper use of the equipment will be covered. This course will also provide the opportunity to develop manual skills in welding, cutting, and brazing. Prerequisite(s): None

WELD 1122 GTAW Pipe 3 cr 0/3/0
In this course, students apply knowledge of the Gas Tungsten Arc Welding process and develop skills to complete groove welds on pipe in all positions. This type of welding is an advanced level skill and commonly used in manufacturing, construction, and repair settings. Prerequisite(s): WELD1120

WELD 1124 Cutting Processes 1 cr 0/1/0
This course covers principles and practices of cutting using Oxy-Acetylene, Plasma, and Air Carbon Arc processes. Prerequisite(s): None

WELD 1131 Advanced GMAW 4 cr 1/3/0
This advanced Gas Metal Arc Welding (GMAW) course provides students with a technical understanding of welding safety, GMAW equipment, and shielding gasses using both ferrous and non-ferrous metals. Gas Metal Arc Welding and Flux Cored Arc Welding (FCAW) will be covered in this course. Prerequisite(s): WELD1130

WELD 1220 SMAW 1 2 cr 1/1/0
This course will focus on the basics of Shielded Metal Arc Welding (SMAW). Topics include SMAW and shop safety, terminology and basic electricity as related to the SMAW process, and basic maintenance related to SMAW equipment and machines. Activities will include: striking and maintaining an arc with various SMAW electrodes, identifying electrode classifications, identifying weld defects and discontinuities, weld measurement, and practicing fillet and groove welds in the flat and horizontal positions with various electrodes and metal thicknesses. Prerequisite(s): None

WELD 1230 SMAW 2 2 cr .5/1.5/0
Students will develop skills necessary to perform Shielded Metal Arc Welding (SMAW) in the vertical and overhead positions on fillet and groove welds that meet industry standards. Prerequisite(s): None

WELD 1240 SMAW 3 2 cr .5/1.5/0
This course is designed for the student to increase their skill in welding on open root v-groove butt joints on plate and pipe in all positions using E6010 and E7018 Shielded Metal Arc Welding (SMAW) electrodes. Students will evaluate their welds using visual and destructive testing. Prerequisite(s): None

WELD 1320 GMAW 1 2 cr 1/1/0
In this course, students will be introduced to the Gas Metal Arc Welding (GMAW) process. This course will include GMAW safety, components, consumables, terms related to the process, and basic electricity. Students will increase their skill level by welding pads and fillet welds with various diameter electrodes utilizing the GMAW

Short-arc (GMAW-S) process. Students will also evaluate various welds and weld discontinuities as perform measuring of fillet welds and weld discontinuities. Prerequisite(s): None

WELD 1330 GMAW 2 2 cr .5/1.5/0
In this course, students will practice welding groove welds on sheet and plate as well as welding fillet welds on sheet metal utilizing the Gas Metal Arc Welding – Short-arc process (GMAW-S). Welds will be performed in all positions – flat, horizontal, vertical, and overhead. Prerequisite(s): None

WELD 1340 GMAW 3 2 cr .5/1.5/0
This course focuses on the fundamentals of Gas Metal Arc Welding (GMAW) spray transfer and Gas Metal Arc Welding - Pulse (GMAW-P). Topics will cover various machine settings, additional safety requirements compared to short-circuit transfer, shielding gases used, and various electrodes used for carbon steel, aluminum, and stainless steel. Students will practice welding with GMAW and GMAW-P on steel, aluminum, and stainless steel in all positions with fillet and/or groove welds. Prerequisite(s): None

WELD 1420 GTAW 1 2 cr .5/1.5/0
This course will introduce the student to the fundamental basics of Gas Tungsten Arc Welding (GTAW). Topics will include: GTAW safety, terminology, basic electricity, GTAW equipment and peripherals, electrodes, shielding gases, and various filler metals. Students will work on arc initiation, maintaining an arc, and puddle control while fillet and groove welds on carbon steel in all positions. Prerequisite(s): None

WELD 1440 GTAW 2 2 cr 1/1/0
This course will focus on the weldability of stainless steel with the Gas Tungsten Arc Welding (GTAW) process. Topics to be covered will include types of stainless steels, uses and application of stainless steels, matching filler metals to base metals, and how to weld mild steel to stainless steel. Students will practice welding stainless fillet and groove welds on sheet, plate, and pipe/tube in various positions to meet industry standards. Prerequisite(s): None

WELD 1450 GTAW 3 2 cr 1/1/0
This course is designed to introduce students to the types, applications, and welding of aluminum using the Gas Tungsten Arc Welding (GTAW) process. Topics covered will include aluminum alloys, shielding gases, aluminum applications, selection of filler metals and electrodes, and machine set up. The welds covered in this course will include fillet and groove welds in the flat, horizontal, and vertical positions on plate, sheet, and pipe/tube. Prerequisite(s): None

WELD 1510 FCAW 1 2 cr .5/1.5/0
This course was developed to introduce the student to the basic concepts of Flux Core Arc Welding (FCAW). Topics included in this course are: FCAW safety, terminology, equipment, electrode types, shielding gases, and making minor external repairs of FCAW equipment. Prerequisite(s): None

WELD 1570 Welding Internship 2 cr 0/0/2
This course is designed for welding students to gain valuable experience while developing skills in an industry setting. Students and instructor will develop a training plan for further development of skills previously learned. Prerequisite(s): None

WELD 1610 Fabrication 3 cr 1/2/0
This course will focus on the steps that go into a typical welding fabrication process. Topics included will cover welding prints, process selection, material selection, measuring, finishing, and the economics of fabricating. The history and importance of welding as related to manufacturing will also be included. Prerequisite(s): None

WELD 1710 Manual Cutting 2 cr 1/1/0
This course covers commonly used manual cutting processes including mechanical and thermal processes. Sawing, shearing, punching, oxy-acetylene cutting (OAC), plasma arc cutting (PAC), carbon arc cutting (CAC) will all be covered in this course. Prerequisite(s): None

Course Number	Course Name	Credit	Lec/Lab/OJT
WELD 1720	**CNC Fundamentals-CAD**	**2 cr**	**1/1/0**

This course will cover the concepts of using Computer Numeric Control (CNC) to program and cut or bend materials as well as cover the Computer Aided Drawing (CAD) software used by various machines in the welding lab. Safety, machine components, coordinate systems, and G-code programming are all topics that will be covered in this course. Prerequisite(s): None

WELD 1730 CNC Cutting 1 cr .5/.5/0

This course will allow the student to utilize their previous learning to cut or bend parts with available Computer Numeric Control (CNC) equipment. A working knowledge of CNC functions and the equipment's Computer Aided Drawing (CAD) software is recommended prior to taking this course. Prerequisite(s): None

WELD 1810 Qualifications 2 cr .5/1.5/0

This course is designed to help the student understand the difference between welding qualifications and certifications as well as to show them what goes into creating a welding procedure. Students will have the opportunity to attempt different weld qualification tests during this course. American Welding Society codes will be the focus of this course. Prerequisite(s): None

Admission to Northland

1. Visit Northland at either campus or go online at northlandcollege.edu
2. While online, fill out the application or print and mail the form to either of the primary campuses.

If you do not have internet access, contact us and we will be happy to send you an admissions packet.

Northland Community & Technical College
East Grand Forks
2022 Central Avenue NE
East Grand Forks, MN 56721
218.793.2800 or 800.959.6282
Northland Admissions

Northland Community & Technical College
Thief River Falls
1101 Highway One East
Thief River Falls, MN 56701
218.683.8800 or 800.959.6282
Northland Admissions

3. Provide NCTC with an official copy of your high school transcript or GED, all previous college transcripts, and immunization records.
4. File for financial aid by completing the financial aid assistance packet, available online at fafsa.gov
5. Call or go to Northland Help Center to get started, make an appointment to take the assessment test, meet with an academic advisor, register for classes, and more.

Financial Information

Most Northland Community & Technical College students are eligible to receive some type of financial aid. Students who want to be considered for financial aid must complete the Free Application for Federal Student Aid (FAFSA) and any other documentation requested. Students should be aware that the initial responsibility for paying for college expenses lies with the student and/or parents.

To assist students in meeting college costs, Northland offers a comprehensive program of student financial aid. Programs available to Northland students include:

- Grants
- Employment
- Loans

To review more detailed information on financial aid including grants and loans, visit the Northland website at Northland Financial Aid.

Northland Community & Technical College Foundation

The Northland Community & Technical College Foundation's mission is to support the college by providing opportunities for contributor s to invest in and enhance the educational experience of Northland's students. The Foundation awards over $160,000 in scholarships annually. Scholarships range in value from $50 to $4,000, depending on contributions or annual growth in the individual funds. Eligibility and criteria for scholarships varies and is often established by the donors. Several scholarships were established as endowments in honor of, or in memory of individuals who have had a special commitment to the College or community. The Foundation invites anyone interested in establishing an endowment or scholarship to contact the Foundation office.

Beginning in the fall of 2024, the North Star Promise Scholarship Program will create a tuition-free pathway to higher education for eligible Minnesota residents at Northland and other eligible institutions: North Star Promise. Additionally, **High School Seniors** coming to Northland in the fall immediately following high school graduation may apply for Early Recruitment Scholarships a year before they begin at Northland: Early Recruitment. **New and Returning students** may apply for a number of other scholarships posted on the Foundation website: Northland Scholarships by completing a *Northland Foundation Student Scholarship application*. Students must complete applications in full and meet the deadlines established for each application to be considered for a scholarship.

A complete listing of scholarships is available on the website. Events and programs sponsored by the Foundation as well as opportunities for alumni to keep in contact with the College are also available.

Anyone interested in establishing a scholarship fund, contributing to an existing fund, or serving on the Board of Directors or a Foundation committee may contact the Foundation Office at 218-683-8616 or 800-959-6282, or by email: Email Northland Foundation

Basic Needs, Counseling, and Academic Advising

Northland Community and technical College recognizes the importance of supporting students' basic needs as well as personal and academic development.

The Basic Needs Resource Hub provides Northland students access to basic needs resources and support – food, housing, and transportation – critical to their wellbeing and success. To learn more, visit: Northland Basic Needs Support

Counseling services are provided to enrolled students free of charge, and are available on each campus and via Zoom. Students may receive assistance in academic, career, and personal development, as well as referrals to appropriate community agencies as needed. Scheduling ahead is recommended. For more information or to schedule an appointment, go to: Northland Counseling Services

Academic Advisors assist students with plans for their course of study and class registration, as well as give academic advice. Advisors strongly recommend that students meet with them regularly to plan academic schedules, assess educational goals, and ensure smooth transition to 4-year and other schools. For more information, visit: Northland Advising

Academic Success Center (ASC)

Services provided by the Academic Success Center are available to every student on campus. This may include students requesting tutors or those with disabilities needing services. In addition, Personal Education Plans are available for students who lack English proficiency. The ASC also accommodates testing by arrangement with instructors. All services are provided free to Northland students.

Northland's Academic Success Center serves as a resource for students who want to improve their academic performance. The ASC provides a program of instructional services to students who may potentially have, or are currently having, academic difficulties. These services are available from specially trained staff in the areas of improvement of study skills, communication skills, math skills, and some diagnostic testing. Individual and group tutoring is available to all students who need help with content areas within their program.

In addition to instructional services, the Academic Success Center plans for and provides services for students with disabilities. They will assist with transition planning prior to enrollment and provide on-going support. Students with short or long term, documented disabilities or physical limitations may be recommended academic options from a qualified professional that may include providing extended time for tests, reading-modified tests, enlarged print for tests, note-takers, modifying the environment or making curriculum accommodations in accordance with documented student need. Students are encouraged to take advantage of these free services provided by the Academic Success Center.

Limited English Proficiency (LEP) support services are developed for individual students through the ASC. These services may include not-takers, extended time for tests, readers for tests and private testing rooms. Go to northlandcollege.edu/support-services/academic-success-center/ for more information.

Diversity Services

The office of Diversity Services was established to provide a support system for diverse students who attend Minnesota State colleges. Northland, as a part of the Minnesota State System, offers students of diverse backgrounds personalized support through academic, career, and personal counseling. The Minnesota State Office of Diversity Services also provides assistance to students of color to identify additional sources of educational funding. The Office is always willing to provide individualized support and assistance when needed.

The Office of Diversity Services is dedicated to all students of diverse background while they purse their educational goals. For those students who qualify, there are grants and scholarships, the Minnesota Indian Scholarship Assistance Program, Tribal Scholarships, Health Service Scholarships, Workforce Investment Act funding, and numerous other academic scholarships.

Find additional information at: Northland Diversity Services

Veterans' Services

Northland Community and Technical College complies with Minnesota Statute 197.775 which exceeds all criteria of Title 38 United States Code Section 3679(e).

The Veterans Resource Center at Northland Community & Technical College provides information to support veterans and their families. Whether veterans are entering school for the first time, transferring from another college, or returning from deployment, the goal of the center is to provide a welcoming environment for all who visit. The center is available for studying, offers educational and services information, and offers a welcoming environment to socialize with other veterans. A Minnesota Department of Veterans Affairs

representative is available weekly to aid with veterans' benefits. Veteran Certifying Officials are available on both campuses as your local connection to the VA to ensure veterans receive all the benefits to which they are entitled.

For additional information, stop by the Veterans Resource Center or go to: Northland Veterans' Services

Student Life

All students are welcomed and encouraged to participate in the variety of student life activities on both of the college's primary campuses and additional sites. Activities include special events, entertainment, and cultural heritage celebrations. Many other events take place throughout the year such as concerts and dances, performances by comedians, lecturers, and speakers, showings of foreign films, and other activities. Getting involved on campus can provide an enriching college experience and improve academic success. Activities are supported by Student Life fees.

Northland strongly supports student participation in professional service organizations, honor societies, clubs and other organizations. Getting involved has been shown to increase student success. Some clubs and organizations available at Northland include student ambassadors, campus recreation and intramurals, music, Phi Theta Kappa honor society, and many others including program-specific clubs.

The Student Senate serves to organize and stimulate activities within the student body for the broader college community. Serving with student government or as a member of the Student Senate is an ideal way to develop student leadership skills. Student Senate is composed of the president, vice-president, secretary, treasurer, and other representatives of the student body. The objectives of the Student Senate are to represent the student body and affiliated organizations in all matters of mutual concern, to provide social and cultural activities for the student body, to establish a calendar of events that will act as a student life guide, and to act as an advocate between the administration and student body. The Student Senate also serves as the means for the students to become involved in issues and decision-making on matters affecting student life and government at the local campus level, as well as state and national levels.

For more information, visit the student life website at: Northland Clubs & Activities

Northland Pioneer Athletics

The Northland Community & Technical College athletic department welcomes talented athletes from the local, national, and international communities. The department's mission is to enhance and support the intellectual mission of the College and its academic standards and practices. The Pioneer coaching staff encourages student athletes to get involved in the College and community. Many student athletes participate in campus organizations and community service groups. Pioneer athletes and teams are also recognized annually for their outstanding academic achievements.

Northland is a leader in promoting athletics, participating in numerous state, regional and national competitions. The Northland athletic programs have a long tradition of excellence both on and off the playing surface and are recognized as an important part of the college experience. Intercollegiate sports at Northland include:

Men	Women
Baseball	Basketball
Basketball	Softball
Football	Wrestling
Wrestling	Volleyball
Clay Target	Clay Target

Northland Pioneer Athletics is a member of the National Junior College Athletic Association (NCJAA) and is assigned to Region XIII including two-year colleges from Minnesota, upper Michigan, North Dakota, South Dakota and Wisconsin. Northland is also a member of the Minnesota Community College Conference along with most two-year colleges in Minnesota. The Thief River Falls campus hosts all Pioneer athletic facilities; however, students from all campuses are qualified to participate in the intercollegiate Pioneer athletic program based on their eligibility. Visit the Pioneer Athletics website at: Northland Pioneers

Additional Services

Campus Stores

Northland Stores are located on both the Thief River Falls and East Grand Forks campuses. The stores are the place to purchase student supplies and official Northland gear. Additionally, students can buy or sell new and used textbooks and purchase gifts. All financial aid and student payroll checks are disbursed at the bookstore upon showing student identification. Tuition and all other financial obligations are paid at the bookstore. For more on the Northland bookstores, go to: Northland Services

Business Services

The business office is responsible for the fiscal operation of the college. This includes working with budgets, student accounts receivable, accounts payable, purchasing, and fixed assets. Visit Business Services on Northland's website at: Northland Business Services

Dining Services

Cafeteria and catering services are available on both campuses. The Northland Market on the Thief River Falls campus and the Eastside Eatery on the East Grand Forks campus are open during select hours, depending on when classes are in session. Self-serve kiosks are also available on each of the primary Northland sites. Students may enjoy a variety of menu options like burgers, pizza, subs, and daily specials, as well as Grab 'n Go sandwiches, snacks, salads, and a wide selection of hot and cold beverages. Additional information can be found at: Northland Meal Plan

Student Housing

Northland Community & Technical College maintains a list of available housing in the area for student use. Northland will not inspect, screen, disapprove, or otherwise check out any of the available housing. The College does not enter into housing agreements or arrangements between students and landlords, nor does it become involved in any negotiations regarding housing problems.

NCTC Foundation Student Housing

The Northland Community & Technical College Foundation owns and operates apartments adjacent to the Thief River Falls campus. These apartments were recently completely refurbished with new windows, appliances, flooring, paint, and furniture. All apartments are completely furnished and come with high-speed internet, washers and dryers, and full kitchens. Details can be found at: Northland Student Housing

Technical Support

Northland's information technology staff provides student-friendly support for technical service. Resources and tools, laptop configuration, software download, and more are available at: Northland ITS

2024 ADMISSIONS

Northland Community and Technical College (Northland) is committed to open admissions and adopts Minnesota State Board Policy 3.4.
Minnesota State - 3.4 Undergraduate Admissions (minnstate.edu)

2024 PROCEDURE -- ADMISSIONS

Application Form: Prospective students may apply by completing the online universal Minnesota State admissions application. The online application may be found at Northland Admissions

Special Student Status: Applicants who are not seeking a diploma, certificate or degree from Northland may be allowed to enroll in coursework. Non-degree seeking students are individuals whose goal is to take a limited number of courses for the purposes of personal or professional enrichment and who have no intent of accumulating credits toward a certificate, diploma, or degree. Undeclared and non-degree seeking students are not eligible for financial aid from Northland. High school transcripts will not be required. College transcripts or assessment scores are necessary if they want to take Northland courses that have prerequisites that they have satisfied at another college. The out-of-state reciprocity process must be completed, if applicable. Students registered for more than one on-campus class for a full semester must submit an immunization form indicating immunizations received as per policy 2068 Immunization Record Requirement.

Admission to a Program: Prospective students may apply to the College, without regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression, or familial status. Academic, fiscal and facilities considerations may limit admission to particular programs or the institution. Admission to the College does not guarantee admission to a specific program. Northland may develop a standard(s) for admission into specific academic career paths.

Students Suspended from other Institutions: Students on academic suspension from a college or university must not be admitted during the term of that suspension unless they demonstrate potential for being successful in the particular program to which they apply. The process for demonstrating potential for being successful is the Student Appeal process. Students who have been suspended or expelled for disciplinary reasons from any postsecondary institution may be denied admission to Northland.

Appeals: Individuals who are denied admission on the basis of the published requirements in policy 2020 Admissions or procedure 2020P Admissions, may file a Student Appeal with the campus registrar's office. Appeals of denial of enrollment based on financial holds must not be accepted.

Financial Holds: Northland may admit a student who has a financial hold at another college or university but shall not allow the student to enroll in courses until the financial hold has been removed. Exceptions will be made for students enrolling in noncredit and closed credit courses offered through Workforce Development Solutions.

Visiting Student Status

Students not admitted:

Northland may allow a student who is not currently admitted as a student to enroll for the maximum number of credits allowed by its enrollment policy in any semester without submitting an application for admission.

Students admitted to a system college or university:

Northland shall allow a student who has been admitted at another system college or university to enroll as a visiting student. A visiting student shall not be required to submit an application for admission, and is not a candidate for a degree, diploma or certificate. A visiting student may enroll for the maximum number of credits allowed by Northland's enrollment policy; provided, that the student's total number of enrolled credits at all system colleges and universities does not exceed 22 in any semester.

Visiting student provisions:

- Visiting students shall satisfy Northland's course prerequisites.
- Northland may deny enrollment as a visiting student to any student who has an enrollment hold due to conduct, or satisfactory academic progress reasons at any system college or university. A visiting student who has an enrollment hold due to conduct or academic progress reasons at the visiting institution shall complete the appropriate appeals process at the college or university where the hold is located.
- Northland shall deny enrollment as a visiting student to any student who has an enrollment hold due to outstanding financial obligations at any other system college or university.
- Northland shall establish a registration window for visiting students that provides a reasonable opportunity to register for courses.
- Northland may limit enrollment of visiting students in courses that historically have enrollment requests exceeding available seats.

2092 NO-SHOW/ LAST DATE OF ATTENDANCE (LDA) REPORTING

Federal policies governing Title IV Financial Aid regulations require the verification of students in attendance. The verification of student attendance will determine how much Title IV Financial Aid a student receives. Non-compliance will affect the college's eligibility for federal student aid. In order to comply with these regulations, Northland Community and Technical College will verify student attendance on the fifth day of classes (No Show). Faculty shall report a last date of attendance on those students who do not complete the course.

2092 PROCEDURE – NO-SHOW/ LAST DATE OF ATTENDANCE (LDA) REPORTING

Students not attending any or all of their classes during the first 5 days of the semester will be reported, by faculty, as a No Show. The process is available to faculty through the Employee eServices. An FN (Failure for Non Attendance) grade will be entered for each reported course on that student. The FN grade will not be calculated in the overall GPA for the student. For courses beginning later in the term, students not attending the first class day will be reported as a No Show by faculty. The FN grade will be posted.

The Last Date of Attendance (LDA) will be entered by faculty members in eServices for students who have not been in attendance after the fifth day of the term (students not attending during days 1-5 are reported as No Shows) and have not completed the course. An FW (Unofficial Withdraw) grade will be entered and will be calculated in the overall GPA for the student. The LDA date must be entered on any student that, according to the instructor, would receive an "F" grade in his/her class due to nonattendance. If, however, the student does attend for the full length of the class, but "earns" an "F" grade through poor academic performance, the "F" grade is entered and the LDA date would be the last day of the class. If a student has not officially withdrawn, the last date of attendance will be validated either by faculty/staff documentation or by applying the midterm date. The Last Date of Attendance (LDA) process is available to faculty through Employee eServices.

3070 ACADEMIC PROGRESS

Introduction: Standards of academic progress are established to require students to progress satisfactorily and timely toward the completion of their degree, diploma or certificate. Additionally, federal regulations require that recipients of federal and/or state financial aid make satisfactory academic progress towards a degree, diploma or certificate to remain eligible for aid. In compliance with federal regulations, the college has established and will apply the following standard of academic progress to all students. The qualitative and quantitative standards of this policy are cumulative and include all periods of enrollment, whether or not a student received financial aid. The registrar's office is responsible for implementing and monitoring the satisfactory academic policy. Students are responsible for their academic progress and for seeking assistance when experiencing academic difficulty. Students are encouraged to work closely with an advisor or a counselor to ensure that they are successfully completing graduation requirements and maintaining satisfactory progress.

Qualitative Measure (GPA): All students are required to maintain the following minimum GPA levels: Cumulative Registered Credits Minimum Required GPA 0 – 5 0.00 6 – 23 1.75 24 and above 2.00

Grades of A, B, C, D, FW, and F shall be included in the GPA calculation.

Quantitative Measure (Completion Percentage): All students are required to complete the following minimum percentages of cumulative attempted credits: Cumulative Completion Credits Minimum Required Completion 0 – 5 0% 6 or more 67% Successfully completed credits include A, B, C, D, P, and CR.

Maximum Time Frame: Students whose cumulative attempted credits exceed 150% of the credits required to complete their intended degree, diploma or certificate are not eligible for financial aid. Up to 30 remedial and developmental credits shall be excluded from maximum time frame calculations. Maximum time frames for students pursuing double majors, students enrolled in consecutive programs or with previous degrees may be based on specific curricular requirements.

Evaluation Period: Satisfactory academic progress will be evaluated for all students with registered credits at the end of each semester; fall, spring and summer. Any non-standard session courses shall be evaluated during the semester in which they are transcripted. Programs less than one year in length will be evaluated at the end of the payment period.

Failure to Meet Standards 2 **Warning Status:** If at the end of the semester, a student has not met either the required cumulative GPA standard and/or required cumulative completion percentage standard, the student shall be allowed to enroll and retain their financial aid eligibility under warning status for one semester. Students on warning status are encouraged to meet with an advisor or counselor and complete an Academic Improvement Plan at the beginning of the warning term of enrollment. This document will be placed in the student's file.

Reinstatement of Students on Warning Status: If at the end of the warning period a student who has been on warning status has met both the colleges cumulative GPA and cumulative completion percentage status, the college shall end the student's warning status.

Suspension for Students on Warning Status: A student on warning status who fails to meet the required cumulative GPA and/or cumulative completion percentage, shall be placed on suspension immediately upon completion of the evaluation. All suspensions will be one calendar year in duration. Students returning after a period of suspension are eligible to be readmitted and will be placed on probation. Probation students will be required to complete an Academic Improvement Plan prior to registration. Requirements of the Academic Improvement Plan will include earning a term GPA and/or term percent of completion higher than the college's cumulative requirements. Students returning after a period of suspension should not assume that financial aid will be reinstated. An appeal to the financial aid office will be required.

Suspension at another college or university (Minnesota State or non-Minnesota State): Students with satisfactory academic progress standings from another college or university are subject to the following standards: • Students with a suspension status from another college or university that has not expired must have an approved appeal to enroll at the college • Students with a suspension status from another college or university that has expired will be eligible to enroll on a probation status. These probation students will be subject to the same requirements an NCTC student on probation is subject to, including the completion of an Academic Improvement Plan and earning a term GPA and/or a term percent of completion higher than the college's cumulative requirements.

Financial Aid Suspension of Students Maximum Time-Frame Failure: If at the end of the evaluation period a student has failed to meet the maximum time frame measurement, the student shall be suspended from financial aid eligibility immediately upon completion of the evaluation.

Suspension for Extraordinary Circumstances: The college may immediately suspend students from financial aid eligibility in the event of extraordinary circumstances which may include but are not limited to the following: i. reinstated students whose academic performance falls below acceptable standards during a subsequent semester; ii. students who register for courses and receive financial aid, but do not attend classes; and iii. students whose attendance patterns appear to abuse the receipt of financial aid.

Suspension for Inability to Meet Program Requirements within the Maximum Time Frame: If at the end of any evaluation period the college determines that it is not possible for a student to raise their GPA or course completion percentage to meet

standards before the student would reach the end of the program for which he or she is receiving financial aid, the college shall suspend the student from financial aid eligibility immediately upon completion of the evaluation. 3

Appeals for Reenrollment: Any student who has been suspended from enrollment due to failure to make satisfactory academic progress may appeal their ability to enroll in courses based on documented unusual or extenuating circumstances which may include but is not limited to death of a relative, illness, hospitalization, or injury of the student by using the college Academic Appeal Procedure. The student must complete the Appeal Form accurately and submit the form to the campus registrar. The student shall submit, as part of the appeal, information regarding why the student failed to make satisfactory academic progress, and what has changed in the student's situation that would allow the student to demonstrate satisfactory academic progress at the end of the next semester. If the student wants to present their case in person to the Academic Appeal committee, they must notify the campus registrar of that decision at the time the appeal is submitted. An appeal may be approved only if the college: 1. Has determined that the student has documented unusual or extenuating circumstances and should be able to meet satisfactory academic progress standards at the end of the next evaluation period; or 2. Develops an academic improvement plan with the student that, if followed, will ensure that the student is able to meet satisfactory academic progress standards by a specific point in time. The academic improvement plan must include term standards of GPA and/or percent of completion that are higher than the institution's cumulative standards. The academic improvement plan may include, but is not limited to, the following: i. a restriction on the number of credits; ii. a requirement that certain courses be taken; iii. a requirement regarding class attendance; iv. a requirement that scheduled meetings occur with a counselor or advisor to review student progress. The Academic Appeal committee will notify the student of the outcome in writing. Notification of approved appeals must include the standards that the student is expected to meet or the academic improvement plan that the student is expected to complete. Notification of denied appeals must describe the reason(s) for the denial and the institution's process for appealing that denial according to Northland Student Complaints and Grievances procedure 3240P. A separate process exists to appeal for reinstatement of financial aid. This process is explained below.

Probationary Status: A student who has successfully appealed must be placed on probation for one semester. If at the end of the next semester, a student on probation status: 1. Has met the college's cumulative GPA and cumulative completion percentage standards, the student will regain enrollment and financial aid eligibility. 2. Has not met the college's cumulative GPA and cumulative completion percentage standards, but has met the conditions specified in the student's academic improvement plan, which includes a GPA and/or percent of completion higher than the college's cumulative standards, the student shall retain probationary status for a subsequent evaluation period. 3. Has not met the college's cumulative GPA and cumulative completion percentage standards and has also not met the conditions specified in the student's academic improvement plan, the student shall be re-suspended immediately upon completion of the evaluation.

Appeal for Reinstatement of Financial Aid: Any student who has been suspended from financial aid may appeal their ability to receive financial aid directly to the financial aid director by using the Appeal/Petition for Reinstatement of Financial Aid Form. The student must accurately complete and submit the form with supporting documentation and an Academic Improvement Plan to the financial aid office. The financial aid office will log the appeal and submit to the financial aid director for review. The financial aid director must notify the student of the outcome in writing. 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 whose financial aid eligibility has been suspended may regain their eligibility only through this appeal process or when they are again meeting the college's financial aid satisfactory academic progress GPA and completion percentage standards. Appeals may be granted in situations that demonstrate unusual or extenuating circumstances. Unusual or extenuating circumstances may include but are not limited to the following: death of a relative, illness, injury, or hospitalization of the student. It is required that students attach appropriate supportive documentation, such as doctor's statements to their form. The student shall submit, as part of the appeal, information regarding why the student failed to make satisfactory academic progress, and what has changed in the student's situation that would allow the student to demonstrate satisfactory academic progress at the end of the next semester. An appeal may be approved only if the financial aid director: 1. Has determined that the student should be able to meet satisfactory academic progress standards at the end of the next evaluation period;

or 2. Reviews the Academic Improvement Plan that was developed with an advisor or counselor, and if followed, ensures that the student is able to meet satisfactory academic progress standards by a specific point in time. The academic improvement plan must include term standards of GPA and/or percent of completion higher than the institution's cumulative standards. Notification of approved appeals must include the standards that the student is expected to meet or the academic improvement plan that the student is expected to complete in order to retain financial aid eligibility at the end of the next evaluation period. Notification of denied appeals must describe the reason(s) for the denial and the college's process for appealing that denial. The initial consideration of an appeal must be undertaken by the Director of Financial Aid or a designee. If an initial appeal is denied by the Financial Aid Director or designee, the student may appeal the initial decision by using the college Appeal/Petition for Reinstatement of Financial Aid Form within ten days of receiving the financial aid director's decision. The student must complete the Appeal/Petition for Reinstatement of Financial Aid Form accurately and submit the form and any additional required documentation to the campus registrar; the student must attach a copy of the denied appeal/petition for reinstatement of financial aid; if a student wants to present their case in person to the Chief Academic Officer (CAO) and the Chief Student Affairs Officer (CSAO), they must notify the campus registrar of that decision at the time that the appeal is submitted. The CAO must notify the student of the joint outcome in writing and must include the standards that the student is expected to meet or the academic plan that the student is expected to complete in order to retain financial aid eligibility at the end of the next evaluation period. The decision of the CAO and CSAO is final and binding.

Financial Aid Appeal/Petition for Maximum Timeframe: Students who have reached the maximum timeframe for financial aid and who have only a few courses left to complete their degree, diploma, or certificate may petition to have the suspension lifted for ONLY 5 the courses needed to finish that degree, diploma, or certificate. To file an appeal for maximum timeframe suspension, a student must meet with an advisor to complete an academic improvement plan. The academic improvement plan must outline the courses needed for completion and a completion date. Students must submit a copy of the academic improvement plan along with the Appeal/Petition for Reinstatement of Financial Aid form and any other supporting documentation to the financial aid office for review. If approved, the student's financial aid will cover only the courses related to completion of the degree, diploma, or certificate. Financial aid appeals submitted without required documentation will be denied.

Notification of Status: Northland shall notify a student in writing any time the student is placed on warning, suspension or probation status. 1. Notification of warning – The College shall notify a student in writing any time the student is placed on warning status, and shall inform the student of the conditions of that warning status. 2. Notification of suspension – The College shall notify a student in writing any time a student is placed on suspension status, and shall inform the student of their right to appeal the suspension. 3. Notification of probation – The College shall notify a student in writing any time a student is placed on probationary status, and shall include the standards the student is expected to meet or the academic improvement plan the student is expected to complete at the end of the next evaluation period.

Treatment of Grades Earned Credits: Successfully completed credits that count toward the required percentage of completion. Earned credits include only A, B, C, D, and P (pass).

Completed Credits: Credits that include A, B, C, D, F, FW (unofficial withdraw), P, and CR. They do not include FN (failure for non-attendance), I (incomplete), W (withdraw), AU (audit), NC (no credit), Z (grade not yet entered), or drops (classes dropped during the drop/add period). Completed credits may qualify for retroactive payment of financial aid.

Successfully Completed Credits: Credits for which a student receives a letter grade of A, B, C, D, and P are included in the calculation of cumulative completion percentage of credits successfully completed.

Credits Attempted But Not Successfully Completed: Credits for which a student receives a letter grade of I, NC, W, FN, FW, F, and Z shall be treated as credits attempted but not successfully completed. Audited courses (AU) are not counted as credits attempted.

Incompletes: A grade of incomplete (I) may be assigned at the discretion of an instructor only in extenuating circumstances. An incomplete grade is to be given only to students who cannot complete the coursework on schedule because of illness or other extenuating circumstances. Students interested in an incomplete grade must complete the "Request for Incomplete" form and submit it to the instructor for consideration. Instructors are responsible for deciding if it is appropriate and feasible to approve a request for an incomplete. An incomplete grade is a temporary grade and will automatically become an "F" grade at the end of the next term (includes summer), if requirements have not been satisfactorily met by the student. Instructors have the option of setting a completion date earlier than the end of the next term.

Grade Point Average (GPA): GPA is the quotient of the student's grade point total divided by the grade point credits. "P" does not carry a grade point value and as such is not calculated in the GPA. A "P" will neither raise nor lower a student's GPA. However, "P" counts toward registered and completed credits.

Grade Points: A letter grade is assigned at the end of the semester for each course in which the student is enrolled. A grade point value for each credit in the course is assigned to each letter grade. Only grades of A, B, C, D, FW, and F carry grade point value and shall be included in the GPA calculation.

Grade Point Total: The sum of grade points earned as determined by multiplying the grade point value of the grade by the number of course credits.

Fresh Start (Academic Amnesty): Credits for which students have been granted a Fresh Start (Academic Amnesty) shall be recorded and retained in the Student Data System in such a way that they will be included in both the qualitative and/or quantitative measurements of financial aid satisfactory academic progress.

Audited Courses: Audited courses (AU) are not funded by financial aid and are not included in any financial aid satisfactory academic progress measurements.

Consortium Credits: Credits for which a student is registered at another college which are accepted for the purposes of processing financial aid are to be included for purposes of calculating satisfactory academic progress (cumulative GPA, completion percentage, and maximum time-frame calculations).

Remedial/Developmental Courses: Credits awarded for remedial or developmental course work (below 1000/100 level) shall be included in the qualitative and quantitative percentage measurement of satisfactory academic progress. Students may receive financial aid for these credits up to a maximum of 30 semester credit hours. Up to 30 remedial and developmental credits shall be excluded from maximum time frame calculation.

Repeated Courses: A student may repeat a course no more than two (2) times unless otherwise defined by program requirements. Repeating a course will not remove previous attempts from the student's transcript. The best grade will become the grade calculated for GPA purposes. All repeated credits are included in the completion percentage calculation for satisfactory academic progress and are taken into consideration when calculating maximum time frame. A student shall not be permitted to receive financial aid for more than one repetition of a previously passed course. In order for repeated courses to be calculated into a student's GPA, a passing grade must be earned. Repeating a course will not remove previously posted Satisfactory Academic Progress notations on the student's transcript.

Transfer Credits: Transfer credits are credits earned at another college which are accepted by NCTC. Transfer credits accepted by NCTC and applied to the student's program requirements shall be counted as credits attempted and completed for calculation of cumulative completion percentage. Grades associated with these credits shall not be used in calculating cumulative GPA. Transfer credits will be counted when calculating the 150% timeframe if the credits apply towards the student's current degree, diploma, or certificate. Withdrawals: Credits for which a grade of "W" is received are considered attempted credits but not successfully completed credits for the purpose of monitoring satisfactory academic progress. A "W" does not impact GPA, but does negatively impact the cumulative completion percentage.

3120 TRANSFER OF CREDIT: Transfer of credit to other colleges varies and is determined by the college to which the student is transferring. Northland follows Minnesota State policy 3.21, procedure 3.21.1, and operating instructions 3.21.1.1, 3.21.1.2, and 3.21.1.3 in the transfer of credit. Students transferring credit from another college or university to Northland must request an official transcript

of their grades be sent to the admissions office for evaluation. Northland is able to access a student's transcript from other Minnesota State Colleges and Universities through eTranscript, provided the student does not have any outstanding financial obligations to that college or university. Once a student has been admitted to NCTC, NCTC evaluates college-level course credits completed, as submitted by the student on an official transcript, determines if they shall be accepted in transfer, and records them into the degree audit reporting system. Once the credits are accepted in transfer, NCTC determines how the course credits will apply to program and graduation requirements. NCTC accepts Minnesota Transfer Curriculum (MnTC) courses, goal areas, or the entire completed curriculum as determined and documented by the sending college or university transcript and/or MnTC Audit. NCTC also considers financial aid implications regarding how the credits are applied to the program. Applying additional credits that do not count toward the student's program requirements could negatively impact the student's financial aid eligibility. Evaluation considerations of credit transfer are identified in Transfer of Credit Procedure 3120P, in addition to specific information regarding credit transfer from nationally or regionally accredited colleges or universities, non-regionally accredited institutions, and acceptable passing grades in transfer. For acceptance of military credits, see NCTC policy 3150 and procedure 3150.3P. Students may appeal any decision regarding their transfer of credits. See Transfer of Credit Procedure 3120P, Appeals section for details.

3240 STUDENT COMPLAINTS AND GRIEVANCES

A student has the right to seek a remedy for a dispute or disagreement, including issues of institutional or program quality such as an institution's compliance with the standards of an accrediting agency, or a claim of consumer fraud or deceptive trade practices, through a designated complaint or grievance procedure. This policy does not apply to academic grade disputes. Grade appeals must be handled under the Grade Appeal Policy. Students are encouraged to use available informal resolution procedures before filing a complaint or grievance.

3240 PROCEDURE -- STUDENT COMPLAINTS AND GRIEVANCES

Definitions:

Appeal: A request for reconsideration of a grievance decision under Policy 3240, Procedure 3240, System Policy 3.8, and System Procedure 3.8.1.

Complaint: An oral or written claim concerning a college issue brought by a student alleging improper, unfair, or arbitrary treatment.

Grievance: A written claim raised by a student, alleging improper, unfair, or arbitrary action by an employee involving the application of a specific provision of a college rule/regulation or a board policy or procedure. This policy does not apply to those college rules/regulations or to board policies or procedures that include an appeal or grievance process.

Retaliation: Retribution of any kind taken against a student for participating or not participating in a complaint, or grievance.

Student: An individual who in enrolled in a college, a group of such individuals, or the campus student government.

Notification and Publication: Northland informs students of the established complaint and grievance policy and procedure through the Student Handbook and through its website.

Informal Resolution: Northland encourages informal resolution of complaints by requiring that students discuss the complaint with the employee(s), and/or administrator(s). If not resolved through this informal discussion, a complaint may become a grievance if the complaint involves the application of a college rule/regulation or a board policy or procedure.

Formal Resolution: All appeals, complaints, and grievances not resolved informally must be submitted in writing to the campus registrar. Students are encouraged to use the Student Appeal form to submit formal appeals, complaints or grievances – they are located in Student Services and on the web. Appeals, complaints or grievances are reviewed by standing committees which report their findings directly to the student who has filed the appeal, complaint or grievance. Students may appeal the decision or recommendation through procedural steps listed below.

Committees: Northland has established standing committees to review appeals, complaints and grievances: campus Academic Appeal Committees and the Student Services Appeal

Committee. These groups review student appeals if an informal discussion cannot produce an acceptable remedy. A student who feels that his/her right to an education is being affected unfairly due to the presence of a college academic or non-academic policy or procedure will be directed to the appropriate review committee.

Academic Appeal Committees: These campus committees consider the validity of all student academic appeals. Topics appropriate for review by these committees include, but are not limited to: curriculum and instruction issues, suspension, credit transfer, graduation requirements, withdrawal date deadline adjustments and unresolved academic issues. Suspension appeals are dealt with in accordance with the guidelines outlined in the Satisfactory Academic Progress policy 3070.
Membership consists of a Registrar's Office representative, a Student Services representative, an Academic Dean, a member of the Academic Affairs and Standards Council, faculty representatives, an ADA specialist, and may include a student representative. Faculty should comprise 50% or more of the Academic Appeals Committees.
The committee chairs will be elected by majority vote of each committee (not an administrator). Each member will hold one vote and the elected chair will only vote in the event of a tie. Committee members will refrain from voting if they have a conflict of interest with the issue being discussed. Any committee member directly involved with the appeal will not be in attendance during the review process.

Student Services Appeal Committee: This committee's purpose will be to investigate and make recommendations to the College President's designee. Topics appropriate for review by this committee include, but are not limited to: appeals of nonacademic college policies and procedures (admissions, computer use, financial, etc.).
Membership consists of a business office representative, financial aid representative, student services representative, an ADA specialist, faculty representatives, and may include a student representative.
The committee chair will be elected by majority vote (not an administrator). Each member will hold one vote and the elected chair will only vote in the event of a tie. Committee members will refrain from voting if they have a conflict of interest with the issue being discussed. Any committee member directly involved with the appeal will not be in attendance during the review process.

Steps for Filing:

1. The college Student Appeal form (available from Student Services and on the web) should be accurately completed and returned to the campus registrar's office along with any supporting documentation.
   - Appeals concerning tuition, fees, and late withdrawals must be submitted by the end of the following term (Fall, Spring, Summer).
2. The campus registrar reviews the student appeal and assigns it to the appropriate committee or administrator.
3. If the appeal is directed to a committee, the committee appoints a member to gather information pertinent to the appeal and reports his or her findings to the committee.
4. Students have the right to present their case in person at the committee meeting. Students must notify the appropriate designee of their decision to present their case in person 24 hours prior to the date of the committee meeting. Students intending to bring another person who can provide information regarding the appeal to the meeting must notify the appropriate designee 24 hours prior to the date of the committee meeting.
5. The committee reserves the right to include other college personnel in the meeting to address issues of the appeal as needed.
6. The committees review and judge the merits of all information provided within 20 business days.
7. The Student Services Appeal committee makes recommendations to the college Dean of Student Affairs, who will inform the student of the outcome in writing within ten business days of the committee meeting.
   - The student may appeal the Student Services appeal decision of the college Dean of Student Affairs to the College President within ten business days of the Dean of Student Affairs' decision.
8. The Academic Appeal committee informs the student of the outcome in writing within ten business days of the committee meeting.
   - The student may appeal the Academic Appeal Committee's decision to the Chief Academic Officer within ten business days of the committee's decision. The decision of the Chief

Academic Officer is final. The decision of the Academic Appeal Committee or the CAO does not determine financial aid eligibility. Financial aid eligibility is determined through the reinstatement process as defined in Policy 3070.

Appeals to any administrator or designee must be submitted through the Registrar's Office and should include:

- Student name
- Student program
- Statement regarding why the committee decision should be reversed based on information previously considered.
- Completed Academic Improvement Plan, if necessary
- Copy of Academic Progress Conditions form, if any
- Related correspondence

Retaliation: No retaliation of any kind shall be taken against a student for participating, or refusing to participate, in an appeal, complaint or grievance. Retaliation may be subject to action under appropriate student or employee policies.

Administrative Complaint Statement and Reference to Policy: Appeals of federal, state, and Minnesota State policies and procedures will be directed to the College President or designee for referral to the appropriate federal or state agency. If the grievance involves a board policy, the actions of NCTC's President or Chief Academic Officer, an issue of institutional or program quality such as an institution's compliance with the standards of an accrediting or licensing agency, or a claim of consumer fraud or deceptive trade practice, a student may further appeal the College decision to the Chancellor. The decision of the Chancellor is final and binding.

3260 STUDENT LEAVE/ABSENCE

STUDENT RIGHTS AND RESPONSIBILITIES:

Students are expected to regularly attend the classes for which they are registered, and familiarize themselves with instructors' individual attendance policies. It's the responsibility of students to initiate and follow through on direct communication with instructors about any type of absence for which they desire accommodations. Students have the right to avoid suffering irreversible grade penalties when certain conditions are met; namely, those connected to Student Leave and College-Sanctioned Activity absences (detailed below).

INSTRUCTOR RIGHTS AND RESPONSIBILITIES:

Instructors determine specific class policies and procedures regarding absences from scheduled class meetings (lectures, labs, exams, etc.), and they are responsible for providing these policies and procedures to students. Instructors have extensive freedom and flexibility in this regard, so their policies may differ considerably with respect to such things as whether prior notification of absence is required, whether supporting evidence is required, whether make-up work will be allowed, whether and what kinds of grade penalties will be assessed, and so on. Instructors also have a responsibility to ensure that their policies and procedures are reasonable, and to ensure that they are applied and enforced fairly and consistently.

STUDENT LEAVE/COLLEGE-SANCTIONED ACTIVITY ABSENCES:

Student Leave is a series of one or more absences for a defined purpose that, when granted, is considered an approved or legitimate period of absences. Whether a series of absences is to be considered Student Leave or not will be determined on a case-by-case basis by individual instructors, though federal or state regulations may mandate some types of Student Leave to be granted under certain conditions (such as military leave, pregnancy leave, parental leave, jury duty, etc.).

College-Sanctioned Activities are scheduled activities including (but not limited to): academic conferences, athletic competitions, class field trips, club-related activities, musical performances, and program-related exams or activities. These types of special activities can create scheduling conflicts internal to the college, in which case the students' participation in special activities is generally encouraged.

When facing absences due to College-Sanctioned Activities or when requesting absences to be considered as Student Leave, students are responsible for notifying instructors as far as possible in advance, supplying relevant supporting documentation if requested, and working within their instructors' class policies and procedures. Instructors may require advance work or make-up work, they may impose

deadlines, or they may set other reasonable conditions for the students' work, as long as students who meet their responsibilities are given the opportunity to avoid suffering irreversible grade penalties from these types of absences.
In the special case of extreme short notice of scheduling, it may be unreasonable for instructors to require advance work, but it is generally still reasonable to expect students to notify instructors as soon as they become aware of the need to be absent and then follow through with the rest of the procedures in a timely manner.
Accommodations agreements made between instructors and students, as well as any relevant supporting documentation, should be recorded and preserved whenever possible, especially in the case of extended Student Leave (which may also, depending on the agreement, require forms to be filed with the Registrar).

OTHER ABSENCES:

Instructors are not required to make accommodations for absences that are neither Student Leave nor due to College-Sanctioned Activities. Other types of absences are handled according to individual class policies, as allowed by the rest of this policy.
Students who do not intend to regularly attend a class for which they are registered are strongly encouraged to Drop or Withdraw, in accordance with Policy 2090 (Drop/Add, Withdrawal & Refund).
Students who fail to regularly attend a class for which they are registered without making sufficient arrangements with the instructor and without Dropping or Withdrawing from the course may be Failed for Non Attendance (assigned an FN grade) or Unofficially Withdrawn (assigned an FW grade) by the instructor, in accordance with Policy 2092 and Procedure 2092P (No Show/Last Date of Attendance).

APPEALS PROCEDURE:

Students who disagree with an instructor's attendance policy (or enforcement thereof) should pursue their complaints through the usual process for appeals of student grievances, first by pursuing an informal resolution and then, if needed, filing a formal complaint or grievance with the program or college. For details on the college appeal procedure see Policy 3240 and Procedure 3240P (Student Complaints and Grievances).
If an individual instructor's class policy is found to conflict with this policy, this policy will take precedence over the class policy. Likewise, if this policy is found to conflict with a state or federal regulations, those regulations will take precedence over this policy.

View all College policies and procedures at: Northland Policies and Procedures