Northwood Tech
2022-2023 Catalog

NorthwoodTech.edu
800.243.9482

Northwood
Technical College

Welcome!

We are excited that you are considering one of the many educational opportunities provided by Northwood Technical College. Our nationally-recognized College is committed to providing you with the skills and knowledge you need for a rewarding career. Our programs are offered at an affordable price and with faculty and staff whose top priority is helping you achieve your goals. At Northwood Tech, you will find the support you need in a dynamic learning environment.

As you think about your options, consider the fact that Forbes, Washington Monthly, and the Aspen Institute all regard Northwood Tech as one of the nation's best two-year colleges. Come develop skills that help you with your employment outlook and allow you to play an important role in your community. Be one of the many who decide it's time to make a decision that will benefit not only you, but also those who live and work in your area. Join the thousands of people annually who make Northwood Tech their first choice. Come to Northwood Tech and Experience Success!

Good luck, and please contact us if you have any questions about Northwood Tech's programs and services.

John Will, Ed.D.
President
Northwood Technical College

Northwood Tech
Experience. Success.

Accredited by the Higher Learning Commission
www.hlcommision.org

Northwood Tech 2022-2023 Catalog

This catalog contains general information about Northwood Tech's programs and services, course descriptions, tuition and fees, and policies in existence at the time of this publication's deadline, July, 2022.

Northwood Tech reserves the right, without prior notice, to change, delete, supplement or otherwise amend at any time the information, policies, curriculum or program requirements contained in this catalog, whether during a student's enrollment or otherwise.

A student's or prospective student's reliance upon information contained within the catalog, when making academic decisions does not constitute, and should not be construed as, a contract with the College. Students should consult with the appropriate academic division or department for further information.

Northwood Tech
Experience. Success.

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Northwood Tech
Experience. Success.

Welcome to Northwood Technical College, Northwest Wisconsin's leader in Career and Technical Education. At Northwood Tech, we promise you a hands-on college experience tailored to fit your needs. We are here to help you gain the practical skills and valuable knowledge to succeed wherever life leads you.

We are caring, responsive, down-to-earth, skilled, and confident. We care about you as the learner and want to make your academic experience at Northwood Tech one that is memorable and enjoyable. We embrace and support your goals to enhance the quality of your life through career success.

We measure our success through yours.

You need to be qualified and prepared as you pursue your career goals, and we're here to help. Experiencing the nationally-recognized education provided at Northwood Tech will enable you to access the exciting and rewarding career opportunities you seek.

Making Northwood Tech your college of choice is the right decision. Together, we will Experience Success.

Respectfully,

Northwood Tech Administration, Faculty, and Staff

Board of Trustees

The College operates under the direction of the Northwood Tech Board of Trustees. Board members are appointed by a board appointment committee made up of the county board chairpersons in Northwood Tech's 11-county district and serve three-year terms from July through June. The chairperson whose county has the largest population serves as the chairperson of the appointment committee.

Employee Members
Janelle Gruetzmacher
Amber Richardson
Employer Members
Brett Gerber
Nicole O'Connell
Additional Members
Andrew Albarado
James Beistle
Lorraine C. Laberee
Elected Official
Chris Fitzgerald
School District Administrator
Josh Robinson
Board Global Ends Statement
Northwood Tech exists to provide the regional economy with an educated, skilled, diverse, and dynamic workforce that is worth the expenditure of resources committed.

Table of Contents

Mission, Vision, and Values

Mission

Learning First
Learning is our passion. As Northwest Wisconsin's leader in technical education, Northwood Technical College creates dymanic opportunities for career preparation and personal growth. We are committed to making each and every experience with us meaningful and professional.

Vision

An Innovative Journey
Education is a lifelong journey of learning and discovery. We embrace innovative theories, techniques, and technologies to ensure success in a changing world.

Values

Empowerment – We value an engaging and supportive environment that inspires learners to achieve their personal and professional goals.

Excellence – We value high-quality training, professional development, and customer service in a dynamic learning environment.

Innovation – We value flexible delivery options and embrace the latest theories and technologies to meet individual learners' needs.

Integrity – We value honesty, accountability, and diversity in an open and ethical environment.

Collaboration – We value partnerships that enhance learning, promote economic development, and improve the quality of life.

Strategic Goals

EVOLVE XXXIII: Strategic Plan for 2021-2023

Strategic Key Strengths

1. TRANSFERABILITY: Increase awareness of transfer and higher education partnership opportunities.
2. PROGRAM OPTIMIZATION: Establish programming that focuses on flexibility and leverages technology to serve regional employment needs.
3. PERCEPTION: Improve recognition of the College to become a first choice college.
4. REBRANDING: Branding tools reflect new name, mascot, and logo for Northwood Technical College.
5. DIVERSITY, EQUITY, INCLUSION: Create an environment welcoming to everyone through diversity awareness and removing barriers in the learning and working environment.

Diversity, Equity, and Inclusion

Northwood Tech is committed to providing a diverse, equitable, and inclusive working and learning environment. Current goals of the College center on creating opportunities, removing barriers, and ensuring a climate of success that appreciates uniqueness and celebrates diversity. To learn more about the College's Affirmative Action/Equal Opportunity goals and find helpful resources, please visit the Northwood Tech Diversity, Equity and Inclusion webpage.

Equity Vision Statement
The faculty, staff and community partners of Northwood Tech commit to identifying and addressing inequities through purposeful data use and intentional planning of policies, procedures, professional learning and continuous improvement actions to ensure every individual receives what they need to develop their full academic and economic potential.

Northwood Technical College Purposes

As an accredited public postsecondary educational institution serving Northwest Wisconsin, Northwood Technical College is committed to achieving our mission of "Learning First" by:

- Providing comprehensive programming to include certificates, diplomas, and associate degrees in occupational fields.
- Providing general studies courses to empower learners to become active and productive members of society.
- Providing support services to assist learners in achieving occupational, educational, and personal enrichment goals.
- Providing academic support to prepare learners for successful transition into employment or postsecondary programs.

The Northwood Tech District

One of 16 districts in the Wisconsin Technical College System (WTCS), Northwood Tech began serving Northwest Wisconsin in 1912 in Superior, and now has locations in Ashland (since 1921), Rice Lake (1941), and New Richmond (1967). Northwood Tech also has outreach centers in Balsam Lake, Hayward and Ladysmith.

The Northwood Tech district encompasses 10,500 square miles with over 300,000 residents. Of the nearly 14,000 students served last year, 48 percent were female, 7.8 percent were ethnic minorities, 7 percent were Veterans, and 64 percent were 20 years old or older.

Northwood Technical College is accredited by the Higher Learning Commission, an institutional accreditation agency recognized by the U.S. Departments of Education. The College offers a variety of associate degrees, technical diplomas, short-term certificate programs, continuing education courses, and customized business training designed to help start or advance a career.

Operating under the direction of the Board of Trustees and the state technical college system, the College generates its revenue through student tuition and other student fees, local government, state and federal aids, and institutional revenue. The Northwood Tech Foundation also supports the College with scholarships, staff development training, and equipment donations.

Northwood Tech partners with area businesses, educational institutions, and agencies to create programming that meets regional needs.

Student Academic Achievement at Northwood Tech

Northwood Tech's "Learning First" mission establishes a strong commitment to learner success. Course competencies, program outcomes, and Employability Essentials identify the College's expectations for successful learning. The Employability Essentials at Northwood Tech represent the collegewide outcomes. They are the knowledge, skills, and abilities students are expected to develop as a result of their overall experiences at Northwood Tech. The College assesses the Employability Essentials each academic year, using the information to improve teaching and learning. The documentation and assessment of learning outcomes provide a basis for Northwood Tech's continuous improvement.

Course Competencies
Major skills, knowledge, attitudes, or abilities needed to perform a task effectively and efficiently.

Program Outcomes
Field-specific skills, attitudes, and abilities expected to be mastered by learners completing a program. Program outcomes go beyond a specific course and pertain to the entire program.

Employability Essentials
The Northwood Tech Employability Essentials to **communicate clearly, demonstrate professionalism, practice inclusivity, and think critically** will be assessed in an ongoing basis. Assessment of the Employability Essentials assists Northwood Tech as we continuously work to improve teaching and learning.

- » Communicate Clearly
- » Demonstrate Professionalism
- » Practice Inclusivity
- » Think Critically

Assessment of Student Learning

The purpose of student learning assessment is to improve students' learning and faculty teaching methods. The assessment process should help to identify the following:

- What students should be learning
- The ways students are growing intellectually
- The gaps in the learning process
- What the college should be doing to facilitate student learning and growth
- What the college should be measuring to determine student learning and growth

Northwood Tech Assessment of Student Learning includes the following:

- Course Level Assessment (program courses and general studies courses)
  - » Course level assessment results will be used to improve student learning in the classroom, as well as improve teaching practices
- Program Outcome Assessment
  - » Assessment of program outcomes will ensure that continuous improvement is taking place and will demonstrate accountability to constituents (students, employers, accrediting bodies, etc.)
- Employability Essentials Assessment
  - » Assessment of the Employability Essentials and use of the results to make improvements will ensure that Northwood Tech graduates will have the skills necessary to be effective in career and personal effectiveness

Please visit Northwood Tech's Assessment web site for further resources and information related to Assessment of Student Learning.

Programs

Offered at	1 year technical	2 year technical	2 year associate	Page	Online	Ashland	New Richmond	Rice Lake	Superior	Outreach Centers	Custom[1]
* Accounting »			■	39	■	■	■	■	■	■	
* Accounting Assistant »	■			41	■	■	■	■	■	■	
* Administrative Coordinator »			■	43	■	■	■	■	■	■	
Advanced EMT**				45			■	■			
* Agricultural Power and Equipment Technician		■		48			■				
* Architectural Commercial Design (unique in Wisconsin) »			■	50	■	■	■	■	■		
* Architectural Woodworking & Cabinetmaking »	■			52				■			
* Automated Packaging Systems Technician (unique in Wisconsin) »		■		53			■				
* Automation for Industrial Systems (unique in Wisconsin) »			■	55			■				
* Automotive Service Technician »	■			57					■		
* Automotive Technician »		■		59				■			
Billing and Posting Clerk** »				61	■	■	■	■	■	■	
* Business Management »			■	65		■	■	■	■	■	
Community-Based Residential Facility (CBRF) Caregiver** »				69		■	■	■	■		
* Construction and Cabinetmaking (unique in Wisconsin) »		■		70				■			
Construction Essentials** »				72							■
* Cosmetology	■			73				■	■		
* Criminal Justice - Law Enforcement 720 Academy**				77				■			
* Criminal Justice Studies			■	79	■	■	■	■	■		
* Customer Service Manager »	■			83		■	■	■	■	■	
* Dental Assistant	■			86				■			
* Diesel Equipment Technician		■		88			■				
* Drafting Technician »	■			90	■	■	■	■	■		
* Early Childhood Education »			■	91			■	■	■		
* E-CHiLD »			■	93	■						
* E-Connect - Child Care Services »	■			95	■						
Emergency Medical Technician**				99		■	■	■	■		
* Emergency Medical Technician - Paramedic » ▲	■			101		■	■	■	■		
* Farm Operation »	■			103		■	■	■	■	■	
* Financial Services »			■	105	■	■	■	■	■	■	
Financial Services Customer Representative** »				107	■	■	■	■	■	■	
* Gerontology - Aging Services Professional »			■	108	■	■	■	■	■	■	
* Health Information Technology »			■	112	■						
* Health Office Professional »	■			114	■	■	■	■	■		
Healthcare Receptionist** »				116	■	■	■	■	■		
* Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R) »		■		117					■		
Hospitality Foundations** (unique in Wisconsin)				119		■	■	■	■		
* Human Resource Management »			■	120	■	■	■	■	■	■	
* Human Resources and Payroll Generalist »	■			122	■	■	■	■	■	■	
* Human Services Associate »			■	124		■	■	■	■		
* HVAC Installation Technician »	■			126					■		
* Individualized Technical Studies			■	128		■	■	■	■		
* Industrial Maintenance Technician		■		129					■		
* Industrial Systems Specialist (unique in Wisconsin) »	■			131			■				
* Information Technology - Cybersecurity Specialist »			■	133		■	■	■	■		
* Information Technology - Systems Administration Specialist »			■	135		■	■	■	■		
* Information Technology - Web and Software Developer			■	137	■		■				
* Leadership Development »			■	141	■	■	■	■	■	■	
Leadership Essentials** »				143	■	■	■	■	■	■	
* Machine Tool Operation »	■			145		■					
* Machine Tool Operation - CNC »	■			146				■			
* Machine Tool Technician »		■		148					■		
* Machine Tooling Technics »		■		150			■				

Programs (cont.)

	Offered at	1 year technical	2 year technical	2 year associate	Page	Online	Ashland	New Richmond	Rice Lake	Superior	Outreach Centers	Custom†
*	Marine Repair Technician (unique in Wisconsin) ▲ »	■			155		■					
*	Medical Administrative Professional »			■	157	■	■	■	■	■		
*	Medical Assistant»	■			159		■	■	■	■		
*	Medical Billing Specialist »	■			161	■	■	■	■	■		
*	Medical Coding Specialist »	■			163	■						
	Microsoft Office** »				165	■	■	■	■	■	■	
*	Nonprofit Leadership »			■	167	■	■	■	■	■	■	
*	Nonprofit Professional (unique in Wisconsin) »	■			169	■	■	■	■	■	■	
	Nursing Assistant**				171		■	■	■	■	■	
*	Nursing - Associate Degree			■	172		■	■	■	■		
*	Nursing - Associate Degree - Part Time			■	174	■						
*	Occupational Therapy Assistant			■	176		■	■	■			
*	Office Support Specialist »	■			178	■	■	■	■	■	■	
	Office Technology Assistant** »				180	■	■	■	■	■	■	
*	Paramedic Technician »			■	181		■	■	■	■		
*	Pharmacy Technician	■			184			■		■		
*	Power Sports Technician	■			189			■				
	Refrigeration Essentials**»				194					■		
*	Substance Abuse Counselor Education »	■			195		■	■	■	■		
*	Technical Studies - Journeyworker			■	200		■	■	■	■		
	Truck Driving**»				201			■	■			
*	University Transfer Degree - Associate to Bachelor's/Arts			■	202	■						
*	University Transfer Degree - Associate to Bachelor's/Science			■	204	■						
*	Utility Construction Technician (unique in Wisconsin) »	■			206				■			
*	Veterinary Technician »			■	208			■				
*	Welding »	■			210		■	■	■	■		

*** Indicates financial aid eligible. ** Program duration is less than one year. ▲ Program duration is three terms.**
General Studies is central to all programs. GED/HSED® and Academic Support offerings are available at all locations.
† Custom Programs - See Page 11 for more information
» Indicates this program is part of a career pathway

Select courses are offered at the Balsam Lake, Hayward, Ladysmith outreach centers, and/or Shell Lake Health Education Center. Please contact the outreach center manager for details.

Certificates

	Page	Online	Ashland	New Richmond	Rice Lake	Superior	Outreach Centers
		Offered at					
Advanced Marine Repair Technician	46		■				
Agricultural Business Fundamentals »	47		■	■	■	■	■
Business Administration Specialist	63		■	■	■	■	■
Business Graphics	64	■	■	■	■	■	
Crop Production»	81		■	■	■	■	■
Customer Service	82	■	■	■	■	■	■
Dementia Care (unique in Wisconsin) »	85	■	■	■	■	■	■
Gerontology for Healthcare Professionals (unique in Wisconsin) »	110	■	■	■	■	■	■
Group Child Care Essentials »	111	■		■	■	■	
Livestock Production »	144		■	■	■	■	■
Management Certificate	154	■	■	■	■	■	■
Nonprofit Essentials (unique in Wisconsin) »	166	■					
Personal Care Worker	183		■	■	■	■	
Phlebotomy	186			■	■		
Preschool Education Professional (The Registry Preschool Credential)»	191	■		■	■	■	
Professional Credential for Infants/Toddlers (Wisconsin)	193	■					
Supervisory Leadership »	197	■	■	■	■	■	■
Tax Preparer Assistant »	199	■	■	■	■	■	■

Apprenticeships

	Page	Online	Ashland	New Richmond	Rice Lake	Superior	Outreach Centers
		Offered at					
Broadband Service Technician Apprentice (unique in Wisconsin)	62	■					
Carpentry Apprentice (ABC)	67				■		
Cosmetology Apprentice	75	■					
Electrical Construction Apprentice	97				■		
Injection Mold Set-up (Plastic) Apprentice	139			■			
Maintenance Mechanic / Millwright Apprentice	152				■		
Plumbing Apprentice	187		■	■	■		

» **CP Logo: Indicates this program is part of a career pathway**

Select courses are offered at the Balsam Lake ,Hayward, Ladysmith Outreach Centers and/or the Shell Lake Health Education Center. Please contact the outreach center manager for details.

Northwood Tech Campuses and Online Opportunities

Northwood Tech Online

Online learning at Northwood Tech is growing! There are many learning options that include online courses and programs. Use this link to view the online opportunities at Northwood Tech: Degree Programs and Certificates

The College is proud to be offering the following programs/certificates completely online*

Architecture and Construction
Architectural Commercial Design (Online Live)
Drafting Technician (Online Live)

Business Management and Administration
Administrative Coordinator
Health Office Professional
Healthcare Receptionist
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Medical Administrative Professional
Medical Billing Specialist
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Education and Training
E-CHiLD
E-Connect - Child Care Services

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
Gerontology - Aging Services Professional (Your Choice)
Health Information Technology
Medical Coding Specialist
Nursing - Associate Degree (Part-Time)

Information Technology
Information Technology – Web and Software Developer

Law, Public Safety and Security
Criminal Justice Studies

University Transfer Degree
University Transfer Degree - Associate to Bachelor's/Arts
University Transfer Degree - Associate to Bachelor's/Science

Certificates
Business Graphics
Customer Service
Demential Care (Your Choice)
Gerontology for Healthcare Professionals (Your Choice)
Group Child Care Essentials
Management Certificate
Nonprofit Essentials
Professional Credential for Infants/Toddlers (Wisconsin)
Preschool Education Professional (The Registry Preschool Credential)
Supervisory Leadership
Tax Preparer Assistant

Apprenticeship
Broadband Service Technician Apprentice
Cosmetology Apprentice

*Practicum/Fieldwork, etc., days/times/locations may vary

Northwood Tech Online

Technology Requirements

The computer hardware, software, and the Internet connection that is used for accessing coursework are the primary means of participating in online courses and therefore are significant contributors to academic success in online courses and/or programs at Northwood Technical College. It is essential that students own or have ready access to a computer.

Northwood Technical College is primarily Windows PC-based and, therefore, we are not able to actively support documents from Macintosh- or Linux-based computers.

For specific information on technology requirements, go to: Technology Requirements

Individual Success Factors

To be successful, students should determine if they would be a good candidate for online courses or programs. The following characteristics and skills are perceived as being prerequisites to the success of the online learner:

- Having a strong academic self-concept
- Exhibiting fluency in the use of online learning technologies
- Possessing interpersonal and communication skills
- Understanding and valuing interaction and collaborative learning
- Exhibiting self-directed learning skills

In addition, before taking a Northwood Tech online program or course:

- Students must be familiar with Northwood Tech's Learning Management System, Blackboard.
- Students must be motivated and responsible for their own learning. Online classes are very different from traditional face-to-face classes in terms of how material is presented, nature of interaction with class members and instructor, and can be much more work. There is less structure than a face-to-face class, so it is up to students to pace themselves and keep up with assignments.
- Students must be fluent in the use of online technologies. Students will need to send e-mails with attachments, navigate the Internet, download browser plug-ins to view multimedia enhanced Web pages, participate in threaded discussions, and troubleshoot computer or connectivity problems.
- Courses labeled "Online" provide all learning materials and assignments over the Internet. However, in some instances, students may be required to attend a campus site to have an exam proctored.
- Students must realize that "Online" is not "Independent Study"! In Online courses, students will be required to participate in a learning community with other students as student engagement and participation is critical to the success of the class. Students should also value interaction and collaborative learning.

To be a successful online student:

- Be proactive. Students should know what they are getting into and have conversations with a counselor and/or advisor to ensure that online is right for them.
- Be self-directed in learning skills. Do not procrastinate with assignments. Use time management skills. Set aside time each week to complete the required assignments and submit them in a timely manner.
- Be collaborative. Read the threaded discussion at least three times a week and respond to the discussions as appropriate and as required by the instructor. This is collaborative learning – an essential part of online instruction.
- Be confident. If having problems, ask questions, send an e-mail to fellow students or the instructor, and use the discussion board to post questions. Chances are if one student has a question, others may as well.
- Contact the Learning Resource Center, Educational Technology Center, or Academic Support Center at the local campuses for additional assistance. Also, online at: www.NorthwoodTech.edu/commons/index.htm.

Use this link to access information on online programming: Online Programming

Students that decide they are not prepared to take an online course or program should contact a counselor for more information and suggestions for additional assistance.

Custom Programs

The Workforce and Community Development (WCD) department offers a number of credit programs through a variety of custom delivery options. Mobile site delivery allows Northwood Tech expansion of campus-based programs to off-campus sites based on regional needs. Online delivery provides opportunities for training without having to travel to a campus location. All of these options provide opportunities for Northwood Tech to be responsive to student needs and partner with high schools, business and industry, and regional workforce agencies to provide training when and where it is needed.

Following is a list of custom programs currently available:

- 30-410-3 Construction Essentials Technical Diploma (see page 72)
- 17-410-1 Construction Foundations Technical Certificate (For more information, contact: Leslie Larsen, Associate Dean, WCD, leslie.larsen@northwoodtech.edu)
- 17-420-9 Machine Tool Basics Technical Certificate (For more information, contact: Dan Miller, Associate Dean, WCD, dan.miller@northwoodtech.edu)
- 30-454-1 Mechatronics Basics Technical Diploma (For more information, contact: Liz Pizzi, Associate Dean, WCD, liz.pizzi@northwoodtech.edu)

Ashland

Northwood Technical College in Ashland, situated on the shores of Lake Superior in a progressive community of almost 8,000 residents, is known for its commitment to academic excellence and personalized instruction. The campus is surrounded by inland lakes, streams, and forests; just minutes from the Apostle Islands National Lake Shore and about an hour from the Twin Ports of Superior/Duluth.

The Ashland Campus offers career programs in:

Agriculture, Food and Natural Resources
Farm Operation

Architecture and Construction
Architectural Commercial Design (Online Live)
Drafting Technician (Online Live)

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Health Office Professional
Healthcare Receptionist
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Medical Administrative Professional
Medical Billing Specialist
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
CBRF Caregiver
Gerontology - Aging Services Professional (Online Live)

Health Sciences (continued)
Medical Assistant
Nursing Assistant
Nursing - Associate Degree
Occupational Therapy Assistant

Hospitality and Tourism
Hospitality Foundations

Human Services
Human Services Associate
Substance Abuse Counselor Education

Information Technology
Information Technology - Cybersecurity Specialist (first year coursework)
Information Technology - Systems Administration Specialist

Law, Public Safety and Security
Criminal Justice Studies
Emergency Medical Technician
Emergency Medical Technician - Paramedic
Paramedic Technician

Manufacturing
Machine Tool Operation
Welding

Transportation, Distribution and Logistics
Marine Repair Technician

Individualized Studies
Individualized Technical Studies
Technical Studies - Journeyworker

Certificates
Advanced Marine Repair Technician
Agricultural Business Fundamentals
Business Administration Specialist
Business Graphics
Crop Production
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Livestock Production
Management Certificate
Personal Care Worker
Supervisory Leadership
Tax Preparer Assistant

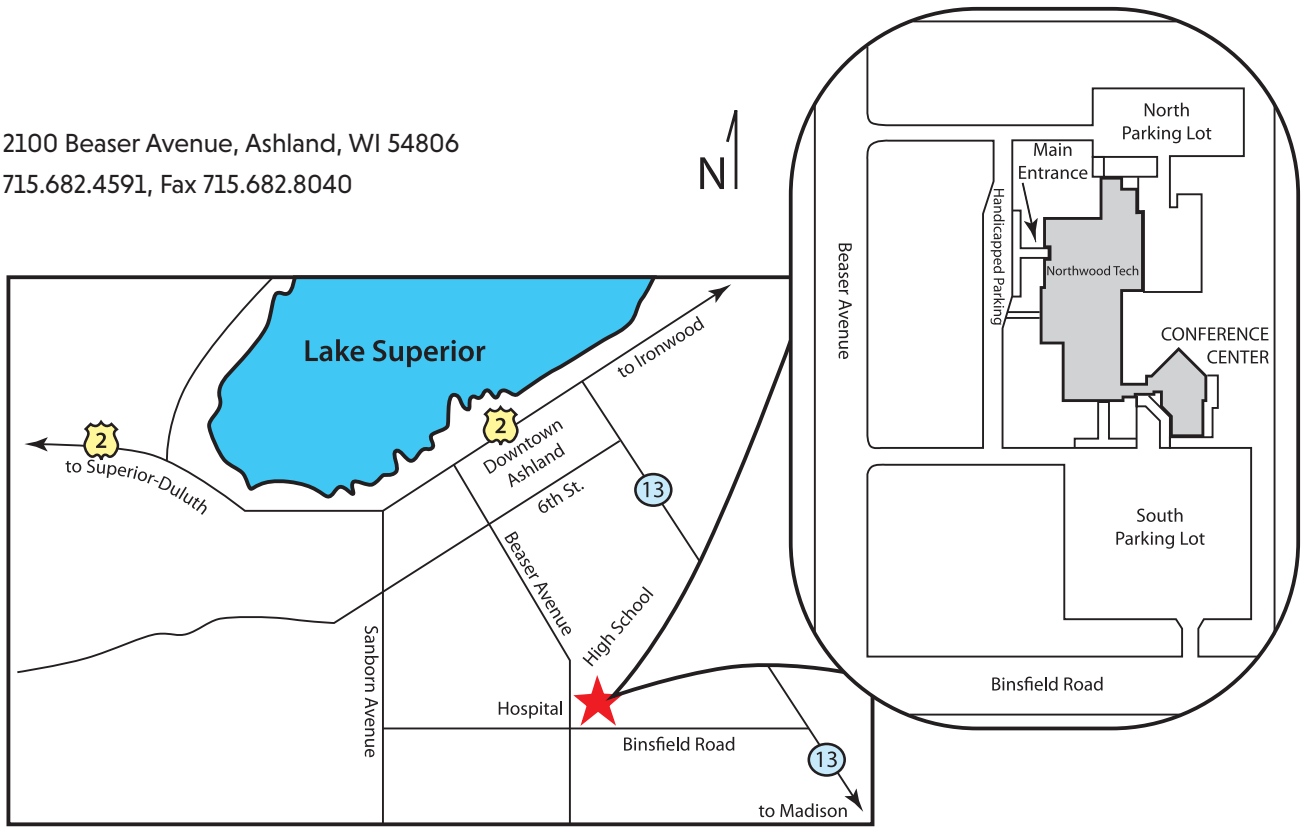
Apprenticeship
Plumbing Apprentice

Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Studies - coursework central to all programs
English Language Learning (ELL)

Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Please see Page 10 for a listing of Online Programs

2100 Beaser Avenue, Ashland, WI 54806
715.682.4591, Fax 715.682.8040



New Richmond

Northwood Technicial College in New Richmond is in the center of an expanding, prosperous business and residential area. Located in the beautiful St. Croix Valley, New Richmond offers an abundance of recreational and cultural activities. Scenic farmlands, wooded hills, and clean lakes accent the amenities that New Richmond has to offer. The Minneapolis/St. Paul metropolitan area is only a 30- to 40-minute drive. Many people like having the benefits of an urban center nearby while also enjoying the comforts offered by small-town living.

The New Richmond Campus offers career programs in:

Agriculture, Food and Natural Resources
Agricultural Power and Equipment Technician
Farm Operation
Veterinary Technician

Architecture and Construction
Architectural Commercial Design (Online Live)
Drafting Technician (Online Live)

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Health Office Professional
Healthcare Receptionist
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Medical Administrative Professional
Medical Billing Specialist
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Education and Training
Early Childhood Education

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
CBRF Caregiver
Gerontology - Aging Services Professional (Online Live)
Medical Assistant
Nursing Assistant
Nursing - Associate Degree
Occupational Therapy Assistant
Pharmacy Technician

Hospitality and Tourism
Hospitality Foundations

Human Services
Human Services Associate
Substance Abuse Counselor Education

Information Technology
Information Technology - Cybersecurity Specialist
Information Technology - Systems Administration Specialist
Information Technology - Web and Software Developer

Law, Public Safety and Security
Advanced EMT
Criminal Justice Studies
Emergency Medical Technician
Emergency Medical Technician - Paramedic
Paramedic Technician

Manufacturing
Automated Packaging Systems Technician
Automation for Industrial Systems
Industrial Systems Specialist
Machine Tooling Technics
Welding

Transportation, Distribution and Logistics
Diesel Equipment Technician
Power Sports Technician
Truck Driving

Individualized Studies
Individualized Technical Studies
Technical Studies - Journeyworker

Certificates
Agricultural Business Fundamentals
Business Administration Specialist
Business Graphics
Crop Production
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Group Child Care Essentials

Certificates (continued)
Livestock Production
Management Certificate
Personal Care Worker
Phlebotomy
Preschool Education Professional (The Registry Preschool Credential)
Supervisory Leadership
Tax Preparer Assistant

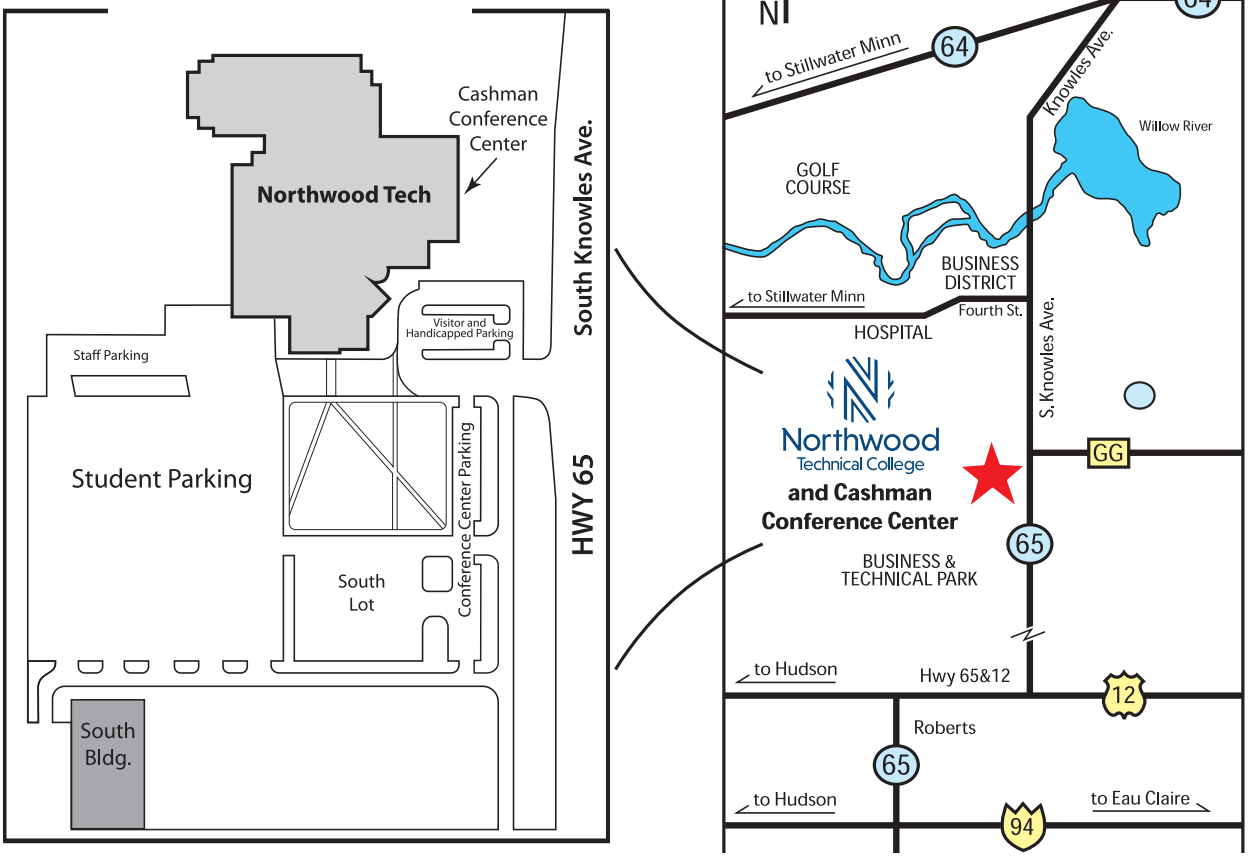
Apprenticeship
Injection Mold Set-Up (Plastic) Apprentice
Plumbing Apprentice

Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Studies - coursework central to all programs
English Language Learning (ELL)

Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Please see Page 10 for a listing of Online Programs

1019 South Knowles Avenue, New Richmond, WI 54017
715.246.6561, Fax 715.246.2777



Rice Lake

Northwood Technical College in Rice Lake is packed with exciting attractions and recreational opportunities. From shopping and historic sites to bike trails and parks, Rice Lake has it all. The town and surrounding area is a great natural beauty: the waters of Rice Lake and the Red Cedar River, plus the beautiful Blue Hills have been attracting visitors for decades. Friendly people and genuine hospitality make everyone feel welcome.

The Rice Lake Campus offers career programs in:

Agriculture, Food and Natural Resources
Farm Operation

Architecture and Construction
Architectural Commercial Design (Online Live)
Architecural Woodworking & Cabinetmaking
Construction and Cabinetmaking
Drafting Technician (Online Live)
Utility Construction Technician

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Health Office Professional
Healthcare Receptionist
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Medical Administrative Professional
Medical Billing Specialist
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Education and Training
Early Childhood Education

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
CBRF Caregiver
Dental Assistant
Gerontology - Aging Services Professional (Online Live)
Medical Assistant
Nursing Assistant
Nursing - Associate Degree
Occupational Therapy Assistant

Hospitality and Tourism
Hospitality Foundations

Human Services
Cosmetology
Human Services Associate
Substance Abuse Counselor Education

Information Technology
Information Technology - Cybersecurity Specialist
Information Technology - Systems Administration Specialist

Law, Public Safety and Security
Advanced EMT
Criminal Justice - Law Enforcement 720 Academy
Criminal Justice Studies
Emergency Medical Technician
Emergency Medical Technician - Paramedic
Paramedic Technician

Manufacturing
Machine Tool Operation - CNC
Welding

Transportation, Distribution and Logistics
Automotive Technician
Truck Driving

Individualized Studies
Individualized Technical Studies
Technical Studies - Journeyworker

Certificates
Agricultural Business Fundamentals
Business Administration Specialist
Business Graphics
Crop Production
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Group Child Care Essentials
Livestock Production
Management Certificate
Personal Care Worker
Phlebotomy
Preschool Education Professional (The Registry Preschool Credential)
Supervisory Leadership
Tax Preparer Assistant

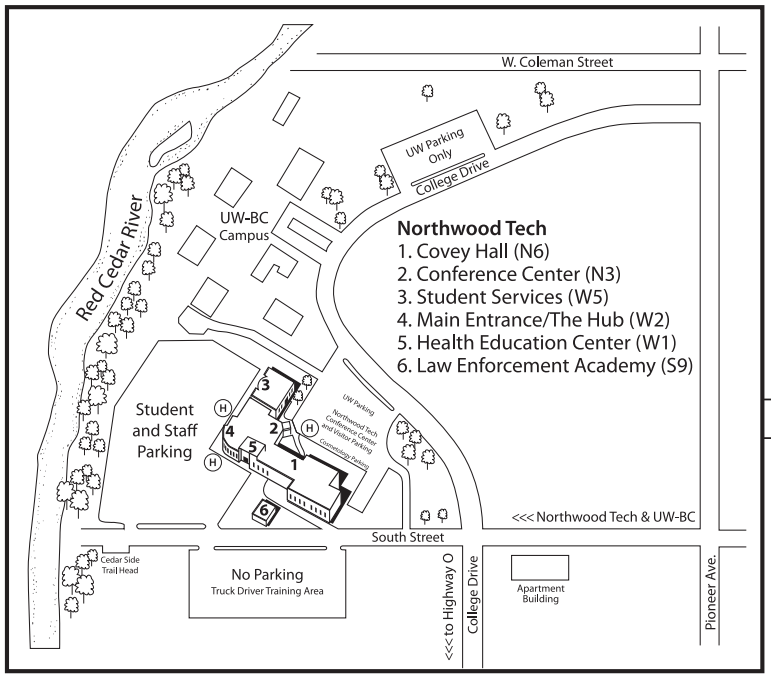
Apprenticeship
Carpentry Apprentice (ABC)
Electrical Construction Apprentice
Maintenance Mechanic/Millwright Apprentice
Plumbing Apprentice

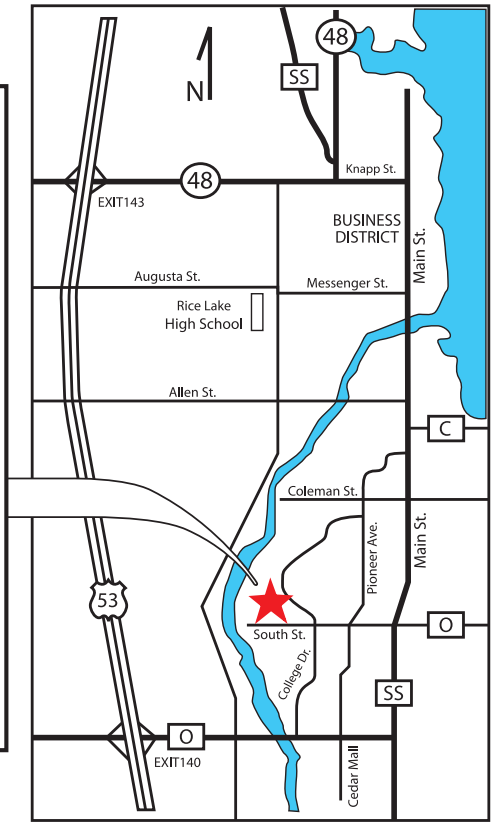
Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Studies - coursework central to all programs
English Language Learning (ELL)

Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Please see Page 10 for a listing of Online Programs

1900 College Drive, Rice Lake, WI 54868
715.234.7082, Fax 715.234.1241





Superior

The staff at Northwood Technical College in Superior is dedicated to meeting the needs of today's students and employers, ensuring students are completely satisfied with their learning experience. The education is dynamic and hands-on, offering focused career preparation with a variety of courses, career programs, and delivery options.

Founded in 1912, the Superior campus offers top-notch faculty and state-of-the-art technology, as well as breathtaking landscapes. Students will benefit from the classes and enjoy the area.

In addition to the inland lakes, rivers, streams, waterfront trails, and the state's largest waterfall, there are endless shopping opportunities, concerts, expos, marathons, plays, sporting events, rodeos, festivals, outdoor recreational opportunities, and more. This is the ideal environment for learning and for living.

The Superior Campus offers career programs in:

Agriculture, Food and Natural Resources
Farm Operation

Architecture and Construction
Architectural Commercial Design (Online Live)
Drafting Technician (Online Live)
Heating, Ventilation, and Air Conditioning/ Refrigeration (HVAC/R)
HVAC Installation Technician
Refrigeration Essentials

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Health Office Professional
Healthcare Receptionist
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Medical Administrative Professional
Medical Billing Specialist
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Education and Training
Early Childhood Education

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
CBRF Caregiver
Gerontology - Aging Services Professional (Online Live)
Medical Assistant
Nursing Assistant
Nursing - Associate Degree
Pharmacy Technician

Hospitality and Tourism
Hospitality Foundations

Human Services
Cosmetology
Human Services Associate
Substance Abuse Counselor Education

Information Technology
Information Technology - Cybersecurity Specialist
Information Technology - Systems Administration Specialist

Law, Public Safety and Security
Criminal Justice Studies
Emergency Medical Technician
Emergency Medical Technician - Paramedic
Paramedic Technician

Manufacturing
Industrial Maintenance Technician
Machine Tool Technician
Welding

Transportation, Distribution and Logistics
Automotive Service Technician

Individualized Studies
Individualized Technical Studies
Technical Studies - Journeyworker

Certificates
Agricultural Business Fundamentals
Business Administration Specialist
Business Graphics
Crop Production
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Group Child Care Essentials
Livestock Production
Management Certificate
Personal Care Worker

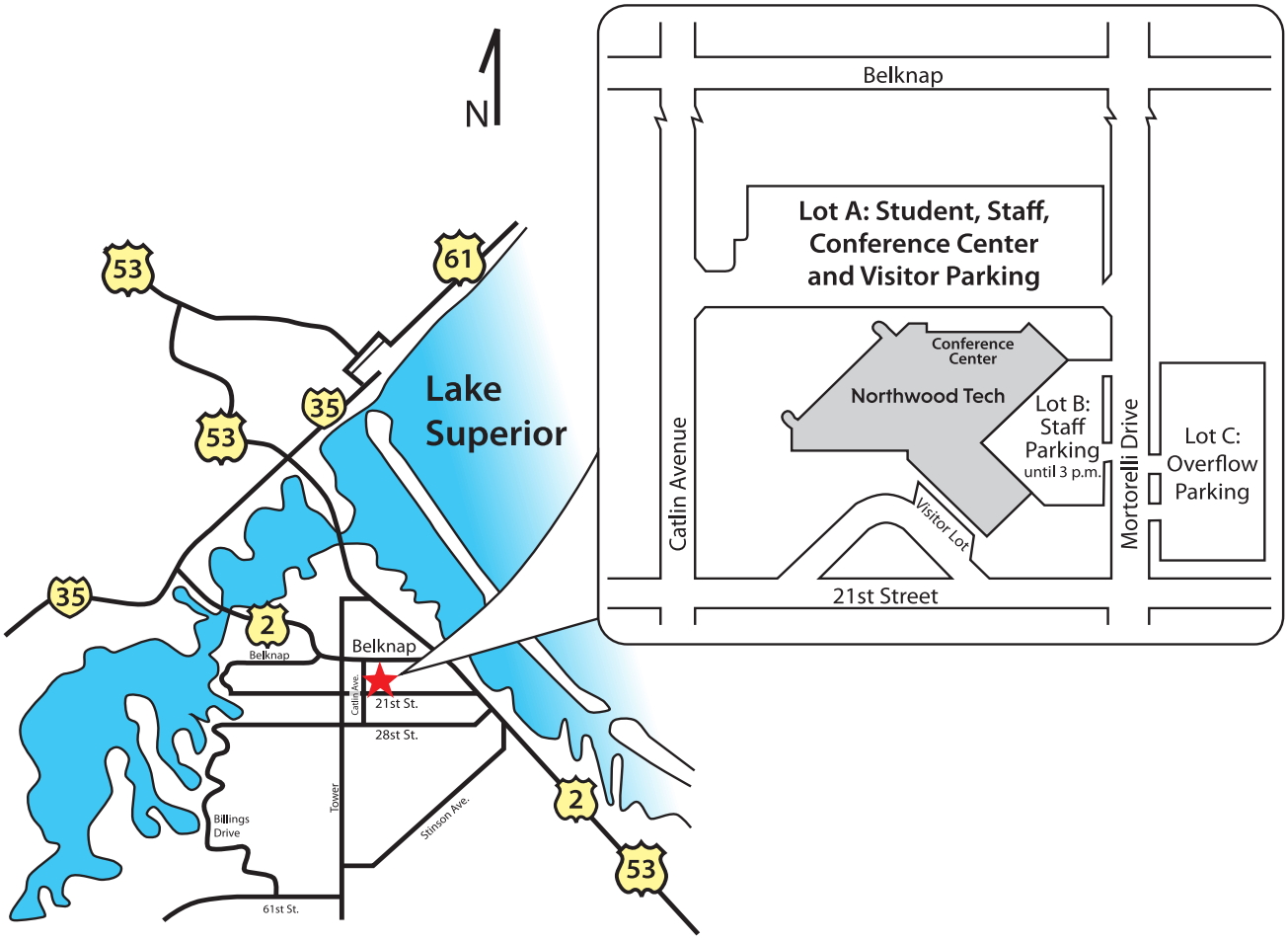
Certificates (continued)
Preschool Education Professional (The Registry Preschool Credential)
Supervisory Leadership
Tax Preparer Assistant

Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Education - coursework central to all programs
English Language Learning (ELL)

Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Please see Page 10 for a listing of Online Programs

600 North 21st Street, Superior, WI 54880
715.394.6677, Fax 715.394.3771



Balsam Lake Outreach Center

With a population just over 1,000, Balsam Lake is comfortably sized with a vibrant and friendly community. Located in the scenic woods of Northwest Wisconsin, Balsam Lake is surrounded by dozens of lakes and is renowned for its bass fishing. It is a destination for hiking and ATV/snowmobiling enthusiasts and is known for an abundance of opportunities for recreational activities for all seasons.

Balsam Lake Outreach Center offers many course options to area residents, as well as customized training to business and industry customers. Students may choose from a selection of credit courses and Continuing Education courses available at these locations. For added convenience and reduced travel, students enrolled in an academic program have the opportunity of attending classes from their own home or another convenient location of their choosing via Blue Jeans or another online platform. Another option for attending class is the Your Choice delivery mode classes which provide three ways to attend class - 1) Online Live via the internet, 2) On Site in a classroom, or 3) watch recorded sessions at a time convenient for you. Your Choice provides the flexibility to choose how you want to attend class. For those individuals pursuing their GED or HSED, the Academic Support instructors at Balsam Lake provide free course preparation.

Select courses in the programs below are available at the Northwood Technical College Outreach Centers. Instructional modes vary. Please contact your local campus for specifics.

Agriculture, Food and Natural Resources
Farm Operation

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
Gerontology - Aging Services Professional (Online Live)

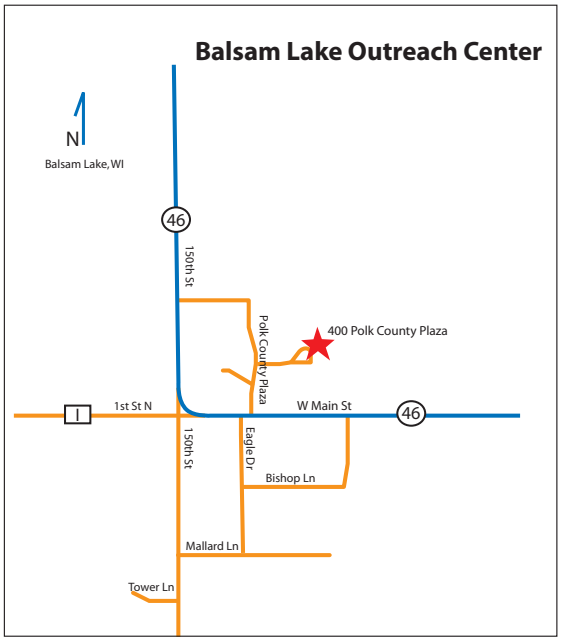
Certificates
Agricultural Business Fundamentals
Business Administration Specialist
Crop Production
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Livestock Production
Management Certificate
Supervisory Leadership
Tax Preparer Assistant

Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Education - coursework central to all programs
English Language Learning (ELL)

Please see Page 10 for a listing of Online Programs

Balsam Lake Outreach Center
400 Polk County Plaza
Balsam Lake, WI 54810

715.485.3044,
800.243.9482
Fax: 715.485.3049



Hayward Outreach Center

A bustling, yet small community, the Hayward area is a destination for world-class events. Every year, Hayward brings people from around the globe to the renowned American Birkebeiner cross country ski race and the Annual Lumberjack World Championships, to name a couple. Hayward's eclectic downtown area features locally-owned shops and eateries that are buzzing with activity. With crystal clear lakes for water sports and fishing to miles of trails for hiking, bicycling, or snowmobiling, Hayward offers something for everyone!

Hayward Outreach Center offers many course options to area residents, as well as customized training to business and industry customers. Students may choose from a selection of credit courses and Continuing Education courses available at these locations. For added convenience and reduced travel, students enrolled in an academic program have the opportunity of attending classes from their own home or another convenient location of their choosing via Blue Jeans or another online platform. Another option for attending class is the Your Choice delivery mode classes which provide three ways to attend class - 1) Online Live via the internet, 2) On Site in a classroom, or 3) watch recorded sessions at a time convenient for you. Your Choice provides the flexibility to choose how you want to attend class. For those individuals pursuing their GED or HSED, the Academic Support instructors at Hayward provide free course preparation.

Select courses in the programs below are available at the Northwood Technical College Outreach Centers. Instructional modes vary. Please contact your local campus for specifics.

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

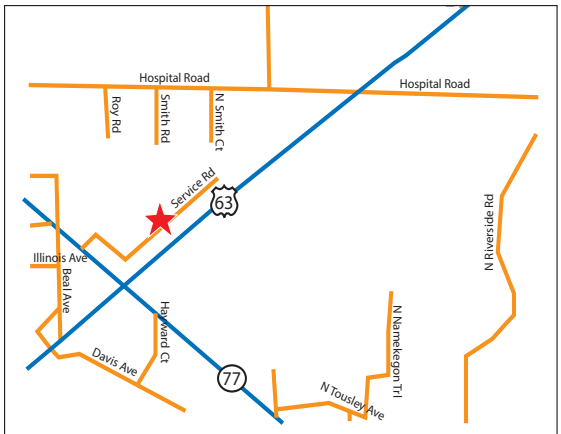
Health Sciences
Nursing Assistant
Gerontology - Aging Services Professional (Online Live)

Certificates
Business Administration Specialist
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Management Certificate
Supervisory Leadership
Tax Preparer Assistant

Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Education - coursework central to all programs
English Language Learning (ELL)

Please see Page 10 for a listing of Online Programs

Hayward Outreach Center
715.634.5167,
800.243.9482
Fax: 715.634.8387



Hayward Outreach Center
15618 Windrose Lane, Suite 106
Hayward, WI 54843

Ladysmith Outreach Center

Located in Rusk county, Ladysmith was once a booming rail center. Now visitors come from all over to experience the scenery of the four rivers and rich history of Ladysmith. Cultural arts, music and dance concerts are offered nearly every weekend in Ladysmith. From Northland Mardi Gras to a spectacular Venetian night parade on the Flambeau River, Ladysmith is the economic and cultural center of Rusk county.

Ladysmith Outreach Center offers many course options to area residents, as well as customized training to business and industry customers. Students may choose from a selection of credit courses and Continuing Education courses available at these locations. For added convenience and reduced travel, students enrolled in an academic program have the opportunity of attending classes from their own home or another convenient location of their choosing via Blue Jeans or another online platform. Another option for attending class is the Your Choice delivery mode classes which provide three ways to attend class - 1) Online Live via the internet, 2) On Site in a classroom, or 3) watch recorded sessions at a time convenient for you. Your Choice provides the flexibility to choose how you want to attend class. For those individuals pursuing their GED or HSED, the Academic Support instructors at Ladysmith provide free course preparation.

Select courses in the programs below are available at the Northwood Technical College Outreach Centers. Instructional modes vary. Please contact your local campus for specifics.

Business Management and Administration
Administrative Coordinator
Business Management
Customer Service Manager
Human Resource Management
Human Resources and Payroll Generalist
Leadership Development
Leadership Essentials
Microsoft Office
Nonprofit Leadership
Nonprofit Professional
Office Support Specialist
Office Technology Assistant

Finance
Accounting
Accounting Assistant
Billing and Posting Clerk
Financial Services
Financial Services Customer Representative

Health Sciences
Gerontology - Aging Services Professional (Online Live)

Certificates
Business Administration Specialist
Customer Service
Dementia Care (Online Live)
Gerontology for Healthcare Professionals (Online Live)
Management Certificate
Supervisory Leadership
Tax Preparer Assistant

Other Offerings
GED/HSED completion
Academic Support - academic preparation and support
General Education - coursework central to all programs
English Language Learning (ELL)

Please see Page 10 for a listing of Online Programs

Ladysmith Outreach Center
715.532.3399,
800.243.9482
Fax: 715.532.5483

Ladysmith Outreach Center
1104 Lake Ave. W. Suite #1
Ladysmith, WI 54848

Shell Lake Health Education Center

A friendly, small town with a vibrant art scene and no shortage of outdoor fun for all seasons, Shell Lake is the epicenter of the Northwood Tech district. After serving as the College's administration offices for years, the College transformed the space into a state-of-the-art health education center. Students in health sciences programs will travel to the Shell Lake Health Education Center. Travel requirements are customized to meet individual program course competencies.

Vision:
Provide a dynamic and innovative health education center to advance inter-professional learning, resulting in safe, high-quality healthcare for Northwestern Wisconsin communities and beyond.

Mission:
Create a comprehensive health care curriculum that:

- Enhances the use of simulated learning
- Utilizes virtual and tele-health experiences
- Advocates for and promotes patient care and safety
- Supports the application of healthcare-based skills
- Promotes collaboration between inter-professional groups
- Employs evidence-based learning
- Invites progressive engagement of student learning
- Fosters collaborative community relationships

Northwood Tech Health Sciences Programs:
- Nursing - Associate Degree (ADN)*
- Nursing Assistant (NA) - some course offerings will be at the Shell Lake Health Education Center
- Occupational Therapy Assistant (OTA)*

*Students in health science programs will travel to the Shell Lake Health Education Center. Travel requirements are customized to meet individual program course competencies.

Shell Lake Health Education Center
715.468.2815
24-Hour Voicemail
715.468.2815

What Is It Like at Northwood Tech?

What Is It Like at Northwood Tech?

What Does Northwood Tech Offer?

Northwood Tech is the college of choice for students who wish to pursue associate degrees, technical diplomas or certificates, GED/HSED completion, and for those presently employed who wish to advance in their careers. Area employers contract with the college for customized training consisting of specific courses that are developed and taught by Northwood Tech instructors at an employer's work site. Northwood Tech also provides instruction for apprentices in cooperation with employers and the state of Wisconsin.

Types of Degrees/Offerings

Associate Degrees (Associate of Arts in Liberal Arts and Associate of Science in Liberal Arts)

Northwood Tech's Associate of Arts in Liberal Arts and Associate of Science in Liberal Arts will use the marketing titles of: University Transfer Degree - Associate to Bachelor's/ Arts and University Transfer Degree - Associate to Bachelor's/ Science. These degrees are designed to prepare students for a bachelor's degree. These programs generally take two years to complete when pursued on a full-time basis.

Associate Degrees (of Applied Science)

Northwood Tech's Associate of Applied Science (A.A.S.) degrees lead students to employment in a specified career or career advancement. An associate degree may also be the first step towards a bachelor's degree. These programs generally take two years to completed when pursued on a full-time basis.

Technical Diplomas

If students wish to prepare for specific jobs or upgrade their job skills, Northwood Tech offers specialized programs that lead to a diploma in the chosen field. Diploma programs vary in length from less than one year to two years and provide extensive career training. Some diplomas are embedded within other technical diploma and associate degree programs allowing students to earn a credential, go to work, and return to complete the full diploma or associate degree.

Certificates

Northwood Tech awards certificates for the successful completion of a group of courses targeted toward a specialty area. Some certificates are embedded within technical diploma and associate degree programs allowing students to enhance current employment opportunities, lead to employment or continue to complete the diploma or associate degree.

Apprenticeship

What Is It?

A Registered Apprenticeship is a state-certified training program that combines paid related instruction and on the job training. Apprenticeships require employment: 90% of the training is on the job and 10% is classroom instruction. Apprenticeships are offered in a variety of occupational areas, including: construction, industrial, service, utilities, information technology, healthcare, and agriculture. Apprenticeships include a three-part contract with the apprentice, the sponsor (employer), and the Department of Workforce Development. Apprenticeships also includes a progressive wage scale, so as knowledge and skills increase, wages increase. Apprenticeship programs can vary by length of time from one year to five years.

How Do Students Qualify?

The apprentice must be a high school graduate or equivalent, be physically fit to perform trade, and have a valid drivers license. Some apprenticeship programs have an advisory committee that have additional requirements, such as: an application, an interview, and testing (example: Accuplacer Next Generation or ACT). There are circumstances where a high school senior can enter a Registered Apprenticeship. For more information regarding all apprenticeships, please contact Eric Lockwood, Director, Apprenticeship and Academies for specific information.

What Is Offered?

The apprenticeship programs offered at Northwood Tech include:

- Broadband Service Technician (Online)
- Carpentry Apprenticeship (ABC)
- Cosmetology (Online)
- Electrical Construction Apprentice (Hybrid)
- Injection Mold Set-Up (Plastic)
- Maintenance Mechanic/Millwright
- Plumbing

For a complete list of more than 300 state-certified apprenticeships, visit the Wisconsin Department of Workforce Development, or call the Bureau of Apprenticeship Standards Representative at 715-874-4627 or Long.Vang@dwd.wisconsin.gov.

How to Get Started?

To start the application process, contact the local Apprenticeship Training Representative, Long Vang, at 715.874.4627. Apprenticeship requires a sponsoring employer. Students should start by learning what they can about the trade by talking to people who are in the occupation: employers, employees, high school counselors, Northwood Tech instructors and counselors, employers' associations, and labor unions.

For more information, contact Eric Lockwood, Director, Apprenticeship and Academies at 715-246-1871, or eric.lockwood@northwoodtech.edu, or go to the Northwood Tech Apprenticeship webpage.

GED/HSED Completion

GED/HSED preparation is available at Northwood Tech Academic Support Centers in these communities: Ashland, New Richmond, Rice Lake, Superior, Hayward, Ladysmith, and Balsam Lake. For other current locations, visit **NorthwoodTech.edu**. Services to adult students are generally free; however, some courses may require a $4.50 material fee.

What Is the GED?

The GED requires a student to complete a battery of five tests: Reasoning through Language Arts, Mathematical Reasoning, Science, Social Studies, and Civics.

What Is the HSED?

The High School Equivalency Diploma (HSED) is more comprehensive than the GED. The HSED requires all of the GED tests, plus:

- Verifying one-half Health credit earned in grades 7-12 or passing the additional Health test.
- Completion of Employability Activities.

Who Can Take the GED?

The GED/HSED tests may be taken if a student is a Wisconsin resident who is at least 18 1/2 years of age, or if the class with which the student entered 9th grade has graduated from high school.

Academic Calendar

An academic year at Northwood Tech consists of three semesters: fall, spring, and summer. Fall and spring semesters consist of 16 weeks and the summer semester is 8 weeks.

Start Now

Northwood Tech offers selected Start Now classes providing students the opportunity to enroll at different times within a semester. Currently four, eight, and 12 week sessions are available.

Career Pathways

Career Pathways connect progressive levels of coursework to allow students to build upon their education. Each step in the pathway connects with employment and provides the opportunity for advancement to higher levels.

Program Sequencing

Courses are scheduled to enable full-time students, who enter the fall term (first semester) and carry a full program credit load, to complete all graduation requirements within two, three, or four semesters, depending on their program. Northwood Tech cannot guarantee that specific courses will be available as needed to students entering programs at mid-year, enrolling part-time, and/or students with non-sequenced academic schedules; nor can Northwood Tech guarantee that a program will not be suspended or discontinued prior to a student's completion. For the most current curriculum checklists documenting specific courses needed to satisfy program requirements, go to the Northwood Tech Program and Certificates webpage, select a program, then select "Curriculum" from the left navigation, and download the Curriculum Checklist from the top of the page.

Types of Courses

Technical Studies/Occupational Specific Courses (Credit)

The Technical Studies/Occupational Specific courses contain content directly related to a specific technical area and can be taken to enhance skills, renew certification, or lead to technical diploma or associate degree completion or prepare students to enter Baccalaureate programs.

Northwood Tech also offers Service Learning and Work-Based Learning options. Service Learning is experiential learning that integrates community service and educational learning objectives. Work-Based Learning opportunities may include: job shadowing, internships, clinicals, etc.

General Studies/Occupational Supportive Courses (Credit)

The General Studies/Occupational Supportive courses in all programs are designed to ensure well-rounded college graduates. These courses include communication, math, science, and social and behavioral sciences.

NOTE: many courses have a prerequisite and/or corequisite requirements. To advance to a higher level course, a grade point of 2.0 or higher must be earned in the prerequisite course. For select courses, a grade point higher than 2.0 is required and noted on program and certificate pages.

Professional Development and Continuing Education Courses (Noncredit)

These courses provide students the opportunity to update their job skills, maintain licensure or certification, and gain valuable interpersonal and leadership skills. In addition, students explore non-career related interests through a wide variety of personal enrichment courses offered virtually and throughout Northwest Wisconsin. Additional information and course offerings are available online using the Northwood Tech Continuing Education webpage, or students can request a Continuing Education catalog from any campus.

Customized Training for Business and Industry

Northwood Tech offers customized training and technical assistance solutions to help businesses stay competitive. Training can be scheduled virtually and at times and locations that are convenient for you.
For more information, go to the Northwood Tech Customized Training webpage or contact your regional representative:

- **Ashland** and **Superior**: 715.319.7335
- **New Richmond**: 715.752.8127
- **Rice Lake**: 715.788.7046

Course Numbering System

Northwood Tech has an eight-digit course numbering system for all courses offered. The first two digits identify the credential type, the next three digits identify the instructional area, and the last three digits identify the specific course.

For example, course number 10801136 breaks down as: 10 equals associate degree, 801 equals communication, and 136 equals English Composition 1; course number 32404375 breaks down as: 32 equals two-year technical diploma, 404 equals Automobile - Mechanical, and 375 equals Automotive Fundamentals.

- Credential Type 10 – Associate Degree (Associate of Applied Science) program courses
- Credential Type 20 – Associate Degree (Associate of Arts/ Science in Liberal Arts) program courses
- Credential Type 32 (two-year), 31 (one-year), 30 (less than one year) – Technical Diploma program courses
- Credential Type 42, 47, 60 – Non-credit courses
- Credential Type 50 – Apprenticeship courses
- Credential Type 73, 74, 75, 76, 77, 78 – Academic Support courses

Instruction Modes

Northwood Tech offers coursework in a variety of instructional delivery formats. Following are definitions of the various instruction modes.

On Site

Attend face-to-face, scheduled meetings in a classroom setting.

- Required, Scheduled Onsite Meetings - Yes
- Required, Scheduled Online Work/Meetings - No
- Instructor Location - Onsite location may vary

Online

Complete your course totally online. Course content is delivered online, with deadlines, but no set meeting times.

- Required, Scheduled Onsite Meetings - No
- Required, Scheduled Online Work/Meetings - No
- Instructor Location - May vary

Online Live

Join your classes through the internet live from anywhere. Connect with your instructor and classmates during live classes via the web.

- Required, Scheduled Onsite Meetings - No
- Required, Scheduled Online/Work Meetings - Yes
- Instructor Location - May vary

Your Choice

Choose from 3 ways to attend classes: 1) on-line via the internet, 2) on site in a classroom, or 3) watch recorded sessions at a time convenient for you.

- Required, Scheduled Onsite Meetings - No, but you may choose to attend on site
- Required, Scheduled Online Work/Meeting - Varies by class
- Instructor Location - May vary

Flex

Work at your own pace in an individualized, workshop environment. Multiple courses are offered by your instructor during the same time frame.

- Required, Scheduled Onsite Meetings - No, but you may choose to attend onsite
- Required, Scheduled Online Work/Meetings - No *but, an orientation is required prior to starting class*
- Instructor Location - May vary

Hybrid

Leverage the best of on site, online, and/or online instructional formats. Courses are delivered via a combination of modes, based on specific class content.

- Required, Scheduled Onsite Meetings - Varies by class
- Required, Scheduled Online Work/Meetings - Varies by class
- Instructor Location - May vary

Work Based Learning

Get on-the-job experience combined with expert support and instruction.

- Required, Scheduled Offsite Work Experience in a Community-Based Setting - Yes
- Required, Scheduled Onsite Work/Meetings - Possibly
- Required, Scheduled Online or Virtual Meetings - Possibly
- Instructor Location - May vary

Additional Student Information

Student Handbook

The College publishes a Student Handbook designed to provide students with information about college policies, procedures, and services for students. It also contains the academic calendar, and calendar of events. Every student is responsible for abiding by the rules and regulations of the College as published in the handbook. A copy may be obtained from student services or online, under Current Student Resources. The College reserves the right, without prior notice, to make changes in policy and procedure as deemed necessary.

Sec. 112 Textbook Information

(d) Provision of ISBN College Textbook Information in Course Schedules. To the maximum extent practicable, each institution of higher education receiving Federal financial assistance shall

(1) disclose, on the institution's Internet course schedule and in a manner of the institution's choosing, the International Standard Book Number and retail price information of required and recommended college textbooks and supplemental materials for each course listed in the institution's course schedule used for preregistration and registration purposes, except that (A) if the International Standard Book Number is not available for such college textbook or supplemental material, then the institution shall include in the Internet course schedule the author, title, publisher, and copyright date for such college textbook or supplemental material; and
(B) if the institution determines that the disclosure of the information described in this subsection is not practicable for a college textbook or supplemental material, then the institution shall so indicate by placing the designation 'To Be Determined' in lieu of the information required under this subsection; and

(2) if applicable, include on the institution's written course schedule a notice that textbook information is available on the institution's Internet course schedule, and the Internet address for such schedule.

Campus Crime Statistics

Northwood Tech prides itself on maintaining a safe environment for its students, faculty, and staff and provides the following information and statistics on the frequency of crime, known and reported, on- and off-campus on an annual basis and in compliance with the federal Clery Act and Student Right to Know and Campus Security Act of 1990.

The most recent Annual Security Report (ASR) can be found on the Northwood Tech website. Questions concerning any of the information contained in the ASR Plan should be directed to Administrative Services at Northwood Tech, 1900 College Drive, Rice Lake, WI 54868, telephone 800.243.9482 OR 715.234.7082 Email: safety@NorthwoodTech.edu. TTY: 711.

How to Become a Northwood Tech Student

GETTING STARTED IS EASY AT Northwood Tech

Northwood Technical College

Most programs at Northwood Tech have no admission testing requirements.

Your next step is to schedule your admissions meeting. If you are applying to one of the programs listed below, our Northwood Tech counselors will discuss options with you. We will help you through your next steps.

Programs with Academic Requirements

Apprenticeships

- **Plumbing Apprenticeship**
- **Carpentry Apprenticeship**
- **Electrical Construction Apprenticeship**

Required assessment for listed appreciceship programs may be waived if you have met the score requirements for the Classic ACCUPLACER®/ACT within the last five years.

- **Nursing-Associate Degree**

Required assessment for Nursing may be waived if you have an associate degree or higher, or have previous ACCUPLACER®/ACT scores.

- **Occupational Therapy Assistant**
- **Veterinary Technician**

Students considering any of the above programs **must meet one** of the following items:

- Minimum high school GPA of 2.8
- Qualifying ACT scores
- Minimum college GPA 2.2 (min 3 cr.)
- Associate degree or higher
- Qualifying ACCUPLACER® scores
- Additional measures may be considered as determined by the counselor

- **Dental Assistant**
- **Health Information Technology**
- **Medical Coding Specialist**
- **Medical Assistant**
- **Pharmacy Technician**

Students considering any of the above programs **must meet one** of the following items:

- Minimum high school GPA of 2.1
- Qualifying ACT scores
- Minimum college GPA 2.0 (min 3 cr.)
- Associate degree or higher
- Qualifying ACCUPLACER® scores
- Additional measures may be considered as determined by the counselor

Northwood Technical College is an Equal Opportunity/Access/Affirmative Action/Veterans/Disability Employer and Educator.

Apply Online at NorthwoodTech.edu/apply

The online application takes less than 15 minutes to complete.

Northwood Tech Application Dates

- On or after October 1 for the following fall semester
- On or after February 1 for the following spring semester
- On or after July 1 for the following summer term
- Additional information is listed in "Before You Apply" at **NorthwoodTech.edu/admissions/how-to-apply.**

The ACCUPLACER® or ACT entrance assessment may be waived if you have an associate degree or higher or have satisfactory scores that are less than five years old on a recent college entrance test such as ACCUPLACER® or ACT. Official transcripts or test results required. Schedule your entrance assessment through the Student Services Office. Study First! Northwood Tech encourages all students taking the ACCUPLACER® to brush up on their skills before taking the assessment. **Online study tools are available at NorthwoodTech.edu/apply**.

Schedule an Admissions Meeting

After applying, your next step is to call the Student Services Office to schedule your admissions meeting. The purpose of this meeting is to connect you with all the support services available at Northwood Tech to help you have a great experience as a college student. This meeting can be held in person, by phone, or via TEAMS.

Admissions Meeting Tips:

Bring your high school, college or military transcripts. Note: In most cases, unofficial transcripts are accepted. However many of our allied health and public safety programs require an offical transcript for admission. Official transcripts are also required to award any transfer credit. If these situations apply to you, request your official transcripts to be sent directly to Northwood Tech as soon as possible.

For more information, or to schedule your assessment and/or admissions meeting, contact the Student Services Office at a campus near you. Call 800.243.9482.

Ashland: 715.682.4591

New Richmond: 715.246.6561

Rice Lake: 715.243.7082

Superior: 715.394.6677

Explore the College and Careers

One of the best ways to see if Northwood Tech is a good fit is for a student to set up an appointment with an admissions advisor. They can help a student decide on a career path, explore the campus, visit program classrooms, meet instructors and current students, and much more. While not required, many students find the following experiences valuable to their career decision:

Campus Tours

Students are invited to call and set up an appointment with a campus admissions advisor for a campus tour of the Ashland, Rice Lake, New Richmond, or Superior location.

Call 800.243.9482 or
Ashland - 715.685.3039
New Richmond - 715.752.8119
Rice Lake - 715.788.7144
Superior - 715.319.7331

Program Shadowing

Program shadowing is the opportunity to visit a campus and experience a program. Contact the admissions advisor at the campus of choice:
Call 800.243.9482 or
Ashland - 715.685.3039
New Richmond - 715.752.8119
Rice Lake - 715.788.7144
Superior - 715.319.7331

Career Planning and Assessment

In today's world, every person's career journey follows a different path. This path is guided by an individual's past experiences and also by decisions that were made throughout their life. The staff at Northwood Tech will work to guide students down the path that will lead to the program or career that is most appropriate.

Northwood Tech offers three options to begin the career exploration journey:

1) An online career assessment questionnaire to identify which career areas might be the best fit.
Explore program offerings and other career resources

2) A free One-on-One Career Exploration with a Career Specialist to help you evaluate career options. This consists of: self-assessments, personality tests, the Career Clusters interest inventory, labor market trends, employability skills, goal setting, and career decision making.

3) A Northwood Tech career counselor will provide guidance in determining which careers are best suited for each individual. Schedule an appointment with a counselor at the campus of your choice. Students will be given the opportunity to complete the Myers-BriggsType Indicator® and the Strong Interest Inventory® for a low to no cost fee. The counselors will discuss the results of assessments, past employment, education, personal experiences, interests, and other factors that will help students make a career choice.

Financial Aid Events

Each year in October, several campuses host a Financial Aid Event. This community service event is designed to answer questions about applying for financial aid. These informational sessions are open to anyone interested in attending any postsecondary institution. For upcoming event dates and locations, contact a financial aid advisor at the Ashland, New Richmond, Rice Lake, or Superior campus.

Admissions Process

If a student would like to enroll as a full- or part-time student in a degree or technical diploma, they must first complete the admissions process. Admission to most degree or diploma programs will qualify students to apply for financial aid.

Complete Application for Admission

While there is no set application deadline, October 1 is the date Northwood Tech begins taking applications for the following fall term. February 1 is the date for the following spring term, and July 1 is the date for the following summer term. Students should apply early since applications are processed in the order in which they are received.

Application acceptance is based on the state technical college system's Administrative Code, Section 10.06 and 10.07. The code ensures that all district residents (persons residing in counties within the Northwood Tech district) receive priority admission over nondistrict state residents, reciprocity students, and nonresidents.

District residents who apply on or before the following dates shall have admission priority:

- For programs commencing any time during the fall semester, the preceding January 1
- For programs commencing any time during the spring semester, the preceding May 1
- For programs commencing any time during the summer semester, the preceding October 1

After the dates specified above, district residents shall have priority equal to non-district state residents for admission to programs.

Apply online

Get Admitted

Northwood Tech has a simple three-step admissions process you can complete in one visit.

- Apply online
- Review admissions requirements
- Meet with a Northwood Tech counselor

Preparation is key. You'll want to take the time to research your career area of choice, what program is the best fit for you and gather all of your documents. If you need to take the ACCUPLACER placement assessment, you'll also want to make sure you brush-up on the skills you'll need to do well. Online resources and the Academic Support Center instructors are available to help you with that. In your final step, the counselor will meet with you to walk through your goals and help you foresee and overcome any obstacles to your success.

Assessment and Preparation for Admission

The college uses the ACCUPLACER or ACT assessment results and multiple measures (high school GPA, college coursework completed, etc.) to determine skill levels and place students in courses and/or programs where they will succeed academically.

For programs requiring assessment, students who have successfully met the ACCUPLACER or ACT assessment requirements within the last five years are immediately accepted for course placement and/or program admission. Students who have earned an associate or a baccalaureate degree (with the exception of a degree earned in a foreign country) do not need to complete an assessment. The student should bring score report(s) and/or official transcripts to the admissions meeting.

Note: Accommodations for assessment are available for persons with disabilities. They will need to fill out a request for accommodations and provide appropriate documentation. Students should also make an appointment to meet with the accommodations specialist on campus.

Admissions Meeting

Students must attend an admissions meeting with a counselor to discuss skills, strengths, expectations for college, time management, available resources, and answer any questions the student may have about program(s) and their goals. Students that have completed all of the admission requirements will be admitted to the program of their choice and placed in coursework based on their assessment (if required).

Transcripts

Students are encouraged to submit official copies of all prior academic transcripts (high school, GED/HSED, college, university, and military) to the Student Services office on the Northwood Tech campus they will be attending. Students still in high school should send a transcript of their coursework along with documentation of remaining courses to be completed prior to graduation. High school students who have completed the tenth grade and are participating the Start College Now program may also be eligible for admission into a Northwood Tech program. Students should check with their high school counselor or a Northwood Tech counselor for more information.

Special Licensing Requirements

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

Waiting Lists

Waiting lists are established when the number of accepted students for a program exceeds the capacity of the program. Only students who meet a program's admissions requirements are offered a place on the waiting list. Students will be offered the option of being placed on a waiting list during the admissions meeting. Northwood Tech's policy regarding waiting lists complies with the Wisconsin Technical College System Board policy. Students may begin general studies coursework and other available classes required for a program as a pre-program student.

Admissions Deferment

Students who have been admitted to a program may request to defer their enrollment for one full year without having to reapply. Contact Student Services for more information.

Declared Program Major

Students have officially declared a major if they have applied to a program and have been accepted. When a student declares a program, they receive a variety of services that are not available to students who do not declare a program. Students with a declared program can test out of courses that are required, receive credit for prior learning, transfer credits from other institutions, and receive assistance from program advisors. Students also qualify to apply for financial aid.

Double Program Major

Combining two degrees or diplomas is a good way to expand a student's career options. Students can add a second degree by filling out an online application. As students complete their double major, courses in common will apply to both programs.

Undeclared Program Major

Students wanting to enroll in credit classes without entering a program of study will be classified in an undeclared program. Students in an undeclared program will only be allowed to enroll in courses in which required prerequisites are met if space is available after students with declared programs have enrolled. Students with an undeclared program do not qualify for financial aid. Students will not be allowed to graduate from a program unless they have officially completed an online application, successfully completed the admissions assessment (if required), and interviewed with a counselor.

Requirements for Admission

Northwood Tech has an open admissions policy to enroll in the college. Additional requirements vary by program. Students should check with an admissions advisor at the appropriate campus. For more information, go to www.NorthwoodTech.edu.

Grade Point Average (GPA) Requirements

Northwood Tech does not require a specific GPA for admission, however, an admissions assessment is required for some programs. Resources are available to develop needed skills for completion of the admissions assessment. In addition, the Academic Support Center on each campus has a variety of refresher courses that students can take before enrolled or while enrolled to enhance their academic and study skills.

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Programs and Certificates

Campuses add or discontinue programs periodically. Please contact the Admissions office for information on current program availability. Curricula may change at any time to assure that instruction is keeping pace with changing technology and workplace requirements.

General Studies

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, or On Site instruction. Select courses are available at the Northwood Tech Outeach Centers. Please contact your local campus for specifics.

General Information

General Studies offers courses in communication, mathematics, science, social science, and behavioral science that provide the foundation for degree, certificate, and diploma programs at Northwood Tech

Prepared Learned courses equip students with the skills necessary to master college-level curricula. Academic history, self-awareness, and/or length of time away from formal education steer students to these courses. Prepared Learner courses carry college credits and are eligible for financial aid.

Academic Support offers individualized and group instruction in English, social studies, science, reading, mathematics, English Language Learning (ELL), civics, health, career exploration, and employability skills. Persons may attend classes to prepare for entry into specific Northwood Tech courses, to receive academic support with current program course materials, to prepare for employment, to increase knowledge of oral and written communication, and to fulfill personal goals. GED/HSED preparation and testing services are also available.

University Transfer Courses and Degrees

Northwood Tech offers both a University Transfer Degree-Associate to Bachelor's/Arts and a University Transfer Degree-Associate to Bachelor's/Science degree. The University Transfer programs are an academic partnership with UW-Superior so a full slate of Liberal Arts courses are available to complete the degrees. Courses are available Online and Online Live delivery modes so they are available anywhere you have reliable and available internet access. The combination of Northwood Tech General Studies courses and UW-Superior courses enable a Northwood Tech students to work toward a full Associate to Bachelor's/Arts or Associate to Bachelor's/Science degree, while still living, working and going to school near home. For more information, see the University Transfer degree pages (202-205).

General Studies Courses

Communication

10801136	English Composition 1
10801196	Oral/Interpersonal Communication
10801197	Technical Reporting
10801198	Speech
32801361	Applied Communications
32801362	Advanced Communication Skills*
10838104	Intro to College Reading
76851740	Writing Foundations
76851750	Writing Foundations for Trades
76858740	Reading Foundations
99831900	Writing Essentials

Mathematics

10804107	College Mathematics
10804113	College Technical Mathematics 1A
10804114	College Technical Mathematics 1B*
10804118	Intermediate Algebra with Applications*
10804123	Math with Business Applications
10804133	Mathematics and Logic
10804138	Math for Health Professionals
10804189	Introductory Statistics*
10804196	Trigonometry with Applications*
10834109	Pre-Algebra
20804224	College Algebra with Applications*
32804303	Applied Math
32804313	Applied Math 2*
32804325	Applied Technical Math 1
32804334	Applied Technical Math 2*
32804335	Advanced Technical Math*
76854745	Math Foundations
76854740	Math Foundations for Health
76854750	Math Foundations for Trades

Science

10806105	Principles of Animal Biology
10806112	Principles of Sustainability
10806114	General Biology
10806134	General Chemistry
10806140	Chemistry
10806175	Pathophysiology*
10806177	General Anatomy and Physiology
10806179	Advanced Anatomy and Physiology*
10806197	Microbiology*
10806198	Human Biology

Social Science

10809122	Introduction to American Government
10809143	Microeconomics
10809144	Macroeconomics
10809166	Introduction to Ethics: Theory and Application
10809172	Introduction to Diversity Studies
10809195	Economics
10809196	Introduction to Sociology

Behavioral Science

10809159	Abnormal Psychology*
10809188	Developmental Psychology
10809198	Introduction to Psychology
32809380	Applied Interpersonal Skills

Interdisciplinary

10835103	Study Skills
10890116	Job Quest
30890320	Working Smart
76890765	Study Skills for Allied Health

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better unless otherwise specified by program requirements.

Academic Support Courses

Various levels of coursework are offered in the following areas:

- English
- Social Studies
- Science
- Reading
- Mathematics
- English Language Learning (ELL)
- Civics
- Health
- Employability Skills
- GED/HSED Orientation

General Studies Course Descriptions

Communication

10801136
English Composition 1 - Credits: 3
This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents. This course focuses on writing-intensive practices and meets expectations of High Impact Practice courses. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10801196
Oral/Interpersonal Communication - Credits: 3
Focuses on developing effective listening techniques and verbal and nonverbal communication skills through oral presentation, group activity, and other projects. The study of self, conflict, and cultural contexts will be explored, as well as their impact on communication. This course focuses on writing-intensive practices and meets expectations of High Impact Practice courses. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10801197
Technical Reporting - Credits: 3
Prepare and present written, oral, and visual communication products, including instructions, proposals, informal and formal reports. Produce clear, usable communication by incorporating information design principles, arranging content to satisfy diverse audience needs, and presenting visuals for various contexts. Designed as an advanced course to develop collaborative communication practices, information literacy skills, and ethically responsible professional communication strategies. This course focuses on writing-intensive practices and meets expectations of High Impact Practice courses. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10801198
Speech - Credits: 3
Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. This course focuses on writing-intensive practices and meets expectations of High Impact Practice courses. Note: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

32801361
Applied Communications - Credits: 2
This basic communication course focuses on effective listening, speaking, reading, and writing in life and at work. Students demonstrate their skills both individually and in groups. Students also produce such employment documents as a cover letter, a resume, and a preliminary job portfolio.

32801362
Advanced Communication Skills - Credits: 2
This course focuses on building effective professional and personal communication skills. Students will practice, prepare, and deliver program-specific written documents, presentations, and interpersonal communication scenarios for diverse audiences. The course also examines the importance of community and engagement, and includes best practices in Computer-Mediated Communication. PREREQUISITE: 32801361 Applied Communications.

10838104
Intro to College Reading - Credits: 2
Provides learners with opportunities to develop and expand reading skills including comprehension and vocabulary. Learners apply reading skills to academic tasks and read to acquire information from a variety of sources.

76851740
Writing Foundations
Writing Foundations is a course designed to improve a student's writing skills to prepare the student for success in Intro to College Writing. Completing the course with a grade of C or higher will allow a student to enter Intro to College Writing.

76851750
Writing Foundations for Trades
Writing Foundations for Trades is a course designed to improve a student's writing skills to prepare the student for success in trades programs.

76858740
Reading Foundations
Reading Foundations is a course designed to improve a student's reading skills to prepare the student for success in Intro to College Reading. Completing the course with a grade of C or higher will allow a student to enter Intro to College Reading.

99831900
Writing Essentials - Credits: 2
This transitional course prepares students for success in English Composition 1. Topics include basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents. This course cannot be used to meet any General Studies course requirements for graduation in a program. COREQUISITE: 10801136 English Composition 1.

Mathematics

10804107
College Mathematics - Credits: 3
This course is designed to review and develop fundamental concepts of mathematics in the areas of algebra, geometry, trigonometry, measurement and data. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators.

10804113
College Technical Mathematics 1A - Credits: 3
Topics include: solving linear equations, graphing, percent, proportions, measurement systems, computational geometry, and right triangle trigonometry. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

10804114
College Technical Mathematics 1B - Credits: 2
This course is a continuation of College Technical Mathematics 1A. Topics include: performing operations on polynomials, solving quadratic and rational equations, formula rearrangement, solving systems of equations, and oblique triangle trigonometry. Emphasis will be on the application of skills to technical problems. Successful completion of or concurrent enrollment in College Technical Mathematics 1A is required for course enrollment. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1. PREREQUISITE: 10804113 College Technical Mathematics 1A.

10804118
Intermediate Algebra with Applications - Credits: 4
This course offers algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions. Students in this college transfer course will complete a scholarly research/academic assignment. PREREQUISITE: 10834109 Pre-Algebra, 10804114 College Technical Mathematics 1B, any associate degree or college parallel level WTCS mathematics course, or additional measures may be considered as determined by the counselor.

10804123
Math with Business Applications - Credits: 3
This course integrates algebraic concepts, proportions, percents, simple interest, compound interest, annuities, and basic statistics with business/consumer scenarios. It also applies math concepts to the purchasing/buying and selling processes. Emphasis is placed on the use of complex formulas for sinking funds and for present/future value and payments in both the accumulation and distribution phases of an annuity as well as to the development of formulas for business scenarios such as finding effective interest rates and finding the proceeds of a third-party discount.

10804133
Mathematics and Logic - Credits: 3
Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases.

10804138
Math for Health Professionals - Credits: 2
Following an arithmetic review, this course emphasizes those mathematical skills necessary for success in the nursing field and related health occupations. Emphasis will be placed on computational skills and applications of rational numbers; problem solving skills with ratios, proportions, and percents; basic principles and application of algebra, graphing, and statistics; measurement skills in U.S. Customary and Metric systems as well as apothecary and household systems; and the use of calculators as a tool.

10804189
Introductory Statistics - Credits: 3
Students taking Introductory Statistics display data with graphs, describe distributions with numbers, perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. Students in this college transfer course will complete a scholarly research/academic assignment. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA). Recommended Prerequisite: Introductory computer skills to include spreadsheets. PREREQUISITES: 10834109 Pre-Algebra, any associate degree or college parallel level WTCS mathematics course, or additional measures may be considered as determined by the counselor.

10804196
Trigonometry with Applications - Credits: 3
Topics include the unit circle, trigonometric functions, graphs, identities, equations, inverse functions, solutions of triangles, complex numbers, polar coordinates, and vectors. Students in this college transfer course will complete a scholarly research/academic assignment. PREREQUISITE: 10804118 Intermediate Algebra with Applications NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10834109
Pre-Algebra - Credits: 3
Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra related courses. This course cannot be used to meet any General Studies course requirements for graduation in a program.

20804224
College Algebra with Applications - Credits: 4
Algebraic concepts, techniques, and applications are studied with topics including the complex number system, functions and graphs (polynomial, rational, exponential, and logarithmic), systems of equations, properties of matrices, and binomial theorem. Students in this college transfer course will complete a scholarly research/ academic assignment. PREREQUISITES: 10804118 Intermediate Algebra with Applications, any associate degree or college parallel level WTCS mathematics course, or additional measures may be considered as determined by the counselor.

32804303
Applied Math - Credits: 2
This course covers practical applications of whole numbers, fractions, decimals, percent, proportion, and formula evaluation. The course also includes measurement, U.S. and metric systems of measurement, and basic geometry.

32804313
Applied Math 2 - Credits: 2
This course is a continuation of Applied Math. A more thorough coverage of solving equations and rearranging formulas with special applications to formulas used in the mechanical technician programs. Other topics include a study of solid geometry and direct and inverse proportions for work with hydraulics and transmission studies. The course is team-taught with the core instructor and direct application of math skills taught will be assessed in the math class and during time spent with the core instructor. PREREQUISITE: 32804303 Applied Math.

32804325
Applied Technical Math 1 - Credits: 3
This technical diploma course begins with a short review of basic arithmetic skills and continues with the application of these skills. Problem solving involving fractional and decimal dimensions is emphasized. The course also includes introductory algebra with emphasis on utilization of formulas including work with signed numbers. First-degree equation solution is also emphasized.

32804334
Applied Technical Math 2 - Credits: 2
This technical diploma course is a continuation of Applied Technical Math 1 . Topics covered include the basic geometry of plane and solid figures, right-triangle trigonometry, oblique-triangle trigonometry, and applications of these topics to trade and industry programs. PREREQUISITE: 32804325 Applied Technical Math 1.

32804335
Advanced Technical Math - Credits: 3
This technical diploma course is a continuation of Applied Technical Math 1. Topics covered include the basic geometry of plane and solid figures, right-triangle trigonometry, oblique-triangle trigonometry, and applications of these topics to trade and technical programs. Additional topics covered in this course are program specific. These topics include applications to machine shop formulas, Cartesian coordinates, point-to-point programming, land-surveying mathematics, and framing-square calculations. PREREQUISITE: 32804325 Applied Technical Math 1.

76854745
Math Foundations
Math Foundations is a course designed to improve a student's math skills to support their success in Pre-Algebra. Students will be able to co-enroll in Pre-Algebra. Completing the course with a grade of C or higher should prepare a student to successfully complete their Pre-Algebra course.

76854740
Math Foundations for Health
Math Foundations for Health is a course designed to improve a student's math skills to prepare the student for success in health programs.

76854750
Math Foundations for Trades
Math Foundations for Trades is a course designed to improve a student's math skills to support their success in Applied Math or Applied Technical Math 1. Students in Math Foundations for Trades will be able to co-enroll in Applied Math or Applied Technical Math 1. Completing the course with a grade of C or higher should prepare a student to successfully complete their Applied Math or Applied Technical Math 1 course.

Science

10806105
Principles of Animal Biology - Credits: 4
Introductory course focusing on general biological principles, cell structure and function, genetics, comparative anatomy and physiology, evolution, and ecosystems. Includes dissection of various fresh and preserved materials. This course is appropriate for OTA, AODA and other allied health students. (This course is a prerequisite to Microbiology.) PREREQUISITE: Admission to Veterinary Technician plan.

10806112
Principles of Sustainability - Credits: 3
Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability. Students in this college transfer course will complete a scholarly research/ academic assignment.

10806114
General Biology - Credits: 4
Introduces general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution, and taxonomical relationships. Consideration is also given to diversity among the various kingdoms. Students in this college transfer course will complete a scholarly research/academic assignment. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10806134
General Chemistry - Credits: 4
Covers the fundamentals of chemistry. Topics include the metric system, problem solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws. Students in this college transfer course will complete a scholarly research/academic assignment. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/ Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10806140
Chemistry - Credits: 1
This is a combined lecture/laboratory course for those entering health occupations programs. You will study chemical bonds and the solution process; chemical reactions and chemical equilibria; and acids and bases. You will participate in labs where appropriate. No previous background in chemistry is required. Good math skills are helpful.

10806175
Pathophysiology - Credits: 3
This introductory course in pathophysiology covers topics related to alterations of homeostasis and the associated pathophysiological processes. Course studies include the processes involved that generate illness; signs and symptoms of commonly occurring illness states; and effects of disease processes on the cell. Review of normal homeostatic mechanisms is included. Study of these fundamental processes in relation to the pathophysiological processes can enable the students to apply this knowledge to clinical situations. PREREQUISITES: 10806179 Advanced Anatomy and Physiology and 10806197 Microbiology.

10806177
General Anatomy and Physiology - Credits: 4
Examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. This course includes a one-credit lab component that supports the course objectives. Students in this college transfer course will complete a scholarly research/ academic assignment. (This course also provides the foundation, and is prerequisite to, Advanced Anatomy and Physiology.) NOTE: Successful completion of a chemistry course within the last five years is highly recommended.

10806179
Advanced Anatomy and Physiology - Credits: 4
Advanced Anatomy and Physiology is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuromuscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. Students in this college transfer course will complete a scholarly research/ academic assignment. PREREQUISITE: 10806177 General Anatomy and Physiology, preferably within the last five years.

10806197
Microbiology - Credits: 4
Examines microbial structure, metabolism, genetics, growth and the relationship between humans and microbes. Addresses disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Presents the role of microbes in the environment, industry, and biotechnology. This course includes a one-credit lab component that supports the course objectives. Students in this college transfer course will complete a scholarly research/ academic assignment. PREREQUISITE: 10806177 General Anatomy and Physiology, preferably within the last five years or 10806105 Principles of Animal Biology. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10806198
Human Biology - Credits: 4
This is an introductory course that emphasizes the structure of the human body and the functional interrelationships of the body's systems. Consideration is given to the human body and disease, human genetics, human ecology, and the role that humans play in the environment. The course consists of 3 hours of lecture and 2 hours of lab per week. Students in this college transfer course will complete a scholarly research/academic assignment. Note: This course does not meet requirements for or substitute for General Anatomy and Physiology or Anatomy & Physiology I and II.

Social Science

10809122
Introduction to American Government - Credits: 3
Introduces American political processes and Institutions. Focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. Explores the role of the media, interest groups, political parties, and public opinion in the political process. Also explores the role of state and national government in our federal system. Students will complete a global awareness project. Note: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10809143
Microeconomics - Credits: 3
Microeconomics explores individual decision making. The course focuses on how consumers, producers, and policy impact market outcomes; and how market factors influence consumer choices, producer decisions, and policy actions. Topics include economic decision making, consumption, production, elasticity, costs of production, market structures, market failures, resource markets, and international trade. The goal of this course is to improve personal, professional, and social decision making; better understand consumer and producer behavior; and analyze the impacts of government policy on market outcomes. Students in this college transfer course will complete a scholarly research/academic assignment.

10809144
Macroeconomics - Credits: 3
Macroeconomics explores the economy as a whole. This course focuses on how the aggregate economy impacts individuals, businesses, and policies; and how individuals, businesses, and policies can in turn impact the aggregate economy. Topics include alternate economic systems, aggregate behavior, macroeconomic indicators, business cycles, fiscal policy, monetary policy, and international trade. The goal of this course is to understand and evaluate current national and international economic issues. Students in this college transfer course will complete a scholarly research/academic assignment.

10809166
Introduction to Ethics: Theory and Application - Credits: 3
This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and professional standards of behavior, and apply a systematic decision-making process to these situations. Students will complete a global awareness project. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10809172
Introduction to Diversity Studies - Credits: 3
Introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. Students will complete a global awareness project. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10809195
Economics - Credits: 3
This course is designed to give an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. Students in this college transfer course will complete a scholarly research/academic assignment. Note: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10809196
Introduction to Sociology - Credits: 3
Introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. Students will complete a global awareness project. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

Behavioral Science

10809159
Abnormal Psychology - Credits: 3
The course in Abnormal Psychology surveys the essential features, possible causes, assessments, and treatment of mental health challenges from the viewpoint of the major historical and theoretical perspectives in the field. Students will be introduced to the diagnostic system of the Diagnostic and Statistical Manual of Mental Disorders. Biological, psychological, and socio-cultural perspectives in understanding and responding to abnormal behavior will be addressed, as well as current topics and issues. Students will complete a global awareness project. PREREQUISITE: 10809198 Introduction to Psychology. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10809188
Developmental Psychology - Credits: 3
Developmental Psychology is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. Students will complete a global awareness project. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

10809198
Introduction to Psychology - Credits: 3
This science of psychology course is a survey of multiple aspects of behavior and mental processes. It provides an overview of topics such as research methods, theoretical perspectives, learning, cognition, memory, motivation, emotions, personality, abnormal psychology, physiological factors, social influences, and development. Students will complete a global awareness project. NOTE: This course is recognized for general education transfer as part of the University of Wisconsin (UW) System/Wisconsin Technical College System (WTCS) Universal Credit Transfer Agreement (UCTA).

32809380
Applied Interpersonal Skills - Credits: 2
Improve intrapersonal and interpersonal skills in high demand by employers to enhance life-long learning both professionally and personally. Areas that are highlighted include providing excellent customer service in a diverse workplace, working ethically, improving motivation, applying critical thinking skills, and managing difficult situations.

Interdisciplinary

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

30890320
Working Smart - Credits: 1
This course will work in collaboration with student internship, second 8 weeks, to address employability skills in a natural, work-based learning environment. Students will continue the development and enhancement of job seeking skills, while practicing job retention skills such as problem solving, time management, accountability, self-awareness and working relationships. COREQUISITES: 30109330 Hospitality Applications, 30109331 Safety and Sanitation Fundamentals and 30109332 Guest Relations Fundamentals.

10835103
Study Skills - Credits: 1
This course provides learners with strategies to develop study skills for success in college. Through hands-on experiences, learners will apply study skills, learn how to think critically, and use information resources and technology. This course cannot be used to meet any General Studies course requirements for graduation in a program.

Accounting

10-101-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

Accounting is an important tool for any business. In this two-year accounting associate degree, you will be prepared to assemble, analyze, interpret and forecast essential information about the operation of an organization. You'll prepare financial statements, cost studies and tax reports.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Accounting graduates will be able to:

- Process financial transactions throughout the accounting cycle
- Analyze financial and business information to support planning and decision-making
- Perform payroll preparation, reporting, and analysis tasks
- Perform cost accounting preparation, reporting, and analysis tasks
- Perform individual and/or organizational tax accounting preparation, reporting, and analysis tasks
- Identify internal controls to reduce risk

Career Outlook

Typical positions available after graduation include:

- Accountant
- Bookkeeper
- Accounts Receivable Specialist
- Accounts Payable Specialist
- Payroll Specialist
- Cost Accounting Specialist
- Tax Accounting Specialist

Some graduates also continue their education in the field of Accounting at a four-year institution.

Career Pathways

The Accounting program includes the following pathway options (page 213):

- Accounting Assistant
- Billing and Posting Clerk
- Tax Preparer Assistant

Related Programs

- Financial Services
- Business Management
- Administrative Coordinator

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101101	Financial Accounting 1	4 cr.
10101103	Financial Accounting 2*	4 cr.
10101105	Intermediate Accounting 1*	4 cr.
10101107	Intermediate Accounting 2*	4 cr.
10101121	Cost and Managerial Accounting*	4 cr.
10101123	Income Tax Accounting	4 cr.
10101124	Payroll Systems and Accounting*	3 cr.
10101131	Accounting Capstone*	3 cr.
10101174	QuickBooks Accounting - Beginning*	2 cr.
10101179	Advanced Excel for Accounting*	2 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B *	1 cr.
10103162	MS Access A	1 cr.
10105125	Business Law	3 cr.
10890116	Job Quest	1 cr.
Technical Studies Total		42 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech or	
10801196	Oral/Interpersonal Communication	3 cr.
10804123	Math with Business Applications	3 cr.
10809195	Economics	3 cr.
10809188	Developmental Psychology or	
10809198	Introduction to Psychology	3 cr.
General Studies Total		15 cr.
ELECTIVES		**3 cr.**
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required (10101XXX) courses.

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10101103
Financial Accounting 2 - Credits: 4
Students will be introduced to corporate accounting. Students will have an understanding of corporate transactions with an emphasis on stocks and bonds. The student will analyze financial statements including the statement of cash flows. Managerial accounting is also introduced in this class. PREREQUISITE: 10101101 Financial Accounting 1.

10101105
Intermediate Accounting 1 - Credits: 4
Intermediate Accounting course (in sequence with 10101107 Intermediate Accounting 2) covering complex accounting theory, financial statement preparation, and analysis of an in-depth nature. PREREQUISITES: 10101103 Financial Accounting 2 and 10103152 MS Excel B.

10101107
Intermediate Accounting 2 - Credits: 4
Intermediate Accounting 2 (in sequence with 10101105 Intermediate Accounting 1) covers complex accounting theory, financial statement preparation, and analysis of an in-depth nature. PREREQUISITE: 10101105 Intermediate Accounting 1.

10101121
Cost and Managerial Accounting - Credits: 4
This course addresses cost accounting principles, procedures, and managerial applications of cost data; theory of job order cost, process cost, and standard cost; and managerial cost decision making. Though not required, 10101103 Financial Accounting 2 is also recommended prior to taking this course. PREREQUISITES: 10101101 Financial Accounting 1 and 10103152 MS Excel B.

10101123
Income Tax Accounting - Credits: 4
This course will prepare you to complete and file individual federal and Wisconsin income tax returns including the 1040EZ/WIZ, 1040A/1A, and 1040/1 with most common supporting schedules. This course is lecture- and project-based with most returns done manually and some comprehensive problems being computerized.

10101124
Payroll Systems and Accounting - Credits: 3
Study of state and federal laws affecting payroll -- Fair Labor Standards Act, Federal and State Unemployment Acts, Federal Insurance Contributions Act, Federal and State Withholding Tax Acts, payroll accounting procedures, and systems design. COREQUISITE: 10101101 Financial Accounting 1

10101131
Accounting Capstone - Credits: 3
Prepares students for real-world accounting. Students will process financial transactions throughout the accounting cycle, analyze financial information to support planning and decision-making, examine internal controls, perform payroll preparation and reporting, and prepare individual tax returns. Coursework is almost entirely project-based. PREREQUISITES: 10103152 MS Excel B, 10101174 Quickbooks Accounting – Beginning, 10101124 Payroll Systems and Accounting, 10101105 Intermediate Accounting 1 and COREQUISITES: 10101123 Income Tax Accounting

10101174
QuickBooks Accounting - Beginning - Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10101179
Advanced Excel for Accounting - Credits: 2
Students will learn to use MS Excel as it pertains mainly to accounting related functions. Activities will include working with pivot tables, exporting/importing information, continuing with advanced formulas and macros, using analytical options, and developing creativity/application skills in building spreadsheets to replace and enhance manual record keeping, calculations, and reporting. PREREQUISITES: 10101103 Financial Accounting 2 and 10103152 MS Excel B

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10105125
Business Law - Credits: 3
Business Law provides the student with a working knowledge of the legal system, business ethics, and essentials of contracts. Students gain knowledge in logical and analytical thinking, and are encouraged to challenge legal issues and defend their point of view.

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

Accounting Assistant

31-101-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

Accounting is an important tool for any business. Upon completion of the one-year Accounting Assistant technical diploma, you will be prepared to work as a bookkeeper in a small business or as an accounting specialist in a larger business. By maintaining accounting records such as receivables, payables, inventory, and payroll, you will help an organization run smoothly.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Accounting Assistant graduates will be able to:

- Process financial transactions throughout the accounting cycle
- Analyze basic financial and business information to support planning and decision-making
- Perform payroll preparation, reporting, and analysis tasks

Career Outlook

Typical positions available after graduation include:

- Accounting Clerk
- Accounts Receivable Clerk
- Accounts Payable Clerk
- Payroll Clerk

After you complete your Accounting Assistant technical diploma, you can continue your education to obtain the Accounting associate degree and transfer your credits to another college to work towards your bachelor's degree. Northwood Tech has articulation agreements with a variety of four-year universities. Some graduates may also choose to pursue professional certifications.

Career Pathways

The Accounting Assistant program includes the following pathway option (page 213):

- Billing and Posting Clerk

Accounting Assistant is also a pathway into the following program:

- Accounting

Related Program

- Tax Preparer Assistant

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10101101	Financial Accounting 1	4 cr.
10101103	Financial Accounting 2*	4 cr.
10101124	Payroll Systems and Accounting*	3 cr.
10101174	QuickBooks Accounting - Beginning*	2 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10103162	MS Access A	1 cr.
10804123	Math with Business Applications*	3 cr.
10890116	Job Quest	1 cr.
Occupational Specific Total		21 cr.
Occupational Supportive Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech **or**	
10801196	Oral/Interpersonal Communication	3 cr.
10809188	Developmental Psychology **or**	
10809198	Introduction to Psychology	3 cr.
Occupational Supportive Total		9 cr.
TOTAL PROGRAM REQUIREMENTS		**30 cr.**

Graduates may choose to continue with the second year of the Accounting associate degree program.

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions. You must earn a grade point of 2.0 or better in all required (10101XXX) courses.

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10101103
Financial Accounting 2 - Credits: 4
Students will be introduced to corporate accounting. Students will have an understanding of corporate transactions with an emphasis on stocks and bonds. The student will analyze financial statements including the statement of cash flows. Managerial accounting is also introduced in this class. PREREQUISITE: 10101101 Financial Accounting 1.

10101124
Payroll Systems and Accounting - Credits: 3
Study of state and federal laws affecting payroll -- Fair Labor Standards Act, Federal and State Unemployment Acts, Federal Insurance Contributions Act, Federal and State Withholding Tax Acts, payroll accounting procedures, and systems design. COREQUISITE: 10101101 Financial Accounting 1.

10101174
QuickBooks Accounting - Beginning - Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

Administrative Coordinator (Administrative Professional)

10-106-6 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

The Administrative Coordinator program will prepare you with cutting-edge skills in virtual assisting, event planning, organizing, and scheduling. As a graduate, you will have the competency to coordinate a modern office environment while supporting managers, executives, and teams. You will be equipped with the skills to manage projects, troubleshoot technology, provide exceptional customer service, and craft professional business communication. With this degree, typical career opportunities for grads could include, executive assistant, administrative coordinator, administrative professional, office manager or virtual assistant. This foundation prepares you for many career opportunities and gives you transferable credits to continue your education.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Administrative Coordinator graduates will be able to:

- Demonstrate effective workplace communications
- Apply technology skills to business and administrative tasks
- Perform routine administrative procedures
- Manage administrative projects
- Maintain internal and external relationships
- Model professionalism in the workplace

Career Outlook

Typical positions available after graduation include:

- Administrative Coordinator
- Executive Assistant
- Office Manager
- Virtual Assistant

Career Pathways

The Administrative Coordinator program includes the following pathway options (page 214):

- Office Support Specialist
- Office Technology Assistant
- Microsoft Office

Related Programs

- Business Graphics Certificate
- Customer Service Certificate
- Leadership Essentials
- Medical Administrative Professional

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101174	QuickBooks Accounting - Beginning*	2 cr.
10101176	Financial Accounting 1A	2 cr.
10103106	MS PowerPoint	1 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103156	Adobe Photoshop	2 cr.
10103162	MS Access A	1 cr.
10103184	Advanced Document Applications*	2 cr.
10103185	Advanced Spreadsheets and Analytics*	2 cr.
10106110	Document Formatting	2 cr.
10106123	Meeting and Event Planning	3 cr.
10106127	Desktop Publishing	2 cr.
10106128	Software Integration*	1 cr.
10106129	Web and Social Media Technologies	3 cr.
10106139	Administrative Office Management*	3 cr.
10106146	Proofreading for the Office	3 cr.
10106165	Business Information Management	2 cr.
10106166	Virtual Administrative Professional Capstone *	3 cr.
10106199	Business Technology and Success	1 cr.
10890116	Job Quest	1 cr.
Technical Studies Total		39 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10801197	Technical Reporting	3 cr.
10804123	Math with Business Applications	3 cr.
10809122	Introduction to American Government **or**	
10809172	Introduction to Diversity Studies **or**	
10809195	Economics **or**	
10809196	Introduction to Sociology	3 cr.
10809188	Developmental Psychology **or**	
10809198	Introduction to Psychology	3 cr.
General Studies Total		18 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10101174
QuickBooks Accounting - Beginning- Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103156
Adobe Photoshop - Credits: 2
Students will become skilled in using the Adobe Photoshop image-editing software package. Students will create and modify graphic images using various tools and techniques. They will learn to create original artwork, manipulate images, and create images for the Web and retouch photographs.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10103184
Advanced Document Applications - Credits: 2
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, mail merge, desktop publishing, themes, templates, forms, sort, styles, references, captions, and macros. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365. COREQUISITE: 10103146 MS Word A

10103185
Advanced Spreadsheets and Analytics - Credits: 2
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Excel software. Students will use spreadsheet software apply advanced features, manage data using PivotTables, and macros. Use software to solve and analyze various business situations. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365 for Windows. COREQUISITE: 10103151 MS Excel A

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10106123
Meeting and Event Planning - Credits: 3
In this course students will deepen their understanding of planning meetings and project management. Students learn about event planning and budgeting, negation and contracts, income projections, food and beverage coordination, technology utilization, and logistics management.

10106127
Desktop Publishing - Credits: 2
Preparation of professional-looking documents using desktop publishing software or word processing software with desktop publishing capabilities.

10106128
Software Integration - Credits: 1
This course is designed to integrate computer applications. Participants will prepare and enhance documents using word processing, spreadsheets, database, and presentation graphics software. PREREQUISITES: 10103106 MS PowerPoint, 10103146 MS Word A, 10103184 Advanced Dcoument Applications, 10103151 MS Excel A, 10103185 Advanced Spreadsheets and Analytics, and 10103162 MS Access A.

10106129
Web and Social Media Technologies - Credits: 3
This course presents the foundational skills necessary to function in a web and social media platform. Students will create a web site using effective web page design concepts including text, graphics, hypertext links, tables, forms, layers, and templates. This course will also introduce students to a broad spectrum of concepts and issues associated with E-Business, cloud based systems and Social Media from marketing to network security to customer service. A general knowledge of working in a Windows environment and keyboarding skills are recommended.

10106139
Administrative Office Management - Credits: 3
This course is designed to develop professional skills and attitudes needed in today's global business environment. Topics include making ethical decisions, working independently and as a team member, and managing time. Telecommunications, mail processing, travel arrangements and conferences, public relations, and ergonomics will be included. Previous word processing and proofreading experience is recommended. PREREQUISITES: 10106110 Document Formatting and 10106146 Proofreading for the Office.

10106146
Proofreading for the Office - Credits: 3
This course provides the learner with techniques used in proofreading office documents from both hard and soft copy (computer screen). Learners will incorporate the use of office reference manuals. This project-based course uses individual and group activities as well as in-class and out-of-class work.

10106165
Business Information Management - Credits: 2
This course will include coverage of the different indexing systems (alphabetic, numeric, subject, geographic, and chronological) as well as an overview of the entire records management function -- planning, designing, classifying, controlling, and evaluation. Electronic filing methods are utilized at locations where equipment is available.

10106166
Virtual Administrative Professional Capstone - Credits: 3
This course is designed to provide students with an experience to simulate tasks and duties performed in their field. It provides a foundation and exposure to On Site techniques and available virtual platforms; experience providing computer support in an office setting while tracking the requests; and exposure and use of emerging Internet-based softwares to assist them in their professional duties. Setting priorities, meeting deadlines, and doing mailable-quality work are stressed. This is a final semester capstone course and requires a high level of ability and mastery of communication, keying, proper document formatting, records management, word processing, spreadsheets, presentation graphics, database, and related field requirements. PREREQUISITES: 10106110 Document Formatting and 10106139 Administrative Office Management and COREQUISITE: 10106128 Software Integration.

10106199
Business Technology and Success - Credits: 1
Designed to explore the impact of digital technology, communication, and media. Course learners will be able to apply organizational techniques and manage electronic files; explore computer hardware and the web using various software and apps while practicing security and safety techniques. Improve skills in critical thinking, innovation, and personal responsibility through experiential and problem-solving approaches for a workforce-ready mindset.

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

Advanced EMT

30-531-6 Technical Diploma (less than one-year)

Campuses: New Richmond*, Rice Lake*

*Combination of On Site and Online Live instruction

Program Overview

The Advanced EMT program is for students who are seeking advanced skills and a higher level of challenge in an exciting field. Students will develop more enhanced emergency treatment skills including assessment skills and medication administration. Students will also perform a variety of patient assessments and skills including intravenous, intraosseous, intranasal, inhalation and intramuscular injections on real patients. Students will be expected to successfully complete the clinical course after obtaining a Training Center Training Permit. Students who successfully complete the program, with a program plan GPA of 2.0 or better, will be eligible to take the National Registry of EMT's cognitive and psychomotor examinations for Advanced Emergency Medical Technician (AEMT) level of certification. Prerequisite: 30-531-3 Emergency Medical Technician.

Special Features

On-site skills labs will be scheduled on select Saturdays at the Rice Lake campus.

Admission Requirements

- Complete Online application form
- Review and sign EMT Proof of Licensure Disclosure
- Provide proof of a current State of Wisconsin EMT license with expiration date

Program-Specific Requirements

- Attend a mandatory orientation session scheduled prior to start of class
- Pay fee and have acceptable results based on the Wisconsin Criminal History Record Check, Wisconsin Caregiver Background Check, Minnesota Caregiver Background Check (if applicable), and/or other states if applicable
  – Information from the Caregiver Background Check may affect ability to obtain Training Permit from the State of Wisconsin
- Be affiliated with an Advanced EMT service approved by the Wisconsin EMS Unit or approval from the Training Center Medical Director
- Have current immunizations, and demonstrate negative status for tuberculosis (Tb) by the first day of class
  – Decision to not receive vaccinations may limit ability to obtain clinical placement based upon meeting site placement requirements
- Possess current certification of "BLS Basic Life Support" or the equivalent
  – Certification must be active through the completion of the program
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Submit Background Information Disclosure (BID) Statement
- Review and sign Advanced EMT Confidentiality Statement of Understanding Form

Program Outcomes

The Advanced EMT program is approved by the Wisconsin EMS Unit and follows the National Emergency Medical Services Education Standards. Employers will expect graduates to be able to:

- Prepare for incident response and EMS operations
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care
- Demonstrate AEMT skills associated with established standards and procedures for a variety of patient encounters
- Communicate effectively with others
- Demonstrate professional behavior
- Meet state competencies for AEMT certification

Career Outlook

Licensure as an Advanced EMT allows the Advanced EMT to initiate intravenous therapy and administer selected medications as authorized by the Wisconsin EMS DHS, Scope of Practice and the Ambulance Service Medical Director.

Related Programs

- EMT
- EMT-Paramedic
- Paramedic Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Course		
30531336	Advanced EMT*	3 cr.
30531337	Advanced EMT Clinical*	1 cr.
PROGRAM REQUIREMENTS		**4 cr.**

* Courses require a prerequisite and/or corequisite.

Professional Licensure and/or Certification Information

Northwood Tech's Advanced EMT program is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets the requirements for preparation, examinations, or licensure for other states. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Course Descriptions

30531336
Advanced EMT - Credits: 3
The Advanced EMT course expands the role and skills of the EMT. Skills involved in obtaining intravenous and intraosseous access, intranasal, intramuscular and subcutaneous medication administration, and fluid therapy will be included. Student must hold a current Wisconsin EMT license. Extensive patient assessment knowledge and skills have been integrated throughout the curriculum, as well as enhanced critical decision making. This class meets the National Emergency Medical Services Education Standards, which qualifies students to certify with the National Registry of Emergency Medical Technicians. PREREQUISITE: Admission to the program.

30531337
Advanced EMT Clinical - Credits: 1
The Advanced EMT course expands the role and skills of the EMT. Skills involved in obtaining intravenous and intraosseous access, intranasal, intramuscular and subcutaneous medication administration, and fluid therapy will be included. Student must hold a current Wisconsin EMT license . Extensive patient assessment knowledge and skills have been integrated throughout the curriculum, as well as enhanced critical decision making. Participants will be required to participate in a clinical experience as part of their training. This class meets the National Emergency Medical Services Education Standards, which qualifies students to certify with the National Registry of Emergency Medical Technicians. PREREQUISITE: Admission to the program and 30531336 Advanced EMT.

Advanced Marine Repair Technician

17-461-1 Technical Certificate

Campus: Ashland

Program Overview

Diagnostics and the repair of outboard motors, inboard engines, marine transmissions, along with sterndrive units will be examples of coursework designed within this advanced certificate. Students are encouraged to select their own project that will increase their level of expertise as a qualified Marine Repair Technician. This certificate is designed to adapt to specific student interests in combination with the advance technological changes taking place within the marine industry.

Special Features

This certificate is unique in the state.

Prerequisite requirements for this certificate must be met. This certificate has the ability to be adapted to unique interests in the marine repair field.

How to Apply:

Complete the online application or contact Student Services. When completing an online application select the Advanced Marine Repair Technician Certificate from the program of choice dropdown list

Outcomes

The Advanced Marine Repair Technician Certificate will prepare you to:

- Meet project completion deadlines
- Follow proper repair instructions
- Complete projects that meet professional standards
- Complete self-directed projects
- Demonstrate an in-depth knowledge related to select product-specific training

Career Outlook

Completing this certificate will prepare you to begin your career as a marine repair technician and be able to complete advanced repairs such as (depending on selected learning activities):

- Diagnose and repair outboard motors
- Diagnose and repair sterndrive and inboard engines
- Repair marine transmissions and sterndrive units

Related Program

- Marine Repair Technician

Curriculum

Number	Course Title	Credits (cr.)
31461344	Advanced Marine Engine Rebuilding*	3 cr.
31461345	Advanced Marine Engine Systems*	3 cr.
CERTIFICATE REQUIREMENTS		**6 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

31461344
Advanced Marine Engine Rebuilding - Credits: 3
This course is designed to study in detail the process of rebuilding a marine engine or its related major components. The student will choose and provide a major project(s) and rebuild it to the manufacturer's specifications. The student will have to provide the instructor with a list of project(s) and the time estimated for their completion. The instructor will need to approve the project(s) and will guide the student as to the feasibility of completion. The estimated hours of completion will equal 3 credit hours (96 hours of time). The instructor will offer guidance to assure the students success in completion of the project. Lab work will need to be completed during the open time of the marine lab. PREREQUISITE: Successful completion of the Marine Repair Technician program.

31461345
Advanced Marine Engine Systems - Credits: 3
This course is designed to increase the student's knowledge of specific manufacturers' operation systems. The student will be able to complete additional manufacture training programs. There may be an additional cost to the student for some of these programs. Also the student will select areas of interest to study in detail, and provide training to program students and the public. Student to submit an outline of work to be completed that equals the number of credit hours of the course. Lab work will need to be completed during the open time of the marine lab. PREREQUISITE: Successful completion of the Marine Repair Technician program.

Agricultural Business Fundamentals

61-080-4 Pathway Certificate (less than one year)

Campus: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Center: Balsam Lake*
*Combination of Hybrid and On Site instruction

Program Overview

The business side of the farm operation is often times the most critical part of any farm regardless of focus. In this pathway, students will learn what financial records to keep, how to market commodities, analyze financial benchmarks, along with assessing new technology.

Special Features

Evening courses will be available for individuals needing to complete continuing education requirements for FSA loans.

Certificate is available part time or over 2 years.

Inquire

For more information on this program or schedule of courses, contact:
Julie Wadzinski, instructor at
Julie.Wadzinski@Northwood Tech.edu or
715.788.7064

How to Apply:

Complete the online application or contact Student Services. When completing an online application select the Agricultural Business Fundamentals Certificate from the program of choice dropdown list.

Program Outcomes

The Agricultural Business Fundamentals Certificate will prepare you to:

- Plan for operation and maintenance of farm facilities and equipment
- Create farm business plans
- Apply marketing principles to agricultural enterprises

Career Outlook

Typical positions available after graduation include:

- Farm Bookkeeper
- Agricultural Administrative Assistant

Career Pathway

The Agricultural Business Fundamentals certificate is a pathway into the following program (page 222):

- Farm Operation

Related Programs

- Livestock Production
- Crop Production

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31094343	Farm Commodities	2 cr.
31080370	Operating the Farm Business	3 cr.
31080375	Farm Records and Analysis	3 cr.
31080378	Emerging Trends in Agriculture	3 cr.
CERTIFICATE REQUIREMENTS		**11 cr.**

Course Descriptions

31094343
Farm Commodities - Credits: 2
This course is designed to introduce students to the purpose, operation, and use of futures and options in managing commodity price risks. The objectives of the course are to understand commodity marketing, futures contracts, options contracts, basis, hedging and speculating strategies as part of a successful commodity risk management program. Students will be introduced to fundamental and technical analysis techniques.

31080370
Operating the Farm Business - Credits: 3
This course will help the student learn many items involved with running a modern farm. These skills include but are not limited to record keeping, selecting proper insurance for the farm, analyzing financial performance, identifying credit needs and sources, planning for crops, and planning for the feeding of livestock.

31080375
Farm Records and Analysis - Credits: 3
This course emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. Includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business and finance strategy to meet the learner's needs. Production and financial decisions will be made based on the learner's farm business analysis. All competencies will be assessed using the learner's farm or with simulations established by the instructor.

31080378
Emerging Trends in Agriculture - Credits: 3
In this course, student will learn about the technological advances in production agricultural, relevant policy changes in legislation, consumer trends and new niche ventures. The production technology section will focus on data analysis and management from multiple sources including: robotic milkers, activity monitors, rumination meters, precision feeding, precision planting and harvesting data, satellite imagery and soil sampling.

Agricultural Power and Equipment Technician

32-070-1 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: New Richmond

Program Overview

As a service technician in this field, your skills are extremely valuable. Having the mechanical skills to help you get a piece of equipment running right for the customer or for yourself, before weather can ruin the crops, is an amazing accomplishment. The Agriculture Power and Equipment Technician Program will allow students to develop skills in the theory, operation, and repair of tillage, planting, harvesting equipment and tractors. Opportunities to troubleshoot and service farm equipment are a valuable aspect of this program. Students study diesel engines, drivetrains, electrical systems, and hydraulics.

Special Features

- Within the program curriculum, you will have the opportunity to earn the OSHA Forklift Certification and Mobile Air Conditioning EPA 609 Certification.
- First year of this program is shared with the Diesel Equipment Technician program.

Admission Requirements

- Complete Online application form
- Review and Sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Agricultural Power and Equipment Technician graduates will be able to:

- Repair electrical systems
- Analyze an electronic system
- Repair hydraulic systems
- Repair internal combustion engines
- Repair power trains/transmissions
- Follow industry safety standards

Career Outlook

Typical positions available after graduation include:

- Equipment Mechanic
- Construction Mechanic
- Diesel Mechanic
- Lawn and Garden Equipment Mechanic
- Parts Manager

Related Programs

- Diesel Equipment Technician
- Truck Driving

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32070326	Basic Engines	5 cr.
32070338	Diesel Engine Theory*	1 cr.
32070339	Mobile Hydraulics Theory*	1 cr.
32070341	Power Train Theory*	1 cr.
32070358	Power Trains 1*	5 cr.
32070361	Diesel Engine Repair*	5 cr.
32070364	Power Trains 2*	5 cr.
32070365	Mobile Hydraulics*	5 cr.
32070366	Advanced Mobile Hydraulics*	5 cr.
32070367	12-Volt Electrical Circuits*	5 cr.
32070369	Mobile HVAC for Heavy Equipment	1 cr.
32070370	12-Volt Electrical Theory*	2 cr.
32070371	Introduction to Live Repair*	3 cr.
32412301	Diesel Safety and Industry Practices	2 cr.
32412309	Advanced Diesel Engine Controls and Emissions*	1 cr.
32442307	Welding for Mechanics	2 cr.
Occupational Specific Total		49 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32801362	Advanced Communication Skills*	2 cr.
32804303	Applied Math	2 cr.
32804313	Applied Math 2*	2 cr.
Occupational Supportive Total		8 cr.
TOTAL PROGRAM REQUIREMENTS		**57 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

32070326
Basic Engines - Credits: 5
This class will provide the learner with an in depth look at how internal combustion engines operate. The learner will be able to identify, measure, and inspect parts of the internal combustion engine, with diesel engines used in agriculture machinery the main area of focus.

32070338
Diesel Engine Theory - Credits: 1
This course will provide the learner with a basic understanding of the diesel engine. The design and operating principles of the engine, cooling, fuel, intake, exhaust systems, and lubrication systems will be examined. COREQUISITE: 32070326 Basic Engines.

32070339
Mobile Hydraulics Theory - Credits: 1
This course will provide a practical understanding of mobile hydraulic components. Their design, application, operation and maintenance will be studied. A hydraulic training bench will be used in the classroom. PREREQUISITE: 32070367 12-Volt Electrical Circuits

32070341
Power Train Theory - Credits: 1
This course will provide a general overview of clutches, sliding gear, and hydrostatic drives. Design, operation, adjustment, and maintenance will be discussed. PREREQUISITE: 32070366 Advanced Mobile Hydraulics.

32070358
Power Trains 1 - Credits: 5
This course will provide an in-depth study of hydraulically operated and controlled transmissions as they are found on various types of farm tractors. You will learn transmission operation by studying manufacturers' service manuals as well as a prepared text. Lab projects will allow hands-on training. PREREQUISITE: 32070366 Advanced Mobile Hydraulics and COREQUISITE: 32070341 Power Train Theory.

32070361
Diesel Engine Repair - Credits: 5
This course provides the student with both a theoretical and practical background in the basic operating and rebuilding principles of diesel engines. The course includes practical experience in rebuilding, testing, troubleshooting, and tuning diesel engines. Additionally, the student will gain experience in the proper use of tools and equipment. If prerequisite courses have not been completed, the student must have consent of the instructor to enroll. COREQUISITES: 32070326 Basic Engines and 32070338 Diesel Engine Theory.

32070364
Power Trains 2 - Credits: 5
This course provides an opportunity to work on clutches, transmission torque amplifiers, torque converters, differentials, final drives, and power take-off units. Lab time is spent on disassembly, parts identification, operation, and repair of these units. COREQUISITES: 32070358 Power Trains 1 and 32070341 Power Train Theory.

32070365
Mobile Hydraulics - Credits: 5
This course will provide a broad, general, and practical coverage of fluid power components and their design, application, operation, and maintenance. You will learn hydraulics operation by studying manufacturers' service manuals as well as a prepared text. Lab projects will allow hands-on training. PREREQUISITE: 32070367 12 - Volt Electrical Circuits and COREQUISITE: 32070339 Mobile Hydraulics Theory.

32070366
Advanced Mobile Hydraulics - Credits: 5
This course provides an in-depth study on how the basic fluid power components are incorporated into a tractor hydraulic system. This lecture- and lab-based course includes demonstration and practice opportunities. If prerequisite courses have not been completed, student must have consent of instructor to enroll. PREREQUISITE: 32070367 12-Volt Electrical Circuits and COREQUISITES: 32070365 Mobile Hydraulics and 32070339 Mobile Hydraulics Theory.

32070367
12-Volt Electrical Circuits - Credits: 5
This course is designed to study the construction, operation and repair of electrical components and systems used in the agriculture/construction/heavy diesel truck field. Classroom activities will include reading and interpreting wiring diagrams, troubleshooting and repairing electrical circuits, and components (including performing repairs on alternators and starters). Computer based electrical circuits are introduced, with the opportunity to work with diagnostic laptops and scan tools. COREQUISITES: (32070370 12-Volt Electrical Theory and 32070371 Introduction to Live Repair) OR (32404376 DC Automotive Electrical and 32404377 Electrical Systems).

32070369
Mobile HVAC for Heavy Equipment - Credits: 1
Mobile HVAC for heavy equipment will teach the learner the basics of air conditioning systems. Air conditioning fundamentals will be learned along with proper servicing procedures and air conditioning equipment used. In depth study of air conditioning systems from older agriculture equipment will be looked at, along with study of new auto temperature control systems. EPA environmental laws pertaining to mobile air conditioning will be examined.

32070370
12-Volt Electrical Theory - Credits: 2
This course is designed for the learner to understand (12-volt) DC electricity. Classroom trainers along with lab exercises will be used to learn electrical theory. Students will also be introduced to electrical wiring schematic reading, wire harness construction and repair. PREREQUISITE: 32412301 Diesel Safety and Industry Practices.

32070371
Introduction to Live Repair - Credits: 3
This course is designed to study the construction, operation, adjustments, and repairs of electrical components used in tractors and farm implements. Classroom and lab activities will include reading and interpreting wiring diagrams, troubleshooting electrical circuits, and performing repairs on alternators, generators, starters, and regulators. Monitors are also included in this course. PREREQUISITE: 32412301 Diesel Safety and Industry Practices and COREQUISITE: 32070370 12-Volt Electrical Theory.

32412301
Diesel Safety and Industry Practices - Credits: 2
This course will introduce students to the safety and legal requirements and common shop practices of the diesel equipment industry. Personal safety as well as overall shop/job site safety will be emphasized while students learn to operate shop equipment and learn basic repair techniques common to all aspects of the diesel and heavy equipment industry. Skills learned in this course will be directly applied throughout the diesel equipment technician program.

32412309
Advanced Diesel Engine Controls and Emissions - Credits: 1
This course will provide a broad, general and practical coverage of electronic engine controls and multiple after treatment systems/emissions operations, components, and trouble shooting. Classroom and lab activities include comparing different engine systems and how they operate, identifying components and locations, and diagnosing problems. PREREQUISITE: 32070361 Diesel Engine Repair and 32070367 12-Volt Electrical Circuits

32442307
Welding for Mechanics - Credits: 2
Instruction in safe setup and operation of plasma cutting (PAC), oxy-fuel cutting (OFC), SMAW (Stick), GMAW (Mig), FCAW, and/or GTAW (Tig) welding in applications related to general industry practices. Selection of appropriate welding processes with a specific emphasis on typical repair situations including metal identification will be stressed.

Architectural Commercial Design

10-614-4 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Available through Online Live instruction

Program Overview

Architecture is a combination of art, science and communication. The Architectural Commercial Design program emphasizes the science of construction knowledge and communicating that knowledge in drawings through an efficient use of building information modeling (BIM) and computer-aided design (CAD) programs.

Employers are impressed with Northwood Tech graduates' understanding of the entire building process, building connection details and programs like Revit and AutoCAD.

Special Feature

This program is unique in the state.

Admission Requirements

- Complete Online application form
- Review and Sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Architectural Commercial Design graduates will be able to:

- Develop construction documents
- Evaluate building materials
- Develop building designs
- Integrate building systems
- Use computer-aided drafting, building information modeling, and architectural related software
- Utilize office practices and standards
- Utilize the Enrolled Wisconsin Commercial Building Code incorporating the International Building Code (IBC)

Career Outlook

Typical positions available after graduation include:

- CAD Technician
- Store Planner
- Project Manager
- Technical Coordinator
- Design Technician
- CAD Technician
- Architectural Technician
- BIM Technician

With additional experience, graduates may move into one of these positions:

- Architect
- Project Manager
- CAD Manager

Career Pathway

The Architectural Commercial Design program includes the following pathway option (page 215):

- Drafting Technician

Related Program

- Construction and Cabinetmaking

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10614129	Building Estimating*	3 cr.
10614165	Site Design*	3 cr.
10614170	Architectural Materials and Methods 1	3 cr.
10614171	Architectural Materials and Methods 2*	3 cr.
10614172	Architectural Drafting and Design 1*	4 cr.
10614173	Architectural Drafting and Design 2*	4 cr.
10614174	Architectural Drafting and Design 3*	5 cr.
10614175	Architectural Drafting and Design 4*	5 cr.
10614176	Architectural Technology 1	3 cr.
10614177	Architectural Technology 2*	2 cr.
10614178	Architectural Technology 3* **or**	
10614115	Architectural Internship*	3 cr.
10614179	Mechanical Systems*	3 cr.
10614180	Structural Analysis and Design*	3 cr.
Technical Studies Total		44 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.
10804118	Intermediate Algebra with Applications*	4 cr.
10804196	Trigonometry with Applications*	3 cr.
10809122	Introduction to American Government **or**	
10809166	Introduction to Ethics: Theory and Application **or**	
10809172	Introduction to Diversity Studies **or**	
10809195	Economics **or**	
10809196	Introduction to Sociology	3 cr.
10809198	Introduction to Psychology **or**	
10809188	Developmental Psychology	3 cr.
General Studies Total		19 cr.
TOTAL PROGRAM REQUIREMENTS		**63 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10614129
Building Estimating - Credits: 3
This course introduces the student to the basic methods of building estimating and systems for doing quantity surveys. Emphasis is placed on developing the skills received in preparing the kinds of estimates commonly used in architecture and building construction. Practical exercises in developing estimates for wood frame and light commercial structure are included in the course of study. PREREQUISITE: 10614170 Architectural Materials and Methods 1.

10614165
Site Design - Credits: 3
The course focuses on the fundamental design issues of the building site with an introduction to land surveying and topography, land planning and zoning, and environmental regulations. The lab portion of the course provides an opportunity to develop site analysis and design skills through the development of an architectural commercial site design project. PREREQUISITE: 10614176 Architectural Technology 1.

10614170
Architectural Materials and Methods 1 - Credits: 3
This course introduces the student to the materials and methods used in wood frame construction. It familiarizes students with components of modern construction for the purpose of selecting the materials best suited to various construction jobs.

10614171
Architectural Materials and Methods 2 - Credits: 3
This course introduces the student to commercial building materials. Students draw connection details for concrete, steel, and masonry and combinations thereof. Commercial building code analysis and construction practices such as the design process, bidding, and construction administration are also covered. PREREQUISITE: 10614170 Architectural Materials and Methods 1.

10614172
Architectural Drafting and Design 1 - Credits: 4
This course introduces graphic representation in construction. It covers the fundamentals of drafting including line work, lettering, measuring, sketching, projections, and pictorial drawings. Students will use the aforementioned fundamentals to complete a set of drawings for a residence. COREQUISITES: 10614170 Architectural Materials and Methods 1 and 10614176 Architectural Technology 1.

10614173
Architectural Drafting and Design 2 - Credits: 4
This course introduces the student to the design principles needed for wood frame structures and incorporates the many aspects of building aesthetics and working drawings. The final assignment is to plan a set of drawings for a wood frame commercial building. PREREQUISITE: 10614172 Architectural Drafting and Design 1 and 10614176 Architectural Technology 1.

10614174
Architectural Drafting and Design 3- Credits: 5
In this course the student learns the design principles needed for creating working drawings for multi-level commercial buildings. This course starts with units on accessibility and space planning. As the course progresses, students complete a set of construction documents while applying building codes and incorporating various structural building materials such as precast concrete, masonry, and steel. PREREQUISITES: 10614173 Architectural Drafting and Design 2 and COREQUISITE: 10614171 Architectural Materials and Methods 2.

10614175
Architectural Drafting and Design 4 - Credits: 5
This final semester course is designed to prepare the student for the challenges of working in an architectural office. The major portion of the course is finalizing a set of architectural working drawings for a commercial building. The course also includes architectural office orientation, specifications, architectural group projects, and commercial building planning considerations as well as several activities directed toward successful job-hunting skills. PREREQUISITE: 10614174 Architectural Drafting and Design 3.

10614176
Architectural Technology 1 - Credits: 3
AutoCAD and related architectural software is utilized to teach learners the fundamentals of architectural computer-aided drafting. Topics from CAD applications in architecture and the equipment required to do actual drafting, modifying, and plotting operations are covered.

10614177
Architectural Technology 2 - Credits: 2
This course is an introduction to the application of BIM software in architectural drafting. Students will apply Revit Architecture software to create a three-dimensional building model that allows for deliverables such as floor plans, building sections, exterior elevations, and schedules. The building model will include walls, openings, floors, stairs, roofs, foundations, and footings. Topics such as datum, annotation, modifying family types, and profiles will be covered. PREREQUISITE: 10614170 Architectural Materials and Methods 1.

10614178
Architectural Technology 3 - Credits: 3
This course builds upon students' prior experience from other courses in which Revit has been instrumental in developing projects. Students will spend part of their time learning advanced concepts in Revit such as creating and editing families, exploring interoperability, exploring 3D viewing options, and other advanced features. Throughout the course, students will also apply those concepts to a project of their choosing. PREREQUISITE: 10614177 Architectural Technology 2.

10614115
Architectural Internship - Credits: 3
Internship is designed to provide students with on-the-job experience in actual work situations. These experiences strengthen student competencies through participation in a wide variety of occupational experiences, ranging from routine assignments to specialized work-related duties. PREREQUISITES: Appropriate technical studies courses and a minimum of one year successful associate degree program competencies and/or instructor approval.

10614179
Mechanical Systems - Credits: 3
This course introduces basic principles of plumbing and electrical systems along with heating, ventilating and air conditioning systems in building design and construction. These systems are studied in the context of the overall building design with emphasis on materials, equipment systems design, engineering principles, and sustainable design practices. PREREQUISITE: 10614172 Architectural Drafting and Design 1 and 10614176 Architectural Technology 1.

10614180
Structural Analysis and Design - Credits: 3
Basic concepts of design as applied to steel and timber beams and columns, as well as concrete bases, slabs, columns, and foundations are developed. Emphasis is on developing a sound conception of the related problems faced by the architect, contractor, construction superintendent, and distributors in planning and erecting buildings. PREREQUISITE: 10804196 Trigonometry with Applications.

Architectural Woodworking & Cabinetmaking

31-409-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Rice Lake

Program Overview

The Architectural Woodworking & Cabinetmaking technical diploma will provide students with the knowledge and skills necessary to work in cabinet and /or furniture shops, furniture factories, display shops, and finish the interior of homes. Students will learn the fundamentals of cabinetmaking and furniture making along with installation and interior finish, print reading, math concepts, and CNC machine operation. Safety principles and the use of hand and power tools will also be covered.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Architectural Woodworking & Cabinetmaking graduates will be able to:

- Read blueprints
- Identify materials
- Set up machinery
- Operate saws, joiners, planers, shapers, sanders and other woodworking machinery
- Assemble parts

Career Outlook

Typical positions available after graduation include:

- Cabinet Installer
- Cabinetmaker
- Machine Operator
- Furniture Maker
- Interior Finish Carpenter

Career Pathway

The Architectural Woodworking & Cabinetmaking program is a pathway into the following program (page 220):

- Construction and Cabinetmaking

Related Program

- Architectural Commercial Design
- Drafting Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32410300	Cabinet and Furniture Making 1	5 cr.
32410302	Cabinet and Furniture Making 2	5 cr.
32410320	CNC Machine Operation	2 cr.
32410334	Production Cabinetmaking*	5 cr.
32410335	Interior Finish*	5 cr.
32410339	Print Reading for Building Construction	2 cr.
Occupational Specific Total		24 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804325	Applied Technical Math 1	3 cr.
Occupational Supportive Total		5 cr.
PROGRAM REQUIREMENTS		**29 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

32410300
Cabinet and Furniture Making 1 - Credits: 5
This is a lab/shop/theory application. This course covers the basics of cabinet and furniture construction. Fundamental machine operations and safety rules are taught. The students are required to construct, by approved machine methods, the common joints used in good construction. The study of wood and other materials, hand tools and bench work, shop drawing, design, and layout are a part of the basic course.

32410302
Cabinet and Furniture Making 2 - Credits: 5
This is a lab/shop applications course. The student will be involved in projects according to his/her abilities to provide practical application of the operations learned. COREQUISITE: 32410300 Cabinet and Furniture Making 1.

32410320
CNC Machine Operation - Credits: 2
This course introduces the student to the development and editing of CNC programs. The basic elements of CNC machine setup and operation are covered for the production of acceptable parts. Safety concerns are also addressed. PREREQUISITE: 32804325 Applied Technical Math 1.

32410334
Production Cabinetmaking - Credits: 5
This is a lab/shop/theory application focuses on finishing and fine tolerances of the cabinet making trade. This course will provide the skills needed for advanced production cabinetmaking, including materials cut lists, ordering, setting up machines for production cabinetmaking, assembly as well as production wood finishes. PREREQUISITE: 32410302 Cabinet and Furniture Making 2.

32410335
Interior Finish - Credits: 5
This is a lab/shop/theory application that deals with finishing and fine tolerances of the construction trade. Hands-on techniques of installing trim and molding, and designing and building cabinets are covered. PREREQUISITE: 32410302 Cabinet and Furniture Making 2 and COREQUISITE: 32410334 Production Cabinetmaking.

32410339
Print Reading for Building Construction - Credits: 2
This course provides instruction in reading and interpreting shop drawings, residential drawings, and commercial building plans. Emphasis is placed on building terminology and learning conventional techniques of communicating building methods from the designer to the builder. Students learn to visualize the structure and to interpret elevations, plan views, details, and sections from drawings. They also learn to read and interpret building specifications.

Automated Packaging Systems Technician

32-454-1 Technical Diploma (two-year) **Financial Aid Eligible**

Campuses: New Richmond

Program Overview

The Automated Packaging Systems Technician program will give you the skills you need to enter a career in the packaging industry. You learn to service and repair a variety of packaging equipment and automated systems. This program emphasizes the maintenance and troubleshooting of electrical, mechanical, fluid power, robotics, and PLC (Programmable Logic Controller) components on packaging machines. Classroom and hands-on instruction on packaging machines plus visits to the packaging industry are all parts of the program. You may participate in the Institute of Packaging Professionals meetings each month as a member of the student chapter.

Program integrates advanced manufacturing (Industry 4.0) competencies to meet the regional need for skilled employees.

Special Features

This is a unique program in the state.

An outstanding feature of this program is the reliance on actual automated packaging machinery. The packaging industry, both locally and nationally, provides support to the program by providing scholarships. Coursework will help prepare students to take PMMI exams for industry certification.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Automated Packaging Systems Technician graduates will be able to:

- Demonstrate safe practices and techniques
- Install power transmission components, fluid power components, and automation components
- Maintain power transmission components, fluid power components, and automation components
- Troubleshoot power transmission components, fluid power components, and automation components
- Electrically connect automation and communication components
- Troubleshoot automated control systems
- Create electrical systems drawings and schematics for automated machines

Career Outlook

Typical positions available after graduation include:

- Packaging Systems Assembler
- Maintenance Technician
- Field Service Technician
- Line Mechanic/Adjuster
- Packaging Systems Operator

Career Pathway

The Automated Packaging Sytems Technician program includes the following pathway option (page 216):

- Mechatronics Basics

Related Program

- Automation for Industrial Systems
- Industrial Systems Specialist

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32150302	Applied IT Basics	1 cr.
32414335	DC Electricity	3 cr.
32414336	AC Electricity*	3 cr.
32414380	Basic PLCs*	3 cr.
32420314	Basic Machine Shop	3 cr.
32454340	Packaging Machine Maintenance	3 cr.
32454341	Fluid Power Systems	3 cr.
32454343	Packaging Machine Rebuilding*	5 cr.
32454344	Schematics, Prints, and Layouts*	2 cr.
32454345	Packaging Systems Equipment Control*	3 cr.
32454347	Electromechanical Componentry*	4 cr.
32454348	Troubleshooting*	2 cr.
32454349	Installation of Packaging Machines*	5 cr.
32454357	Power Transmission Componentry*	2 cr.
32454359	Packaging Materials/Processes*	2 cr.
32454362	Processes of Manufacturing - Packaging	2 cr.
32454364	Motion Controls*	2 cr.
32454366	Introduction to Robotics*	2 cr.
Occupational Specific Total		50 cr.
Occupational Supportive Courses**		
32442307	Welding for Mechanics	2 cr.
32801361	Applied Communications	2 cr.
32801362	Advanced Communication Skills*	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804334	Applied Technical Math 2*	2 cr.
32809380	Applied Interpersonal Skills	2 cr.
Occupational Supportive Total		13 cr.
PROGRAM REQUIREMENTS		**63 cr.**

This program is funded with $295,458 in WTCS Grant Funds

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions

32150302
Applied IT Basics - Credits: 1
This course provides students with an introduction to basic Information Technology concepts. Students will learn to identify and describe basic PC hardware components. Students will also learn how to install and maintain an Operating System using software utilities. Students will learn the basic components of networks, how devices communicate on a network and how to add a device to an existing data network.

32414335
DC Electricity - Credits: 3
This course is an introduction to electricity. The focus will be on direct current as used in industry. You will learn the basics of series, parallel and combination circuits. You will develop skills in circuit analysis, and electrical measurement using a digital multimeter.

32414336
AC Electricity - Credits: 3
This course is an introduction to alternating current electricity as used in industry. You will study series and parallel alternating current circuits that contain inductance and capacitance, as well as, single and three phase transformers, direct current, single phase and three phase motors. PREREQUISITE: 32414335 DC Electricity.

32414380
Basic PLCs - Credits: 3
This course will provide a foundation for working with microprocessor controls. Students will learn the theory and application of electrical principles as they are applied to control systems found in industry. The learner will use trainers and machine components to provide recognition and understanding of modern microprocessor-based control systems. PREREQUISITE: 32454345 Packaging Systems Equipment Control.

32420314
Basic Machine Shop - Credits: 3
This lab-based course will provide instruction in shop safety, measuring, print reading, and basic setup and operation of saws, mills, and lathes.

32442307
Welding for Mechanics - Credits: 2
Instruction in safe setup and operation of plasma cutting (PAC), oxy-fuel cutting (OFC), SMAW (Stick), GMAW (Mig), FCAW, and/or GTAW (Tig) welding in applications related to general industry practices. Selection of appropriate welding processes with a specific emphasis on typical repair situations including metal identification will be stressed.

32454340
Packaging Machine Maintenance - Credits: 3
You will learn to research and locate suppliers for mechanical, electrical, pneumatic and automation components that are required to maintain and repair equipment. You will learn to read machine electrical diagrams and trace control circuits using a digital multimeter.

32454341
Fluid Power Systems - Credits: 3
This course develops the skills required for the implementation of vacuum, air, and oil used to transmit force for performing useful functions on machines. Students will apply symbols to components and connect components to understand the assembly, operation, and maintenance of fluid power systems. The transmission of force is used in a variety of applications and can be hazardous to individuals who do not understand the related laws of physics.

32454343
Packaging Machine Rebuilding - Credits: 5
The student will learn to plan, organize, and perform various tasks for the repair of packaging machines. Individuals and groups will disassemble mechanical components on packaging equipment simulating the work environment. Rebuilding and repairing machines gives students the opportunity to develop mechanical skill and see the potential problems that may require maintenance on packaging machinery. PREREQUISITE: 32454347 Electromechanical Componentry.

32454344
Schematics, Prints, and Layouts - Credits: 2
This course covers an introduction and use of engineering drawings used to represent machines components. Students will draw sketches and develop interpretation skills required for the correct translation of machine drawings. Students will sketch electrical and control systems symbols that are used in electrical diagrams. COREQUISITE: 32454340 Packaging Machine Maintenance.

32454345
Packaging Systems Equipment Control - Credits: 3
This course gives the students the opportunity to perform the selection, design, installation, and operation of control systems found on automated packaging machines. The student will work with many types of components to gain recognition and skill development in the correct installation of electrical control systems. The modern control system requires specialized skills that are useful for understanding high technology applications such as robotics and climate control. PREREQUISITE: 32414335 DC Electricity.

32454347
Electromechanical Componentry - Credits: 4
This course will develop an understanding of the skills necessary for the application of electromechanical components used in machine control systems. You will have the opportunity to simulate a control system by wiring and testing circuits that use control system devices. PREREQUISITE: 32454345 Packaging Systems Equipment Control.

32454348
Troubleshooting - Credits: 2
The learner will develop the skills necessary for troubleshooting by analyzing the process of problem solving. You will perform troubleshooting procedures on components, machines, and systems. You will learn to think critically as an individual and as a member of a team. Prior knowledge of machine controls is required. PREREQUISITE: 32454347 Electromechanical Componentry.

32454349
Installation of Packaging Machines - Credits: 5
The learner will develop skills necessary to plan, install, and perform system checkouts. You will develop a schedule to simulate a machine installation, provide operator training, and develop a team approach to the installation. A variety of packaging machines will be used for the installation projects. A successful installation requires proper planning, teamwork, and the ability to analyze the machine's performance. PREREQUISITE: 32454347 Electromechanical Componentry.

32454357
Power Transmission Componentry - Credits: 2
The learner will develop skills necessary to install, maintain, and repair mechanical drive system components. The learner will use machine components to develop skills for installing and repairing defective mechanical drive systems. The correct installation and maintenance is required for trouble-free operation. COREQUISITE: 32454345 Packaging Systems Equipment and Control.

32454359
Packaging Materials/Processes - Credits: 2
You will learn about glass, metal, paper and plastic materials that are used in the packaging industry. Each material has special properties that provide benefits for packaging various products. You will learn about the processes that are used to create these materials as they are used in the packaging industry. PREREQUISITE: 32454347 Electromechanical Componentry.

32454362
Processes of Manufacturing - Packaging - Credits: 2
You will learn how to select materials, fabricate parts, and perform quality assurance used in a manufacturing environment. Students will perform a variety of tasks to develop skills necessary for the manufacturing of components. Manufacturing is a fast-paced, highly technical, and globally competitive industry that requires a basic understanding of manufacturing principles.

32454364
Motion Controls - Credits: 2
The student will learn the application of motion controllers used in industry that accurately control position or speed. The student will select the correct motion controller from application requirements as used in industry. Performance will include the installation, connection, configuring, and troubleshooting of basic motion controllers. PREREQUISITES: 32414380 Basic PLCs and 32454347 Electromechanical Componentry.

32454366
Introduction to Robotics - Credits: 2
This course presents an overview of robotics in practice and research with topics including vision, motion planning, mobile mechanisms, kinematics, inverse kinematics, and sensors. PREREQUISITES: 32414335 DC Electricity and 32414336 AC Electricity.

Automation for Industrial Systems

10-631-2 Associate Degree (two-year) **Financial Aid Eligible**

Campus: New Richmond

Program Overview

Process and manufacturing plants employ technicians to keep their machines and processing running, and install and maintain equipment. In this two-year associate degree program, you will be prepared to be employed at the technician level or higher on computers, industrial computer networks, programmable logic controllers (PLCs), and process instruments. You will have both classroom and hands-on laboratory instruction with several systems to gain an understanding of computer and PLC interfacing, control systems, network installation and network administration.

Program integrates advanced manufacturing (Industry 4.0) competencies to meet the regional need for skilled employees.

Special Features

This is a unique program in the state.

Students in the Automation for Industrial Systems program have the opportunity to dual major with the IT-Cybersecurity Specialist or IT-Systems Administration Specialist programs by completing additional coursework (see pages 133-136 for more information on these programs).

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Automation for Industrial Systems graduates will be able to:

- Support basic computer networks
- Support client systems
- Utilize network operating systems
- Apply basic IT security principles
- Demonstrate safe practices and techniques
- Perform installations of controls hardware/software/cabling
- Perform installations and supportive functions for LAN/communication busses
- Perform programming and configuration of Programmable Logic Controllers (PLCs) and Distributed Control Systems (DCSs)
- Integrate control systems
- Troubleshoot hardware/software of PLCs, instrumentation, and control systems
- Develop system documentation

Career Outlook

Typical positions available after graduation include:

- Control Systems Technician
- Instrument Technician
- Programmable Logic Controller (PLC) Technician
- Industrial Automation Technician
- Computer Technician
- Network Technician
- Controls Engineer
- Automation Engineer

Career Pathways

The Automation for Industrial Systems program includes the following pathway options (page 217):

- Industrial Systems Specialist
- IT - Network Technician

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10150111	Cisco CCNA 1 Introduction to Networks*	3 cr.
10150113	Cisco CCNA 2 Routing and Switching Essentials*	3 cr.
10150117	Server Administration 1*	3 cr.
10150139	IT Essentials and Security	2 cr.
10150170	Coding with Python	2 cr.
10154103	Linux Operating Systems*	3 cr.
10154149	Windows Operating Systems*	3 cr.
10605167	Electricity 1*	2 cr.
10605168	Electricity 2*	2 cr.
10631100	Introduction to Process Control	2 cr.
10631102	Industrial Power Electronics*	2 cr.
10631103	Process Control and Instrumentation*	3 cr.
10631104	Smart Instruments*	2 cr.
10631105	Industrial Networks and Communication Busses*	2 cr.
10631106	Supervisory and Distributed Control Systems*	3 cr.
10631107	Industrial Automation Case Project*	1 cr.
10631108	PLC Programming and Interfacing*	3 cr.
10631109	Industrial AC, Motor Control, and Pilot Devices*	3 cr.
10631110	Advanced PLC Programming and Interfacing*	3 cr.
Technical Studies Total		47 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10804113	College Technical Mathematics 1A	3 cr.
10804114	College Technical Mathematics 1B*	2 cr.
10809166	Introduction to Ethics: Theory and Application **or**	
10809172	Introduction to Diversity Studies **or**	
10809195	Economics	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		17 cr.
PROGRAM REQUIREMENTS		**64 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

(See pages 35-38 for General Studies course descriptions)

10150111
Cisco CCNA 1 Introduction to Networks - Credits: 3
Cisco CCNA 1 Introduction to Networks (ITN) covers networking architecture, structure, and functions. The course introduces On Site4 and On Site6 addressing structure and design, the fundamentals of Ethernet concepts, media, and operations, the OSI and TCP/IP models and associated protocols to set a strong networking foundation. Wireshark is used to examine protocols on the network. Students configure and troubleshoot routers (IOS), switches and clients for a basic network.

10150113
Cisco CCNA 2 Routing and Switching Essentials - Credits: 3
Cisco CCNA 2 Routing and Switching Essentials (RSE) covers the architecture, components, and operations of routers and switches in a small network. Students learn how to configure, device management, switch ports, security, VLANs, Static and Dynamic routing, DHCP (v4 and v6), NAT and ACLs on routers and switches. At the completion of this course student may achieve a discount voucher for the CCENT certification exam. PREREQUISITE: 10150111 Cisco CCNA1 Introduction to Networks.

10150117
Server Administration 1 - Credits: 3
This course provides students with the fundamental technologies needed to administer a Windows domain. Students will learn how to manage domain resources including user, workstation, servers and shared folders using Active Directory, role management, Sever Manager and RSAT. Students will learn how to secure these domain resources using Group Policy, NTFS and file share permissions. Students will also learn how to use the Domain Naming System (DNS), an integral part of Windows domain environments. PREREQUISITE: 10154149 Windows Operating Systems.

10150139
IT Essentials and Security - Credits: 2
The IT Essentials and Security (ITES) course introduces students to the fundamentals of computer hardware and software, mobile devices, security and networking concepts, and the responsibilities of an IT professional. The latest release includes mobile devices, Linux, and client side virtualization, as well as expanded information about Microsoft Windows operating systems, security, networking, and troubleshooting. This course covers materials on the CompTia A+ certification exam.

10150170
Coding with Python - Credits: 2
This course introduces Python for network engineering. It begins with basic programming topics such as variables, lists, decisions, loops and I/O. Using this knowledge the course teaches students how to automate the configuration of networking equipment. This course also introduces the "Internet of Things" (IoT) and how to use Python to program IoT devices.

10154103
Linux Operating Systems - Credits: 3
In this course the Linux operating system is examined in-depth with emphasis on features, capabilities, tools, and configurations including an introduction to network configurations. PREREQUISITE: 10154149 Windows Operating Systems

10154149
Windows Operating Systems - Credits: 3
A review of the most common command line operations and study of more advanced commands necessary to configure the Windows operating system for a variety of environments. Topics to be studied include creating directories, batch files, menus, custom configurations, file management, multitasking, windowing, security, and disk management utilities. There will be an introduction to usage, configuration, and tools of the Windows operating system.

10605167
Electricity 1 - Credits: 2
Electricity 1 is a lecture/hands-on course designed to introduce students to basic electrical terminology, laws, concepts, instrumentation, and application. Hands-on activities will be stressed to reinforce electrical concepts related to practical applications dealing with computer networks. Topics covered will include electrical safety, terminology and symbols, electrical laws, basic circuits, multimeter use, DC power supplies, and troubleshooting. Critical-thinking skills are emphasized to develop competencies in problem solving and troubleshooting. COREQUISITE: 10804113 College Technical Mathematics 1A or 10804115 College Technical Math 1.

10605168
Electricity 2 - Credits: 2
This course is designed to introduce students to the basic concepts of alternating current. Emphasis is placed on circuit analysis and problem-solving skills necessary for the maintenance of modern industrial electric systems. PREREQUISITE: 10605167 Electricity 1.

10631100
Introduction to Process Control - Credits: 2
The Introduction to Process Control course explains the function of basic devices for measuring and controlling different kinds of variables in process control. It introduces closed-loop control, PID functions, analog and digital devices, and control system applications. It also covers instrumentation symbols and the interpretation and use of process diagrams.

10631102
Industrial Power Electronics - Credits: 2
The Industrial Power Electronics course is a hands-on course dealing with the electronics that are used to control, power, and operate machines and processes in the modern manufacturing plant. The course includes the study and use of the oscilloscope and digital multimeter, thyristors, ICs, and AC, DC, stepper and servo motor drive systems. PREREQUISITE: 10605167 Electricity 1 or equivalent.

10631103
Process Control and Instrumentation - Credits: 3
The Process Control and Instrumentation course offers hands-on skill exercises on controlling and manipulating temperature, pressure, flow, and level in the manufacturing process. Students will be able to identify, connect, operate, troubleshoot, and perform preventive maintenance on the components that form a process control system. PREREQUISITE: 10605167 Electricity 1 or equivalent and COREQUISITE: 10631100 Introduction to Process Control.

10631104
Smart Instruments - Credits: 2
The Smart Instruments course introduces students to smart instruments including temperature devices, pressure devices, and smart control valves. Students will be able to calibrate, configure, and troubleshoot smart devices. Students will be able to identify appropriate applications for smart instruments. PREREQUISITE: 10631100 Introduction to Process Control or equivalent.

10631105
Industrial Networks and Communication Busses - Credits: 2
This course introduces networks, communication busses, and protocols used in industrial applications. Students will be able to discuss strengths and weaknesses of each communications solution and pick the most appropriate for given applications. COREQUISITE: 10631110 Advanced PLC Programming and Interfacing

10631106
Supervisory and Distributed Control Systems - Credits: 3
This course will provide an overview exposure to networked distributed control systems and data acquisition systems. Included are PLCs, data acquisition systems, Single Loop Controllers, Smart Devices, and Distributed Control Systems. Students will connect, configure, and operate a simulated process that includes the elements of distributed control and data acquisition systems. PREREQUISITES: 10631100 Introduction to Process Control and 10631108 PLC Programming and Interfacing or equivalent.

10631107
Industrial Automation Case Project - Credits: 1
The primary focus of this course is to have the students receive exposure and experience with an industrial process control or manufacturing automation system. Students will complete a project or research dealing with an existing process in an area industry or complete an advanced project in the lab dealing with applications of industrial networks, sensors, control, and data acquisition. PREREQUISITES: 10631100 Introduction to Process Control; 10631102 Industrial Power Electronics; 10631103 Process Control and Instrumentation; 10631108 PLC Programming and Interfacing; and 10631109 Industrial AC, Motor Control, and Pilot Devices.

10631108
PLC Programming and Interfacing - Credits: 3
PLC Programming and Interfacing offers students a hands-on approach to implementing industrial control by integrating typical plant floor electrical components with microprocessor-based controllers. Students will learn to identify and connect field inputs and outputs; communicate with, and program microprocessor-based controllers. Students will also connect, communicate with, and develop displays for computer-based operator interfaces. PREREQUISITE: 10605167 Electricity 1.

10631109
Industrial AC, Motor Control, and Pilot Devices - Credits: 3
This course gives students the opportunity to learn about AC theory, circuits, and control devices used in industry. The course begins with an overview of AC theory including resistance, inductance, and capacitance. The course includes topics on AC and DC motors, motor controls, and pilot devices. The student will engage in hands-on activities with real industrial components to enable them to recognize, select, apply, and troubleshoot industrial electrical control circuit components. PREREQUISITE: 10605168 Electricity 2 or equivalent.

10631110
Advanced PLC Programming and Interfacing - Credits: 3
Advanced PLC offers students a hands-on approach to implementing industrial control using modem controllers to implement programs that utilize advanced functions. Students will complete hands-on activities with Allen Bradley ControlLogix PLCs. The course will examine the use of basic instructions and addressing with RSLogix 5000 as well as more advanced PLC instructions in Ladder Logic and Function Block. Other topics include PLC configuration and commissioning, communications with RSLinx, OPC, and RSNetworx, HMI configuration using PanelView, Wonderware and/or RSView. PREREQUISITE: 10631108 PLC Programming and Interfacing.

Automotive Service Technician

31-404-2 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Superior

Program Overview

The nine-month program is designed to provide you with skills necessary for entry-level automotive industry positions. You will learn automotive maintenance, repair and diagnosis. As an Automotive Service Technician, you may work on a variety of cars and light trucks or specialize in specific automobile brands or types, depending on your place of employment. A career in automotive service and repair offers a variety in day-to-day work, along with the sense of a job well done when returning a repaired vehicle to its owner.

Special Feature

This program has received certification by the ASE Education Foundation. See their Web site at www.ase.com

Accredited Training Program
Powered by ASE Education Foundation

The Automotive programs at Northwood Technical College have adopted new certification(s) established by The National Coalition of Certifications (NC3).

NC3 was established to address the need for strong industry partnerships with educational institutions in order to develop, implement, and sustain industry-recognized certifications that have strong validation and assessment standards.

nc3 National Coalition of Certification Centers

Admission Requirements

- Complete Online application form
- Review and Sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Automotive Service Technician graduates will be able to:

- Demonstrate professionalism appropriate for the auto service industry
- Perform maintenance and light repair of automotive brake systems
- Perform maintenance and light repair of automotive electrical & electronic systems
- Perform maintenance and light repair of automotive steering and suspension systems

Career Outlook

Typical positions available after graduation include:

- Automotive Service Technician
- Drivability Technician
- Brake Technician
- Suspension and Alignment Technician
- Quick Service Technician
- Lube Technician
- Auto Service Writer
- Automotive Parts Technician

Career Pathways

The Automotive Service Technician program includes the following pathway option (page 218):

- Automotive Maintenance & Light Repair Technician

Automotive Service Technician is also a pathway into the following program:

- Automotive Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32404375	Automotive Fundamentals	2 cr.
32404376	DC Automotive Electrical*	2 cr.
32404377	Electrical Systems*	3 cr.
32404378	Engine Repair*	4 cr.
32404379	Suspension and Alignment*	3 cr.
32404380	Automotive Brake Systems*	3 cr.
32404381	Engine Performance*	3 cr.
32404382	Body Electrical Systems*	3 cr.
32404385	Air Conditioning and Heating Systems (WBL)*	3 cr.
Occupational Specific Total		26 cr.
Occupational Supportive Courses**		
32804303	Applied Math	2 cr.
Occupational Supportive Total		2 cr.
PROGRAM REQUIREMENTS		**28 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

32404375
Automotive Fundamentals - Credits: 2
This course is an introduction to the automotive field. Career opportunities together with employer expectations will be discussed. Students will begin to use required safety practices for both general lab activities and when operating equipment. Vehicle maintenance inspections together with light repairs will take place.

32404376
DC Automotive Electrical - Credits: 2
This course will introduce students to Ohm's law, electrical fundamentals, magnetism, and series and parallel circuits. Further studies will include automobile wiring diagrams, electrical test equipment, and basic troubleshooting. COREQUISITE: 32404375 Automotive Fundamentals.

32404377
Electrical Systems - Credits: 3
This course introduces battery, starting, and charging systems; theory of operation; diagnostic techniques; and servicing procedures. This course also includes exterior lighting systems; diagnostics and repair procedures. Wiring diagrams will be used and emphasized throughout the course. COREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404378
Engine Repair - Credits: 4
This course is designed to provide the student with the skills needed to diagnose, service, and repair internal combustion engines found on late model vehicles. Emphasis is placed on in-vehicle systems repairs including: lubrication systems, valve timing, leak diagnosis and repair, engine noise & failure diagnosis, cylinder head replacement, and intake systems. COREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404379
Suspension and Alignment - Credits: 3
This course introduces steering system types, suspension geometry, troubleshooting procedures, and repair of suspensions including both two- and four-wheel alignments. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404380
Automotive Brake Systems - Credits: 3
This course introduces students to automotive braking systems, troubleshooting procedures, and repair of brake systems to include manual, power, and anti-lock types. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404381
Engine Performance - Credits: 3
This course is designed to develop the skills needed to diagnose, service, and repair powertrain control, fuel and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404382
Body Electrical Systems - Credits: 3
This course is an introduction to automotive body electrical systems. Students will learn about various body electrical components and how to diagnose and repair body electrical systems. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404385
Air Conditioning and Heating Systems (WBL) - Credits: 3
This course introduces automotive air conditioning and heating systems. Theory of operation, diagnostic techniques, and servicing of heating and air conditioning systems will be covered. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical

Automotive Technician

32-404-2 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: Rice Lake

Program Overview

With an emphasis on hands-on experience, in the Automotive Technician program you'll learn essential service techniques including testing, repairing and rebuilding of basic automotive systems. Coursework will prepare you to diagnose and repair concerns in engines, drivetrains, brakes, electrical systems, steering, suspension, transmission systems as well as basic diesel, hybrid and alternative systems.

Special Features

This program has received certification by the ASE Education Foundation. See their Web site at www.ase.com

Accredited Training Program
Powered by ASE Education Foundation

The Automotive programs at Northwood Technical College have adopted new certification(s) established by The National Coalition of Certifications (NC3).

NC3 was established to address the need for strong industry partnerships with educational institutions in order to develop, implement, and sustain industry-recognized certifications that have strong validation and assessment standards.

nc3 National Coalition of Certification Centers

Admission Requirements

- Complete Online application form
- Review and Sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Automotive Technician graduates will be able to:

- Demonstrate professionalism appropriate for the auto service industry
- Perform diagnosis, service, and repair of automotive internal combustion engines
- Perform diagnosis, service, and repair of automotive automatic transmission/ transaxle systems
- Perform diagnosis, service, and repair of automotive manual drive train and axles systems
- Perform diagnosis, service, and repair of automotive steering and suspension systems
- Perform diagnosis, service, and repair of automotive brake systems
- Perform diagnosis, service, and repair of automotive electrical & electronic systems
- Perform diagnosis, service, and repair of automotive heating and air conditioning systems
- Perform diagnosis, service, and repair of automotive engine performance systems

Career Outlook

Typical positions available after graduation include:

- Brake Technician
- Air Conditioning Technician
- Auto Transmission Technician
- Automotive Electrical Technician
- Service Writer
- Drive Train Technician
- Suspension and Alignment Technician
- Drivability Technician
- Automotive Technician

Career Pathways

The Automotive Technician program includes the following pathway options (page 218):

- Automotive Service Technician
- Automotive Maintenance & Light Repair Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32404375	Automotive Fundamentals	2 cr.
32404376	DC Automotive Electrical*	2 cr.
32404377	Electrical Systems*	3 cr.
32404378	Engine Repair*	4 cr.
32404379	Suspension and Alignment*	3 cr.
32404380	Automotive Brake Systems*	3 cr.
32404381	Engine Performance*	3 cr.
32404382	Body Electrical Systems*	3 cr.
32404383	Automatic Transmissions*	4 cr.
32404385	Air Conditioning and Heating Systems (WBL)*	3 cr.
32404387	Advanced Engine Repair*	4 cr.
32404388	Intro to Diesels and Hybrids*	2 cr.
32404390	Manual Drive Trains*	4 cr.
32404391	Advanced Body Electrical Systems*	4 cr.
32404392	Advanced Engine Performance*	4 cr.
32442307	Welding for Mechanics	2 cr.
Occupational Specific Total		50 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804303	Applied Math	2 cr.
Occupational Supportive Total		4 cr.
PROGRAM REQUIREMENTS		**54 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

32404375
Automotive Fundamentals - Credits: 2
This course is an introduction to the automotive field. Career opportunities together with employer expectations will be discussed. Students will begin to use required safety practices for both general lab activities and when operating equipment. Vehicle maintenance inspections together with light repairs will take place.

32404376
DC Automotive Electrical - Credits: 2
This course will introduce students to Ohm's law, electrical fundamentals, magnetism, and series and parallel circuits. Further studies will include automobile wiring diagrams, electrical test equipment, and basic troubleshooting. COREQUISITE: 32404375 Automotive Fundamentals.

32404377
Electrical Systems - Credits: 3
This course introduces battery, starting, and charging systems; theory of operation; diagnostic techniques; and servicing procedures. This course also includes exterior lighting systems; diagnostics and repair procedures. Wiring diagrams will be used and emphasized throughout the course. COREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404378
Engine Repair - Credits: 4
This course is designed to provide the student with the skills needed to diagnose, service, and repair internal combustion engines found on late model vehicles. Emphasis is placed on in-vehicle systems repairs including: lubrication systems, valve timing, leak diagnosis and repair, engine noise & failure diagnosis, cylinder head replacement, and intake systems. COREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404379
Suspension and Alignment - Credits: 3
This course introduces steering system types, suspension geometry, troubleshooting procedures, and repair of suspensions including both two- and four-wheel alignments. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404380
Automotive Brake Systems - Credits: 3
This course introduces students to automotive braking systems, troubleshooting procedures, and repair of brake systems to include manual, power, and anti-lock types. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404381
Engine Performance - Credits: 3
This course is designed to develop the skills needed to diagnose, service, and repair powertrain control, fuel and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404382
Body Electrical Systems - Credits: 3
This course is an introduction to automotive body electrical systems. Students will learn about various body electrical components and how to diagnose and repair body electrical systems. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404383
Automatic Transmissions - Credits: 4
This course includes the principles of construction and operation of automatic transmissions and transaxles. Diagnosis and repair of front-, rear-, and four-wheel drive transmissions will be covered. PREREQUISITE: 32404375 Automotive Fundamentals.

32404385
Air Conditioning and Heating Systems (WBL) - Credits: 3
This course introduces automotive air conditioning and heating systems. Theory of operation, diagnostic techniques, and servicing of heating and air conditioning systems will be covered. PREREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32404387
Advanced Engine Repair - Credits: 4
Focuses on developing the skills needed to diagnose, service, and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair including overhaul procedures. Variable valve timing and cylinder deactivation systems will be included in this course. PREREQUISITE: 32404378 Engine Repair.

32404388
Intro to Diesels and Hybrids - Credits: 2
This course introduces students to the service of the diesel fuel systems used in pickup trucks and automobiles. It will explore the history of hybrid-electric and electric vehicles, safety concerns, maintenance, equipment and troubleshooting procedures related to these vehicles. This course will also explore some of the current and future alternative fueled vehicle configurations. COREQUISITES: 32404376 DC Automotive Electrical and 32404377 Electrical Systems.

32404390
Manual Drive Trains - Credits: 4
This course introduces the operation and repair of manual transmissions, transaxles, drivelines, differential assemblies, and transfer cases. PREREQUISITE: 32404375 Automobile Fundamentals.

32404391
Advanced Body Electrical Systems - Credits: 4
Expands on learner's skills in diagnosing and repairing electrical and electronic systems. Emphasizing their knowledge of proper diagnostic routines, learners performs and evaluates testing and repairs on electrical and electronic accessories, controls, and sensors related to body electrical systems. Can and Bus networking systems will also be part of this course. PREREQUISITE: 32404382 Body Electrical System.

32404392
Advanced Engine Performance - Credits: 4
This course provides students with hands-on practical experience in powertrain diagnosis. This course builds on basic skill and system theory gained in previous courses. PREREQUISITE: 32404381 Engine Performance.

32442307
Welding for Mechanics - Credits: 2
Instruction in safe setup and operation of plasma cutting (PAC), oxy-fuel cutting (OFC), SMAW (Stick), GMAW (Mig), FCAW, and/or GTAW (Tig) welding in applications related to general industry practices. Selection of appropriate welding processes with a specific emphasis on typical repair situations including metal identification will be stressed.

Billing and Posting Clerk

30-101-4 Technical Diploma (less than one-year)

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

When you complete this program you'll be able to use accounting and office software and perform a variety of tasks including basic accounting entry and assisting in the payroll process.

Admission Requirement

- Complete Online application form

Program Outcomes

Billing and Posting Clerk graduates will be able to:

- Process financial transactions throughout the accounting cycle
- Perform payroll preparation, reporting, and analysis tasks

Career Outlook

Typical positions available after graduation include:

- Payroll Assistant
- Payroll Clerk
- Accounts Payable Clerk
- Accounts Receivable Clerk
- Bookkeeper
- Accounting Technician

After you complete your Billing and Posting Clerk technical diploma, you can continue your education to obtain the Accounting associate degree and transfer your credits to another college to work towards your bachelor's degree. Northwood Tech has articulation agreements with a variety of four-year universities. Some graduates may also choose to pursue professional certifications.

Career Pathways

The Billing and Posting Clerk is a pathway into the following programs (page 213):

- Accounting
- Accounting Assistant

Related Program

- Tax Preparer Assistant

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101101	Financial Accounting 1	4 cr.
10101124	Payroll Systems and Accounting*	3 cr.
10101174	QuickBooks Accounting - Beginning*	2 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10103162	MS Access A	1 cr.
Technical Studies Total		13 cr.
TOTAL PROGRAM REQUIREMENTS		**13 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
You must earn a grade point of 2.0 or better in all required (10101XXX) courses.

Course Descriptions

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10101124
Payroll Systems and Accounting - Credits: 3
Study of state and federal laws affecting payroll -- Fair Labor Standards Act, Federal and State Unemployment Acts, Federal Insurance Contributions Act, Federal and State Withholding Tax Acts, payroll accounting procedures, and systems design. COREQUISITE: 10101101 Financial Accounting 1.

10101174
QuickBooks Accounting - Beginning - Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

Broadband Service Technician Apprentice

50-451-3 Apprenticeship

Campus: Online

Program Overview

The Broadband Service Technician assists with onsite installations, troubleshooting, repairs and maintenance of telecommunication products and equipment that broadband providers sell and lease. The technician will have direct, face-to-face contact with customers and is expected to be proactive with the sale of services and products. Services include, but are not limited to, Telephony, Video/CATV/DBS, Internet, WiFi and/or high-speed networks. Technicians will exceed customer expectations by performing extraordinary customer service by identifying customer needs and providing them with communication solutions. Products and services include, but are not limited to, Local Services, Central Office Services, Structured Cabling, MAC (Moves, Adds and Changes), Voicemail, Audio and/or Video Conferencing and non-regulated CPE.

Special Features

- 12-month training program
- 2,000 hours on-the-job training
- 144 hours of paid related instruction
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last semester of the apprenticeship.

For more details on apprenticeships, please refer to page 25

Qualifications Required by the Bureau of Apprenticeship Standards

- A high school graduate or equivalency and must be able to furnish record of schooling and grades obtained.
- Not less than 18 years of age and must be able to furnish proof of age.
- Physically able to perform the work of the occupation with reasonable accommodations and without hazard to themselves or others.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To become an apprentice in the state of Wisconsin, one must first be indentured by the State Bureau of Apprenticeships Standards (BAS).

- Contact an employer on your own.
- Once you have an employer/sponsor, contact the Bureau of Apprenticeship Standards, to initiate the application process between you and your employer.

Admission Requirements

- Complete the paper Northwood Tech application form

NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to ABC of Wisconsin and the the Bureau of Apprenticeship Standards (Eau Claire Office) The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprenticeship Training Representative, at long.vang@dwd.wisconsin.org

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Broadband Service Technician Apprentice graduates will be able to:

- Install Customer Services
- Repair Services and Network
- Install Network Elements
- Maintain Network
- Perform Sales and Customer Service
- Perform Administration
- Adhere to Safety Practices

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50451701	Broadband Installation	2 cr.
50451702	Broadband Support and Repair	2 cr.
PROGRAM REQUIREMENTS		**4 cr.**

Course Descriptions

50451701
Broadband Installation - Credits: 2
This course will introduce the apprentice to broadband services and practices for understanding Telco, HFC, IPTV and fiber-optic communication systems. The apprentice will be able to identify the physical layers of broadband networks and installation components. Apprentice will gain a deeper understanding of the networking devices and how they operate in the broadband network.

50451702
Broadband Support and Repair - Credits: 2
This course will provide the theory necessary to understand and troubleshoot the components and systems support unique to the broadband industry. Theory will be specialized in following areas Telco, HFC, IPTV and Fiber Optic networks. You learn to apply basic troubleshooting techniques and repair procedures of broadband service support and repair.

Business Administration Specialist

17-104-5 Technical Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

This certificate will provide you with the well-rounded skills that are necessary to become an integral support employee in a business firm.

Special Feature

This certificate is completely focused on the key areas of business administration.

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Business Administration Specialist program from the program of choice dropdown list.

Outcomes

The Business Administration Specialist Certificate will prepare you to:

- Handle basic functions of a business office
- Make informed decisions regarding business transactions
- Document business transaction and planning documents
- Communicate and relate with clients, peers, and supervisors

Career Outlook

Completing this certificate will qualify you to become an integral support employee in a business firm.

Related Program

- Business Management

Curriculum

Number	Course Title	Credits (cr.)
10104198	Managing Human Resources **or**	
10116100	Human Resource Management	3 cr.
10105100	Introduction to Business	3 cr.
10105125	Business Law	3 cr.
10145101	Entrepreneurship	3 cr.
10196191	Supervision	3 cr.
10801197	Technical Reporting#	3 cr.
CERTIFICATE REQUIREMENTS		**18 cr.**

See pages 35-38 for course descriptions.

Course Descriptions

10104198
Managing Human Resources - Credits: 3
Introduces the functions of Human Resource Management in the legal and social context of today's dynamic business environment. Topics include human resource development, employee selection, performance, appraisal, compensation, training, labor relations, affirmative action, and career management.

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10105100
Introduction to Business - Credits: 3
This is an introductory course designed to develop an understanding of the activities, functions, and principles of business enterprises. The course helps to gain insight into the responsibilities and challenges of operating a business. Emphasis is on the interaction of the various functions required to operate businesses of all sizes. Specifically, the areas of business trends, ownership models, leadership, human resources, marketing, information management, and finance will be explored.

10105125
Business Law - Credits: 3
Business Law provides the student with a working knowledge of the legal system, business ethics, and essentials of contracts. Students gain knowledge in logical and analytical thinking, and are encouraged to challenge legal issues and defend their point of view.

10145101
Entrepreneurship - Credits: 3
This course is designed to develop the planning, organizing, financing, and management functions needed to start a small business. Included are research methods and identification of the resources to create, develop, and implement solutions to problems. Students will also develop appropriate strategies to initiate or maintain a small business.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

Business Graphics

17-106-6 Technical Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

*Combination of Online, Your Choice or On Site instruction.

Program Overview

Learn the Adobe Creative Suite basics to create graphic based designs for your organization or update projects in place. Students will learn Photoshop, Desktop Publishing, and Web & Social Media skills to engage and attract customers via many marketing platforms and strategies. Numerous social media platforms, website builders, and design-based apps are introduced and used in the creative process while working on project-based designs.

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Business Graphics program from the program of choice dropdown list.

Outcomes

The Business Graphics Certificate will prepare you to:

- Exhibit visual and creative thinking
- Exhibit conceptual skills
- Complete projects (such as brochures, mailers, business cards, and prepared print media) in a professional and timely manner

Career Outlook

After completing this certificate you will be ready to create, design, and edit business graphics and be employed or assist in such fields as:

- Marketing
- Publication
- Advertising
- Web Design
- Administration
- Office Support
- Management
- Accounting/Finance

Related Programs

- Administrative Coordinator
- Office Support Specialist
- Microsoft Office
- Office Technology Assistant

Curriculum

Number	Course Title	Credits (cr.)
10103156	Adobe Photoshop	2 cr.
10106127	Desktop Publishing	2 cr.
10106129	Web and Social Media Technologies	3 cr.
10106147	Advanced Graphics Applications*	3 cr.
CERTIFICATE REQUIREMENTS		**10 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

10103156
Adobe Photoshop - Credits: 2
Students will become skilled in using the Adobe Photoshop image-editing software package. Students will create and modify graphic images using various tools and techniques. They will learn to create original artwork, manipulate images, and create images for the Web and retouch photographs.

10106127
Desktop Publishing - Credits: 2
Preparation of professional-looking documents using desktop publishing software or word processing software with desktop publishing capabilities.

10106129
Web and Social Media Technologies - Credits: 3
This course presents the foundational skills necessary to function in a web and social media platform. Students will create a web site using effective web page design concepts including text, graphics, hypertext links, tables, forms, layers, and templates. This course will also introduce students to a broad spectrum of concepts and issues associated with E-Business, cloud based systems and Social Media from marketing to network security to customer service. A general knowledge of working in a Windows environment and keyboarding skills are recommended.

10106147
Advanced Graphics Applications - Credits: 3
Advanced Graphics Applications further enhances the skills students obtained in Adobe Photoshop, vector based illustrations, and desktop publishing software at a more advanced level. Students will also be given independent projects in real-world situations where they can use their creativity, review layout and design principles, utilize their web design experience, and develop their customer service skills. The community independent project will be presented for final approval. The final project will be to create a professional portfolio of their work in electronic form. COREQUISITES: 10103156 Adobe Photoshop, 10106127 Desktop Publishing, and 10106129 Web and Social Media Technologies.

Business Management

10-102-3 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, and On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

In the Business Management program, you will develop skills for employment in a variety of business settings or prepare to operate a business of your own. Careers can be found in hospitality, sales, technology, retail, manufacturing and financial services. While at Northwood Tech, you will learn to plan and implement business strategies. You will have the opportunity to specialize in general business or marketing. A field study experience allows you to practice skills in a real-world business environment.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Business Management graduates will be able to:

- Plan the operations of a business across functional areas
- Organize resources to achieve the goals of the organization
- Direct individuals and/or processes to meet organizational goals
- Control business processes

Career Outlook

Typical positions available after graduation include:

- Assistant Manager
- Management Trainee
- Department Manager
- Branch Manager
- Store Manager
- Operations Assistant
- Coordinator
- Owner/Entrepreneur
- Customer Service
- Sales
- Agent
- Client Services

Career Pathway

The Business Management program includes the following pathway option (page 219):

- Customer Service Manager

Related Program

- Business Administration Specialist Certificate

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101101	Financial Accounting 1	4 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10104102	Marketing Principles	3 cr.
10104180	Business & Marketing Field Study*	2 cr.
10105100	Introduction to Business	3 cr.
10105125	Business Law	3 cr.
10114107	Principles of Finance	3 cr.
10104191	Customer Service Management	3 cr.
10196191	Supervision	3 cr.
Technical Studies Total		27 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.
10804123	Math with Business Applications	3 cr.
10809195	Economics	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		15 cr.
Select one emphasis area:		
Business Management General Emphasis		
10101174	QuickBooks Accounting - Beginning*	2 cr.
10103106	MS PowerPoint	1 cr.
10103152	MS Excel B *	1 cr.
10103162	MS Access A	1 cr.
10116100	Human Resource Management or	3 cr.
10104198	Managing Human Resources	
10145101	Entrepreneurship	3 cr.
10196157	Strategic Planning	1 cr.
10196188	Project Management	3 cr.
General Emphasis Total		15 cr.
Business Management Marketing Emphasis		
10104104	Selling Principles	3 cr.
10104110	Technological Applications in Marketing	3 cr.
10104189	Social Media Marketing	3 cr.
10104125	Multi-Media Marketing*	3 cr.
10104148	Sales Management*	3 cr.
Marketing Emphasis Total		15 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

(See pages 35-38 for General Studies course descriptions)

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10104102
Marketing Principles - Credits: 3
This course focuses on the marketing process as it relates to the operation of a business enterprise. The intent is to provide students with an understanding of how the marketing function fits within the overall structure of the organization. Special attention is given to the role and significance of evaluating customer needs, pricing, distribution, and promotion of products and services.

10104180
Business & Marketing Field Study - Credits: 2
This course will allow the student to analyze what specific occupational field(s) they are best suited for. Included will be an in-depth self-analysis, simulated job application and interviews, a career research report, and work-based experience(s). PREREQUISITE: Minimum of 36 credits of program coursework must be completed prior to enrolling in this course.

10105100
Introduction to Business - Credits: 3
This is an introductory course designed to develop an understanding of the activities, functions, and principles of business enterprises. The course helps to gain insight into the responsibilities and challenges of operating a business. Emphasis is on the interaction of the various functions required to operate businesses of all sizes. Specifically, the areas of business trends, ownership models, leadership, human resources, marketing, information management, and finance will be explored.

10105125
Business Law - Credits: 3
Business Law provides the student with a working knowledge of the legal system, business ethics, and essentials of contracts. Students gain knowledge in logical and analytical thinking, and are encouraged to challenge legal issues and defend their point of view.

10114107
Principles of Finance - Credits: 3
The Principles of Finance course concentrates its study on the financial management of business. Students analyze profitability, cash flow, long-term investment decisions, long-term financing decisions, short-term working capital management, mergers, acquisitions, and business failure.

10104191
Customer Service Management - Credits: 3
This course equips learners to selectively hire, train, manage, and measure customer service providers as well as strategies to recover from difficult service situations. Topics include telephone/online etiquette, active listening and problem solving. Best practices in handling complaints, controlling stress and managing customer expectations will be explored. An examination of internal systems and policies that impact service to include customer relationship management software will be explored. This course is designed to help managers and supervisors of customer service representatives to increase customer satisfaction, loyalty and profitability.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

10101174
QuickBooks Accounting - Beginning - Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10104198
Managing Human Resources - Credits: 3
Introduces the functions of Human Resource Management in the legal and social context of today's dynamic business environment. Topics include human resource development, employee selection, performance, appraisal, compensation, training, labor relations, affirmative action, and career management.

10145101
Entrepreneurship - Credits: 3
This course is designed to develop the planning, organizing, financing, and management functions needed to start a small business. Included are research methods and identification of the resources to create, develop, and implement solutions to problems. Students will also develop appropriate strategies to initiate or maintain a small business.

10196157
Strategic Planning - Credits: 1
Analyze current business strategy, recognize trends, develop vision and mission statements, identify benchmarks, measure business against benchmarks, recommend future directions.

10196188
Project Management - Credits: 3
In Project Management, the learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will demonstrate the application of the role of project management, developing a project proposal, use of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment.

10104104
Selling Principles - Credits: 3
This introductory course is designed to acquaint the student with the principles of selling and applications to the marketing of goods and services. Special emphasis is given to developing the selling process. Included are customer relations, sales psychology, steps to successful presentation, closing techniques, and sales motivation.

10104110
Technological Applications in Marketing - Credits: 3
This course is designed to expose the student to current and upcoming technologies impacting the field of marketing.

10104189
Social Media Marketing - Credits: 3
This course follows social media's transformation of advertising from a mass medium to one-to-one communication with immediate feedback. Social media's use for public relations and advertising as well as how to create and deploy a social media campaign will be the main focus of the course. The history and development of social media platforms will be examined as well as today's ethical and legal implications of social media efforts.

10104125
Multi-Media Marketing - Credits: 3
Multi-Media Marketing provides an overview of advertising and public relations efforts in today's business environment. The course will explore what is done in advertising and the reasons why. Public relations activities and their effectiveness will be discussed using real-world examples. Additional topics of study include the social and economic aspects of promotion. PREREQUISITE: 10104102 Marketing Principles.

10104148
Sales Management - Credits: 3
This course examines the elements of operating as part of an effective sales team. As sales is a key component of organizational success, best practices from the industry will be explored. Additional topics include sales team structure, use of technology and issues in compensating/retaining salespeople. PREREQUISITE: 10104104 Selling Principles.

Carpentry Apprentice (ABC)

50-410-9 Apprenticeship

Campus: Rice Lake

Program Overview

Carpenters construct, erect and repair buildings and other structures made of wood, wood substitutes, steel and other materials. Topics covered during the Carpentry Apprentice (ABC) program include, but are not limited to: wood building materials, fasteners and adhesives; hand and power tools; floor systems; wall and ceiling framing; window and exterior doors; blueprint reading and elevations; site layouts; foundations and flat work; concrete and patented forms; reinforcing, handling and placing concrete; tilt up wall systems; exterior finish; roof framing and applications; thermal and moisture protection; stairs; framing with metal studs; drywall installation; interior finishes; metal building; and welding.

Special Features

- Four-year training program
- 5,840 hours on-the-job training
- 576 hours of paid related instruction
- 120 hours of required unpaid related instruction
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last year of the apprenticeship.

For more details on apprenticeships, please refer to page 25

Partnership

Associated Builders and Contractors, Inc.

Qualifications required by the Bureau of Apprenticeship Standards

- Must be at least 17 years of age, and must be a high school graduate or show documentation of equivalency.
- Must be physically fit and able to perform all tasks of the trade with or without reasonable accommodation.
- Must furnish proof of age if under 18 years of age.
- All applicants must take one of the following assessments and satisfy the minimum scores: ACT: 15 Reading and 15 Math. Next Gen Accuplacer: 239 Reading and 237 Arithmetic. Scores will be accepted 5 years from the test date.
- At the time of placement as an apprentice, all persons must possess a valid driver's license or be able to prove ability to get to and from work and school.
- Must be approved by the Madison ABC Advisory Board prior to being admitted to this apprenticeship.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To learn more about the steps to apply or to apply, visit the ABC of Wisconsin website

Admission Requirements

- Complete the paper Northwood Tech application form

  NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to ABC of Wisconsin and the the Bureau of Apprenticeship Standards (Eau Claire Office). The contact for ABC of Wisconsin is Cheyenne Foster, Apprenticeship Manager, at cfoster@abcwi.org, 608.244.6056 The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprenticeship Training Representative, at long.vang@dwd.wisconsin.org

- Complete Accuplacer Next Gen entrance assessment (individuals with valid ACT or Classic Accuplacerscores from within the last 5 years do not have to test) (academic admission requirements apply – see page 30 for more information)

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Carpentry Apprentice (ABC) graduates will be able to:

- Explore trade options
- Practice Construction safety
- Operate construction-related tools
- Interpret blueprints to construct projects
- Apply construction theory to related practice
- Demonstrate measurement and layout practices
- Identify construction materials and their applications
- Investigate and incorporate green and sustainable energy conservation practices

Related Program

- Technical Studies - Journeyworker (page 200)

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50410771	Carpentry Fundamentals & Floor Systems	2 cr.
50410772	Framing Fundamentals, Stair Layout & Building Envelope Systems	2 cr.
50410773	Framing and Exterior Finishing for Carpenter Apprentices	2 cr.
50410774	Interior Finishing	2 cr.
50410775	Concrete, Rigging & Excavating	2 cr.
50410777	Site Layout & Advanced Exterior Systems	2 cr.
50410778	Advanced Interior Systems & Crew Leadership	2 cr.
50410776	Concrete Forming for Carpentry Apprentices	2 cr.
PROGRAM REQUIREMENTS		**16 cr.**

50410771
Carpentry Fundamentals & Floor Systems
Credits: 2
Course competencies align with NCCER Core and Level 1 learning outcomes. Course topics includes an orientation to the trade; building materials, fasteners and adhesives; hand and power tool use; introduction to construction drawings, specifications, and layout; flooring systems and trade math.

50410772
Framing Fundamentals, Stair Layout & Building Envelope Systems
Credits: 2
Course competencies align with the remaining NCCER level 1 learning outcomes. Course topics include wall systems; ceiling joists and roof framing; introduction to building envelope systems, and basic stair layout.

50410773
Framing and Exterior Finishing for Carpenter Apprentices
Credits: 2
Course competencies align with NCCER level 2 learning outcomes. Course topics include commercial drawings, cold-formed steel framing, exterior finishing, roofing applications, and thermal and moisture protection.

50410774
Interior Finishing
Credits: 2
Course competencies align with additional NCCER level 2 learning outcomes. Course topics include doors and door hardware; drywall installation; drywall finishing, suspended ceilings; cabinet installation; and window, door, floor, and ceiling trim work.

50410775
Concrete, Rigging & Excavating
Credits: 2
Course competencies align with NCCER level 3 learning outcomes. Course topics include rigging equipment, rigging practices, properties of concrete, reinforcing of concrete, and trenching and excavating.

50410776
Concrete Forming for Carpentry Apprentices
Credits: 2
Course competencies align with additional NCCER Level 3 learning outcomes. Course topics include foundations and slab-on-grade, vertical formwork, horizontal formwork, handling and placing concrete, and tilt-up wall systems.

50410777
Site Layout & Advanced Exterior Systems
Credits: 2
Course competencies align with NCCER level 4 learning outcomes. Advanced carpentry course topics include site layout, angular and distance measurement, advanced roofing systems, and advanced exterior wall systems.

50410778
Advanced Interior Systems & Crew Leadership
Credits: 2
Course competencies align with additional NCCER level 4 learning outcomes. Course topics include advanced interior wall systems, advanced stair systems, construction equipment and safety, site preparation, and fundamentals of crew leadership.

Community-Based Residential Facility (CBRF) Caregiver

30-575- 1 Technical Diploma (less than one-year)

Campuses: Ashland, New Richmond, Rice Lake, Superior

Program Overview

Upon successful completion of this program, you will be added to the Wisconsin CBRF Employee Registry. Coursework will include the following training modules: Fire Safety, Medication Administration and Management, Standard Precautions, First Aid and Choking, Resident's Rights and Challenging Behaviors.

Admission Requirement

- Complete Online application form

Program Outcomes

CBRF Caregiver graduates will be able to:

- Practice safe medication storage and administration
- Advocate for the fair and ethical treatment of all residents
- Respond appropriately to challenging behaviors
- Practice standard precautions in all situations in the residential setting
- Apply first aid and choking emergency procedures
- Apply the basics of fire, fire prevention and emergent response

Career Outlook

CBRF Caregiver program graduates will be well prepared to use their knowledge, skills and abilities in a variety of positions in diverse CBRF settings such as:

- Assisted Living
- Memory Care
- Group Homes
- Transitional Housing

Career Pathway

The Community-Based Residential Facility (CBRF) Caregiver is a pathway into the following program (page 228):

- Human Services Associate

Related Programs

- Substance Abuse Counselor Education
- Gerontology-Aging Services Professional
- Nursing Assistant
- Personal Care Worker

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10575100	CBRF Caregiver Fundamentals	2 cr.
PROGRAM REQUIREMENTS		**2 cr.**

Professional Licensure and/or Certification Information

Northwood Tech's Community-Based Residential Facility (CBRF) Caregiver program is designed to prepare students to obtain the required licensure or to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Course Description

10575100
CBRF Caregiver Fundamentals - Credits: 2
In this credit-based course, students will obtain the knowledge and skills required to become Community-Based Residential Facility (CBRF) caregivers. Coursework will include the following training modules: DHS 83.20 (2) (b) CBRF Fire Safety, DHS 83.20 (2) (d) CBRF Medication Administration and Management, DHS 83.20 (2) (a) CBRF Standard Precautions, DHS 83.20 (2) (c) CBRF First Aid and Choking, DHS 83.21 (1) CBRF Resident's Rights, and DHS 83.21 (3) CBRF Challenging Behaviors. Upon successful completion of this course, students are added to the Wisconsin CBRF Employee Registry.

Construction and Cabinetmaking

32-410-2 Technical Diploma (two-year) **Financial Aid Eligible**

Campuses: Rice Lake

Program Overview

The Construction and Cabinetmaking program will provide you with the knowledge and skills necessary for job success in the construction industry. You will learn the fundamentals of building design, construction, layout operation, related mathematics, print reading, estimating, CNC, cabinet construction and materials of industry. You will use hand and power tools that are commonly used in construction and fabrication to assemble furniture, cabinets and build a custom home off site.

Special Feature

This is a unique two-year program in the state that combines cabinetry and residential construction.

The second year of this program includes building a custom home as a capstone project.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Construction and Cabinetmaking graduates will be able to:

- Use hand and power tools and equipment
- Apply industry recognized safety practices and procedures
- Analyze sustainable building practices
- Interpret construction drawings
- Interpret building codes
- Demonstrate industry building practices and material application

Career Outlook

Typical positions available after graduation include:

- Carpenter
- Woodworking Machine Operator
- Furniture Finisher
- Millperson
- Machine Setup Person
- Cabinetmaker/Furniture Maker
- Salesperson
- Estimator
- Draftsperson
- Material Handling Specialist
- Interior/Exterior Finisher

Career Pathways

The Construction and Cabinetmaking program includes the following pathway options (page 220):

- Architectural Woodworking & Cabinetmaking
- Construction Essentials

Related Program

- Architectural Commercial Design

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32410300	Cabinet and Furniture Making 1	5 cr.
32410302	Cabinet and Furniture Making 2*	5 cr.
32410303	Construction Framing 1*	4 cr.
32410304	Advanced Construction Framing (WBL)*	4 cr.
32410320	CNC Machine Operation*	2 cr.
32410326	Site Surveying*	1 cr.
32410329	Building Materials Estimating*	3 cr.
32410332	Drafting for Carpentry 1*	5 cr.
32410333	Drafting for Carpentry 2*	5 cr.
32410334	Production Cabinetmaking*	5 cr.
32410335	Interior Finish*	5 cr.
32410339	Print Reading for Building Construction	2 cr.
32410353	Construction Framing 2*	4 cr.
Occupational Specific Total		50 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32801362	Advanced Communication Skills*	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804335	Advanced Technical Math*	3 cr.
32809380	Applied Interpersonal Skills	2 cr.
Occupational Supportive Total		12 cr.
PROGRAM REQUIREMENTS		**62 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

32410300
Cabinet and Furniture Making 1 - Credits: 5
This is a lab/shop/theory application. This course covers the basics of cabinet and furniture construction. Fundamental machine operations and safety rules are taught. The students are required to construct, by approved machine methods, the common joints used in good construction. The study of wood and other materials, hand tools and bench work, shop drawing, design, and layout are a part of the basic course.

32410302
Cabinet and Furniture Making 2 - Credits: 5
This is a lab/shop applications course. The student will be involved in projects according to his/her abilities to provide practical application of the operations learned. COREQUISITE: 32410300 Cabinet and Furniture Making 1.

32410303
Construction Framing 1 - Credits: 4
This is a lab/shop applications course covers the operations required in building layout and the framing of floors and walls to meet Wisconsin State Code. Competencies are learned through actual hands-on applications. COREQUISITES: 32410339 Print Reading for Building Construction and 32804325 Applied Technical Math 1.

32410304
Advanced Construction Framing (WBL) - Credits: 5
This is a lab/shop/theory application. This course provides instruction in current application techniques of various building materials as applied to construction work on residential/ light commercial buildings. The course of study encompasses the procedures of appropriate safe skills and knowledge required to construct/install rafters, roofing, materials, siding, insulations, stairs, platforms, decks, floor coverings, wall coverings, and related materials. PREREQUISITE: 32410315 Construction Framing 2.

32410320
CNC Machine Operation - Credits: 2
This course introduces the student to the development and editing of CNC programs. The basic elements of CNC machine setup and operation are covered for the production of acceptable parts. Safety concerns are also addressed. PREREQUISITE: 32804325 Applied Technical Math 1.

32410326
Site Surveying - Credits: 1
This course is designed to provide the student with the understanding of site plans, the recontouring of sites, the use of builder's surveying equipment, and other related information. PREREQUISITES: 32410339 Print Reading for Building Construction and 32804325 Applied Technical Math 1.

32410329
Building Materials Estimating - Credits: 3
This course introduces the student to the basic methods of estimating and develops a system for doing quantity surveys. The course also prepares the student to make some of the kinds of estimates that are commonly used in architecture and building construction. PREREQUISITES: 32410333 Drafting for Carpentry 2 and 32804325 Applied Technical Math 1 or equivalent.

32410332
Drafting for Carpentry 1 - Credits: 5
This course introduces students to the subject of residential design and construction. The problems faced by builders and designers before actual construction begins are emphasized. Students complete a series of detail drawings to acquaint them with the materials used and the methods of fabrication in sketching, lettering, line weights, and use of the scale are stressed. Standard house plans are utilized to acquaint the student with the drawings used in home construction. Students are also introduced to state, federal, and local codes. PREREQUISITE: 32410339 Print Reading for Building Construction.

32410333
Drafting for Carpentry 2 - Credits: 5
This course introduces SoftPlan software and the use of the Uniform Dwelling Code Book. In this course the students design residential structures based on the needs of individuals. The needs and desires of the client and their family are stressed in assignments. Various types of residential structures are designed. The student is introduced to the use of models and perspective drawings in selling a design to a client. UDC regulations are stressed throughout the drawings. PREREQUISITE: 32410332 Drafting for Carpentry 1.

32410334
Production Cabinetmaking - Credits: 5
This is a lab/shop/theory application focuses on finishing and fine tolerances of the cabinet making trade. This course will provide the skills needed for advanced production cabinetmaking, including materials cut lists, ordering, setting up machines for production cabinetmaking, assembly as well as production wood finishes. PREREQUISITE: 32410302 Cabinet and Furniture Making 2.

32410335
Interior Finish - Credits: 5
This is a lab/shop/theory application that deals with finishing and fine tolerances of the construction trade. Hands-on techniques of installing trim and molding, and designing and building cabinets are covered. PREREQUISITE: 32410302 Cabinet and Furniture Making 2 and COREQUISITE: 32410334 Production Cabinetmaking.

32410339
Print Reading for Building Construction - Credits: 2
This course provides instruction in reading and interpreting shop drawings, residential drawings, and commercial building plans. Emphasis is placed on building terminology and learning conventional techniques of communicating building methods from the designer to the builder. Students learn to visualize the structure and to interpret elevations, plan views, details, and sections from drawings. They also learn to read and interpret building specifications.

32410353
Construction Framing 2 - Credits: 4
This is a lab/theory course that covers the operations required in building layout and the framing of floors, walls, roofs, and stairs. The learner will learn the importance of building an energy-efficient home, and will be performing energy tests with diagnostic tools. Competencies are learned through lecture and actual hands-on applications. PREREQUISITES: 32410339 Print Reading for Building Construction, 32804325 Applied Technical Math 1, and COREQUISITE: 32410303 Construction Framing 1.

Construction Essentials

30-410-3 Technical Diploma (less than one-year)

Campus: Custom Delivery

Program Overview

You will find entry-level job success with an opportunity to build your knowledge, skills and professionalism to further your career. You will learn the basic fundamentals of construction framing and drafting along with print reading and math concepts related to construction. Safety principles and the use of hand and power tools will be covered.

Special Features

Northwood Tech's Construction Essentials program is designed to offer at off-campus sites. This mobile delivery option increases training opportunities for high schools and other Northwood Tech partnering agencies.

Inquire

For more information on this program, scheduled sites, and how to apply, contact: Karen Hoglund, Dean, Academic Programs, Karen.Hoglund@NorthwoodTech.edu or 715.685-3070.

Program Outcomes

Construction Essentials graduates will be able to:

- Use hand and power tools and equipment
- Apply industry recognized safety practices and procedures
- Interpret construction drawings
- Demonstrate industry building practices and material application

Career Outlook

Typical positions available after graduation include:

- Construction Worker
- Construction/Carpenter Laborer
- Carpenter Assistant
- Carpentry Framer

Career Pathway

The Construction Essentials program is a pathway into the following program (page 220):

- Construction and Cabinetmaking

Related Program

- Architectectural Woodworking & Cabinetmaking

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32410303	Construction Framing 1*	4 cr.
32410339	Print Reading for Building Construction	2 cr.
Occupational Specific Total		6 cr.
Occupational Supportive Courses**		
32804325	Applied Technical Math 1	3 cr.
Occupational Supportive Total		3 cr.
TOTAL PROGRAM REQUIREMENTS		**9 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

32410303
Construction Framing 1 - Credits: 4
This is a lab/shop applications course covers the operations required in building layout and the framing of floors and walls to meet Wisconsin State Code. Competencies are learned through actual hands-on applications. COREQUISITES: 32410339 Print Reading for Building Construction and 32804325 Applied Technical Math 1.

32410339
Print Reading for Building Construction - Credits: 2
This course provides instruction in reading and interpreting shop drawings, residential drawings, and commercial building plans. Emphasis is placed on building terminology and learning conventional techniques of communicating building methods from the designer to the builder. Students learn to visualize the structure and to interpret elevations, plan views, details, and sections from drawings. They also learn to read and interpret building specifications.

Cosmetology

31-502-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Rice Lake* and Superior*

*Combination of Hybrid and On Site instruction

Program Overview

The Cosmetology program prepares you with essential theory and hands-on instruction to develop your skills in cosmetology. You'll learn theories and techniques that are reflective of industry standards and apply these skills working with real clients in Northwood Tech's state-of-the-art salons. Upon successful completion, you will be eligible to take the Wisconsin Cosmetology Practitioner License examination.

Special Feature

PIVOT POINT LEGACY PARTNER

This designation reflects an educational program consisting of distinctive techniques of scientific hair designing and cosmetology. Techniques from this educational program are taught in educational institutions around the world. For more information, visit **pivot-point.com**.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Cosmetology Program Kit Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirement

- Submit non-refundable kit deposit fee and form
- Participate in a mandatory orientation session

Program Outcomes

Cosmetology graduates will be able to:

- Perform shampoo, haircut, and style service
- Perform skin care services
- Perform chemical services
- Perform nail services
- Develop business practices for industry success

Career Outlook

Typical positions available after graduation include:

- Cosmetologist
- Color Technician
- Make-Up Artist
- Nail Technician
- Skin Care/Esthetics

With additional experience, graduates may move into one of these positions:

- Manager
- Owner
- Platform Artist
- Instructor
- Independent Contractor
- Consultant

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31502382	Hair Sculpture*	3 cr.
31502383	Hair Design*	3 cr.
31502384	Chemical Texture*	3 cr.
31502385	Hair Color*	3 cr.
31502386	Cosmetology Fundamentals*	4 cr.
31502387	Introductory Client Services*	2 cr.
31502388	Intermediate Client Services*	3 cr.
31502389	Advanced Cosmetology Techniques*	2 cr.
31502394	Esthetics*	1 cr.
31502395	Nail Care and Design*	1 cr.
31502396	Advanced Client Services*	5 cr.
		30 cr.
TOTAL PROGRAM REQUIREMENTS		**30 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

You must earn a grade point of 2.0 in all required courses.

Professional Licensure and/or Certification Information

Northwood Tech's Cosmetology program is designed to meet the State of Wisconsin's licensing criteria. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

For more information, visit:
Wisconsin Department of Safety and Professional Services

31502382
Hair Sculpture - Credits: 3
Develop skills, utilizing proper tools and equipment, in haircutting, hair tapering (clipper cuts), and razor cutting on manikins and clients. COREQUISITES: 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, and 31502387 Introductory Client Services.

31502383
Hair Design - Credits: 3
Develop skills, utilizing proper tools and equipment, in hairstyling, curling, thermal waving, finger waving, roller setting, pincurl placement, blow drying, shampoos, scalp and hair treatments, conditioning, reconditioning, hair analysis and care of hairpieces, wigs and wefts on manikins and clients. COREQUISITES: 31502382 Hair Sculpture, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, and 31502387 Introductory Client Services.

31502384
Chemical Texture - Credits: 3
Develop skills, utilizing proper tools and equipment, in hair straightening, hair relaxing, thermal hair straightening, blow-outs, and permanents applying chemistry principles on manikins and clients. COREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, and 31502387 Introductory Client Services.

31502385
Hair Color - Credits: 3
Develop skills, utilizing proper tools and equipment, in hair coloring, tinting, and bleaching while applying chemistry principles and law of color inclusive of color correction techniques, hair damage assessment, and appropriate product selection on manikins and clients. COREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502386 Cosmetology Fundamentals, and 31502387 Introductory Client Services.

31502386
Cosmetology Fundamentals - Credits: 4
Examine industry trends and fundamental cosmetology topics related to individual cosmetologist hygiene/grooming, professional communication, and personal and professional development. Focus on anatomy, physiology, and disorders of the hair, skin and nails and the study of bacteriology, decontamination, safety and first aid required in establishments, including Wisconsin cosmetology state statutes and administrative codes. Develop knowledge and familiarity with salon point-of-sale software. COREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, and 31502387 Introductory Client Services.

31502387
Introductory Client Services - Credits: 2
Apply practical techniques learned in the classroom for hair sculpture, hair design, chemical texture, hair color and communication skills with clients, inclusive of individual student needs, including point-of-sale process and salon operations. COREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, and 31502386 Cosmetology Fundamentals.

31502388
Intermediate Client Services - Credits: 3
Develop practical techniques learned in the classroom for hair sculpture, hair design, chemical texture, hair color, and communication skills with clients, inclusive of individual student needs, with continued application of point-of-sale process and salon operations. PREREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, 31502387 Introductory Client Services, and COREQUISITES: 31502389 Advanced Cosmetology Techniques, 31502394 Esthetics, 31502395 Nail Care and Design, and 31502396 Advanced Client Services.

31502389
Advanced Cosmetology Techniques - Credits: 2
Practice advanced techniques learned in the classroom for hair sculpture, hair design, chemical texture, and hair color with manikins and clients, inclusive of individual student needs. PREREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, 31502387 Introductory Client Services, and COREQUISITES: 31502388 Intermediate Client Services, 31502394 Esthetics, 31502395 Nail Care and Design, and 31502396 Advanced Client Services.

31502394
Esthetics - Credits: 1
Develop skills, utilizing proper tools and equipment, in hair removal, beard and mustache shaping, facial treatments, makeup, eyelashes, light therapy, and basic principles of electricity on manikins and clients. PREREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, 31502387 Introductory Client Services, and COREQUISITES: 31502388 Intermediate Client Services, 31502389 Advanced Cosmetology Techniques, 31502395 Nail Care and Design, and 31502396 Advanced Client Services.

31502395
Nail Care and Design - Credits: 1
Develop skills, utilizing proper tools and equipment, in manicures, pedicures, and varied nail enhancement techniques on manikins and clients. PREREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, 31502387 Introductory Client Services, and COREQUISITES: 31502388 Intermediate Client Services, 31502389 Advanced Cosmetology Techniques, 31502394 Esthetics, and 31502396 Advanced Client Services.

31502396
Advanced Client Services - Credits: 5
Enhance practical techniques learned in the classroom for hair sculpture, hair design, chemical texture, hair color, esthetics, nails, and communication skills with clients, inclusive of individual student needs, with continued application of point-of-sale process and salon operations. PREREQUISITES: 31502382 Hair Sculpture, 31502383 Hair Design, 31502384 Chemical Texture, 31502385 Hair Color, 31502386 Cosmetology Fundamentals, 31502387 Introductory Client Services, and COREQUISITES: 31502388 Intermediate Client Services, 31502389 Advanced Cosmetology Techniques, 31502394 Esthetics, and 31502395 Nail Care and Design.

Cosmetology Apprentice

50-502-1 Apprenticeship

Campus: Online

Program Overview

Cosmetology is a vibrant career with many employment and career opportunities. Salons, spas, barber shops, and beauty supply companies are in need of professional stylists.

A career in cosmetology combines professional techniques with creativity to provide a challenging career with many rewards. The cosmetology apprenticeship program provides the theory training to allow the student to satisfy the Wisconsin state requirements to become a licensed professional.

Special Features

- Two year training program
- 3,712 hours on-the-job training
- 288 hours of paid related instruction
- After completing the program, apprentices must pass the state test to be licensed as a practioner
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last year of the apprenticeship.
- The Mock Board Prep (8 hours) course is an optional course students can complete during the last semester of the apprenticeship.

For more information on apprenticeships, see page 25

Qualifications required by the Bureau of Apprenticeship Standards

- Be at least seventeen (17) years of age.
- Be employed full time, at least thirty-two (32) hours or more per week, including paid related instruction.
- Adhere to all requirements in Section XVII: Hours of Work, (32 hours or more per week, including related instruction).
- Make a commitment to the apprenticeship program policies and procedures.
- Be physically able to perform the duties of the occupation with reasonable accommodations if necessary.
- Provide their own or reliable transportation to related classroom instruction and on-the-job training.
- If the apprentice is still in high school, he or she must meet the requirements in the Apprenticeship Manual and may work part-time.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To become an apprentice in the state of Wisconsin, one must first be indentured by the State Bureau of Apprenticeships Standards (BAS).

- Contact an employer on your own
- Once you have an employer/sponsor, contact the Bureau of Apprenticeship Standards, to initiate the application process. between you and your employer.

Admission Requirements

- Complete the paper Northwood Tech application form

NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to the Bureau of Apprenticeship Standards (Eau Claire Office).
The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprenticeship Training Representative, at long.vang@dwd.wisconsin.org

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Cosmetology Apprentice graduates will be able to:

- Summarize safety and sanitation procedures
- Summarize the current Wisconsin administrative codes and statutes for cosmetology
- Demonstrate interpersonal skills for success
- Compare haircutting services
- Compare shampoo services
- Compare skin care services
- Compare texture services
- Compare hair color services
- Compare hairstyling and finishing techniques
- Compare nail services
- Develop strategies to market products and services

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50502501	Orientation/Professional Development	.5 cr.
50502502	Salon Ecology	.5 cr.
50502503	Salon Business	.5 cr.
50502505	Trichology	.5 cr.
50502506	Haircutting	1 cr.
50502507	Hairstyling	1.25 cr.
50502508	Chemistry for Cosmetology Apprenticeship	.5 cr.
50502509	Hair Color	1 cr.
50502510	Chemical Texturing	1 cr.
50502512	Study of the Skin	1 cr.
50502513	Cosmetology Law/Rules, History/ Business	.75 cr.
50502515	Study of the Nail	.5 cr.
PROGRAM REQUIREMENTS		**9 cr.**

Professional Licensure and/or Certification Information

Northwood Tech's Cosmetology Apprenticeship meets the requirements of the Bureau of Apprenticeship Standards in Wisconsin. Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure in states other than Wisconsin should contact the appropriate apprenticeship bureau or licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

50502501
Orientation/Professional Development - Credits: .5
Examines the policies and responsibilities of the Cosmetology program. Learners apply practices related to maintaining a healthy mind and body, and in determining personal qualities related to health and human relations. Also focuses on developing personal life management skills.

50502502
Salon Ecology - Credits: .5
Focuses on different types of organisms to prevent the spread of disease in a salon environment. Students explore basic safety and first aid methods in the salon.

50502503
Salon Business - Credits: .5
Introduces the student to all the responsibilities of owning a salon. Students develop a personal career-building plan incorporating a variety of areas to help them reach success in the profession. The theory of hair color and chemical texturizing (permanent waving and chemical relaxing) is studied and applied. Learners develop skills in how to handle the physical and chemical changes in the hair as each service is performed in order to achieve successful outcomes in the profession.

50502505
Trichology - Credits: .5
Focus will be on the structure of the hair root and hair shaft, including descriptions of the three layers of the hair. Discussion will include the chemical bonds that make up the hair and how the bonds are affected by the services performed in the salon. Hair and scalp disorders, diseases, and hair loss will be addressed.

50502506
Haircutting - Credits: 1
Students will learn basic haircutting procedures to include disinfection and proper use of tools.

50502507
Hairstyling - Credits: 1.25
Focus will be on styling the hair to include fingerwaving, pincurling, roller-setting, blow-drying, thermal curling, thermal pressing, braiding, and long hairstyling. Product knowledge will be discussed. Safety and sanitation procedures will be addressed.

50502508
Chemistry for Cosmetology Apprentice - Credits: .5
This .5 credit course looks at the study of Matter and the pH scale as it relates to the profession of Cosmetology.

50502509
Hair Color - Credits: 1
This course focuses on the law of color, consultations skills, basic application techniques and formulation to safely and effectively perform a color service.

50502510
Chemical Texturing - Credits: 1
Focuses on the theory of Chemical Texturizing and the application techniques and procedures related to Permanent Waving, Chemical Relaxing, and Soft Curl (Curl Reforming) Permanent Waves.

50502512
Study of the Skin - Credits: 1
Explores the structure, composition, and related glands of the skin. Students also characterize skin diseases and disorders as contagious or non-contagious to protect themselves and their clients. Also covers skin care services to include facials, waxing, delegated medical procedures, e.g., microdermabrasion, electricity/light therapy, and anatomy.

50502513
Cosmetology Law/Rules, History/Business - Credits: .75
Focuses on laws and rules affecting cosmetology in the state of Wisconsin.

50502515
Study of the Nail - Credits: .5
Applies techniques for basic manicures and pedicures. Artificial nails will also be addressed. The structure of the nail will be studied. The diseases and disorders of the nail will also be examined.

Criminal Justice - Law Enforcement 720 Academy

30-504-2 Technical Diploma (less than one-year) **Financial Aid Eligible**

Campuses: Rice Lake

Program Overview

The Criminal Justice - Law Enforcement 720 Academy will provide students with the right skills to handle complex situations encountered as a Law Enforcement Officer at municipal, county, or state government levels.

To become eligible to work as an officer in the State of Wisconsin, the student must have basic policing skills. The Wisconsin Department of Justice's (WisDOJ) Law Enforcement Standards Board has established criteria. Admission is restricted to those who qualify under WisDOJ administrative rules. Upon completing the Academy, the student becomes certifiable for a period of three years from the date of completion. This makes the student eligible for formal certification as a Basic Law Enforcement Officer upon hiring by a law enforcement agency.

Candidates for the Criminal Justice - Law Enforcement 720 Academy must undergo criminal history and traffic record checks and will be required to submit fingerprints. All non-sponsored candidates must participate in a personal screening interview and all candidates must pass a physical readiness test for entrance. See **http://wilenet.widoj.gov** for additional information from the Law Enforcement Standards Board.

Admission Requirements

- Complete paper application form
- Review and sign the Functional Abilities Disclosure
- Review and sign Background Check Disclosure

Program-Specific Requirements

- Have earned a high school diploma or GED certificate
- Non-sponsored students must have achieved an associate degree from a Wisconsin Technical College System district or its accredited equivalent from another state; OR have earned at least 60 accredited college credits. The 60-college credit standard is defined in terms of semester credits. Quarter credits may be converted to semester credits by multiplying quarter credits by two-thirds. Generally, 90 quarter credits are equivalent to 60 semester credits. Applicants must provide an official college transcript.
- Submit Background Check fee.
- Complete physical fitness assessment prior to the start of the academy.
- If employed, the employing agency must provide a copy of completed form DJ-LE-303, Verification of Employment Standards and Application for Certification, to enroll an officer in preparatory training. This form documents that the student has met all of the required employment standards.
- Complete form DJ-LE-310, Student Authorization for Release of Information.
- Complete form DJ-LE-327, Application for Enrollment in Law Enforcement, Jail or Secure Juvenile Detention Officer Training.
- Sign and acknowledge compliance with the Law Enforcement AcademyHandbook.
- Complete an oral interview with a panel of criminal justice executives or with teaching or counseling staff affiliated with the training school.
- Undergo a criminal history records check. An unpardoned felony conviction or misdemeanor crime of domestic violence conviction will prohibit a student from attending the unified tactics portion of preparatory law enforcement officer training, and will prohibit employment as a law enforcement officer.
- Undergo a physical. A physical will be conducted to verify that the candidate can meet the physical standards required. The physical will be conducted by a licensed physician, physician assistant or nurse practitioner utilizing the Physician's Assessment form (DJ-LE-332), or a form similar to DJ-LE-332, which provides the physician with a job description on which to base the assessment. The candidate will also complete a personal medical history, a copy of which is to be submitted to the examining physician, nurse practitioner or physician assistant for reference.
- Possess a valid Wisconsin driver's license or other such valid operator's permit recognized by the Wisconsin Department of Transportation as authorizing operation of a motor vehicle.
- Be at least 18 years of age and a United States citizen, and complete form DJ-LE-322, Birth Certificate Verification, to provide verification of age and citizenship.

Program Outcomes

Criminal Justice - Law Enforcement 720 Academy graduates will be able to:

- Think critically
- Manage emergencies
- Communicate effectively
- Demonstrate professionalism
- Conduct investigations
- Interact with others
- Demonstrate tactical skills

Career Outlook

Typical positions available after graduation include:

- Police Officer
- Deputy Sheriff
- Other Certified Law Enforcement Positions

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
30504503	Overview of Criminal Justice	1 cr.
30504500	Overview of Patrol Response	2 cr.
30504507	Application of Traffic Response	3 cr.
30504506	Overview of Investigations	2 cr.
30504508	Principles of Investigations	1 cr.
30504502	Application of Investigations	1 cr.
30504501	Physical Fitness	1 cr.
30504504	Principles of Emergency Vehicle Response	2 cr.
30504510	Overview of Tactics	1 cr.
30504509	Principles of Tactics	5 cr.
30504511	Scenario Assessment*	1 cr.
30504505	Sensitive Crimes	2 cr.
PROGRAM REQUIREMENTS		**22 cr.**

* Requires a prerequisite and/or corequisite that must be completed.

Professional Licensure and/or Certification Information

The Northwood Tech Criminal Justice - Law Enforcement 720 Academy adheres to the uniform student performance objectives as established by the Wisconsin Department of Justice, Bureau of Training and Standards. The program is certified by the Wisconsin Department of Justice. Northwood Tech has not made a determination whether this program meets the requirements for preparation, examinations, or licensure for other states. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

30504500
Overview of Patrol Response - Credits: 2
Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase I topics: Critical Thinking and Decision-Making, Basic Response (RESPOND), Radio Procedures, Introduction to TraCS, Traffic Law Enforcement, and First Aid/CPR/AED. This course will also include the WI DOJ 720 Academy Integration Exercises.

30504501
Physical Fitness - Credits: 1
Through classroom lecture and on-campus lab students will apply Phases I-III Health Fitness WI Department of Justice 720 Academy curriculum framework program requirements and Officer Wellness Suicide Prevention.

30504502
Application of Investigations - Credits: 1
Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase III topics of the Department of Justice 720 Academy curriculum framework: Ethics II: Moral Reasoning and Professional Responsibility, Cultural Competence II: Fair and Impartial Policing, Interrogations, Testifying in Court, Crimes III and Physical Evidence.

30504503
Overview of Criminal Justice - Credits: 1
Through classroom lecture and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following WI Department of Justice 720 Academy Phase I curriculum framework topics: Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy, and Professional Communication.

30504504
Principles of Emergency Vehicle Response - Credits: 2
Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy Phase II topics: Emergency Vehicle Operation and Control (EVOC) and Vehicle Contacts II.

30504505
Sensitive Crimes - Credits: 2
Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase III topics: Domestics, Juvenile Law, Victim, Sexual Assault, and Child Maltreatment. The DOJ Phase III Written Examination will be administered in this course.

30504506
Overview of Investigations - Credits: 2
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Constitutional Law I, Crimes I, Interviews, and Report Writing. The DOJ Phase I Written Examination will be admistered in this course.

30504507
Application of Traffic Response - Credits: 3
Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises, students will learn and apply skills addressed in the following Phase III topics from the WI Department of Justice 720 Academy curriculum framework: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations & Incident Management, Operating a Motor Vehicle While Intoxicated (OMVWI), Standardized Field Sobriety Tests (SFST), Hazardous Materials and Weapons of Mass Destruction (WMD), Incident Command Systems and NIMS, and Report Writing.

30504508
Principles of Investigations - Credits: 1
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase II topics of the WI Department of Justice 720 Academy curriculum framework: Constitutional Law II, Physical Evidence Collections, and Crisis Management. The Phase II Written Exam will be given in this course.

30504509
Principles of Tactics - Credits: 5
Through classroom lecture and on-campus lab and integration exercises, students will learn and apply skills addressed in the following Phase II topics from the Department of Justice 720 Academy curriculum frameworks including: Professional Communication Skills II, DAAT, Firearms II, Tactical Response, and a Tactical Emergency Casualty Care.

30504510
Overview of Tactics - Credits: 1
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Fundamentals of Firearms, Vehicle Contacts I, and Officer Wellness, and DAAT.

30504511
Scenario Assessment - Credits: 1
Scenario Assessment is a capstone course to assess the learner's cumulative knowledge through the use of scenarios in the certifiable Law Enforcement curriculum. COREQUISITES: All Criminal Justice - Law Enforcement 720 Academy Courses.

Criminal Justice Studies

10-504-5 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

*Combination of On Site, Online, and Hybrid instruction

Program Overview

Protective services today require employees that are knowledgeable, ethical, have strong communication skills and are adaptable to ever-changing technological and societal changes. The Criminal Justice Studies Associate Degree program will prepare you for various positions in law enforcement, probation/parole, corrections, juvenile detention, police dispatching, security, or others. Additional positions in protective services may require a bachelors degree, such as with the FBI or other state/federal agencies.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor
- NOTE: A successful background check will be required prior to being admitted in the Criminal Justice - Law Enforcement 720 Academy or the Jail Academy. Information from the Criminal History Record Check may affect ability to find employment after graduation.

Program Outcomes

Criminal Justice Studies graduates will be able to:

- Illustrate the interrelationships of the three core components of the criminal justice system
- Analyze situational responses
- Apply communication skills as a criminal justice professional
- Conduct investigations
- Examine the professional code of ethics for a criminal justice practitioner
- Explore personal wellness strategies for the criminal justice professions
- Explain the role of criminal justice professionals in working with diverse populations

Career Outlook

Typical positions available after graduation include:

- Youth Care Workers
- Detention Workers
- Private Investigators
- Security Officers
- Dispatcher
- Park and Forestry Personnel
- Victim Witness Advocate

After completing the associate degree program, graduates may apply for the 200 Basic Jail Officer Academy or Criminal Justice - Law Enforcement 720 Academy. Typical positions available after completing an academy include:

- Police Officer
- Deputy Sheriffs
- Correctional Officers

With additional education or work experience, graduates may also pursue a position as a(n):

- Adult/Juvenile Administrator
- Institutional Case Worker/Social Worker
- Probation/Parole Administrator
- Probation/Parole Agent
- Youth Counselor/Case Aide
- Youth Detention Home Supervisor
- State Patrol/Troopers
- DNR Warden

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10504161	Courts/Jurisdiction	3 cr.
10504163	Criminal Justice-Introduction	3 cr.
10504164	Introduction to Criminal Law	3 cr.
10504165	Communication Strategies	3 cr.
10504167	Policing Strategies	3 cr.
10504168	Wellness	2 cr.
10504169	Criminal Justice Due Process	3 cr.
10504172	Criminology	3 cr.
10504173	Criminal Justice Investigations **or**	
10504174	Correctional Institutions	3 cr.
10504175	Juvenile Justice System	3 cr.
10504176	Criminal Justice Ethics	3 cr.
10504177	Traffic Law Enforcement **or**	
10504146	Probation/Parole	3 cr.
10504181	Criminal Justice Report Writing	3 cr.
10504183	Criminal Justice Capstone*	2 cr.
10504184	Emerging Issues in Criminal Justice*	3 cr.
Technical Studies Total		43 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10804123	Math with Business Applications **or**	3 cr.
10804107	College Mathematics or	
10804189	Introductory Statistics *	
10809172	Introduction to Diversity Studies **or**	
10809159	Abnormal Psychology*	3 cr.
10809196	Introduction to Sociology	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		18 cr.
TOTAL PROGRAM REQUIREMENTS		**61 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions. You must earn a grade point of 2.0 or better in all required 10504XXX courses.

10504161
Courts/Jurisdiction - Credits: 3
This introductory course explores the development of the American judicial system. Students will examine the operational procedures of the federal, state, municipal, and specialized court systems as they impact law enforcement and/or corrections.

10504163
Criminal Justice-Introduction - Credits: 3
Students will explore the evolution of criminal justice systems, including courts, corrections, and law enforcement. Understand career pathways within the criminal justice system, including roles, functions, and professionalism.

10504164
Introduction to Criminal Law - Credits: 3
Identify basic concepts of criminal law. Students will explore the elements of various crimes against persons, property and crimes involving drugs, alcohol, or other criminal activity. Understand the diverse sentence structures in the criminal justice system.

10504165
Communication Strategies - Credits: 3
Students will learn about the communication process and techniques used to make them effective, professional communicators. Verbal and nonverbal communication strategies will be incorporated for a variety of situations and populations. Professional communication skills, including Motivational Interviewing (MI), interviewing, and interrogation techniques will be emphasized.

10504167
Policing Strategies - Credits: 3
Students will learn various policing strategies. Emphasis will be placed on community policing philosophies and problem solving using community resources. Understand how to identify and develop partnerships in the community to promote positive community relationships.

10504168
Wellness - Credits: 2
Understand how to maintain a healthy lifestyle, including stress management and relaxation, weight control, effective sleep, minimization of alcohol and tobacco use, financial stability, and spirituality. Recognize factors contributing to suicide within the criminal justice profession.

10504169
Criminal Justice Due Process - Credits: 3
Learn key concepts and principles of due process and constitutional law. The U.S. Constitution, particularly the Bill of Rights, will be analyzed as it applies to the criminal justice professionals. Legal precedent setting cases and state law will be reviewed.

10504172
Criminology - Credits: 3
This introductory course examines the nature, demographics, and impact of crime in the United States. Using a scientific approach, students will analyze the theoretical causation of criminal activity. Explore legal and political implications of crime prevention and control.

10504173
Criminal Justice Investigations - Credits: 3
Gain general knowledge of investigative strategies and techniques. Learn basic information on identifying, processing and preserving various types of evidence, and processing crime scenes. Interview and interrogation techniques will be practiced within legal guidelines of Miranda.

10504174
Correctional Institutions - Credits: 3
Students will study the evolution of punishment, jails, and prisons. Emphasis will be given to institutional subgroups, evidence based practice and rehabilitative institutional programs and services.

10504175
Juvenile Justice System - Credits: 3
Compare and contrast the juvenile and adult justice systems. The historical aspect of the juvenile system will be studied and compared to the modern day system. Juvenile sanctions and dispositions, including rehabilitation and therapy, will be discussed. Laws covering child maltreatment and children in need of protection services will be recognized.

10504176
Criminal Justice Ethics - Credits: 3
This course explores the ethical, legal, and criminal justice professional issues. It is designed to teach a process of ethical decision-making and to increase awareness of the complexities in the criminal justice system for criminal justice professionals.

10504177
Traffic Law Enforcement - Credits: 3
Gain a basic knowledge of Wisconsin traffic laws. General skills of detecting traffic violations, issuing traffic citations, directing traffic, and crash investigation will be gained. Identify responsibilities of a first responding officer, how to manage the response to a scene, and take necessary steps to enable effective follow-up as needed.

10504146
Probation/Parole - Credits: 3
Explore the function, duties, and role of probation and parole. Learn the types of offenses, sentencing process, presentence investigation, revocation procedures, transitioning, and alternatives to incarceration. Identify and implement classification and assessment tools proved to be effective in evidence based practice.

10504181
Criminal Justice Report Writing - Credits: 3
Learn basic requirements, guidelines, and skills for proper and professional written documentation of activities in a criminal justice setting. The student will explain the context of report writing, take effective field notes, organize information in reports, write narratives, and describe what information should/should not be included in certain types of reports.

10504183
Criminal Justice Capstone - Credits: 2
This course is the capstone work-based experience for the Criminal Justice Studies program. It is designed to encourage students to think critically and solve challenging problems. Students will design, develop, and perform a project either in an actual work experience or a simulated project. The project will be designed to utilize skills typical of a graduate in the field. Instructor approval is required prior to enrolling in this course. PREREQUISITE: 32 Credits of 10504XXX coursework must be completed.

10504184
Emerging Issues in Criminal Justice - Credits: 3
This course will explore contemporary trends and key issues associated within the criminal justice field. Drawing from student experience in learning, students will come up with solutions for responding to current issues. Topics may include implicit bias, mental health, CIT (Crisis Intervention Training), drug/alcohol effects, social media and technology, homeland security, and other current issues. PREREQUISITE: 32 credits of 10504XXX coursework must be completed.

Crop Production

61-080-3 Pathway Certificate (less than one year)

Campus: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Center: Balsam Lake*

*Combination of Hybrid and On Site instruction

Program Overview

The Crop Production pathway certificate will teach you the fundamentals of soil science and basic agronomy skills. Couple those skills with farm records and financials, and you will be prepared to rejoin your family's crop operation or manage your own farm after successful completion of this certificate.

Special Features

Evening courses will be available for individuals needing to complete continuing education requirements for FSA loans.

Certificate is available part time or over 2 years.

Labs will be on Fridays at either the Home Campus or On - Farm (at regional farms or test plots).

Inquire

For more information on this program or schedule of courses, contact: Julie Wadzinski, instructor at Julie.Wadzinski@NorthwoodTech.edu or 715.788.7064.

How to Apply:

Complete the online application or contact Student Services. When completing an online application select the Crop Production Certificate from the program of choice dropdown list.

Program Outcome

The Crop Production Certificate will prepare you to:

- Utilize agronomic resources for optimal farm production

Career Outlook

Typical positions available after graduation include:

- Field Technician
- Field Applicator
- Custom Operator
- Agricultural Equipment Operator

Career Pathway

The Crop Production program is a pathway into the following program (page 222):

- Farm Operation

Related Programs

- Livestock Production
- Agricultural Business Fundamentals

Curriculum

Number	Course Title	Credits (cr.)
31080371	Soil Management	3 cr.
31080372	Crop Management	3 cr.
31080375	Farm Records and Analysis	3 cr.
CERTIFICATE REQUIREMENTS		**9 cr.**

Course Descriptions

31080371
Soil Management - Credits: 3
Soil Management is important to the productivity and profitability of a farmer. The farmer is a steward of the land and an environmentalist. The farmer must take care of the soil or he will not be a farmer for long! The student in this class will learn how to prepare a land use plan, collect and interpret soil samples results, develop a plan for fertilizer use on crops, develop a plan for storage and use of manure, analyze new farm issues and practices to determine future use, evaluate tillage equipment and methods, and to practice farm and environmental safety.

31080372
Crop Management - Credits: 3
This course will help the student learn many items involved with agricultural crop production. These skills include but are not limited to management practices, pest control, harvesting options and practices, economics, planting practices, seed and variety selection, etc.

31080375
Farm Records and Analysis - Credits: 3
This course emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. Includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business and finance strategy to meet the learner's needs. Production and financial decisions will be made based on the learner's farm business analysis. All competencies will be assessed using the learner's farm or with simulations established by the instructor.

Customer Service

17-105-2 Technical Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

The Customer Service certificate prepares you to serve a diverse customer base in business. Choose from either a service or a marketing/sales focus.

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Customer Service program from the program of choice dropdown list.

Outcomes

The Customer Service certificate will prepare you to:

- Professionally communicate non-verbally and in writing
- Provide ethical service to a diverse customer base
- Exhibit superior listening skills
- Operate appropriate technology
- Select appropriate technology (software and equipment) for tasks

Career Outlook

After completing the Customer Service certificate, students' career opportunities will be strengthened with the ability to effectively and professionally communicate and provide both internal and external customer service to a global and diverse business community.

Related Programs

- Administrative Coordinator
- Business Management
- Leadership Development
- Office Support Specialist
- Medical Administrative Professional

Curriculum

Number	Course Title	Credits (cr.)
10104102	Marketing Principles or	
10809172	Introduction to Diversity Studies#	3 cr.
10106123	Meeting and Event Planning	3 cr.
10196108	Customer Service	1 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10801136	English Composition 1#	3 cr.
10801196	Oral/Interpersonal Communication#	3 cr.
10890116	Job Quest#	1 cr.
CERTIFICATE REQUIREMENTS		**15 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

#See pages 35-38 for course descriptions.

Course Descriptions

10104102
Marketing Principles - Credits: 3
This course focuses on the marketing process as it relates to the operation of a business enterprise. The intent is to provide students with an understanding of how the marketing function fits within the overall structure of the organization. Special attention is given to the role and significance of evaluating customer needs, pricing, distribution, and promotion of products and services.

10106123
Meeting and Event Planning - Credits: 3
In this course students will deepen their understanding of planning meetings and project management. Students learn about event planning and budgeting, negation and contracts, income projections, food and beverage coordination, technology utilization, and logistics management.

10196108
Customer Service - Credits: 1
This course examines customer service as it relates to organizational quality. It addresses service models for internal and external customers, systems and strategies applied to customer service, and tools and techniques for gathering customer feedback and handling complaints.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

Customer Service Manager

31-102-9 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, and On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

The first year of the Business Management associate's degree, the Customer Service Manager technical diploma will prepare you to implement the activities of production, pricing, distribution, and promotion of products. You'll apply marketing, customer service, project management, and finance skills in solving business problems. In addition, communication and computer skills will enhance your ability to launch your career.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Customer Service Manager graduates will be able to:

- Implement the activities of production, pricing, distribution, or promotion of products.
- Assist employees and customers in handling difficult or complex problems.
- Coordinate work schedules, tasks, and production sequences to reach production goals.

Career Outlook

Typical positions available after graduation include:

- Account Coordinator
- Customer Service Specialist
- Help Desk Specialist
- Account Representative

Career Pathway

The Customer Service Manager is a pathway into the following program (page 219):

- Business Management

Related Program

- Business Administration Specialist Certificate

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10103106	MS PowerPoint	1 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10103162	MS Access A	1 cr.
10104102	Marketing Principles	3 cr.
10104191	Customer Service Management	3 cr.
10105100	Introduction to Business	3 cr.
10114107	Principles of Finance	3 cr.
10196188	Project Management	3 cr.
Occupational Specific Total		21 cr.
Occupational Supportive Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.
10804123	Math with Business Applications	3 cr.
Occupational Supportive Total		9 cr.
TOTAL PROGRAM REQUIREMENTS		**30 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10104102
Marketing Principles - Credits: 3
This course focuses on the marketing process as it relates to the operation of a business enterprise. The intent is to provide students with an understanding of how the marketing function fits within the overall structure of the organization. Special attention is given to the role and significance of evaluating customer needs, pricing, distribution, and promotion of products and services.

10104191
Customer Service Management - Credits: 3
This course equips learners to selectively hire, train, manage, and measure customer service providers as well as strategies to recover from difficult service situations. Topics include telephone/online etiquette, active listening and problem solving. Best practices in handling complaints, controlling stress and managing customer expectations will be explored. An examination of internal systems and policies that impact service to include customer relationship management software will be explored. This course is designed to help managers and supervisors of customer service representatives to increase customer satisfaction, loyalty and profitability.

10114107
Principles of Finance - Credits: 3
The Principles of Finance course concentrates its study on the financial management of business. Students analyze profitability, cash flow, long-term investment decisions, long-term financing decisions, short-term working capital management, mergers, acquisitions, and business failure.

10105100
Introduction to Business - Credits: 3
This is an introductory course designed to develop an understanding of the activities, functions, and principles of business enterprises. The course helps to gain insight into the responsibilities and challenges of operating a business. Emphasis is on the interaction of the various functions required to operate businesses of all sizes. Specifically, the areas of business trends, ownership models, leadership, human resources, marketing, information management, and finance will be explored.

10196188
Project Management - Credits: 3
In Project Management, the learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will demonstrate the application of the role of project management, developing a project proposal, use of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment.

Dementia Care

61-544-2 Pathway Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online and Your Choice instruction

Northwood Technical College

Program Overview

You will gain relevant and emerging information related to dementia types, symptoms and progression. You will be provided with practical tools and strategies that promote effective communication, honor human dignity, and support the importance of advanced planning. You will examine ways to positively impact your community through advocacy, education and other cutting edge initiatives based on coursework and experiential learning activities.

Special Features

- Flexible course selection and schedules
- 8-week rotating block courses offered in Online and Your Choice evening formats
- Part-time and full-time program options with flexible entry and exit
- Ideal for people entering the job market or choosing to enhance their current careers in service delivery or leadership roles within the gerontology field
- Blend program offerings with Healthcare, Emergency Services, Human Services, or Business Programs
- This is a unique program in the state

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Dementia Care certificate from the program of choice dropdown list.

Complete application and register for classes:

Registration

Outcomes

The Dementia Care Certificate will prepare you to:

- Analyze the physical, social, psychological, and spiritual aspects of aging throughout the lifespan
- Analyze the physical, social, psychological, and spiritual aspects of dementia
- Apply ethical and legal practice consistent with a gerontology professional
- Identify the role of the gerontology professional in the connection of service delivery
- Identify strategies to cultivate an age-friendly community

Career Outlook

Upon completion of the Dementia Care certificate you will be well prepared to use your knowledge, skills and abilities to work with older adults in a variety of positions in diverse settings such as:

- Hospitals
- Hospice
- Home Health Care and Assisted Living
- Long-Term Care, Nursing Homes and Group Homes
- Adult Care
- Senior Centers
- Community, Non-Profit and Government Agencies
- Counseling Centers
- Business and Industry

Career Pathway

The Dementia Care program is a pathway into the following program (page 224):

- Gerontology - Aging Services Professional

Related Programs

- Nursing - Associate Degree
- Human Services Associate
- Occupational Therapy Assistant
- Medical Assistant
- Paramedic Technician
- EMT - Paramedic
- Nursing Assistant
- Gerontology for Healthcare Professionals
- Community-Based Residential Facility (CBRF) Caregiver

Curriculum

Number	Course Title	Credits (cr.)
10544100	Communication of Aging	3
10544107	Death and Dying	3
10544105	Alzheimer's and Dementia	3
10544111	Legal and Financial Issues of Aging	3
CERTIFICATE REQUIREMENTS		**12**

You must earn a grade point of 2.0 or better in all 10544XXX courses.

Course Descriptions

10544100
Communication of Aging - Credits: 3
Develop effective communication strategies and supportive interview techniques that enhance rapport and relationships with aging populations. Apply ethical principles, standards and boundaries that acknowledge self-determination.

10544107
Death and Dying - Credits: 3
Explore societal, cultural, and personal views of death, dying, and bereavement. Examine losses experienced during the course of aging beyond the physical and emotional process of death and dying. Determine strategies for healthy transitions in coping with loss.

10544105
Alzheimer's and Dementia - Credits: 3
Examine the signs, symptoms and stages of Alzheimer's and other forms of dementia and how these diseases affect physiology and brain function. This course focuses on the principles of communicating and providing care to individuals with memory loss and confusion while learning the best practices for dealing with behavior changes, challenges with the activities of daily living, and strategies to assist caregivers.

10544111
Legal and Financial Issues of Aging - Credits: 3
Analyze legal and financial concepts and structures including Power of Attorney for health care/finance, guardianships, trusts, reallocation of assets, spending down, Medicare/Medicaid benefits, supplemental insurance, Social Security, elder abuse/neglect, financial exploitation, and relevant governmental policies. Apply knowledge through advocacy to benefit aging adults on local, state and federal levels.

Dental Assistant

31-508-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Rice Lake

Program Overview

Dental assistants with documented skills also may carry out a variety of laboratory, clinical and office duties. Some dental assistants manage the office and are responsible for patient scheduling and bookkeeping functions. Most dental assistants work in general or specialized dental offices, either for individual dentists or for groups of dentists. Some dental assistants may choose to work for insurance companies, dental laboratories, or dental supply companies. The dental assistant also may find employment with federal agencies such as the Veterans Affairs; United States Public Health Services; the Armed Forces; or a state, county or city health facility.

The program in dental assisting is accredited by the Commission on Dental Accreditation [and has been granted the accreditation status of "approval without reporting requirements"]. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611. The Commission's Web address is: https://coda.ada.org/en

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states, if applicable
- Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb)
- COVID vaccination---highly recommended

  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/ quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
- Possess current certification of "BLS Basic Life Support" or equivalent
- Review and sign Health Sciences Confidentiality Statement
- Review and sign Dental Office Visit form
- Review and sign Dental Assistant program permission form
- Participate in a mandatory program orientation session

Program Outcomes

Dental Assistant graduates will be able to:

- Perform a variety of advanced supportive dental procedures
- Manage infection and hazard control
- Produce diagnostic intraoral and extraoral radiographs on a variety of patients
- Perform advanced dental laboratory procedures
- Demonstrate professional behaviors, ethics, and appearance
- Perform dental office business procedures

Career Outlook

Typical positions available after graduation include:

- Dental Assistant
- Dental Receptionist
- Dental Office Manager
- Dental Practice Manager
- Dental Lab Technician
- Dental Laboratory Assistant
- Dental Insurance Claims Processor
- Dental Sales Representative
- Dental Treatment Coordinator
- Dental Specialty Assistant
- Maxillofacial Dental Assistant
- Endodontic Dental Assistant
- Prosthodontic Dental Assistant
- Orthodontic Dental Assistant
- Pediatric Dental Assistant
- Periodontic Dental Assistant

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10508101	Dental Health Safety*	1 cr.
10508103	Dental Radiography*	2 cr.
10508113	Dental Materials*	2 cr.
10508120	Dental Office Management*	2 cr.
10508304	Dental and General Anatomy*	2 cr.
31508302	Dental Chairside*	5 cr.
31508306	Dental Assistant Clinical*	3 cr.
31508307	Dental Assistant Professionalism*	1 cr.
31508308	Dental Chairside Advanced*	5 cr.
31508309	Dental Laboratory Procedures*	4 cr.
31508310	Dental Radiography - Advanced*	1 cr.
31508311	Dental Assistant Clinical - Adv*	2 cr.
Occupational Specific Total		30 cr.
Occupational Supportive Courses**		
10801196	Oral/Interpersonal Communication	3 cr.
Occupational Supportive Total		3 cr.
TOTAL PROGRAM REQUIREMENTS		**33 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required courses.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details.

NOTE: all hours are based on a 16-week calculation with the exception of Dental Assistant Clinical-Advanced (31508111) which needs to be at an 18-week hour calculation due to total hour requirements for the program.

All students must earn a minimum of 300 clinical experience hours. These hours are completed during 31508306 Dental Assistant Clinical and 31508311 Dental Assistant Clinical-Advanced.

10508101
Dental Health Safety - Credits: 1
Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. BLS Basic Life Support certification is a prerequisite; students will be required to show proof of certification before beginning the course. This course is a WTCS aligned course required in both the Dental Hygienist and Dental Assistant programs. PREREQUISITES: Current certification in BLS Basic Life Support and acceptance into the Dental Assistant program.

10508103
Dental Radiography - Credits: 2
Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extra oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient. Students gain further experience in exposing radiographs on patients in the clinical portion of their program. This course also provides the background in radiographic theory required for students to make informed decisions and adjustments. COREQUISITES: 10508101 Dental Health Safety, 10508113 Dental Materials, 10508304 Dental and General Anatomy, 31508302 Dental Chairside, and 31508306 Dental Assistant Clinical.

10508113
Dental Materials - Credits: 2
Prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances. This course is aligned to serve students in the Dental Hygienist and Dental Assistant programs. COREQUISITES: 10508101 Dental Health Safety, 10508103 Dental Radiography, 10508304 Dental and General Anatomy, 31508302 Dental Chairside, and 31508306 Dental Assistant Clinical.

10508120
Dental Office Management - Credits: 2
Prepares dental auxiliary students to manage telephones, appointments, recall systems, and inventory. Students also develop the skills needed to process accounts receivable and payable, collections, and third party reimbursements. Students use dental software programs. PREREQUISITE:Successful completion of all first term courses and COREQUISITES: 31508308 Dental Chairside Advanced, 31508309 Dental Laboratory Procedures, 31508310 Dental Radiography – Advanced, and 31508311 Dental Assistant Clinical – Adv.

10508304
Dental and General Anatomy - Credits: 2
Prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision-making and to professional communication with colleagues and patients. PREREQUISITE: Acceptance into the Dental Assistant program and COREQUISITES: 10508101 Dental Health Safety, 10508103 Dental Radiography, 10508113 Dental Materials, 31508302 Dental Chairside, and 31508306 Dental Assistant Clinical.

31508302
Dental Chairside - Credits: 5
Prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations and to assist a dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventive dentistry, brushing and flossing techniques, and dental procedures, using lay terminology. Throughout the course, students will apply decoding strategies to the correct use and interpretation of dental terminology. COREQUISITES: 10508101 Dental Health Safety, 10508103 Dental Radiography, 10508113 Dental Materials, 10508304 Dental and General Anatomy, and 31508306 Dental Assistant Clinical.

31508306
Dental Assistant Clinical - Credits: 3
Students apply skills developed in Dental and General Anatomy, Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography, and Professionalism in a clinical setting with patients. Emphasizes integration of core abilities and basic occupational skills. COREQUISITES: 10508101 Dental Health Safety, 10508304 Dental and General Anatomy, 31508302 Dental Chairside, 10508113 Dental Materials, 10508103 Dental Radiography, and 31508307 Dental Assistant Professional.

31508307
Dental Assistant Professionalism - Credits: 1
Prepares dental assistant students for professional success in a dental practice or another dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within ethical guidelines and legal frameworks. In preparation for entering the work force, dental assistants customize or develop their portfolios and lay out an on-going professional development plan. PREREQUISITE: Acceptance into the Dental Assistant program.**31508308**

Dental Chairside Advanced - Credits: 5
Prepares dental assistant students to adapt chairside skills to assisting with dental specialties as they are performed in general practice. Focuses on pediatric dentistry, orthodontics, oral and maxillofacial surgery, endodontics, periodontics, and prosthodontics. Students will also develop the ability to assist with sealants, perform coronal polishing, and apply topical fluoride and topical anesthetics. PREREQUISITE: Successful completion of all first term courses and COREQUISITES: 10508120 Dental Office Management, 31508309 Dental Laboratory Procedures, 31508310 Dental Radiography – Advanced, and 31508311 Dental Assistant Clinical – Adv.

31508309
Dental Laboratory Procedures - Credits: 4
Prepares Dental Assistant students to produce alginate impressions and fabricate diagnostic models, oral appliances, temporary restorations, and custom trays. Students also polish oral appliances. PREREQUISITE: Successful completion of all first term courses and COREQUISITES: 10508120 Dental Office Management, 31508308 Dental Chairside Advanced, 31508310 Dental Radiography – Advanced, and 31508311 Dental Assistant Clinical – Adv.

31508310
Dental Radiography - Advanced - Credits: 1
Builds on principles and skills developed in Dental Radiography. Dental Assisting students expose full mouth series, extra-oral and specialized radiographs on adult and child patients. Emphasis is placed on protection against x-ray hazards. Students will also process, mount, and evaluate radiographs for diagnostic value. In addition, they will use radiographs to explain dental health and treatment plans to patients. PREREQUISITE: Successful completion of all first term courses and COREQUISITES: 10508120 Dental Office Management, 31508308 Dental Chairside Advanced, 31508309 Dental Laboratory Procedures, and 31508311 Dental Assistant Clinical – Adv.

31508311
Dental Assistant Clinical - Adv - Credits: 2
Dental Assisting students apply skills developed in Dental Chairside - Advanced, Dental Lab Procedures, Dental Radiography - Advanced, and Dental Office Procedures in a clinical setting with patients. Emphasizes integration of core abilities and basic and advanced occupational skills. PREREQUISITE: Successful completion of all first term courses and COREQUISITES: 10508120 Dental Office Management, 31508308 Dental Chairside Advanced, 31508309 Dental Laboratory Procedures, and 31508310 Dental Radiography - Advanced.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501107
Digital Literacy for Healthcare - Credits: 2
The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined. Computer skills proficiency developed as a part of this course.

Diesel Equipment Technician

32-412-4 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: New Richmond

Program Overview

This program prepares students to service and repair diesel trucks, and diesel-powered agricultural and industrial equipment. This hands-on program covers diesel engines, power trains, electrical/electronic systems, chassis systems, brakes, and hydraulics of these types of equipment. Students learn the latest technology used in the industry. Using an interdisciplinary approach, the curriculum draws from welding and general studies providing a solid background for entry into the field through applied, general, and specific industry skills training.

Special Features

Diesel Equipment Technician and Agricultural Power and Equipment Technician have a common first year.

Students will spend the second year of the program getting hands-on training at Hammond Truck & Trailer Repair, a division of Russ Davis Wholesale.

Sponsorships

Northwood Tech's Diesel Equipment Technician program is sponsored by Noregon Systems and Pepsi, allowing technicians to practice real-time diagnostic repair and become certified in using the J-Pro Aftermarket computer interface.

Northwood Tech's Diesel Equipment Technician program is sponsored by River States Freightliner, providing students the opportunity to receive recognitions through Daimler for Freightliner and Western Star trucks using OEM software diagnostics.

Admission Requirements

- Complete Online application form
- Review and Sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Diesel Equipment Technician graduates will be able to:

- Diagnose major systems in diesel industry
- Repair major systems in diesel industry
- Service major systems in diesel industry
- Practice personal and professional work habits
- Document complaint, cause and correction

Career Outlook

Typical positions available after graduation include:

- Diesel Equipment Technician
- Fleet Maintenance Technician
- Equipment Mechanic
- Equipment Technician

Related Programs

- Truck Driving
- Agricultural Power and Equipment Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32070326	Basic Engines	5 cr.
32404376	DC Automotive Electrical*# **or**	
32070370	12-Volt Electrical Theory*	2 cr.
32070338	Diesel Engine Theory*	1 cr.
32070339	Mobile Hydraulics Theory*	1 cr.
32404377	Electrical Systems*# **or**	
32070371	Introduction to Live Repair*	3 cr.
32070361	Diesel Engine Repair*	5 cr.
32070365	Mobile Hydraulics*	5 cr.
32070367	12-Volt Electrical Circuits*	5 cr.
32070369	Mobile HVAC for Heavy Equipment	1 cr.
32412301	Diesel Safety and Industry Practices	2 cr.
32412302	Diesel Truck Brake Systems*	3 cr.
32412303	Diesel Truck Chassis Systems*	3 cr.
32412304	Diesel Truck Powertrains*	3 cr.
32412306	Alternative Fuels*	1 cr.
32412307	Diesel Truck Inspection*	2 cr.
32412308	Diesel Live Repair*	3 cr.
32412309	Advanced Diesel Engine Controls and Emissions*	1 cr.
32412310	Diesel Preventive Maintenance*	2 cr.
32442307	Welding for Mechanics	2 cr.
Occupational Specific Total		50 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32801362	Advanced Communication Skills	2 cr.
32804303	Applied Math	2 cr.
32804313	Applied Math 2	2 cr.
Occupational Supportive Total		8 cr.
PROGRAM REQUIREMENTS		**58 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Courses available at the Superior Campus. Corequisite override required by Academic Dean (for Automotive programs) for student to enroll in 32404376 DC Automotive Electrical and/or 32404377 Electrical Systems.

Courses available at the New Richmond Campus

32070326
Basic Engines - Credits: 5
This course will provide the learner with an in depth look at how internal combustion engines operate. The learner will be able to identify, measure, and inspect parts of the internal combustion engine, with diesel engines used in agriculture machinery the main area of focus.

32070370
12 - Volt Electrical Theory - Credits: 2
This course is designed for the learner to understand (12-volt) DC electricity. Classroom trainers along with lab exercises will be used to learn electrical theory. Students will also be introduced to electrical wiring schematic reading, wire harness construction and repair. PREREQUISITE: 32412301 Diesel Safety and Industry Practices.

32404376
DC Automotive Electrical - Credits: 2
This course will introduce students to Ohm's law, electrical fundamentals, magnetism, and series and parallel circuits. Further studies will include automobile wiring diagrams, electrical test equipment, and basic troubleshooting. COREQUISITE: 32404375 Automotive Fundamentals.

32070338
Diesel Engine Theory - Credits: 1
This course will provide the learner with a basic understanding of the diesel engine. The design and operating principles of the engine, cooling, fuel, intake, exhaust systems, and lubrication systems will be examined. COREQUISITE: 32070326 Basic Engines.

32070339
Mobile Hydraulics Theory - Credits: 1
This course will provide a practical understanding of mobile hydraulic components. Their design, application, operation and maintenance will be studied. A hydraulic training bench will be used in the classroom. PREREQUISITE: 32070367 12 - Volt Electrical Circuits.

32070371
Introduction to Live Repair - Credits: 3
This course is designed to study the construction, operation, adjustments, and repairs of electrical components used in tractors and farm implements. Classroom and lab activities will include reading and interpreting wiring diagrams, troubleshooting electrical circuits, and performing repairs on alternators, generators, starters, and regulators. Monitors are also included in this course. PREREQUISITE: 32412301 Diesel Safety and Industry Practices and COREQUISITE: 32070370 12-Volt Electrical Theory

32404377
Electrical Systems - Credits: 3
This course introduces battery, starting, and charging systems; theory of operation; diagnostic techniques; and servicing procedures. This course also includes exterior lighting systems; diagnostics and repair procedures. Wiring diagrams will be used and emphasized throughout the course. COREQUISITES: 32404375 Automotive Fundamentals and 32404376 DC Automotive Electrical.

32070361
Diesel Engine Repair - Credits: 5
This course provides the student with both a theoretical and practical background in the basic operation and rebuilding principles of diesel engines. The course includes practical experience in rebuilding, testing, troubleshooting, and tuning diesel engines. Additionally, the student will gain experience in the proper use of tools and equipment. If prerequisite courses have not been completed, the student must have consent of the instructor to enroll. COREQUISITES: 32070326 Basic Engines and 32070338 Diesel Engine Theory.

32070365
Mobile Hydraulics - Credits: 5
This course will provide a broad, general, and practical coverage of fluid power components and their design, application, operation, and maintenance. You will learn hydraulics operation by studying manufacturers' service manuals as well as a prepared text. Lab projects will allow hands-on training. PREREQUISITE: 32070367 12 - Volt Electrical Circuits and COREQUISITE: 32070339 Mobile Hydraulics Theory.

32070367
12 - Volt Electrical Circuits - Credits: 5
This course is designed to study the construction, operation and repair of electrical components and systems used in the agricultural/construction/heavy diesel truck field. Classroom activities will include reading and interpreting wiring diagrams, troubleshooting and repairing electrical circuits, and components (including performing repairs on alternators and starters). Computer based electrical circuits are introduced, with the opportunity to work with diagnostic laptops and scan tools. COREQUISITES: (32070370 12 - Volt Electrical Theory and 32070371 Introduction to Live Repair) or (32404376 DC Automotive Electrical and 32404377 Electrical Systems).

32070369
Mobile HVAC for Heavy Equipment - Credits: 1
Mobile HVAC for heavy equipment will teach the learner the basics of air conditioning systems. Air conditioning fundamentals will be learned along with proper servicing procedures and air conditioning equipment used. In depth study of air conditioning systems from older agricultural equipment will be looked at, along with study of new auto temperature control systems. EPA environmental laws pertaining to mobile air conditioning will be examined.

32412301
Diesel Safety and Industry Practices - Credits: 2
This course will introduce students to the safety and legal requirements and common shop practices of the diesel and heavy equipment industry. Personal safety as well as overall shop/job site safety will be emphasized while students learn to operate shop equipment and learn basic repair techniques common to all aspects of the diesel industry. Skills learned in this course will be directly applied throughout the diesel equipment technician program.

32412302
Diesel Truck Brake Systems - Credits: 3
This course is a practical study in performing diagnosis and repair of heavy truck braking systems.PREREQUISITE: 32412301 Diesel Safety and Industry Practices and 32070361 Diesel Engine Repair

32412303
Diesel Truck Chassis Systems - Credits: 3
This course is a practical study in performing diagnosis and repair of heavy truck chassis systems and components. PREREQUISITE: 32412304 Diesel Truck Powertrains

32412304
Diesel Truck Powertrains - Credits: 3
This course is a practical study in performing diagnosis and repair of heavy truck transmissions, differentials, and drivelines. PREREQUISITE: 32412301 Diesel Safety and Industry Practices and 32070361 Diesel Engine Repair

32412306
Alternative Fuels - Credits: 1
A practical study of the theories and procedures for the operation an preventive maintenance of non-traditional fuels and systems. PREREQUISITE: 32070361 Diesel Engine Repair

32412307
Diesel Truck Inspection - Credits: 2
This course is a practical study of performing Federal Department of Transportation (DOT) inspections and Federal Motor Carrier Safety Administration (FMCSA) guidelines on diesel trucks and equipment for highway use. Student will learn what defects to inspect. COREQUISITE: 32412310 Diesel Preventive Maintenance

32412308
Diesel Live Repair - Credits: 3
This course is designed to familiarize the student with the procedures involved in the repair of highway equipment. Hands-on experienced will be gained through the repair of medium and heavy duty diesel trucks. The type of equipment may vary to meet the needs of the students and programs. PREREQUISITE: 32070371 Introduction to Live Repair

32412309
Advanced Diesel Engine Controls and Emissions - Credits: 1
This course will provide a broad, general, and practical coverage of electronic engine controls and multiple after treatment systems/emissions operations, components, and trouble shooting. Classroom and lab activities include comparing different engine systems and how they operate, identifying components and locations, and diagnosing problems. PREREQUISITE: 32070361 Diesel Engine Repair and 32070367 12-Volt Electrical Circuits

32412310
Diesel Preventive Maintenance - Credits: 2
This course is practical study in performing heavy truck preventive maintenance services. Students will learn how to follow a preventive maintenance schedule to prevent costly repairs and unsafe conditions. PREREQUISITE: 32412304 Diesel Truck Powertrains and 32412302 Diesel Truck Brake System

32442307
Welding for Mechanics - Credits: 2
Instruction in safe setup and operation of plasma cutting (PAC), oxy-fuel cutting (OFC), SMAW (Stick), GMAW (Mig), FCAW, and/or GTAW (Tig) welding in applications related to general industry practices. Selection of appropriate welding processes with a specific emphasis on typical repair situations including metal identification will be stressed

Drafting Technician

31-614-3 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Available through Online Live instruction

Program Overview

The Drafting Technician will work in various positions within the engineering, architectural, construction and manufacturing industries. Students will create working drawings and technical drawings from rough sketches or from scratch. Skills include the visualization of forms and shapes from blueprints and sketches, applying technical knowledge, attention to details, and competence on the latest versions of AutoCAD and REVIT software.

Admission Requirements

- Complete Online application form
- Review and Sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Drafting Technician graduates will be able to:

- Develop construction documents
- Identify basic construction materials and systems
- Use computer-aided drafting, building information modeling, and architectural related software
- Utilize office practices and standards
- Utilize the Enrolled Wisconsin Commercial Building Code incorporating the International Building Code (IBC)

Career Outlook

Typical positions available after graduation include:

- Designer
- CAD Technician
- CAD Designer

Career Pathways

The Drafting Technician program includes the following pathway option (page 215):

- Architectural Commercial Design

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10614170	Architectural Materials and Methods 1	3 cr.
10614172	Architectural Drafting and Design 1*	4 cr.
10614173	Architectural Drafting and Design 2*	4 cr.
10614176	Architectural Technology 1	3 cr.
10614177	Architectural Technology 2*	2 cr.
10614179	Mechanical Systems*	3 cr.
Occupational Specific Total		19 cr.
Occupational Supportive Courses**		
10801196	Oral/Interpersonal Communication	3 cr.
10804118	Intermediate Algebra with Applications*	4 cr.
Occupational Supportive Total		7 cr.
TOTAL PROGRAM REQUIREMENTS		**26 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

10614170
Architectural Materials and Methods 1 - Credits: 3
This course introduces the student to the materials and methods used in wood frame construction. It familiarizes students with components of modern construction for the purpose of selecting the materials best suited to various construction jobs.

10614172
Architectural Drafting and Design 1 - Credits: 4
This course introduces graphic representation in construction. It covers the fundamentals of drafting including line work, lettering, measuring, sketching, projections, and pictorial drawings. Students will use the aforementioned fundamentals to complete a set of drawings for a residence. COREQUISITES: 10614170 Architectural Materials and Methods 1 and 10614176 Architectural Technology 1.

10614173
Architectural Drafting and Design 2 - Credits: 4
This course introduces the student to the design principles needed for wood frame structures and incorporates the many aspects of building aesthetics and working drawings. The final assignment is to plan a set of drawings for a wood frame commercial building. PREREQUISITE: 10614172 Architectural Drafting and Design 1 and 10614176 Architectural Technology 1.

10614176
Architectural Technology 1 - Credits: 3
AutoCAD and related architectural software is utilized to teach learners the fundamentals of architectural computer-aided drafting. Topics from CAD applications in architecture and the equipment required to do actual drafting, modifying, and plotting operations are covered.

10614177
Architectural Technology 2 - Credits: 2
This course is an introduction to the application of BIM software in architectural drafting. Students will apply Revit Architecture software to create a three-dimensional building model that allows for deliverables such as floor plans, building sections, exterior elevations, and schedules. The building model will include walls, openings, floors, stairs, roofs, foundations, and footings. Topics such as datum, annotation, modifying family types, and profiles will be covered. PREREQUISITE: 10614170 Architectural Materials and Methods 1.

10614179
Mechanical Systems - Credits: 3
This course introduces basic principles of plumbing and electrical systems along with heating, ventilating and air conditioning systems in building design and construction. These systems are studied in the context of the overall building design with emphasis on materials, equipment systems design, engineering principles, and sustainable design practices. PREREQUISITE: 10614172 Architectural Drafting and Design 1 and 10614176 Architectural Technology 1.

Early Childhood Education

10-307-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: New Richmond, Rice Lake, Superior

Program Overview

The Early Childhood Education program will prepare you to work as a teacher or caregiver in an early childhood setting. You will have the opportunity to combine hands-on learning and student teaching experiences in community-based early childhood settings with related academic work at the college. As a student, you'll take a variety of courses related to early childhood development, curriculum, behavior guidance and working with families that will prepare you for success in this high-demand field. Graduates of this program will be recognized as Wisconsin Registry Career Level 12.

Northwood Technical College

Special Features

Earn an Early Childhood Education degree in two years through Online or On Site classes.

General Studies courses are offered in a variety of delivery methods including Online, Your Choice, or On Site instruction

Agreements between the Wisconsin Technical College System (WTCS) and the following baccalaureate degree-granting institutions allow graduates to transfer credits to:

- UW-Green Bay
- UW-Oshkosh
- UW-River Falls
- UW-Milwaukee
- UW-Stevens Point
- UW-Stout
- UW-Superior
- UW-Whitewater
- Bellevue University
- Concordia University
- Franklin University
- Lakeland University
- Milwaukee School of Engineering (MSOE)
- Northland College
- Viterbo University

Contact the receiving institution for specific details.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Background Check Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

- Submit required Background Check information and fee
- Have an acceptable Wisconsin Caregiver Background Check and/or Minnesota Caregiver Background Check, as applicable
  - Information from the Caregiver Background Check may affect ability to secure fieldwork placement and the ability to find employment after graduation
- Complete Staff Health Report - Child Care Provider form (physical form)
- COVID vaccination---highly recommended

  NOTE: Northwood Technical College cannot guarantee practicum placement or ability to progress in the program if a student is not able to meet the practicum site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other practicum requirements required by the practicum site. Northwood Technical College cannot guarantee practicum placement if the practicum site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the practicum start date.

There are four practicum experiences required in the Early Childhood Education program. ECE: Introductory Practicum requires a minimum of 64 hours of off-campus field experience, and ECE: Preschool Practicum, ECE: Intermediate Practicum, and ECE: Advanced Practicum require a minimum of 128 hours of off-campus field experience. In-class contact time is also required as part of the practicum experience.

Program Outcomes

Early Childhood Education graduates will be able to:

- Apply child development theory to practice
- Cultivate relationships with children, family, and the community
- Assess child growth and development
- Use best practices in teaching and learning
- Demonstrate professionalism
- Integrate health, safety, and nutrition practices

Career Outlook

Typical positions available after graduation include:

- Child Care Teacher
- Preschool Teacher
- Family Child Care Provider
- Infant or Toddler Caregiver
- Early Childhood Special Needs Assistant
- Public School Teacher Aide/Assistant
- Program Director/Administrator
- Head Start Assistant
- Au Pair/ Nanny

Career Pathways

The Early Childhood Education program includes the following pathway options (page 221):

- E-Connect - Child Care Services
- Group Child Care Essentials
- Preschool Education Professional (The Registry Preschool Credential)

Related Programs

- Professional Credential for Infants/Toddlers (Wisconsin)
- Human Services Associate
- Occupational Therapy Assistant

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A Project of Wisconsin Early Childhood Association

http://wisconsinearlychildhood.org/programs/teach/

youngstar
Wisconsin's Child Care Rating Program

Northwood Tech offers a wide array of credit-based early childhood education courses, credentials, and degree options that align with the Youngstar requirements. For more information, go to **www.NorthwoodTech.edu/ece**.

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10307108	ECE: Early Language and Literacy	3 cr.
10307110	ECE: Social Studies, Art, & Music	3 cr.
10307112	ECE: STEM	3 cr.
10307148	ECE: Foundations of Early Childhood Education	3 cr.
10307151	ECE: Infant & Toddler Development	3 cr.
10307167	ECE: Health, Safety, & Nutrition	3 cr.
10307174	ECE: Introductory Practicum*+	3 cr.
10307175	ECE: Preschool Practicum*+#	3 cr.
10307177	ECE: Intermediate Practicum*+#	3 cr.
10307179	ECE: Child Development	3 cr.
10307187	ECE: Children with Differing Abilities	3 cr.
10307188	ECE: Guiding Children's Behavior	3 cr.
10307195	ECE: Family & Community Relationships	3 cr.
10307199	ECE: Advanced Practicum*+#	3 cr.
Technical Studies Total		42 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology **or**	
10809188	Developmental Psychology	3 cr.
10804107	College Mathematics **or**	
10804123	Math with Business Applications or	
10804189	Introductory Statistics* **or**	
10806112	Principles of Sustainability **or**	
10806198	Human Biology	3 cr.
General Studies Total		15 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# An Experiential Portfolio and/or Challenge Exam cannot be used as credit for prior learning for this course
+ You must earn a 2.0 or better in this course

Professional Licensure and/or Certification Information

Northwood Tech's Early Childhood Education Associate Degree is designed to prepare students to obtain the required licensure to be employed/ practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Course Descriptions

(See pages 35-38 for General Studies course descriptions)

10307108
ECE: Early Language and Literacy - Credits: 3
This course explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

10307110
ECE: Social Studies, Art, & Music - Credits: 3
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, and movement (SSAMM).

10307112
ECE: STEM - Credits: 3
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of science, technology, engineering and mathematics.

10307148
ECE: Foundations of Early Childhood Education - Credits: 3
This 3-credit course introduces you to the early childhood profession. Course competencies include: explore the concepts of diversity, cultural responsiveness, and anti-bias as it relates to early childhood education, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings,identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, explore early childhood curriculum models and examine the critical role of play as it relates to developmentally appropriate practice.

10307151
ECE: Infant & Toddler Development - Credits: 3
In this 3-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

10307167
ECE: Health, Safety, & Nutrition - Credits: 3
This 3-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives, examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a healthy early childhood environment, plan nutritionally sound menus, examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies, describe strategies to prevent the occurrence of Abusive Head Trauma (AHT) formerly known as Shaken Baby Syndrome (SBS), incorporate health, safety, and nutrition concepts into the children's curriculum.

10307174
ECE: Introductory Practicum - Credits: 3
In this 3-credit practicum course you will learn about and apply the course competencies in an actual early childhood setting. You will explore the standards for quality early childhood education, demonstrate professional behaviors, and meet the requirements for training in the Wisconsin Model Early Learning Standards. PREREQUISITE: Admission to Early Childhood Education/ E-CHiLD, or E-Connect-Child Care Services or Dean approval.

10307175
ECE: Preschool Practicum - Credits: 3
This course will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers. PREREQUISITE: 10307174 ECE: Introductory Practicum. Prerequisite override required for students in the Preschool Education Professional (The Registry Preschool Credential).

10307177
ECE: Intermediate Practicum - Credits: 3
This 3 credit course will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for children. PREREQUISITE: 10307174 ECE: Introductory Practicum.

10307179
ECE: Child Development - Credits: 3
The 3-credit course examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

10307187
ECE: Children with Differing Abilities - Credits: 3
This 3-credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; promote inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; examine the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; identify community and professional resources; interpret an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; examine strategies for cultivating partnerships with families who have children with developmental differences.

10307188
ECE: Guiding Children's Behavior - Credits: 3
This 3-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identity strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the "24 hour Wisconsin" Pyramid Model training.

10307195
ECE: Family & Community Relationships - Credits: 3
In this 3-credit course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity, cultural responsiveness, and anti-bias perspectives when working with families and community; analyze contemporary family patterns and trends; identify strategies to strengthen and support families; explore effective communication strategies;discover strategies for developing respectful and reciprocal relationships with families; analyze strategies to promote family engagement in early childhood education programs; explore a variety of formats for meeting with families in their contexts; advocate for children and families; and explore community resources that provide a range of services for children and families.

10307199
ECE: Advanced Practicum - Credits: 3
In this final 3-credit practicum course you will demonstrate competence in supporting child development through observation, assessment and implementation of teaching strategies as you work in and learn about and apply the course competencies in an actual early childhood setting. You will demonstrate a high level of skill in fostering relationships with children, families and early childhood professionals, and use skill learned in a lead teacher role to develop a career plan to transition from student to early childhood education professional. PREREQUISITE: 10307174 ECE: Introductory Practicum, 10307175 ECE: Preschool Practicum and 1030777 ECE: Intermediate Practicum.

E-CHiLD (Early Childhood Education)

10-307-1 Associate Degree (two-year) **Financial Aid Eligible**

Campus: Online

Program Overview

E-CHiLD is an innovative Early Childhood Education associate degree program that blends online learning with community-based student teaching and prepares you to work as a teacher or caregiver in an early childhood setting. As a student, you'll take variety of courses related to early childhood development, curriculum, behavior guidance and working with families to prepare you for success in this high-demand field. You will engage in a variety of online teaching and learning experiences, including virtual live face-to-face classroom sessions one evening per week, with optional open teaching labs and technical support available. Graduates of this program will be recognized as Wisconsin Registry Career Level 12.

E-CHiLD is designed to build meaningful relationships, maximize educational technology and promote timely program completion.

Special Features

Earn an Early Childhood Associate degree online.

- Engage in a variety of online teaching and learning experiences
- Interact face to face in a virtual classroom setting with instructor and peers, one evening per week
- Technical Support available
- Community-based student teaching

Agreements between the Wisconsin Technical College System (WTCS) and the following baccalaureate degree-granting institutions allow graduates to transfer credits to:

- UW-GreenBay
- UW-Oshkosh
- UW-River Falls
- UW-Milwaukee
- UW-Stevens Point
- UW-Stout
- UW-Superior
- UW-Whitewater
- Bellevue University
- Concordia University
- Franklin University
- Lakeland University
- Milwaukee School of Engineering (MSOE)
- Northland College
- Viterbo University

Contact the receiving institution for specific details.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Background Check Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

- Submit Background Check information and fee)
- Have an acceptable Wisconsin Caregiver Background Check and/or Minnesota Caregiver Background Check, as applicable
  - Information from the Caregiver Background Check may affect ability to secure fieldwork placement and the ability to find employment after graduation
- Complete Staff Health Report - Child Care Provider form (physical form)
- COVID vaccination---highly recommended

NOTE: Northwood Technical College cannot guarantee practicum placement or ability to progress in the program if a student is not able to meet the practicum site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/ quantiferon, up to date acceptable background check, or any other practicum requirements required by the practicum site. Northwood Technical College cannot guarantee practicum placement if the practicum site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the practicum start date.

There are four practicum experiences required in the E-CHiLD program. ECE: Introductory Practicum requires a minimum of 64 hours of off-campus field experience, and ECE: Preschool Practicum, ECE: Intermediate Practicum, and ECE: Advanced Practicum require a minimum of 128 hours of off-campus field experience. Class contact time is also required as part of the practicum experience.

Program Outcomes

E-CHiLD graduates will be able to:

- Apply child development theory to practice
- Cultivate relationships with children, family, and the community
- Assess child growth and development
- Use best practices in teaching and learning
- Demonstrate professionalism
- Integrate health, safety, and nutrition practices

Career Outlook

Typical positions available after graduation include:

- Child Care Teacher
- Preschool Teacher
- Family Child Care Provider
- Infant or Toddler Caregiver
- Early Childhood Special Needs Assistant
- Public School Teacher Aide/Assistant
- Program Director/Administrator
- Head Start Assistant
- Au Pair/ Nanny

Career Pathways

The E-CHiLD program includes the following pathway options (page 221):

- E-Connect - Child Care Services
- Group Child Care Essentials
- Preschool Education Professional (The Registry Preschool Credential)

Related Programs

- Professional Credential for Infants/Toddlers (Wisconsin)
- Human Services Associate
- Occupational Therapy Assistant

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A Project of Wisconsin Early Childhood Association

http://wisconsinearlychildhood.org/programs/teach/

youngstar Wisconsin's Child Care Rating Program

Northwood Tech offers a wide array of credit-based early childhood education courses, credentials, and degree options that align with the Youngstar requirements. For more information, go to **www.NorthwoodTech.edu/ece**.

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10307108	ECE: Early Language and Literacy	3 cr.
10307110	ECE: Social Studies, Art, & Music	3 cr.
10307112	ECE: STEM	3 cr.
10307148	ECE: Foundations of Early Childhood Education	3 cr.
10307151	ECE: Infant & Toddler Development	3 cr.
10307167	ECE: Health, Safety, & Nutrition	3 cr.
10307174	ECE: Introductory Practicum*+	3 cr.
10307175	ECE: Preschool Practicum*#+	3 cr.
10307177	ECE: Intermediate Practicum*#+	3 cr.
10307179	ECE: Child Development	3 cr.
10307187	ECE: Children with Differing Abilities	3 cr.
10307188	ECE: Guiding Children's Behavior	3 cr.
10307195	ECE: Family & Community Relationships	3 cr.
10307199	ECE: Advanced Practicum*+#	3 cr.
Technical Studies Total		42 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology **or**	
10809188	Developmental Psychology	3 cr.
10804107	College Mathematics **or**	
10804123	Math with Business Applications **or**	
10804189	Introductory Statistics* **or**	
10806112	Principles of Sustainability **or**	
10806198	Human Biology	3 cr.
General Studies Total		15 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# An Experiential Portfolio and/or Challenge Exam cannot be used as credit for prior learning for this course
+You must earn a 2.0 or better in this course

Professional Licensure and/or Certification Information

Northwood Tech's Early Childhood Education Associate Degree is designed to prepare students to obtain the required licensure to be employed/ practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

10307108
ECE: Early Language and Literacy - Credits: 3
This course explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

10307110
ECE: Social Studies, Art, & Music - Credits: 3
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, and movement (SSAMM).

10307112
ECE: STEM - Credits: 3
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of science, technology, engineering and mathematics.

10307148
ECE: Foundations of Early Childhood Education - Credits: 3
This 3-credit course introduces you to the early childhood profession. Course competencies include: explore the concepts of diversity, cultural responsiveness, and anti-bias as it relates to early childhood education, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings,identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, explore early childhood curriculum models and examine the critical role of play as it relates to developmentally appropriate practice.

10307151
ECE: Infant & Toddler Development - Credits: 3
In this 3-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

10307167
ECE: Health, Safety, & Nutrition - Credits: 3
This 3-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives, examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a healthy early childhood environment, plan a healthy early childhood environment, plan nutritionally sound menus, examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies, describe strategies to prevent the occurrence of Abusive Head Trauma (AHT) formerly known as Shaken Baby Syndrome (SBS), incorporate health, safety, and nutrition concepts into the children's curriculum.

10307174
ECE: Introductory Practicum - Credits: 3
In this 3-credit practicum course you will learn about and apply the course competencies in an actual early childhood setting. You will explore the standards for quality early childhood education, demonstrate professional behaviors, and meet the requirements for training in the Wisconsin Model Early Learning Standards. PREREQUISITE: Admission to Early Childhood Education/ E-CHiLD, or E-Connect-Child Care Services or Dean approval.

10307175
ECE: Preschool Practicum - Credits: 3
This course will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers. PREREQUISITE: 10307174 ECE: Introductory Practicum. Prerequisite override required for students in the Preschool Education Professional (The Registry Preschool Credential).

10307177
ECE: Intermediate Practicum - Credits: 3
This 3 credit course will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for children. PREREQUISITE: 10307174 ECE: Introductory Practicum.

10307179
ECE: Child Development - Credits: 3
The 3-credit course examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

10307187
ECE: Children with Differing Abilities - Credits: 3
This 3-credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; promote inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; examine the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; identify community and professional resources; interpret an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; examine strategies for cultivating partnerships with families who have children with developmental differences.

10307188
ECE: Guiding Children's Behavior - Credits: 3
This 3-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identity strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the "24 hour Wisconsin" Pyramid Model training.

10307195
ECE: Family & Community Relationships - Credits: 3
In this 3-credit course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity, cultural responsiveness, and anti-bias perspectives when working with families and community; analyze contemporary family patterns and trends; identify strategies to strengthen and support families; explore effective communication strategies;discover strategies for developing respectful and reciprocal relationships with families; analyze strategies to promote family engagement in early childhood education programs; explore a variety of formats for meeting with families in their contexts; advocate for children and families; and explore community resources that provide a range of services for children and families.

10307199
ECE: Advanced Practicum - Credits: 3
In this final 3-credit practicum course you will demonstrate competence in supporting child development through observation, assessment and implementation of teaching strategies as you work in and learn about and apply the course competencies in an actual early childhood setting. You will demonstrate a high level of skill in fostering relationships with children, families and early childhood professionals, and use skill learned in a lead teacher role to develop a career plan to transition from student to early childhood education professional. PREREQUISITE: 10307174 ECE: Introductory Practicum, 10307175 ECE: Preschool Practicum and 1030777 ECE: Intermediate Practicum.

E-Connect - Child Care Services

31-307-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Online (On Site and/or Online + Community-Based Student Teaching)

Program Overview

E-Connect-Child Care Services is an innovative Early Childhood Education one-year technical diploma that incorporates the first year of the Early Childhood Education associate degree with Preschool Education Professional (The Registry Preschool Credential) coursework. Choose from online or face-to-face courses, or mix and match. This coursework, combined with community-based student teaching, prepares you to work as a teacher or caregiver in an early childhood setting. As a student, you'll take a variety of courses related to early childhood development, curriculum, behavior guidance, and working with families to prepare you for success in this high-demand field. Graduates of this technical diploma will be recognized as Wisconsin Registry Career Level 11.

Special Features

- Earn an E-Connect - Child Care Services technical diploma in one year through On Site, Online and Online Live (synchronous) classes - mix and match. .
- Meets "Year One" technical studies coursework required to obtain the Early Childhood Education associate degree with seamless opportunities for degree completion.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Background Check Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

- Submit Background Check information and fee
- Have an acceptable Wisconsin Caregiver Background Check and/or Minnesota Caregiver Background Check, as applicable
  - Information from the Caregiver Background Check may affect ability to secure fieldwork placement and the ability to find employment after graduation
- Complete Staff Health Report - Child Care Provider form (physical form)
- COVID vaccination---highly recommended

  NOTE: Northwood Technical College cannot guarantee practicum placement or ability to progress in the program if a student is not able to meet the practicum site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other practicum requirements required by the practicum site. Northwood Technical College cannot guarantee practicum placement if the practicum site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the practicum start date.

There are two practicum experiences required in the E-Connect - Child Care Services program. ECE: Introductory Practicum requires a minimum of 64 hours of off-campus field experience and ECE: Preschool Practicum requires a minimum of 128 hours of off-campus field experience. Class contact time is also required as part of the practicum experience.

Program Outcomes

E-Connect - Child Care Services graduates will be able to:

- Relate knowledge of child development to practice
- Create relationships with children, family, and the community
- Apply observation, documentation, and assessment strategies
- Implement developmentally appropriate teaching and learning activities
- Demonstrate professionalism
- Follow health, safety, and nutrition practices

Career Outlook

Typical positions available after graduation include:

- Child Care Teacher
- Child Care Assistant Teacher
- Family Child Care Provider
- Infant or Toddler Caregiver
- Au Pair/Nanny
- Early Childhood Special Needs Assistant
- Public School Teacher Aide/Assistant

Career Pathways

The E-Connect - Child Care Services program includes the following pathway option (page 221):

- Group Child Care Essentials
- Preschool Education Professional (The Registry Preschool Credential)

E-Connect - Child Care Services is also a pathway into the following programs:

- Early Childhood Education
- E-CHiLD

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10307108	ECE: Early Language and Literacy	3 cr.
10307110	ECE: Social Studies, Art, & Music	3 cr.
10307148	ECE: Foundations of Early Childhood Education	3 cr.
10307151	ECE: Infant & Toddler Development	3 cr.
10307167	ECE: Health, Safety, & Nutrition	3 cr.
10307174	ECE: Introductory Practicum*+	3 cr.
10307175	ECE: Preschool Practicum*#+	3 cr.
10307179	ECE: Child Development	3 cr.
10307188	ECE: Guiding Children's Behavior	3 cr.
TOTAL PROGRAM REQUIREMENTS		**27 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
# An Experiential Portfolio and/or Challenge Exam cannot be used as credit for prior learning for this course
+You must earn a 2.0 or better in this course

Professional Licensure and/or Certification Information

Northwood Tech's E-Connect - Child Care Services Technical Diploma is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Northwood Tech offers a wide array of credit-based early childhood education courses, credentials, and degree options that align with the Youngstar requirements. For more information, go to **www.NorthwoodTech.edu/ece**.

http://wisconsinearlychildhood.org/programs/teach/

10307108
ECE: Early Language and Literacy - Credits: 3
This course explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

10307110
ECE: Social Studies, Art, & Music - Credits: 3
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, and movement (SSAMM).

10307148
ECE: Foundations of Early Childhood Education - Credits: 3
This 3-credit course introduces you to the early childhood profession. Course competencies include: explore the concepts of diversity, cultural responsiveness, and anti-bias as it relates to early childhood education, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings,identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, explore early childhood curriculum models and examine the critical role of play as it relates to developmentally appropriate practice.

10307151
ECE: Infant & Toddler Development - Credits: 3
In this 3-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

10307167
ECE: Health, Safety, & Nutrition - Credits: 3
This 3-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives, examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a healthy early childhood environment, plan nutritionally sound menus, examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies, describe strategies to prevent the occurrence of Abusive Head Trauma (AHT) formerly known as Shaken Baby Syndrome (SBS), incorporate health, safety, and nutrition concepts into the children's curriculum.

10307174
ECE: Introductory Practicum - Credits: 3
In this 3-credit practicum course you will learn about and apply the course competencies in an actual early childhood setting. You will explore the standards for quality early childhood education, demonstrate professional behaviors, and meet the requirements for training in the Wisconsin Model Early Learning Standards. PREREQUISITE: Admission to Early Childhood Education/ E-CHiLD, or E-Connect-Child Care Services or Dean approval.

10307175
ECE: Preschool Practicum - Credits: 3
This course will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers. PREREQUISITE: 10307174 ECE: Introductory Practicum. Prerequisite override required for students in the Preschool Education Professional (The Registry Preschool Credential).

10307179
ECE: Child Development - Credits: 3
The 3-credit course examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

10307188
ECE: Guiding Children's Behavior - Credits: 3
This 3-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identity strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the "24 hour Wisconsin" Pyramid Model training.

Electrical Construction Apprentice

50-413-3 Apprenticeship

Campuses: Rice Lake

*Combination of Online, On Site and Hybrid instruction

Program Overview

The Electrical Construction Apprentice is an earn-while-you-learn program of on-the-job training combined with related classroom instruction. During the apprenticeship, the apprentice works on-the-job learning the electrical construction trade under the supervision of qualified journeymen. Apprentices are trained under a written training agreement called an indenture. While indentured, the employer agrees to teach the student the skills of the trade and the apprentice agrees to learn the skills involved.

As an Electrical Construction Apprentice, you will learn to install, maintain, and repair electrical wiring, equipment, and fixtures; ensure that work is in accordance with relevant codes; and may install or service street lights, intercom systems, or electrical control systems.

Special Features

- Four year program
- 8,000 hours on-the-job training
- 576 hours of paid related instruction
- 104 hours of unpaid related instruction on own time
- First six months is the probationary period
- A state journeyperson examination at the completion of the apprenticeship
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last year of the apprenticeship.

For more information on apprenticeships, see page 25

Qualifications required by the Bureau of Apprenticeship Standards

- The minimum age of an apprentice is established to be 17 years of age. (Applicant must provide evidence of minimum age respecting any applicable State Laws or regulations.)
- All apprentices must be high school graduates, from a state accredited or state approved school, have a GED or High School Equivalency Certificate. High school transcript or proof of equivalency must be provided to the Committee on request.
  WI Statute 118.15 (4), states that "instruction in a home-based private educational program that meets all of the criteria under s. 118.165 (1) may be substituted for attendance at a public or private school." Providers of the instruction must file form PI-1206 "Home-Based Private Educational Program" annually with the Department of Public Instruction (DPI). This form may be used as proof of instruction.
- Applicants will be physically capable of performing the essential functions of the Construction Electrician apprenticeship program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.
- All applicants must take one of the following assessments and satisfy the minimum scores: ACT: 16 Reading and 15 Math. Next Gen Accuplacer: 244 Reading, 235 Arithmetic and 237 Algebra. Scores will be accepted 5 years from the test date.
- The apprentice applicant must have the ability to get to and from school and work. Individual employers may require a valid driver's license at the time of placement as an apprentice.
- The apprentice applicant must have satisfactorily (with a passing grade of "C" or better) completed one year of high school algebra or its equivalency.
  - Equivalent courses are defined as: one (1) full year of high school Geometry, Algebra II, Trigonometry, or Calculus that are satisfactorily completed with a passing grade of "C", or one (1) post high school Algebra, Geometry, Algebra II, Trigonometry, Calculus course with a passing grade of "C".
  - If an applicant does not meet the math requirements as specified in the above section, the applicant will be required to take and satisfactorily pass the 32804325 Applied Technical Math 1 course through Northwood Technical College with a "C" or better before being registered as an apprentice.
  - To qualify as an equivalent, each course is required to be satisfactorily completed in its entirety, and each course will be considered separately.
- Must be approved by the Northwest Electrical Committee prior to being admitted to this apprenticeship.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To become an apprentice in the state of Wisconsin, one must first be indentured by the State Bureau of Apprenticeships Standards (BAS).

- Contact an employer on your own.
- Once you have an employer/sponsor, contact the Bureau of Apprenticeship Standards, to initiate the application process between you and your employer.

Admission Requirements

- Complete the paper Northwood Tech application form

  NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to the Bureau of Apprenticeship Standards (Eau Claire Office).
  The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprecticeship Training Representative, at long.vang@dwd.wisconsin.org

- Complete Accuplacer Next Gen entrance assessment (individuals with valid ACT or Classic Accuplacer scores from within the last 5 years do not have to test) (academic admission requirements apply – see page 30 for more information)

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Electrical Construction Apprentice graduates will be able to:

- Apply AC and DC theory
- Apply electrical code requirements
- Apply operational principles to transformer installations
- Examine electric motor theory and applications
- Apply electric motor control theory and applications
- Analyze variable speed drives
- Interpret electrical and equipment drawings
- Communicate trade and occupational related information effectively

Related Program

- Technical Studies - Journeyworker (page 200)

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50413540	Electrician I	2 cr.
50413541	Electrician II	2 cr.
50413542	Electrician III	2 cr.
50413543	Electrician IV	2 cr.
50413544	Electrician V	2 cr.
50413545	Electrician VI	2 cr.
50413546	Electrician VII	2 cr.
50413547	Electrician VIII	2 cr.
PROGRAM REQUIREMENTS		**16 cr.**

Professional Licensure and/or Certification Information

Northwood Tech's Electrical Construction Apprenticeship meets the requirements of the Bureau of Apprenticeship Standards in Wisconsin. Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure in states other than Wisconsin should contact the appropriate apprenticeship bureau or licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

50413540
Electrician I - Credits: 2
Course explores electrical theories and DC circuits and applies those theories to construction related situations. Apprentices will review energy sources, electrical devices, current, voltage and resistance. Course covers how current, voltage, and power relate in various DC circuits. Hands-on labs will reinforce applications of concepts to developing trade skills.

50413541
Electrician II - Credits: 2
Course explores electrical theories and AC circuits and applies those theories to trade related situations. Concepts including reactance, vectors, and capacitance will be introduced. Apprentices will apply related concepts to various AC circuits. Hands- on labs will reinforce applications of concepts and help develop trade skills.

50413542
Electrician III - Credits: 2
Apprentices will continue learning about AC theory and electrical safety related work practices. The course will continue to examine transformers and apply principles to various installations and situations. Safety requirements related to rigging and signaling are included in this course.

50413543
Electrician IV - Credits: 2
Course continues the orientation to the trade. Apprentices will also examine conductor sizing and ampacities, working with branch circuits, services, devices, and assemblies. Electrical applications and NEC requirements will be covered. Additional safety related work practices associated with OSHA, NFPA, and job site hazards are included in the course. Blueprint reading and use of test instruments are introduced.

50413544
Electrician V - Credits: 2
Apprentices will learn about transformers and continue examining various electrical codes and practices related to the trade.

50413545
Electrician VI - Credits: 2
Conduit fabrication and related trade skills are included in this course. Trade math including fractions, decimals, and geometry will be applied to various situations. Offsets, bends, saddles and more fabrication techniques will be examined. Use of hand and power equipment will be explored. Hands-on lab projects will build skills required by electricians on a variety of job sites.

50413546
Electrician VII - Credits: 2
Apprentices learn about motors and generators in this course. Code and safety practices are reviewed. Code calculations help develop trade skills and apply concepts to job situations. Blueprint reading skills are applied to industrial applications. Lightning concepts are introduced.

50413547
Electrician VIII - Credits:
Course examines basic principles and concepts involved in motor controls. Control diagrams, and electrical theories related to motor controls are covered. Apprentices are introduced to motor control devices and components including electromechanical and solid state equipment. Safety requirements are identified and applied to various situations. NEC code calculations are discussed.

Emergency Medical Technician

30-531-3 Technical Diploma (less than one-year)

Campus: Ashland*, New Richmond*, Rice Lake*, Superior*

*Combination of On Site and Online Live instruction

Program Overview

Emergency Medical Technicians are the crucial link in the healthcare system. Graduates of the EMT program must complete the National Registry of Emergency Medical Technicians Exam for licensing. If successful, students will be eligible to apply for licensure as an EMT.

Graduates will know how to respond quickly to various life threatening emergencies. Students must be 18-years-old for licensing and will also be required to complete 10 patient contacts after obtaining a Training Center Training Permit. Students who successfully complete the program, with a program plan GPA of 2.0 or better, will be eligible to take the National Registry of EMT's cognitive and psychomotor examinations for Emergency Medical Technician (EMT) level of certification.

Special Features

Emergency Medical Technician (EMT) training is offered at various off-campus locations for your convenience.

On-site skills labs will be scheduled Wednesdays and Saturdays at various locations.

Admission Requirements

- Complete Online application form

Program-Specific Requirements

- Be at least 17 years old
- Attend a mandatory orientation session scheduled prior to start of class
- Pay fee and have acceptable results based on the Wisconsin Criminal History Record Check, Wisconsin Caregiver Background Check, Minnesota Caregiver Background Check (if applicable), and/or other states if applicable
  -Information from the Caregiver Background Check may affect ability to obtain Training Permit from the State of Wisconsin
- Provide current immunization history and demonstrate negative status for tuberculosis (Tb) by the first day of class
  –Decision to not receive vaccinations may limit ability to obtain clinical placement based upon meeting site placement requirements
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Submit Background Information Disclosure (BID) Statement
- Review and sign EMT Confidentiality Statement of Understanding Form

NOTE: Students will be required to complete the mandatory 47531437 BLS Basic Life Support or equivalent three weeks after the start of the program (BLS Basic Life Support is scheduled within the program).

Program Outcomes

The Emergency Medical Technician program is approved by the Wisconsin Division of Health Services because it uses the current National Emergency Medical Services Education Standards. Graduates will be able to:

- Prepare for incident response and EMS operations
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care
- Demonstrate EMT skills associated with established standards and procedures for a variety of patient encounters
- Communicate effectively with others
- Demonstrate professional behavior
- Meet state competencies for EMT certification

Career Outlook

Emergency Medical Technicians are the crucial link in the healthcare system. Graduates of the EMT program must complete the National Registry of Emergency Medical Technicians Exam for licensing. If successful, graduates will be eligible to apply for licensure as an:

- EMT

Related Programs

- EMT - Paramedic
- Paramedic Technician
- Advanced EMT

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Course		
30531330	Emergency Medical Technician	5 cr.
PROGRAM REQUIREMENTS		**5 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Note: In order to successfully complete the program, you must complete the clinical portion of the class, which includes 10 documented patient contacts

Professional Licensure and/or Certification Information

Northwood Tech's EMT Technical Diploma is designed to prepare students to obtain the required licensure to be employed/ practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets the requirements for preparation, examinations, or licensure for other states. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

30531330
Emergency Medical Technician - Credits: 5
This course prepares students for all aspects of emergency medical care, both medical and trauma situations, sanctioned by the Wisconsin Division of Health, at the basic level. Following the most current Wisconsin Revision of the National Standard Curriculum, this course includes didactic and practical skill information in the following areas: legal aspects, anatomy and physiology, patient assessment, critical thinking skills, airway adjuncts, fractures and dislocations, spinal injuries, soft tissue wounds, pharmacology, stroke, cardiac, diabetic, respiratory, altered mental status, pediatric, geriatric, ambulance operations, and triage. Successful completion of this course prepares the learner for the National Registry of EMT's cognitive and psychomotor examinations for Emergency Medical Technician (EMT) level of certification. PREREQUISITE: Admission to the program.

Emergency Medical Technician - Paramedic

31-531-1 Technical Diploma **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*

*Combination of On Site and Online Live instruction

Program Overview

The 16 - month Emergency Medical Technician - Paramedic (EMT - Paramedic) program is identical to the 531 coursework in the Paramedic Technician associate degree program. The program offers students the opportunity to further their professional EMS careers. Instruction is based upon the U.S. DOT Administration/Wisconsin Bureau of Local Health Support and EMS Curriculum - Paramedic Technician Curriculum. Students are prepared with the knowledge and skills to work competently as an EMT - Paramedic. The program consists of classroom lectures, practical skills labs, laboratory simulations, and hospital and pre-hospital clinical experiences. Certifications in Advanced Cardiac Life Support and Pediatric Advanced Life Support are included, as well as neonatal advanced life support competencies. Students who successfully complete the program, with a grade point of 2.0 or better in all required courses, will be eligible to take the National Registry of EMT's cognitive and psychomotor examinations for Paramedic level of certification.

Students completing the 16 - month EMT - Paramedic program have the option of returning to complete the associate degree program by completing all of the General Studies coursework outlined on Page 181.

The Emergency Medical Technician - Paramedic program is accredited by the Commission on Accreditation of Allied Health Programs (www.caahep.org) upon recommendation of the Committee on Accreditation of Education Programs for the Emergency Medical Services Professions (CoAEMSP). This will enable graduates to take the Wisconsin Paramedic licensing examinations upon successful completion of all portions of the technical studies courses.

Special Features

- Core lecture coursework will be offered via Online Live on two evenings per week to all campus locations.
- On site skills labs will be scheduled every other Saturday, and select Fridays, at the Rice Lake Campus (per course schedule)
- The EMT - Paramedic program will be scheduled over 16 months, which includes clinicals over the summer term.

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final transcript with confer date
- Provide proof of current State of Wisconsin EMT license with expiration date
- Review and sign EMT Proof of Licensure Disclosure
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

- Attend a mandatory program orientation session
- Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb) by the first day of class
  – Decision to not receive vaccinations may limit ability to obtain clinical placement based upon meeting site placement requirements
- Pay fee and have acceptable results based on the Wisconsin Criminal History Record Check, Wisconsin Caregiver Background Check, Minnesota Caregiver Background Check (if applicable), and/or other states, if applicable
  -Information from the Caregiver Background Check may affect ability to obtain to secure clinical
- Review and sign EMT - Paramedic Confidentiality Statement of Understanding Form
- Submit signed Syllabi Form, Background Information Disclosure (BID) Statement, and a Student ID Form
- Possess current certification of "BLS Basic Life Support" or equivalent
  -Certification must be active through the completion of the program

Program Outcomes

EMT - Paramedic graduates will be able to:

- Prepare for incident response and EMS operations
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care
- Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters
- Communicate effectively with others
- Demonstrate professional behavior
- Meet state and national competencies listed for paramedic certification(s)

Career Outlook

Graduates of the program will be ready to start their career as paramedic technicians in a variety of healthcare settings including:

- Ambulance services
- Dispatch centers
- First responder units
- Hospitals/Emergency Departments
- Industrial Safety Departments
- Rescue squads
- Urgent care facilities

With further education, advancement potential may include:

- Critical Care Transport Paramedic
- Ambulance Service Training Coordinator
- EMS Shift Supervisor
- EMS Instructor
- Ambulance Service Manager
- Flight Paramedic

Career Pathways

The EMT-Paramedic program is a pathway into the following program (page 240):

- Paramedic Technician

Related Programs

- Advanced EMT
- Emergency Medical Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10531911	EMS Fundamentals*	2 cr.
10531912	Paramedic Medical Principles*	4 cr.
10531913	Adv. Patient Assessment Principles*	3 cr.
10531914	Adv. Pre-hospital Pharmacology*	3 cr.
10531915	Paramedic Respiratory Management*	2 cr.
10531916	Paramedic Cardiology*	4 cr.
10531917	Paramedic Clinical/Field 1#	3 cr.
10531918	Advanced Emergency Resuscitation*	1 cr.
10531919	Paramedic Medical Emergencies*	4 cr.
10531920	Paramedic Trauma*	3 cr.
10531921	Special Patient Populations*	3 cr.
10531922	EMS Operations*	1 cr.
10531923	Paramedic Capstone*	1 cr.
10531924	Paramedic Clinical/Field 2*#	4 cr.
TOTAL PROGRAM REQUIREMENTS		**38 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

\# This course will be offered in various regional hospitals, clinical settings, and/or ambulance services

You must earn a grade point of 2.0 or better in all required courses.

Professional Licensure and/or Certification Information

Northwood Tech's EMT Paramedic Technical Diploma is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets the requirements for preparation, examinations, or licensure for other states. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

10531911
EMS Fundamentals - Credits: 2
This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students will obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations will foster the development of effective written and oral communications with colleagues and other health care professionals. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission.

10531912
Paramedic Medical Principles - Credits: 4
This course addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing the paramedic students to the topics of shock, immunology, and bleeding. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission.

10531913
Adv. Patient Assessment Principles - Credits: 3
This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, the students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission. COREQUISITE: 10531912 Paramedic Medical Principles.

10531914
Adv. Pre-hospital Pharmacology - Credits: 3
This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission.

10531915
Paramedic Respiratory Management - Credits: 2
This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531914 Advanced Pre-hospital Pharmacology.

10531916
Paramedic Cardiology - Credits: 4
This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531915 Paramedic Respiratory Management.

10531917
Paramedic Clinical/Field 1 - Credits: 3
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Student may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission, 10531918 Advanced Emergency Resuscitation and 10531921 Special Patient Populations.

10531918
Advanced Emergency Resuscitation - Credits: 1
By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and 10531916 Paramedic Cardiology.

10531919
Paramedic Medical Emergencies - Credits: 4
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531918 Advanced Emergency Resuscitation.

10531920
Paramedic Trauma - Credits: 3
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531913 Advanced Patient Assessment Principles.

10531921
Special Patient Populations - Credits: 3
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma are also included within this course. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531913 Advanced Patient Assessment Principles.

10531922
EMS Operations - Credits: 1
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and 10531921 Special Patient Populations.

10531923
Paramedic Capstone - Credits: 1
This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical skills attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531922 EMS Operations.

10531924
Paramedic Clinical/Field 2 - Credits: 4
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical compentency requirements at the paramedic level as defined by WI DHS EMS. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and 10531917 Paramedic Clinical/Field 1.

Farm Operation

31-080-4 Technical Diploma **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Center: Balsam Lake*
*Combination of Hybrid and On Site instruction

Program Overview

The Farm Operation program includes courses in livestock management and nutrition, crop and soil management, commodities and marketing, emerging trends in agriculture and farm records and analysis. This program is designed to give students the critical thinking skills necessary for profitable decision making. The Farm Operation Technical Diploma will give you both classroom and in the field instruction.

Special Features

Evening courses will be available for individuals needing to complete continuing education requirements for FSA loans.

Program available part time or over 2 - 3 years.

Labs will be on Fridays at either the Home Campus or On - Farm (at regional farms and test plots).

Inquire

For more information on this program or schedule of courses, contact: Julie Wadzinski, instructor at Julie.Wadzinski@Northwood Tech.edu or 715.788.7064.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Farm Operation graduates will be able to:

- Utilize agronomic resources for optimal farm production
- Evaluate livestock management plans
- Plan for operation and maintenance of farm facilities and equipment
- Create a farm business plan
- Apply marketing principles to agricultural enterprises

Career Outlook

Typical positions available after graduation include:

- CSA Owner
- Organic Farmer
- Farm Owner
- Farm Manager/Operator
- Farm/Field Crop Manager
- Livestock Farmer
- Breeder
- Farm Worker
- Dairy Laborer
- Dairy Herdsperson

Career Pathways

The Farm Operation program includes the following pathway options (page 222):

- Agricultural Business Fundamentals
- Crop Production
- Livestock Production

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31094343	Farm Commodities	2 cr.
31080370	Operating the Farm Business	3 cr.
31080371	Soil Management	3 cr.
31080372	Crop Management	3 cr.
31080373	Livestock Nutrition	3 cr.
31080374	Livestock Management	3 cr.
31080375	Farm Records and Analysis	3 cr.
31080376	On the Farm 1	2 cr.
31080377	On the Farm 2	2 cr.
31080378	Emerging Trends in Agriculture	3 cr.
PROGRAM REQUIREMENTS		**27 cr.**

31094343
Farm Commodities - Credits: 2
This course is designed to introduce students to the purpose, operation, and use of futures and options in managing commodity price risks. The objectives of the course are to understand commodity marketing, futures contracts, options contracts, basis, hedging and speculating strategies as part of a successful commodity risk management program. Students will be introduced to fundamental and technical analysis techniques.

31080370
Operating the Farm Business - Credits: 3
This course will help the student learn many items involved with running a modern farm. These skills include but are not limited to record keeping, selecting proper insurance for the farm, analyzing financial performance, identifying credit needs and sources, planning for crops, and planning for the feeding of livestock.

31080371
Soil Management - Credits: 3
Soil Management is important to the productivity and profitability of a farmer. The farmer is a steward of the land and an environmentalist. The farmer must take care of the soil or he will not be a farmer for long! The student in this class will learn how to prepare a land use plan, collect and interpret soil samples results, develop a plan for fertilizer use on crops, develop a plan for storage and use of manure, analyze new farm issues and practices to determine future use, evaluate tillage equipment and methods, and to practice farm and environmental safety.

31080372
Crop Management - Credits: 3
This course will help the student learn many items involved with agricultural crop production. These skills include but are not limited to management practices, pest control, harvesting options and practices, economics, planting practices, seed and variety selection, etc.

31080373
Livestock Nutrition - Credits: 3
The Livestock Nutrition course will instruct the student in the following areas: anatomy and physiology of livestock; nutrient requirements for calves, heifers, and cows; ration balancing for calves, heifers, lactating cows, and dry cows; determine livestock feed needs; evaluate by-product feeds and feed additives; low input livestock feeding; metabolic disorders; and current issues in agriculture. Individualized instruction will be held at the student's on-the-job work location. The class also involves credit for on-the-job experience.

31080374
Livestock Management - Credits: 3
Animal agriculture has changed dramatically in the past decade and will continue to change at an even more rapid rate in the future. With advanced technology, animals have been cloned from tissue cells other than the gametes. This may allow us to produce animal products other than the traditional milk, meat, and fiber of the past. Along with positive changes, we have new animal diseases, concerns for the environment, human health, and these things are happening in a very volatile, economic climate. This course will help you analyze the current situation and make plans to take advantage of the changes in animal agriculture brought about by technological advances. Only by taking advantage of this change will we be able to survive economically in a world market.

31080375
Farm Records and Analysis - Credits: 3
This course emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. Includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business and finance strategy to meet the learner's needs. Production and financial decisions will be made based on the learner's farm business analysis. All competencies will be assessed using the learner's farm or with simulations established by the instructor.

31080376
On the Farm 1 - Credits: 2
In this course, students will enhance their knowledge with on farm practice of soil management strategies, crop management practices, risk management assessment, and analyzing farm records.

31080377
On the Farm 2 - Credits: 2
In this course, students will enhance their knowledge with on farm practice of Livestock management records, interpreting rations and feed analysis, understanding emerging trends in agriculture and analyzing farm records

31080378
Emerging Trends in Agriculture - Credits: 3
In this course, student will learn about the technological advances in production agricultural, relevant policy changes in legislation, consumer trends and new niche ventures. The production technology section will focus on data analysis and management from multiple sources including: robotic milkers, activity monitors, rumination meters, precision feeding, precision planting and harvesting data, satellite imagery and soil sampling.

Financial Services (Finance)

10-114-2 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, and On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

In the Financial Services program, you will learn how to manage your personal finances as well as business finances. Imagine helping others get out of debt, save for retirement or increase profits and net worth for your business. If you have a passion for helping yourself and others succeed, then the financial services program is the right choice for you.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Financial Services graduates will be able to:

- Apply Time Value of Money Concepts
- Evaluate Financial Data
- Assess Financial Investments
- Evaluate Insurance Concepts
- Apply Accounting Principles
- Evaluate Financial Markets

Career Outlook

Typical positions available after graduation include:

- Business Manager or Owner
- Customer Service Representative
- Loan Officer or Personal Banker
- Sales or Sales Manager
- Financial Analyst
- Investment Advisor
- Insurance Sales or Broker
- Real Estate Sales or Broker
- Stockbroker
- Accountant/Bookkeeper

Career Pathway

The Financial Services program includes the following pathway option (page 223):

- Financial Services Customer Representative

Related Programs

- Accounting
- Business Managment

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101101	Financial Accounting 1	4 cr.
10101103	Financial Accounting 2*	4 cr.
10101138	Budgeting and Cost Control*	2 cr.
10103106	MS PowerPoint	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10104102	Marketing Principles	3 cr.
10104104	Selling Principles	3 cr.
10105125	Business Law	3 cr.
10114103	Money and Banking	3 cr.
10114107	Principles of Finance	3 cr.
10114125	Personal Finance	3 cr.
10114150	Investments	3 cr.
10114192	Principles of Insurance	3 cr.
10196189	Team Building and Problem Solving	3 cr.
10196191	Supervision	3 cr.
10890116	Job Quest	1 cr.
Technical Studies Total		45 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech or	
10801196	Oral/Interpersonal Communication	3 cr.
10804123	Math with Business Applications	3 cr.
10809195	Economics	3 cr.
10809198	Introduction to Psychology or	
10809188	Developmental Psychology	3 cr.
General Studies Total		15 cr.
PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10101103
Financial Accounting 2 - Credits: 4
Students will be introduced to corporate accounting. Students will have an understanding of corporate transactions with an emphasis on stocks and bonds. The student will analyze financial statements including the statement of cash flows. Managerial accounting is also introduced in this class. PREREQUISITE: 10101101 Financial Accounting 1.

10101138
Budgeting and Cost Control - Credits: 2
By using the tools and techniques learned in the class, students will understand how to use financial information to manage a business, make better financial decisions, increase business profitability, and improve cash flow. With a detailed review of what the numbers in the financial statements represent and how managers and owners use that information to be more successful in controlling and growing their business operations, students will learn how to use financial information to build an effective and realistic budget that can be used to control costs, improve profits and gain a competitive advantage. COREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10104102
Marketing Principles - Credits: 3
This course focuses on the marketing process as it relates to the operation of a business enterprise. The intent is to provide students with an understanding of how the marketing function fits within the overall structure of the organization. Special attention is given to the role and significance of evaluating customer needs, pricing, distribution, and promotion of products and services.

10104104
Selling Principles - Credits: 3
This introductory course is designed to acquaint the student with the principles of selling and applications to the marketing of goods and services. Special emphasis is given to developing the selling process. Included are customer relations, sales psychology, steps to successful presentation, closing techniques, and sales motivation.

10105125
Business Law - Credits: 3
Business Law provides the student with a working knowledge of the legal system, business ethics, and essentials of contracts. Students gain knowledge in logical and analytical thinking, and are encouraged to challenge legal issues and defend their point of view.

10114103
Money and Banking - Credits: 3
Money and Banking introduces students to money and the financial system, interest rates, financial institutions, and the Federal Reserve.

10114107
Principles of Finance - Credits: 3
The Principles of Finance course concentrates its study on the financial management of business. Students analyze profitability, cash flow, long-term investment decisions, long-term financing decisions, short-term working capital management, mergers, acquisitions, and business failure.

10114125
Personal Finance - Credits: 3
Personal Finance introduces students to money management, taxes, financial services, credit, real estate, insurance, stocks, bonds, mutual funds, retirement planning, and estate planning.

10114150
Investments - Credits: 3
Investments introduces students to stock and bond valuation models, options, futures, future options, international investing, and the spot market. In addition, the student will learn about various investment careers and the various licensing requirements, regulations, and laws that impact the investment community.

10114192
Principles of Insurance - Credits: 3
Principles of Insurance introduces students to insurance contracts, legal principles, and utilizing insurance as a risk management tool using automotive, homeowners, life, health, and commercial insurance..

10196189
Team Building and Problem Solving - Credits: 3
In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, evaluation, and documentation.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

Financial Services Customer Representative

30-114-1 Technical Diploma (less than one-year)

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, and On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

Topics studied will include credit cards, student loans, budgeting, saving, debt avoidance, debt reduction, negotiating deals, taxes, retirement, investing, buying a car, buying a house, planning or big purchases and insurance. Upon completion of the requirements of the program, you will have an understanding of where money goes and strategies for building financial security and wealth.

Admission Requirement

- Complete Online application form

Program Outcomes

Financial Services Customer Representative graduates will be able to:

- Create reports
- Analyze financial data

Career Outlook

Typical positions available after graduation include:

- Bank Teller
- Customer Service Associate
- Member Services Representative
- Cashier
- Sales Associate
- Loan Analyst
- Loan Processor

Career Pathway

The Financial Services Representative is a pathway into the following program (page 223):

- Financial Services

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101101	Financial Accounting 1	4 cr.
10103106	MS PowerPoint	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10114107	Principles of Finance	3 cr.
10114125	Personal Finance	3 cr.
PROGRAM REQUIREMENTS		**14 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10114107
Principles of Finance - Credits: 3
The Principles of Finance course concentrates its study on the financial management of business. Students analyze profitability, cash flow, long-term investment decisions, long-term financing decisions, short-term working capital management, mergers, acquisitions, and business failure.

10114125
Personal Finance - Credits: 3
Personal Finance introduces students to money management, taxes, financial services, credit, real estate, insurance, stocks, bonds, mutual funds, retirement planning, and estate planning.

Gerontology - Aging Services Professional

10-544-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online and Your Choice instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

You will acquire comprehensive and interdisciplinary training to prepare you to work with older adults in a variety of positions and in diverse settings such as community, non-profit and government agencies, counseling centers, adult care, memory care, senior centers, home health care, assisted living, long-term care, nursing homes, group homes, hospitals, hospice, and business and industry. This innovative and flexible program blends online and experiential learning with community-based fieldwork and is designed to fit into busy life schedules. You can choose part-time or full-time program options and mix and match coursework.

Special Features

- Flexible course selection and schedules
- 8 week rotating block courses offered in Online and Your Choice evening formats
- Part-time and full-time program options with flexible entry and exit
- Ideal for people entering the job market or choosing to enhance their current careers in service delivery or leadership roles within the gerontology field
- Blend program offerings with Healthcare, Emergency Services, Human Services, or Business Programs

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Background Check Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirement

- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check and/or Minnesota Caregiver Background Check as applicable - Information from the Caregiver Background Check may affect ability to secure fieldwork placement and the ability to find employment after graduation
- COVID vaccination---highly recommended
  NOTE: Northwood Technical College cannot guarantee fieldwork placement or ability to progress in the program if a student is not able to meet the fieldwork site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other fieldwork requirements required by the fieldwork site. Northwood Technical College cannot guarantee fieldwork placement if the fieldwork site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the fieldwork start date.

Program Outcomes

Gerontology - Aging Services Professional graduates will be able to:

- Evaluate the physical, social, psychological, and spiritual aspects of aging throughout the lifespan
- Exhibit ethical and legal practice consistent with a gerontology professional
- Distinguish the role of the gerontology professional in the coordination of service delivery
- Cultivate an age-friendly community

Career Outlook

Gerontology - Aging Services Professional program graduates will be well prepared to use their knowledge, skills and abilities working with older adults in a variety of positions in diverse settings such as:

- Community, Non-Profit and Government Agencies
- Counseling Centers
- Adult Care
- Senior Centers
- Home Health Care and Assisted Living
- Long-term Care, Nursing Homes and Group Homes
- Hospitals
- Hospice
- Business and Industry

Potential Job Titles:

- Aging Services Provider
- Advocacy Specialist
- Geriatric Care Specialist
- Dementia Care Specialist/Provider
- Benefits Coordinator
- Client Navigation Specialist
- Activity/Recreation Coordinator
- Housing/Transportation Specialist
- Program Planner
- Private Service Provider

Career Pathways

The Gerontology - Aging Services Professional program includes the following pathway certificate options (page 224):

- Gerontology for Healthcare Professionals
- Dementia Care

Related Programs

- Nursing-Associate Degree
- Occupational Therapy Assistant
- Paramedic Technician
- EMT-Paramedic
- Human Services Associate
- Criminal Justice Studies
- Nonprofit Leadership
- Medical Assistant
- Nursing Assistant

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10520103	Ethics in Human Services* #	3 cr.
10520112	Family Systems	3 cr.
10544100	Communication of Aging	3 cr.
10544101	Social Gerontology	3 cr.
10544102	Psychological Aspects of Aging	3 cr.
10544104	Physical Aspects of Aging	3 cr.
10544105	Alzheimer's and Dementia	3 cr.
10544106	Healthy Aging	3 cr.
10544107	Death and Dying	3 cr.
10544108	Developing the Gerontology Professional*#	3 cr.
10544112	Gerontology Fieldwork*#	3 cr.
10544110	Programs of Aging Services	3 cr.
10544111	Legal and Financial Issues of Aging	3 cr.
Technical Studies Total		39 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech or	
10801196	Oral/Interpersonal Communication	3 cr.
10806198	Human Biology **or**	
10806177	General Anatomy and Physiology	4 cr.
10809159	Abnormal Psychology*	3 cr.
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		19 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**61 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# Credit for prior learning not applicable for these courses.
You must earn a grade point of 2.0 or better in all 105XXXXX courses.

All students must earn a minimum of 135 hours of fieldwork hours. These hours are completed during 10544112 Gerontology Fieldwork.

10520103
Ethics in Human Services - Credits: 3
This course explores the ethical, legal, and professional issues facing the human services worker. It is designed to teach a process of ethical decision-making and to increase awareness of the complexities in practice. Students are introduced to the current state and federal statutes, regulations, and judicial decisions that govern the professional practice in human services. Standards, code of ethics, clients' rights, and confidentiality are emphasized.

10520112
Family Systems - Credits: 3
This course focuses on issues related to families and family functioning relevant to the human services field. Major areas of focus will include child maltreatment, domestic violence, and addiction, with emphasis on relevant helping skills and services.

10544100
Communication of Aging - Credits: 3
Develop effective communication strategies and supportive interview techniques that enhance rapport and relationships with aging populations. Apply ethical principles, standards and boundaries that acknowledge self-determination.

10544101
Social Gerontology - Credits: 3
Explore aging in respect to social roles and processes. Topics include history of aging, demographics, family relationships, social supports, economics, retirement, loss, poverty and politics of aging.

10544102
Psychological Aspects of Aging - Credits: 3
Recognize how experience and history affect the value and societal expectations of each generation. Understand diversity among older adults including, but not limited to, race; ethnicity; culture; sexual orientation; and physical, cognitive and developmental disabilities.

10544104
Physical Aspects of Aging - Credits: 3
Analyze normal and pathological changes occurring in the aging human body with special emphasis on age-related chronic diseases. Topics addressed include analysis of biological theories of aging, cultural/ ethnic influence on aging pathologies, and other factors impacting the aging process.

10544105
Alzheimer's and Dementia - Credits: 3
Examine the signs, symptoms and stages of Alzheimer's and other forms of dementia and how these diseases affect physiology and brain function. This course focuses on the principles of communicating and providing care to individuals with memory loss and confusion while learning the best practices for dealing with behavior changes, challenges with the activities of daily living, and strategies to assist caregivers.

10544106
Healthy Aging - Credits: 3
Investigate practices that promote healthy aging including nutrition, physical activity, prevention practices, and commonly prescribed medications for the older adult. Emphasis will focus on the "well" elderly population and practices identified to address current aging trends.

10544107
Death and Dying - Credits: 3
Explore societal, cultural, and personal views of death, dying, and bereavement. Examine losses experienced during the course of aging beyond the physical and emotional process of death and dying. Determine strategies for healthy transitions in coping with loss.

10544108
Developing the Gerontology Professional - Credits: 3
Examine the various roles of the aging services professional and the contexts in which they work. Apply relationship building, communication, ethical standards, self-care planning and practices, documentation, and other related skills to case studies and real life situations. Function as an interdisciplinary team member addressing the complex needs of aging adults. PREREQUISITE: 10520103 Ethics in Human Services and successful completion of 15 credits of 105201XX or 105441XX coursework.

10544112
Gerontology Fieldwork - Credits: 3
Examine the scope, values, and principles of the gerontology profession. Coursework introduces the typical roles and duties of aging services professionals. Students assess their own motivations, attitudes, and interests. In addition to the regular classroom hours, observation and fieldwork in a community-based setting working with older adults is required. Students must complete or have on file current, valid Background Information Disclosure (BID) and Caregiver Background Check (Wisconsin and/ or Minnesota) forms, as part of this course. PREREQUISITE: 10544108 Developing the Gerontology Professional and COREQUISITES: Successful completion or co-enrollment in all other core program courses.

10544110
Programs of Aging Services - Credits: 3
Explore the wide spectrum of programs and services available to older adults that address a variety of physical, mental, emotional, social, financial, legal, spiritual, and recreational needs. Examine social policy as it relates to aging and available federal funding for the aging consumer including community resources, eligibility criteria, and how to access and coordinate services. Additional topics include supplementing social networking and enhancing mental health functioning.

10544111
Legal and Financial Issues of Aging - Credits: 3
Analyze legal and financial concepts and structures including Power of Attorney for health care/finance, guardianships, trusts, reallocation of assets, spending down, Medicare/Medicaid benefits, supplemental insurance, Social Security, elder abuse/neglect, financial exploitation, and relevant governmental policies. Apply knowledge through advocacy to benefit aging adults on local, state and federal levels..

Gerontology for Healthcare Professionals

61-544-1 Pathway Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online and Your Choice instruction

Program Overview

You will be able to directly apply your acquired theory, knowledge and practical skills within a variety of professional settings. This pathway certificate is designed to enhance the education and experience of practitioners who work directly with older adults in healthcare and clinical settings, community-based programs, residential facilities, and private or for-profit business and industry.

Special Features

- Offered Fall Only
- Flexible course selection and schedules
- 8-week rotating block courses offered in Online and Your Choice evening formats
- Part-time and full-time program options with flexible entry and exit
- Ideal for people entering the job market or choosing to enhance their current careers in service delivery or leadership roles within the gerontology field
- Blend program offerings with Healthcare, Emergency Services, Human Services, or Business Programs
- This is a unique program in the state

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Gerontology for Healthcare Professionals certificate from the program of choice dropdown list.

Complete application and register for classes:

Registration

Outcomes

The Gerontology for Healthcare Professionals certificate will prepare you to:

- Analyze the physical, social, psychological, and spiritual aspects of aging throughout the lifespan
- Apply ethical and legal practice consistent with a gerontology professional
- Identify the role of the gerontology professional in the connection of service delivery
- Identify strategies to cultivate an age-friendly community

Career Outlook

Upon completion of the Gerontology for Healthcare Professionals certificate you will be well prepared to use your knowledge, skills and abilities to work with older adults in a variety of positions in diverse settings such as:

- Hospitals
- Hospice
- Home Health Care and Assisted Living
- Long-Term Care, Nursing Homes and Group Homes
- Adult Care
- Senior Centers
- Community, Non-Profit and Government Agencies
- Counseling Centers
- Business and Industry

Career Pathway

The Gerontology for Healthcare Professionals program is a pathway into the following program (page 224):

- Gerontology - Aging Services Professional

Related Programs

- Nursing - Associate Degree
- Human Services Associate
- Occupational Therapy Assistant
- Medical Assistant
- Paramedic Technician
- EMT-Paramedic
- Nursing Assistant
- Dementia Care
- Community-Based Residential Facility (CBRF) Caregiver

Curriculum

Number	Course Title	Credits (cr.)
10544101	Social Gerontology	3 cr.
10544105	Alzheimer's and Dementia	3 cr.
10544110	Programs of Aging Services	3 cr.
10544100	Communication of Aging	3 cr.
CERTIFICATE REQUIREMENTS		**12 cr.**

You must earn a grade point of 2.0 or better in all 10544XXX courses.

Course Descriptions

10544101
Social Gerontology - Credits: 3
Explore aging in respect to social roles and processes. Topics include history of aging, demographics, family relationships, social supports, economics, retirement, loss, poverty and politics of aging.

10544105
Alzheimer's and Dementia - Credits: 3
Examine the signs, symptoms and stages of Alzheimer's and other forms of dementia and how these diseases affect physiology and brain function. This course focuses on the principles of communicating and providing care to individuals with memory loss and confusion while learning the best practices for dealing with behavior changes, challenges with the activities of daily living, and strategies to assist caregivers.

10544110
Programs of Aging Services - Credits: 3
Explore the wide spectrum of programs and services available to older adults that address a variety of physical, mental, emotional, social, financial, legal, spiritual, and recreational needs. Examine social policy as it relates to aging and available federal funding for the aging consumer including community resources, eligibility criteria, and how to access and coordinate services.

Additional topics include supplementing social networking and enhancing mental health functioning.

10544100
Communication of Aging - Credits: 3
Develop effective communication strategies and supportive interview techniques that enhance rapport and relationships with aging populations. Apply ethical principles, standards and boundaries that acknowledge self-determination.

Group Child Care Essentials

61-307-6 Pathway Certificate

Campuses: New Richmond, Rice Lake, Superior, Online

Program Overview

As a student in the Group Child Care Essentials certificate, you will gain a better understanding of the knowledge and skills required of a child care teacher. This pathway certificate was developed with two courses from the Wisconsin Technical College System statewide curriculum for the associate degree in Early Childhood Education. Completers of this certificate will meet the Wisconsin Department of Children and Families licensing guidelines for teachers in group child care centers and will be recognized as Wisconsin Registry Career Level 7.

Special Features

- All of the courses ladder into the Preschool Education Professional (The Registry Preschool Credential) Pathway Certificate, E-Connect - Child Care Services Technical Diploma and E-CHiLD / Early Childhood Education Associate Degree programs.
- Training meets requirements for licensed group center lead teacher
- Completers of this pathway certificate will be recognized as Wisconsin Registry Career Level 7

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure

Professional Licensure and/or Certification Information

Northwood Tech's Group Child Care Essentials is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Outcomes

The Group Child Care Essentials pathway certificate will prepare you to:

- Assess the development of preschoool children
- Provide a healthy, safe, and nutritionally sound preschool environment
- Integrate strategies that support diversity and anti-bias perspectives

Career Outlook

Upon completion of this certificate you will be ready for careers in:

- Child Care Centers
- Preschools or Nursery Schools
- Family Child Care Homes

Typical Positions Include:

- Child Care Teacher
- Assistant Child Care Teacher

Career Pathways

The Group Child Care Essentials program is a pathway into the following programs (page 221):

- Early Childhood Education
- E-CHiLD
- E-Connect - Child Care Services
- Preschool Education Professional (The Registry Preschool Credential)

Related Program

- Professional Credential for Infant/Toddlers (Wisconsin)

Curriculum

Number	Course Title	Credits (cr.)
10307167	ECE: Health, Safety, & Nutrition	3 cr.
10307179	ECE: Child Development	3 cr.
TOTAL CERTIFICATE REQUIREMENTS		**6 cr.**

http://wisconsinearlychildhood.org/programs/teach/

Northwood Tech offers a wide array of credit-based early childhood education courses, credentials, and degree options that align with the Youngstar requirements. For more information, go to www.NorthwoodTech.edu/ece.

Course Descriptions

10307167
ECE: Health, Safety, & Nutrition - Credits: 3
This 3-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives, examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a safe early childhood environment, plan nutritionally sound menus, examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies, describe strategies to prevent the occurrence of Abusive Head Trauma (AHT) formerly known as Shaken Baby Syndrome (SBS), incorporate health, safety, and nutrition concepts into the children's curriculum.

10307179
ECE: Child Development - Credits: 3
The 3-credit course examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

Health Information Technology

10-530-1 Associate Degree (two-year) **Financial Aid Eligible**

Campus: Online

Program Overview

A degree in Health Information Technology (HIT) gives graduates the ability to work in healthcare with a focus on managing health information rather than on direct patient interaction. With this degree you will gain competency in medical coding, ensuring the integrity of health information, analyzing data, adhering to legal and regulatory standards, leading a team and quality management. You'll master this content through simulated learning activities and with the use of academic software applications (electronic health records, encoders, etc.).

Special Features

- All courses will be offered online
- The program may be completed in a full-time or part-time format
- Students will attend clinical rotations in the second year (third or fourth semesters) of the program

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Submit Background Check fee
- Have an acceptable National Criminal Background Check and state-specific caregiver background check for where the HIT clinical experience will be completed
- Pass a physical exam, have current immunizations and demonstrate negative status for tuberculosis (Tb)
- COVID vaccination---highly recommended

  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
- Review and sign Health Sciences Confidentiality Statement
- Review and complete the computer skills inventory
- Review Health Information Technology program orientation materials
- Meet with Health Information Technology program advisor to determine program sequencing and completion goals

Program Outcomes

Health Information Technology graduates will be able to:

- Apply data governance principles to ensure the quality of health data
- Apply coding and reimbursement systems
- Model professional behaviors and ethics
- Apply informatics and analytics in data use
- Apply organizational management techniques

Career Outlook

Typical positions available after graduation include:

- Health Information Technician
- HIM Supervisor
- Insurance/Business Specialist

Career Pathway

The Health Information Technology program includes the following pathway option (page 225):

- Medical Coding Specialist

The Health Information Management accreditor of Northwood Technical College is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College's accreditation for the Health Information Technology degree in Health Information Management has been reaffirmed through 2024-2025.

All inquires about the program's accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at 312.235.3255; or by email at info@cahiim.org.

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10501101	Medical Terminology	3 cr.
10501107	Digital Literacy for Healthcare	2 cr.
10530159	Healthcare Revenue Management*	3 cr.
10530161	Health Quality Management*	3 cr.
10530162	Foundations of HIM*	3 cr.
10530163	Healthcare Stats and Analytics*	3 cr.
10530164	Intro to Healthcare Informatics*	3 cr.
10530165	Intermediate Coding*	3 cr.
10530166	HIT Capstone*	1 cr.
10530167	Management of HIM Resources*	3 cr.
10530178	Healthcare Law & Ethics*	2 cr.
10530182	Human Disease for the Health Professions*	3 cr.
10530184	CPT Coding *	3 cr.
10530196	Professional Practice*	3 cr.
10530197	ICD Diagnosis Coding*	3 cr.
10530199	ICD Procedure Coding*	2 cr.
Technical Studies Total		43 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or** 10801198 Speech	3 cr.
10804189	Introductory Statistics*	3 cr.
10806177	General Anatomy and Physiology	4 cr.
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		19 cr.
TOTAL PROGRAM REQUIREMENTS		**62 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required courses.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501107
Digital Literacy for Healthcare - Credits: 2
The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined. Computer skills proficiency developed as a part of this course.

10530159
Healthcare Revenue Management - Credits: 3
Prepares learners to compare and contrast health care payers and evaluate the reimbursement cycle and compliance with regulations. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software. COREQUISITES: 10530162 Foundations of HIM, 10530182 Human Disease for the Health Professions, 10530184 CPT Coding, 10530197 ICD Diagnosis Coding, and 10530199 ICD Procedure Coding.

10530161
Health Quality Management - Credits: 3
Explores the programs and processes used to manage and improve healthcare quality. Addresses regulatory requirements as related to performance measurement, assessment, and improvement, required monitoring activities, risk management and patient safety, utilization management, and medical staff credentialing. Emphasizes the use of critical thinking and data analysis skills in the management and reporting of data. PREREQUISITE: 10530163 Healthcare Stats and Analytics.

10530162
Foundations of HIM - Credits: 3
Introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. PREREQUISITE: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist and COREQUISITE: 10501107 Digital Literacy for Healthcare.

10530163
Healthcare Stats and Analytics - Credits: 3
Explores the management of medical data for statistical purposes focusing on descriptive and inferential statistics including definition, collection, calculation and compilation of numerical data. Examines data analytics, retrieval, presentation and research methodologies. PREREQUISITE: 10530162 Foundations of HIM and 10804189 Introductory Statistics.

10530164
Intro to Healthcare Informatics - Credits: 3
Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in enterprise information management and database architecture design and implementation. PREREQUISITES: 10530162 Foundations of HIM and 10501107 Digital Literacy for Healthcare.

10530165
Intermediate Coding - Credits: 3
Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQUISITES: 10530184 CPT Coding and 10530197 ICD Diagnosis Coding and successful completion of COREQUISITE: 10530199 ICD Procedure Coding is required prior to taking Intermediate Coding.

10530166
HIT Capstone - Credits: 1
Explore technical skills and professional attributes desired for the HIM profession, and conduct activities to assess one's own readiness to enter the health information industry. COREQUISITE: 10530196 Professional Practice.

10530167
Management of HIM Resources - Credits: 3
Examines the principles of management to include planning, organizing, human resource management, directing, and controlling as related to the health information department. PREREQUISITE: 10530162 Foundations of HIM.

10530178
Healthcare Law & Ethics - Credits: 2
Examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed. PREREQUISITE: 10530162 Foundations of HIM.

10530182
Human Disease for the Health Professions - Credits: 3
Prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests and results, and medical treatments and surgical procedures. PREREQUISITE: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist and COREQUISITES: 10501101 Medical Terminology and 10806177 General Anatomy and Physiology.

10530184
CPT Coding - Credits: 3
Prepares learners to assign CPT/HCPCS codes, supported by medical documentation, with entry level proficiency. Learners apply instructional notations, conventions, rules, and official coding guidelines when assigning codes to case studies and actual medical record documentation. COREQUISITES: 10501101 Medical Terminology, 10530182 Human Disease for the Health Professions and 10806177 General Anatomy and Physiology.

10530196
Professional Practice - Credits: 3
Applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. Student may participate in a supervised clinical experience in healthcare facilities. PREREQUISITE: 10530165 Intermediate Coding and COREQUISITES: 10530161 Health Quality Management, 10530167 Management of HIM Resources, and 10530166 HIT Capstone.

10530197
ICD Diagnosis Coding - Credits: 3
Prepares students to assign ICD diagnosis codes supported by medical documentation. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist and COREQUISITES: 10501101 Medical Terminology, 10530182 Human Disease for the Health Professions and 10806177 General Anatomy and Physiology.

10530199
ICD Procedure Coding - Credits: 2
Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITES: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist 10501101 Medical Terminology, and 10806177 General Anatomy and Physiology and COREQUISITE: 10530182 Human Disease for the Health Professions.

Health Office Professional

31-160-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

*Combination of Online, Your Choice or On Site instruction.

Program Overview

The Health Office Professional (HOP) technical diploma combines medical office skills with computer skills to prepare you for employment on the administrative side of healthcare working in physician's offices, clinics, hospitals, nursing homes and other health organizations.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Health Office Professional graduates will be able to:

- Perform routine medical office administrative procedures
- Demonstrate effective workplace communications
- Apply technology skills to business and administrative tasks
- Maintain internal and external relationships
- Model professionalism in a healthcare setting

Career Outlook

Typical positions available after graduation include:

- Medical Office Specialist
- Medical Secretary
- Medical Receptionist
- Hospital Admissions Representative
- Customer Service Representative
- Medical Scheduler
- Health Information Clerk

Career Pathways

The Health Office Professional program includes the following pathway option (page 236):

- Healthcare Receptionist

Health Office Professional is also a pathway into the following program:

- Medical Administrative Professional

Related Programs

- Medical Billing Specialist
- Office Support Specialist

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103147	MS Word B*	1 cr.
10103151	MS Excel A	1 cr.
10106110	Document Formatting	2 cr.
10160135	Introduction to Healthcare Documentation*	3 cr.
10160140	Medical Office Administration*	3 cr.
10160143	Medical Office Procedures and Customer Service	2 cr.
10106146	Proofreading for the Office	3 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10501101	Medical Terminology	3 cr.
Occupational Specific Total		**21 cr.**
Occupational Supportive Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.
10804123	Math with Business Applications	3 cr.
Occupational Supportive Total		9 cr.
PROGRAM REQUIREMENTS		**30 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103147
MS Word B - Credits: 1
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Word software. Students will use templates, building blocks, mail merge, the sort feature, and apply formatting skills to produce quality documents. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365 for Windows. COREQUISITE: 10103146 MS Word A

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10160135
Introduction to Healthcare Documentation - Credits: 3
This course is designed to expand the student's medical vocabulary and develop skill in keyboarding, formatting, editing, storing, and printing medical documents. Emphasis is placed on speed building and accuracy improvement. PREREQUISITES: 10501101 Medical Terminology and 10106110 Document Formatting or 10103146 MS Word A and COREQUISITE: 10103147 MS Word B.

10160140
Medical Office Administration - Credits: 3
Simulates handling patients and employees, applying customer service skills, and the use of computers in a medical/clinical setting. Hands-on experience in scheduling appointments, work in electronic medical records, establishing a fee schedule, and practice management. Utilizes Microsoft Office software, electronic billing software, electronic medical record software, telephone systems, internet, fax and e-mail. PREREQUISITE: 10160143 Medical Office Procedures and Customer Service.

10160143
Medical Office Procedures and Customer Service - Credits: 2 This course develops professional skills and attitudes needed in a medical business environment. Skills developed include an ability to communicate effectively with patients and other medical office staff,manage time effectively, schedule patients, greet patients, use the telephone properly, process mail, apply ergonomics and office safety, and use medical computer software efficiently.

10106146
Proofreading for the Office - Credits: 3
This course provides the learner with techniques used in proofreading office documents from both hard and soft copy (computer screen). Learners will incorporate the use of office reference manuals. This project-based course uses individual and group activities as well as in-class and out-of-class work.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

Healthcare Receptionist

30-160-2 Technical Diploma (less than one-year)

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

*Combination of Online, Your Choice or On Site instruction.

Program Overview

The Healthcare Receptionist short-term diploma prepares students to perform a variety of office support functions within a health care organization. This embedded technical diploma fully ladders into the Health Office Professional technical diploma and the Medical Administrative Professional associate degree.

Admission Requirement

- Complete Online application form

Program Outcomes

Healthcare Receptionist graduates will be able to:

- Perform routine healthcare administrative procedures
- Apply technology skills to business and administrative tasks
- Maintain internal and external relationships
- Model professionalism in a healthcare setting

Career Outlook

Typical positions available after graduation include:

- Patient Services Representative
- Medical Scheduler
- Medical Information Clerk
- Appointment Coordinator
- Patient Access Representative

Career Pathways

The Healthcare Receptionist program is a pathway into the following programs (page 236):

- Medical Administrative Professional
- Health Office Professional

Related Programs

- Medical Billing Specialist
- Office Technology Assistant

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10106110	Document Formatting	2 cr.
10160143	Medical Office Procedures and Customer Service	2 cr.
10106146	Proofreading for the Office	3 cr.
10501101	Medical Terminology	3 cr.
Occupational Specific Total		12 cr.
Occupational Supportive Courses**		
10801196	Oral/Interpersonal Communication	3 cr.
Occupational Supportive Total		3 cr.
TOTAL PROGRAM REQUIREMENTS		**15 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

10103125
MS Outlook- Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10160143
Medical Office Procedures and Customer Service - Credits: 2
This course develops professional skills and attitudes needed in a medical business environment. Skills developed include an ability to communicate effectively with patients and other medical office staff, manage time effectively, schedule patients, greet patients, use the telephone properly, process mail, apply ergonomics and office safety, and use medical computer software efficiently.

10106146
Proofreading for the Office - Credits: 3
This course provides the learner with techniques used in proofreading office documents from both hard and soft copy (computer screen). Learners will incorporate the use of office reference manuals. This project-based course uses individual and group activities as well as in-class and out-of-class work.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)

32-601-1 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: Superior

Program Overview

The program operates out of Northwood Tech's head-of-the-Great Lakes training center, a state-of-the-art facility on Northwood Tech-Superior's campus. Through partnerships with Trane USA, Snap-on Tools, and the National Coalition of Certification Centers (www.nc3.net), Northwood Tech will train you in the areas of electricity, heating, residential air conditioning, refrigeration, geothermal, sheet metal fabrication, direct digital controls (DDC) and commercial HVAC applications. You can leave with industry credentialing in the areas of refrigerant handling safety, tool usage, and control systems. Foundational skills and principles learned in this program prepare you to work in the commercial and residential HVAC/R industry. Periodic site visits with active HVAC/R equipment are incorporated throughout the two year program to enhance student learning. Students also attend several local training seminars, and conferences that feature industry experts so they can stay on top of industry trends, and training. Full-time students can complete the program in four semesters.

Special Feature

The HVAC/R program at Wisconsin Indianhead Technical College has adopted new certification guidelines established by The National Coalition of Certifications (NC3), working with Trane, a leader in the HVAC/R industry.

NC3 was established to address the need for strong industry partnerships with educational institutions in order to develop, implement, and sustain industry-recognized certifications that have strong validation and assessment standards.

NC3 has developed a comprehensive, workforce development program for training and professional certifications. NC3 members are provided with expert consultation – from facility planning, faculty training, and the support necessary for professional certification programs.

HVAC/R Certifications: Students are eligible to take the following Certification Exams:

- ACCA A2L Refrigerant Training
- NC3/Trane: Building Automation Systems (BAS) 1 – Intro to HVAC Systems and Building Controls
- NC3/Snap-On: 575 Multimeter Certification
- NC3: Building Performance Instruments BPI) - Flue Gas Analysis
- NC3: Building Performance Instruments (BPI) - Fluid Integrity
- NC3: Building Performance Instruments (BPI) - Indoor Air Quality
- NC3: Building Performance Instruments (BPI) - Installation & Diagnostics
- NC3: Building Performance Instruments (BPI) - Leak Detection
- NC3: Building Performance Instruments (BPI) - RPM and Vibration Testing
- NC3/Trane: Residential – Air Flow
- NC3/Trane: Residential – Air-to-Air Heat Pumps
- NC3/Trane: Residential – Refrigeration Diagnostics
- NC3/Trane: Residential - Variable Speed Motors
- Technician EPA Section 608 Certification

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

HVAC/R graduates will be able to:

- Install HVAC/R components
- Service HVAC/R systems
- Troubleshoot HVAC/R systems
- Evaluate HVAC/R system designs

Career Outlook

Typical positions available after graduation include:

- Residential HVAC/R Technician
- Commercial HVAC/R Technician
- Industrial HVAC/R Technician
- Mechanical Contractor HVAC/R Technician
- Facilities HVAC/R Technician
- Wholesale Service Representative

With additional education and/or work experience, graduates may find other opportunities for employment:

- Energy Management Technician
- Business Owner HVAC/R
- Practice Engineering of HVAC/R Systems

Career Pathways

The HVAC/R program includes the following pathway options (page 226):

- HVAC Installation Technician
- Refrigeration Essentials

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32150302	Applied IT Basics	1 cr.
32601300	Air Conditioning Fundamentals*#	2 cr.
32601301	Basic Mechanical Fundamentals*#	3 cr.
32601303	Principles of AC/DC*#	3 cr.
32601304	Heating Systems*#	2 cr.
32601305	Electrical Controls and Systems	3 cr.
32601306	HVAC/R Print Reading *	2 cr.
32601307	Heating System Applications*#	3 cr.
32601308	Electronic Energy Management*	3 cr.
32601309	Control Circuit Applications*	3 cr.
32601310	Sheet Metal Fabrication*	2 cr.
32601311	Hydronic Heating*#	3 cr.
32601312	Refrigeration Applications*###	3 cr.
32601313	HVAC/R Electronic Troubleshooting/ Repair (WBL)*#	2 cr.
32601314	Heat Load Estimation*	1 cr.
32601315	Geothermal Systems*	2 cr.
32601316	Building Automation Systems#	2 cr.
32601317	Refrigeration Fundamentals*#,##	3 cr.
Occupational Specific Total		43 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32801362	Advanced Communication Skills*	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804334	Applied Technical Math 2*	2 cr.
32809380	Applied Interpersonal Skills	2 cr.
Occupational Supportive Total		11 cr.
PROGRAM REQUIREMENTS		**54 cr**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# NC3 Certification Exam Administered.
Technician EPA Section 608 Certification Exam Administered.
ACCA A2L Refrigerant Training Certification Exam Administered

32150302
Applied IT Basics - Credits: 1
This course provides students with an introduction to basic Information Technology concepts. Students will learn to identify and describe basic PC hardware components. Students will also learn how to install and maintain an Operating System using software utilities. Students will learn the basic components of networks, how devices communicate on a network and how to add a device to an exiting data network.

32601300
Air Conditioning Fundamentals - Credits: 2
Topics covered include air conditioning principles and terms, physical principles of air movement and humidity, methods of conditioning air for comfort and health, the proper use of psychrometers, dry bulb thermometers, hygrometers, pitot tubes, recorders, manometers and barometers, and the reading and interpretation of psychrometric charts and scales. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the NC3/Trane: Residential - Air Flow AND NC3: Building Performance Instruments (BPI) – Indoor Air Quality certificiation)

32601301
Basic Mechanical Fundamentals - Credits: 3
This course is designed to introduce the learner to the basic fundamental skills necessary to work in the HVAC/R Industry. Instruction will be given in learning the various types of piping and tubing used in air conditioning, heating, and refrigeration; types of fittings, bending, brazing, soft soldering tubing, black iron pipe work, using hand tools, and the recognition and practice of safety procedures while working on heating, air conditioning, and refrigeration systems. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) – Leak Detection certification)

32601303
Principles of AC/DC - Credits: 3
This course provides an introduction to DC and AC electricity. The students will be able to perform basic resistance, current, voltage, and power calculations and measurements in both DC and AC circuits. Knowledge and use of test equipment will focus on multimeters and oscilloscopes. Critical-thinking skills are emphasized to develop competencies in problem solving and troubleshooting. This is a lab- and lecture-based course that provides hands-on and theoretical learning. COREQUISITE: 32804325 Applied Technical Math 1. (This course will prepare you to take the NC3/Snap-On: 575 Multimeter certification)

32601304
Heating Systems - Credits: 2
Topics include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases, and system controls. PREREQUISITE: Admission to HVAC/R Plan or HVAC Installation Technician Plan. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) - Flue Gas Analysis certification)

32601305
Electrical Controls and Systems - Credits: 3
Topics in this course include basic electricity review, control circuits, symbols, diagrams, protection devices, transformers, relays, thermostats, single-phase motors, capacitors, control components, and troubleshooting ACR system wiring diagrams. Electrical experience equivalent to 32601303 Principles of AC/DC is recommended.

32601306
HVAC/R Print Reading - Credits: 2
Topics include print reading; understanding, interpreting, and utilizing architectural working drawings; safety procedures; drafting techniques; and lettering. PREREQUISITE: Admission to HVAC/R Plan or HVAC Installation Technician Plan.

32601307
Heating System Applications - Credits: 3
Topics include installation, start-up, and service of gas- and oil-fired heating equipment; air conditioning and air-to-air heat pump systems; and electrical and mechanical testing/analyzing of system components. PREREQUISITES: 32601301 Basic Mechanical Fundamentals and 32601304 Heating Systems. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) - Installation and Diagnostics, NC3/Trane: Residential - Air-to-Air Heat Pumps, AND NC3/ Trane: Residential - Variable Speed Motors certifications)

32601308
Electronic Energy Management - Credits: 3
This course serves as an introduction to how a heating, venting, and air conditioning control system is used to operate a building's mechanical equipment so as to maintain the desired environmental conditions. PREREQUISITE: 32601309 Control Circuit Applications.

32601309
Control Circuit Applications - Credits: 3
Topics include control circuit terminology, measuring devices, and control systems. The principles of self-contained, electromechanical, and electronic-electric controls are examined and applied to control systems operation and design. PREREQUISITE: 32601305 Electrical Controls and Systems.

32601310
Sheet Metal Fabrication - Credits: 2
The layout and fabrication of a variety of sheet metal fittings. PREREQUISITE: 32601301 Basic Mechanical Fundamentals.

32601311
Hydronic Heating - Credits: 3
Topics include heating ignition systems, oil boiler installation and start up, venting of gas-fired boilers, heating with hot water, multiple boiler systems basics, and zoning hydronic heating systems. PREREQUISITES: 32601301 Basic Mechanical Fundamentals and 32601304 Heating Systems. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) – Fluid Integrity certification)

32601312
Refrigeration Applications - Credits: 3
Topics include domestic and commercial refrigeration systems, applications, installation, servicing, troubleshooting, heat loads and piping, controls, and special refrigeration components. PREREQUISITES: 32601300 Air Conditioning Fundamentals, 32601301 Basic Mechanical Fundamentals, and 32601317 Refrigeration Fundamentals. (This course will prepare you to take the ACCA A2L Refrigerant Training certification)

32601313
HVAC/R Electronic Troubleshooting/Repair (WBL) - Credits: 2
This course is designed for the advanced student who has already completed the theoretical and basic hands-on classes. In this class the student will be responsible for troubleshooting and repairing a variety of HVAC/R equipment. The student will be required to diagnose the faulty equipment, select the proper replacement parts, return the equipment to a working condition, and prepare a detailed work order listing all work performed. PREREQUISITE: 32601309 Control Circuit Applications. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) - RPM and Vibration Testing certification)

32601314
Heat Load Estimation - Credits: 1
This course will teach the student how to use "Manual J" from ACCA. The student will develop the skills to do residential heating and cooling heat loads. Students will calculate heat loss and also losses or gains due to infiltration, sun loads etc. The student will do calculations on actual buildings using ACCA industry standard form J-1. The student will also be pricing energy upgrades such as insulation, window improvements, etc. and calculating payback and fuel savings. PREREQUISITE: Admission to HVAC/R Plan.

32601315
Geothermal Systems - Credits: 2
This course is designed to introduce the student to the basic concepts of geothermal heating and cooling. Students will be introduced to the concepts of geothermal heating and cooling using geothermal pumps, ground source heat exchangers, indoor heat exchangers, connecting devices, and circulating fluid configurations and fusions. PREREQUISITES: 32601301 Basic Mechanical Fundamentals, 32601317 Refrigeration Fundamentals, and 32601305 Electrical Controls and Systems.

32601316
Building Automation Systems - Credits: 2
A building automation system, or BAS, is an umbrella energy management system that oversees HVAC control systems, heating, and other energy management systems in the building. A BAS itself can combine existing mechanical and electrical systems with microprocessors, and computers. Today's buildings require smarter and better technology and it is up to specially trained technicians to manage them efficiently. Students will gain a working knowledge of computers, networks as well as electrical control systems. PREREQUISITE: 32601305 Electrical Controls and Systems. (This course will prepare you to take the NC3/Trane: Building Automation Systems (BAS) 1 – Intro to HVAC Systems and Building Controls certification)

32601317
Refrigeration Fundamentals - Credits: 3
Topics include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration system components, use of electrical controls, refrigeration applications, and refrigeration tools and materials. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the Technician EPA Section 608 Certification AND NC3/Trane: Residential – Refrigeration Diagnostics certification)

Hospitality Foundations

30-109-2 Technical Diploma (less than one-year)

Campuses: Ashland, New Richmond, Rice Lake, Superior

Program Overview

Hospitality Foundations is a 16-week program preparing students for career opportunities in the area of entry-level hospitality and other customer service employment settings. This skilled based training is developed to help students learn essential hospitality duties through interactive course activities and community-based training experience, while enhancing personal awareness, career effectiveness, and professionalism.

Special Feature

This program is unique in the state.

Inquire:

For more information for the New Richmond and Rice Lake campuses, contact:
Heidi Diesterhaft, MS CRC CVE
Program Coordinator/Accommodation Specialist
Phone: 715-788-7142
heidi.diesterhaft@NorthwoodTech.edu

For more information for the Ashland and Superior campuses, contact:
Karen Mattson
Program Coordinator/Instructor
Phone: 715-685-3069
karen.mattson@NorthwoodTech.edu

Program-Specific Requirements

- Participate in a Program Informational Meeting
- Complete and return all required forms
  - -High school transcript (include most recent attendance record if not included on transcript, if available)
  - -Student Questionnaire
  - -Functional Abilities Disclosure
  - -Northwood Technical College paper application form
  - -Professional reference form from a teacher or community agency (this document can be submitted separately if preferred)

Note: Northwood Tech will review completed application materials and notify students of their college admissions status.

Program Outcomes

Hospitality Foundations graduates will be able to:

- Identify personal strengths, barriers and transferable skills specific to work place environment.
- Demonstrate employability skills to seek and maintain employment in the hospitality service industry.
- Apply functional abilities specific to customer service and hospitality through competency-based learning.
- Identify environmental problems and correct unsafe working conditions.

Career Outlook

Graduates will be prepared for entry-level positions in diverse settings, including:

- Hotels
- Restaurants
- Event Centers
- Environmental Services

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
30109330	Hospitality Applications	2 cr.
30109331	Safety and Sanitation Fundamentals	1 cr.
30109332	Guest Relations Fundamentals	1 cr.
30109333	Hospitality Internship *	1 cr.
Occupational Specific Total		5 cr.
Occupational Supportive Courses		
30890320	Working Smart*	1 cr.
Occupational Supportive Total		1 cr.
PROGRAM REQUIREMENTS		**6 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

30109330
Hospitality Applications - Credits: 2
Hospitality Applications is an 8-week course that offers hands-on learning opportunities to practice and apply hospitality tasks required to seek entry-level employment. Students will be guided in applying and demonstrating positive interpersonal skills and professional customer service skills, while focusing on maintaining a safe work environment, safe food facilities and positive worker habits. Hospitality Applications enhances students' knowledge through application of tasks and demonstration of skills through classroom learning and lab experiences.

30109331
Safety and Sanitation Fundamentals - Credits: 1
Safety and Sanitations Fundamentals is an 8-week course that helps students develop a foundation in detecting safety hazards and bring awareness to best practices to maintain safe facilities. Students will explore safe working habits targeting areas such as principles of safe lifting, proper use of cleaners and chemicals, personal hygiene and health, proper storage and handling of foods, as well as cleaning and sanitizing.

30109332
Guest Relations Fundamentals - Credits: 1
Guest Relations Fundamentals is an 8-week course introducing students to the importance of working with others in a constructive and cooperative working relationship. Students will explore ways to better handle challenging customers and be provided experiences to recognize positive interpersonal skills and professional customer service.

30109333
Hospitality Internship - Credits: 1
In this 1-credit internship students will apply course competencies in employment opportunities at Northwood Tech and community-based placements. The course competencies include: apply essential hospitality tasks, demonstrate interpersonal skills, demonstrate customer service skills, apply safe food, facilities, and worker habits, apply constructive and cooperative working relationships with others, and apply strategies to better handle challenging customers. COREQUISITES: 30109330 Hospitality Applications, 30109331 Safety and Sanitation Fundamentals and 30109332 Guest Relations Fundamentals.

30890320
Working Smart - Credits: 1
This course will work in collaboration with student internship, second 8 weeks, to address employability skills in a natural, work-based learning environment. Students will continue the development and enhancement of job seeking skills, while practicing job retention skills such as problem-solving, time management, accountability, self-awareness and working relationships. COREQUISITES: 30109330 Hospitality Applications, 30109331 Safety and Sanitation Fundamentals and 30109332 Guest Relations Fundamentals.

Human Resource Management

10-116-2 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

The Human Resources program prepares you to support organizations in effectively recruiting, coaching, training, managing and compensating employees. You will also learn how the EEOC and OSHA influence workplaces and how you can help your organization meet compliance regulations.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Human Resource Management graduates will be able to:

- Create an organizational workforce plan
- Develop training programs
- Examine organizational total rewards programs
- Incorporate employment law into business practices
- Facilitate effective employee relations

Career Outlook

Typical positions available after graduation include:

- Compensation and Benefits Specialist
- Employment Specialist
- Human Resources Coordinator
- Human Resources Specialist
- Recruitment Specialist
- Training and Development Specialist
- Payroll Analyst
- Human Resources Generalist
- Human Resources Assistant

Career Pathways

The Human Resource Management program includes the following pathway option (page 227):

- Human Resources and Payroll Generalist

Related Programs

- Leadership Development
- Nonprofit Leadership
- Business Management

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101176	Financial Accounting 1A	2 cr.
10103106	MS PowerPoint	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10106199	Business Technology and Success	1 cr.
10116100	Human Resource Management	3 cr.
10116101	Introduction to Payroll and HRIS	3 cr.
10116102	Employment Law*	3 cr.
10116103	Compensation Management*	3 cr.
10116104	Recruitment and Selection*	3 cr.
10116105	Employee Relations and Labor Law*	2 cr.
10116106	Onboarding and Training*	3 cr.
10116107	Benefit Administration*	3 cr.
10116108	Human Resource Capstone*	3 cr.
10196108	Customer Service	1 cr.
10196136	Safety in the Workplace	3 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10196145	Contemporary Business for Supervisors	2 cr.
10196199	Ethics in Business	3 cr.
Technical Studies Total		43 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10804123	Math with Business Applications	3 cr.
10809195	Economics	3 cr.
10809196	Introduction to Sociology	3 cr.
10809188	Developmental Psychology **or**	
10809198	Introduction to Psychology	3 cr.
General Studies Total		18 cr.
TOTAL PROGRAM REQUIREMENTS		**61 cr.**

*Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

**See pages 35-38 for course descriptions.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10106199
Business Technology and Success - Credits: 1
Designed to explore the impact of digital technology, communication, and media. Course learners will be able to apply organizational techniques and manage electronic files; explore computer hardware and the web using various software and apps while practicing security and safety techniques. Improve skills in critical thinking, innovation, and personal responsibility through experiential and problem-solving approaches for a workforce-ready mindset.

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10116101
Introduction to Payroll and HRIS - Credits: 3
In keeping in line with electronic recordkeeping, human resources and payroll have followed suit. Tracking employee information and payroll transactions is handled efficiently and securely using human resources information systems and payroll software. The learner will come to understand how this type of software works. Payroll calculation will be highly emphasized taking into account all the federal and state laws and filing requirements.

10116102
Employment Law - Credits: 3
Course examines employment, labor and social issues in the work environment through the laws that govern the employer/union and employer/employee relationships. Topics explored include: unemployment compensation; workers' compensation; hiring and firing practices; sexual harassment in the workplace; the Americans with Disabilities Act; and the intricacies of federal and Wisconsin equal employment opportunity laws. Students will use in-depth case analyses, oral presentation, and debates. PREREQUISITE: 10116100 Human Resource Management.

10116103
Compensation Management - Credits: 3
Compensation encompasses the remuneration issues of employment. It will cover all aspects of wage and salary administration including job design, job analysis, pay range development, salary surveys, bonus programs, state and federal compensation law and performance management in regards to pay practices. PREREQUISITE: 10116100 Human Resource Management.

10116104
Recruitment and Selection - Credits: 3
Getting the right employees in the right job is really an art. Learn the methods of recruitment used to attract employees to your organization. Once recruitment takes place, then selection of the most suitable candidate for an opening takes place. This process is highly governed by state and federal law which must be learned and used as the basis for lawful selection of employees. PREREQUISITE: 10116100 Human Resource Management.

10116105
Employee Relations and Labor Law - Credits: 2
The course provides students with both the common and complex issues related to human behavior in the workplace as it relates to employee relations, state and federal mandates and laws. In-depth examination of relationships among workers, management, laws and government are the major focus of this course. PREREQUISITE: 10116100 Human Resource Management.

10116106
Onboarding and Training - Credits: 3
The onboarding and training course prepares participants to be able to orient, train and take new hires through the onboarding process so they have the greatest opportunity to be successful, productive employees in the workplace. Key topics are: training and development, delivery techniques, assessing employee strengths, and methods to determine where employees may focus talent improvement processes. Course will also explore the value of engaging in company culture including techniques for success within that culture. PREREQUISITE: 10116100 Human Resource Management.

10116107
Benefit Administration - Credits: 3
With the ever changing health care laws, this benefits course will address the evolution of benefit offerings in health insurance as well as the other benefit areas. Taking the total reward approach, other topics to be covered include dental insurance, disability insurance, paid time off, government mandated benefits and optional work arrangements. PREREQUISITE: 10116100 Human Resource Management.

10116108
Human Resource Capstone - Credits: 3
The Human Resource Capstone course emphasizes application of advanced principles of human resource management. These principles include the application of the EEOC regulations, recruitment and selection, orientation and training, payroll and benefit administration, interpersonal skills management and business management. Learners are required to design and complete a human resource management project that begins with the fundamentals and extends to application within their workplace. NOTE: This course is only offered in the spring term. COREQUISITES: 10196145 Contemporary Business for Supervisors, 10116101 Introduction to Payroll and HRIS, 10116106 Onboarding and Training, 10116107 Benefit Administration, 10116103 Compensation Management, 10196199 Ethics in Business, 10116102 Employment Law, and 10196138 Conflict Resolution and Confrontation Skills

10196108
Customer Service - Credits: 1
This course examines customer service as it relates to organizational quality. It addresses service models for internal and external customers, systems and strategies applied to customer service, and tools and techniques for gathering customer feedback and handling complaints.

10196136
Safety in the Workplace - Credits: 3
An introduction to safety and loss prevention in the workplace with an emphasis on the supervisor's responsibility for maintaining a safe, productive environment. Students will study safety concepts, hazard controls, developing safety and health programs, and federal- and state-mandated regulations.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10196145
Contemporary Business for Supervisors - Credits: 2
In this course, you will review how the basic management styles affect the people, processes, and profitability of a business. You will also learn how to balance the organization's needs for profits with employees' basic needs within a global context. You will review and study the basic concepts and the supervisor's role regarding return on investment, return on equity, profit centers, financial statements, and overall departmental operations.

10196199
Ethics in Business - Credits: 3
This course will focus on business practices from an ethical point of view. The student will examine such topics as morality/ethical theory, utilitarianism, Kantian ethics, justice and the market system, whistle blowing, trade secrets/conflict of interest, privacy, advertising, product safety, corporate social responsibility, international business.

Human Resources and Payroll Generalist

31-116-2 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available online at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

As a Human Resources and Payroll Generalist, you apply the skills and tools necessary to effectively value and apply employees' abilities and needs in support of organizational goals. You will demonstrate the application of the generalist's responsibilities in contemporary human resource management, supporting employees' growth and development, the impacts of employment law, prepare and maintain employment records, writing job descriptions, recruitment and selection, conducting job interviews, onboarding, interpreting policies and procedures, and effective use of compensation and benefit strategies. You will gain experience using Microsoft Office products and Human Resource Information Systems software suites.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Human Resources and Payroll Generalist graduates will be able to:

- Support effective employee relations
- Create accurate employee records
- Incorporate employment law into administrative practices

Career Outlook

Typical positions available after graduation include:

- Human Resources Administrative Assistant
- Human Resources Associate
- Human Resources Coordinator
- Human Resources Generalist
- Human Resources Technician
- Human Resources Assistant
- Payroll Assistant
- Payroll Coordinator
- Payroll Specialist

Career Pathways

The Human Resources and Payroll Generalist is a pathway into the following program (page 227).

- Human Resource Management

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10116100	Human Resource Management	3 cr.
10116101	Introduction to Payroll and HRIS	3 cr.
10116103	Compensation Management*	3 cr.
10116104	Recruitment and Selection*	3 cr.
10116105	Employee Relations and Labor Law*	2 cr.
10116106	Onboarding and Training*	3 cr.
10116107	Benefit Administration*	3 cr.
10196108	Customer Service	1 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
Occupational Specific Total		24 cr.
Occupational Suppportive Courses**		
10804123	Math with Business Applications	3 cr.
Occupational Supportive Total		3 cr.
TOTAL PROGRAM REQUIREMENTS		**27 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10116101
Introduction to Payroll and HRIS - Credits: 3
In keeping in line with electronic recordkeeping, human resources and payroll have followed suit. Tracking employee information and payroll transactions is handled efficiently and securely using human resources information systems and payroll software. The learner will come to understand how this type of software works. Payroll calculation will be highly emphasized taking into account all the federal and state laws and filing requirements.

10116103
Compensation Management - Credits: 3
Compensation encompasses the remuneration issues of employment. It will cover all aspects of wage and salary administration including job design, job analysis, pay range development, salary surveys, bonus programs, state and federal compensation law and performance management in regards to pay practices. PREREQUISITE: 10116100 Human Resource Management.

10116104
Recruitment and Selection - Credits: 3
Getting the right employees in the right job is really an art. Learn the methods of recruitment used to attract employees to your organization. Once recruitment takes place, then selection of the most suitable candidate for an opening takes place. This process is highly governed by state and federal law which must be learned and used as the basis for lawful selection of employees. PREREQUISITE: 10116100 Human Resource Management.

10116105
Employee Relations and Labor Law - Credits: 2
The course provides students with both the common and complex issues related to human behavior in the workplace as it relates to employee relations, state and federal mandates and laws. In-depth examination of relationships among workers, management, laws and government are the major focus of this course. PREREQUISITE: 10116100 Human Resource Management.

10116106
Onboarding and Training - Credits: 3
The onboarding and training course prepares participants to be able to orient, train and take new hires through the onboarding process so they have the greatest opportunity to be successful, productive employees in the workplace. Key topics are: training and development, delivery techniques, assessing employee strengths, and methods to determine where employees may focus talent improvement processes. Course will also explore the value of engaging in company culture including techniques for success within that culture. PREREQUISITE: 10116100 Human Resource Management.

10116107
Benefit Administration - Credits: 3
With the ever changing health care laws, this benefits course will address the evolution of benefit offerings in health insurance as well as the other benefit areas. Taking the total reward approach, other topics to be covered include dental insurance, disability insurance, paid time off, government mandated benefits and optional work arrangements. PREREQUISITE: 10116100 Human Resource Management.

10196108
Customer Service - Credits: 1
This course examines customer service as it relates to organizational quality. It addresses service models for internal and external customers, systems and strategies applied to customer service, and tools and techniques for gathering customer feedback and handling complaints.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

Human Services Associate

10-520-3 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Hybrid instruction

Program Overview

In this program, you will acquire the skills needed to support people of diverse racial, ethnic and cultural backgrounds. Work within county human services agencies, community-based organizations, residential treatment programs, schools, inpatient facilities and other settings that help people in need. Assist a variety of populations including youth, families, elders and persons with disabilities. You can choose from multiple careers focused on substance abuse counseling, domestic and family violence, community development, prevention and criminal justice. Once you complete the program, you will have successfully met the required 360 hours of approved specialized education in substance use disorder counseling in accordance with the Wisconsin Department of Safety and Professional Services, added to the Wisconsin Community-Based Residential Facility (CBRF) Employee Registry.

Special Features

- Throughout the program, students will have multiple opportunities to directly explore the Human Services field through community-based observation and extended field experiences within designated organizations and agencies
- Graduates may opt to directly enter the workforce and/or choose to complete their Bachelor's Degree in Social Work or other Human Services-related field, as per existing articulation agreements
- Graduates will meet the 360 hour **educational** requirements needed for Wisconsin Substance Abuse Counselor certification, as preapproved by the Wisconsin Department of Safety & Professional Services. (Certification also requires state examination and supervised counseling experience outside of this program, https://dsps.wi.gov/Documents/SACCurrentPreCertificationEducation.pdf)
- Graduates will be added to the Wisconsin Community-Based Residential Facility (CBRF) Employee Registry

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Background Check Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

- Complete and sign Background Information Disclosure Form (BID)
- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check or Minnesota Caregiver Background Check as applicable
  - Information from the Caregiver Background Check may affect ability to secure fieldwork placement and the ability to find employment after graduation.

Program Outcomes

Human Services Associate graduates will be able to:

- Model a commitment to cultural competence
- Uphold the ethical standards and values for human service professionals
- Demonstrate professionalism
- Utilize community resources
- Apply human services interventions and best practices
- Cultivate professional relationships

Career Outlook

Typical positions available after graduation may include:

- Case Worker
- Community Outreach/Support Worker
- Income Maintenance Worker
- Human Services/Information and Referral Specialist
- Substance Abuse Counselor (with specialized field experience)
- Intake Worker
- Prevention Worker
- Residential Manager
- Social Services Assistant
- Volunteer Coordinator
- Adult Day Care Worker
- Human Services Technician
- Counselor Assistant
- Residential Counselor
- Youth Care Counselor
- Family Advocate
- Activities Assistant
- Visitation Worker
- Program Aide

Career Pathways

The Human Services Associate program includes the following pathway options (page 228):

- Substance Abuse Counselor Education
- Community-Based Residential Facility (CBRF) Caregiver

Related Programs

- Gerontology - Aging Services Professional
- Early Childhood Education / E-CHiLD
- Criminal Justice Studies
- Nursing - Associate Degree
- Nonprofit Leadership

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10520101	Introduction to Human Services	3 cr.
10520102	Interviewing	3 cr.
10520103	Ethics in Human Services#	3 cr.
10520104	Issues in Alcohol and Other Drug Abuse	3 cr.
10520105	Introduction to Counseling*	3 cr.
10520106	Methods of Social Casework	3 cr.
10520107	Gerontology **or**	
10520108	Child and Adolescent Behavior	3 cr.
10520110	Group Facilitation*	3 cr.
10520112	Family Systems	3 cr.
10520113	Field Experience 1* #	3 cr.
10520114	Field Experience 2* #	3 cr.
10520115	Substance Abuse Assessment and Treatment*	3 cr.
10575100	CBRF Caregiver Fundamentals	2 cr.
Technical Studies Total		38 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech or	
10801196	Oral/Interpersonal Communication	3 cr.
10806198	Human Biology	4 cr.
10809159	Abnormal Psychology*	3 cr.
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		19 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Credit for prior learning not applicable for these courses.

You must earn a grade point of 2.0 or better in all 105XXXXX courses

Professional Licensure and/or Certification Information

Northwood Tech's Human Services Associate Degree is designed to meet the State of Wisconsin's licensing criteria. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

10520101
Introduction to Human Services - Credits: 3
Students examine the scope, values, and principles of the human service profession. Coursework introduces the typical roles and duties of human services workers. Students assess their own motivations, attitudes, and interests. In addition to the regular classroom hours, volunteer work in a community human services agency is required. Students must complete or have on file current, valid Background Information Disclosure (BID) and Caregiver Background Check (annual Wisconsin and Minnesota) forms, as part of this course.

10520102
Interviewing - Credits: 3
This course provides an introduction to interviewing and recordkeeping skills practiced in human service agencies. Students learn principles and techniques needed to conduct informational and supportive interviews including maintaining clinical records, documenting referrals, staffings, and supervision. Students practice interviewing skills during class.

10520103
Ethics in Human Services - Credits: 3
This course explores the ethical, legal, and professional issues facing the human services worker. It is designed to teach a process of ethical decision-making and to increase awareness of the complexities in practice. Students are introduced to the current state and federal statutes, regulations, and judicial decisions that govern the professional practice in human services. Standards, code of ethics, clients' rights, and confidentiality are emphasized.

10520104
Issues in Alcohol and Other Drug Abuse - Credits: 3
Students gain a basic understanding of the use and abuse of alcohol and other drugs. Emphasis is on historical and social perspectives of drug use, trends of use, and legal and social responses to problematic alcohol and illicit drug use. Additionally, this course provides an accurate description of the effects of psychoactive drugs, identifies methods of substance abuse treatment, and introduces the student to local treatment services.

10520105
Introduction to Counseling - Credits: 3
This course is designed to provide the student with an overview of the major counseling theories and techniques and applications to various situations. Students will apply concepts and skills through practice in initiating, structuring, and terminating counseling sessions. COREQUISITE: 10520106 Methods of Social Casework

10520106
Methods of Social Casework - Credits: 3
This course provides an introduction to case management theory, models, and techniques, along with the management and coordination of case records. Key components include intake assessment, creating a plan of service, coordinating care, referral techniques, client self-determination, and ethical issues.

10520107
Gerontology - Credits: 3
The focus of this course is on mental health issues, physical health issues, socioeconomic factors, and other issues that impact the aging process and the individual's adaptation to it. Dynamics of the individual, social support systems, community support systems, and the various programs that are in place to help those with special issues in the aging process will be examined.

10520108
Child and Adolescent Behavior - Credits: 3
This course examines issues related to child development, juvenile delinquency, and mental health. The course will explore healthy and appropriate child development and issues such as abuse and neglect, which alter development. Juvenile delinquency will explore common behavioral concerns of adolescents and what treatment options exist. Finally, prevalent mental health issues of children and adolescents will be explored as well as treatment including common medications.

10520110
Group Facilitation - Credits: 3
An introduction to theory and practice of group dynamics and processes are covered in this course. Knowledge areas include ethical considerations, effective group leadership, and stages of group development. Learners will record and critique practice group sessions, function as group members, and demonstrate effective group facilitation skills. COREQUISITE: 10510102 Interviewing.

10520112
Family Systems - Credits: 3
This course focuses on issues related to families and family functioning relevant to the human services field. Major areas of focus will include child maltreatment, domestic violence, and addiction, with emphasis on relevant helping skills and services.

10520113
Field Experience 1 - Credits: 3
Students develop skills as human services professionals by working directly or in-directly with clients in community agencies. This experience is designed to enhance the knowledge, skills, and behaviors essential for human services workers in the professional setting. An agency supervisor and a faculty member facilitate this learning experience. Students must complete or have on file current, valid Background Information Disclosure (BID) and Caregiver Background Check (annual Wisconsin and Minnesota) forms, as part of this course. PREREQUISITES: 10520101 Introduction to Human Services, 10520102 Interviewing, 10520103 Ethics in Human Services, 10520104 Issues in Alcohol and Other Drug Abuse, 10520106 Methods of Social Casework, and COREQUISITES: 10520105 Introduction to Counseling and 10520115 Substance Abuse and Treatment.

10520114
Field Experience 2 - Credits: 3
Students continue their on-the-job training in a community agency. Additional hands-on experiences working with clients and agency staff provide students with the opportunity to apply and refine skills learned in coursework areas. An agency supervisor and a faculty member facilitate this learning experience. Students must complete or have on file current, valid Background Information Disclosure (BID) and Caregiver Background Check (annual Wisconsin and Minnesota) forms, as part of this course. PREREQUISITE: 10520113 Field Experience 1.

10520115
Substance Abuse Assessment and Treatment - Credits: 3
This course will gain further understanding of substance abuse and dependence, assessment and treatment interventions. Emphasis is on assessment, diagnostics, and treatment of substance use disorders. Students will also gain further understanding of levels of care, community-based sober support, referrals and family system interventions. PREREQUISITE: 10520104 Issues in Alcohol and Other Drug Abuse and COREQUISITES: 10520110 Group Facilitation and 10520106 Methods of Social Casework

10575100
CBRF Caregiver Fundamentals- Credits: 2
In this credit-based course, students will obtain the knowledge and skills required to become Community-Based Residential Facility (CBRF) caregivers. Coursework will include the following training modules: DHS 83.20 (2) (b) CBRF Fire Safety, DHS 83.20 (2) (d) CBRF Medication Administration and Management, DHS 83.20 (2) (a) CBRF Standard Precautions, DHS 83.20 (2) (c) CBRF First Aid and Choking, DHS 83.21 (1) CBRF Resident's Rights, and DHS 83.21 (3) CBRF Challenging Behaviors. Upon successful completion of this course, students are added to the Wisconsin CBRF Employee Registry.

ELECTIVE

10520111
Psychopharmacology - Credits: 3
This course is an introductory course in psychopharmacology that provides practical information to workers in a human services setting. It is designed to provide an overview of the psychopharmacology of therapeutic drugs, over-the-counter medications, illicit drugs, and alcohol. Emphasis will be on the nervous system structure, brain function, site of action theory, and on comprehending the effects of substances on these systems. Interactions, withdrawal, and maternal and fetal effects and effects on persons in different stages of development will also be addressed.

HVAC Installation Technician

31-601-2 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Superior

Program Overview

The HVAC Installation Technician program will give students the skills to install new heating, cooling, and ventilation systems, inspect current HVAC systems for effectiveness and safety, perform preventative maintenance on HVAC systems to increase longevity, and conduct performance tests with specialized tools. Students will be prepared to test for the Technician EPA Section 608 Certification and multiple NC3 Certifications.

Special Feature

Students are eligible to take the following Certification Exams:

- NC3: Building Performance Instruments (BPI) – Indoor Air Quality
- NC3: Building Performance Instruments (BPI) – Leak Detection
- NC3/Trane: Residential – Air Flow
- NC3: Building Performance Instruments (BPI) – Flue Gas Analysis
- NC3/Snap-On: 575 Multimeter Certification
- NC3/Trane: Residential - Refrigeration Diagnostics
- Technician EPA Section 608 Certification

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

HVAC Installation Technician graduates will be able to:

- Install residential heating, ventilation and air conditioning equipment
- Commission (startup) and service residential heating, ventilation and air conditioning equipment
- Install commercial heating, ventilation and air conditioning equipment
- Commission (startup) and service commercial heating, ventilation, and air conditioning equipment
- Install commercial refrigeration equipment
- Commission (startup) and service commercial refrigeration equipment

Career Outlook

Typical positions available after graduation include:

- HVAC Installer
- HVAC Mechanic
- Service Technician
- Systems Mechanic

Career Pathways

The HVAC Installation Technician program includes the following pathway option (page 226):

- Refrigeration Essentials

HVAC Installation Technician is also a pathway into the following program:

- Heating, Ventilation, and Air Conditioning/ Refrigeration (HVAC/R)

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32601300	Air Conditioning Fundamentals*#	2 cr.
32601301	Basic Mechanical Fundamentals*#	3 cr.
32601303	Principles of AC/DC*#	3 cr.
32601304	Heating Systems*#	2 cr.
32601305	Electrical Controls and Systems	3 cr.
32601306	HVAC/R Print Reading*	2 cr.
32601310	Sheet Metal Fabrication*	2 cr.
32601317	Refrigeration Fundamentals*#,##	3 cr.
Occupational Specific Total		20 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804334	Applied Technical Math 2*	2 cr.
Occupational Supportive Total		7 cr.
PROGRAM REQUIREMENTS		**27 cr**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# NC3 Certification Exam Administered.
Technician EPA Section 608 Certification Exam Administered

32601300
Air Conditioning Fundamentals - Credits: 2
Topics covered include air conditioning principles and terms, physical principles of air movement and humidity, methods of conditioning air for comfort and health, the proper use of psychrometers, dry bulb thermometers, hygrometers, pitot tubes, recorders, manometers and barometers, and the reading and interpretation of psychrometric charts and scales. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the NC3/Trane: Residential – Air Flow AND NC3: Building Performance Instruments (BPI) – Indoor Air Quality certifications)

32601301
Basic Mechanical Fundamentals - Credits: 3
This course is designed to introduce the learner to the basic fundamental skills necessary to work in the HVAC/R Industry. Instruction will be given in learning the various types of piping and tubing used in air conditioning, heating, and refrigeration; types of fittings, bending, brazing, soft soldering tubing, black iron pipe work, using hand tools, and the recognition and practice of safety procedures while working on heating, air conditioning, and refrigeration systems. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) – Leak Detection certification)

32601303
Principles of AC/DC - Credits: 3
This course provides an introduction to DC and AC electricity. The students will be able to perform basic resistance, current, voltage, and power calculations and measurements in both DC and AC circuits. Knowledge and use of test equipment will focus on multimeters and oscilloscopes. Critical-thinking skills are emphasized to develop competencies in problem solving and troubleshooting. This is a lab- and lecture-based course that provides hands-on and theoretical learning. COREQUISITE: 32804325 Applied Technical Math 1. (This course will prepare you to take the NC3/Snap-On: 575 Multimeter Certification)

32601304
Heating Systems - Credits: 2
Topics include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases, and system controls. PREREQUISITE: Admission to HVAC/R Plan or HVAC Installation Technician Plan. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) – Flue Gas Analysis certification)

32601305
Electrical Controls and Systems - Credits: 3
Topics in this course include basic electricity review, control circuits, symbols, diagrams, protection devices, transformers, relays, thermostats, single-phase motors, capacitors, control components, and troubleshooting ACR system wiring diagrams. Electrical experience equivalent to 32601303 Principles of AC/DC is recommended.

32601306
HVAC/R Print Reading - Credits: 2
Topics include print reading; understanding, interpreting, and utilizing architectural working drawings; safety procedures; drafting techniques; and lettering. PREREQUISITE: Admission to HVAC/R Plan or HVAC Installation Technician Plan.

32601310
Sheet Metal Fabrication - Credits: 2
The layout and fabrication of a variety of sheet metal fittings. PREREQUISITE: 32601301 Basic Mechanical Fundamentals

32601317
Refrigeration Fundamentals - Credits: 3
Topics include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration system components, use of electrical controls, refrigeration applications, and refrigeration tools and materials. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the Technician EPA Section 608 Certification AND NC3/Trane: Residential – Refrigeration Diagnostics certification)

Individualized Technical Studies

10-825-X Associate Degree (two-year) Specific career clusters listed below **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Program Overview

Complete a program plan with Northwood Tech Director of Curriculum and Assesment by identifying your own career goals and what you need to get there.

This program is typically designed for students who: have a high school diploma or G.E.D., are currently employed, are able to articulate a specific career objective, would benefit from the combination of associate degree courses from two or more major areas, and are seeking academic credit for work and/or other experience related to a specific career goal.

Specific Career Cluster Plans include:

1082518 ITS - Agriculture, Food and Natural Resources
108252 ITS - Architecture and Construction
108253 ITS - Arts, Audio-Visual Technology and Communications
108254 ITS - Business, Management and Administration
108255 ITS - Education and Training
108256 ITS - Finance
108257 ITS - Government and Public Administration
108258 ITS - Health Sciences
108259 ITS - Hospitality and Tourism
1082510 ITS - Human Services
1082511 ITS - Information Technology
1082512 ITS - Law, Public Safety and Security
1082513 ITS - Manufacturing
1082514 ITS - Marketing, Sales and Service
1082515 ITS - Science, Technology, Engineering and Mathematics
1082516 ITS - Transportation, Distribution and Logistics

Inquire:

For more information, contact:
Ryon List, Director of Curriculum and Assessment. Phone: 715-685-3086
ryon.list@NorthwoodTech.edu

Program Outcomes

The Individualized Technical Studies Program is NOT intended to become a catch-all for students with little or no career focus, nor is it intended to prepare students for occupations that have little or no job market demand. It is also NOT simply an accumulation of credit hours leading to a degree. Finally, this degree program option is NOT designed to give students the opportunity to make minor course changes to current existing programs.

The technical studies option is typically designed for students who:

- Have a high school diploma or G.E.D.
- Are currently employed
- Are able to articulate a specific career objective
- Would benefit from the combination of associate degree courses from two or more major areas
- Are seeking academic credit for work and/or other experience related to a specific career goal

Career Outlook

This degree gives students the flexibility to meet the educational goals of new and emerging occupational fields. Employers also benefit from the flexible program that helps them meet their own specific employee training needs as new technologies and methods emerge in the business world.

Curriculum

Course Title	Credits
Communication	6
Social Science	3
Behavioral Science	3
Math and/or Science	3
Additional Electives	6
Total	**21**

(See list of General Studies courses on pages 35-38)

Individualized Technical Studies Courses	**40**

Each student will be required to complete a minimum of 40 credit hours of individualized technical studies and may utilize courses from all departments of the college. A minimum of 20 of these credits must be focused in one career cluster. The selection of these courses must be relevant to the student's identified career goals and provide sufficient hours of concentration in one or two specific technical areas to ensure technical competence in achieving their occupational goals.

TOTAL PROGRAM CREDITS	**61**

Industrial Maintenance Technician

32-462-1 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: Superior

Program Overview

The Industrial Maintenance Technician program will give you practical "hands-on" experience in welding, hydraulics, machining, plumbing, electricity and mechanical maintenance. Opportunities for advancement increase with further education.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Industrial Maintenance Technician graduates will be able to:

- Demonstrate safe work procedures
- Install industrial equipment and systems
- Maintain industrial equipment and systems
- Troubleshoot industrial equipment and systems
- Repair industrial equipment and systems
- Communicate technical information

Career Outlook

Typical positions available after graduation include:

- Maintenance Technician Assistant
- Maintenance Technician Foreperson
- Maintenance Machinist
- Maintenance Technician
- Maintenance Welding

Graduates may also enter the trades of Machine Repair, Machine Rebuilder, and Millwright. Graduates may advance to such positions as Maintenance Leadperson, Maintenance or Millwright Apprentice, Foreperson, or Superintendent.

Related Programs

- Automation for Industrial Systems
- Machine Tool Technician
- Welding

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31442370	Gas Metal Arc Welding 1	3 cr.
31442373	Shielded Metal Arc Welding 1	3 cr.
31442374	Shielded Metal Arc Welding 2*	2 cr.
31442379	Gas Tungsten Arc Welding 1	2 cr.
32414340	Basic Electrical Theory	2 cr.
32414341	Electrical Systems*	3 cr.
32414343	Industrial Systems Control*	3 cr.
32419301	Hydraulics/Pneumatics	3 cr.
32420305	Maintenance Machining	3 cr.
32420310	Print Reading	2 cr.
32462305	Rigging	2 cr.
32462306	Fabrication Processes	2 cr.
32462308	Piping Systems	2 cr.
32462309	Pump Applications	2 cr.
32462312	Bearings and Lubrication	1 cr.
32462314	Machine Leveling and Alignments	2 cr.
32462317	Industrial Safety	1 cr.
32462320	Gears, Belts, and Chain Drives	1 cr.
32462321	Conveyors (WBL)	2 cr.
32462322	Conveyor Systems Repair Lab*	3 cr.
32462330	Fluid Systems Repair Lab (WBL)*	2 cr.
Occupational Specific Total		46 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804334	Applied Technical Math 2*	2 cr.
32809380	Applied Interpersonal Skills	2 cr.
Occupational Supportive Total		9 cr.
TOTAL PROGRAM REQUIREMENTS		**55 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

31442370
Gas Metal Arc Welding 1 - Credits: 3
This course introduces the student to the basics of GMAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques.

31442373
Shielded Metal Arc Welding 1 - Credits: 3
This course introduces the student to the basics of SMAW welding. It includes the study of the type of metals and equipment utilized when welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard welding techniques.

31442374
Shielded Metal Arc Welding 2 - Credits: 2
This course introduces the student to the next level of SMAW welding. It includes the study of the type of metals and equipment utilized when welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard welding techniques. COREQUISITE: 31442373 Shielded Metal Arc Welding 1.

31442379
Gas Tungsten Arc Welding 1 - Credits: 2
This course introduces the student to the basics of GTAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques.

32414340
Basic Electrical Theory - Credits: 2
This course is designed to introduce the student to the basic concepts of electricity. Students will be introduced to basic electrical components such as resistors, switches, indicators, relays, and basic testing equipment. Reading wiring diagrams will be introduced during this course.

32414341
Electrical Systems - Credits: 3
This course introduces the student to advanced interpretation of the various wiring and ladder diagrams used in electrical systems. The selection and application of interconnecting wiring and control devices used in industrial electrical control systems will be the focus of this course. COREQUISITE: 32414340 Basic Electrical Theory.

32414343
Industrial Systems Control - Credits: 3
This course is designed to introduce the student to the basics of the programmable logic controllers used in industry. Training in ladder logic, logic gates, Boolean equations, and truth tables will be given. Basic program and troubleshooting will be the focus of this course. COREQUISITE: 32414340 Basic Electrical Theory.

32419301
Hydraulics/Pneumatics - Credits: 3
This course is designed to introduce the student to the theory of fluid power. The common gas laws will be analyzed. The basic system of a hydraulic unit and pneumatic unit will be the focus of this laboratory-based course. Common applications of different circuits will be explored and constructed.

32420305
Maintenance Machining - Credits: 3
This course is designed to introduce the student to the basic machines and procedures of machines common to the industrial maintenance industry.

32420310
Print Reading - Credits: 2
This course will cover the basic principles of print reading. The emphasis will be on interpreting lines and symbols in single- and multiple-view working drawings. Topics include print reading procedures, sketching, drawing changes, and the reading of prints in maintenance areas of machining, fabrication, piping systems, and welding.

32462305
Rigging - Credits: 2
During this course the student will be introduced to the safety procedures, the common hardware components, and the equipment used in industry for rigging to lift and move machines and equipment. The student will demonstrate industry standard rigging and lifting procedures in a laboratory-based environment.

32462306
Fabrication Processes - Credits: 2
This course is designed to introduce the student to the basics of fabrication processes that are common to the industrial maintenance field along with the tools and components used in these processes. This course is a theory-based course with hands-on lab applications.

32462308
Piping Systems - Credits: 2
This course is designed to introduce the student to basic plumbing of air, water, and other process systems found in industrial plants. Layout, cutting, threading, and installing these systems will be the focus of this course.

32462309
Pump Applications - Credits: 2
This course is designed to enable the student to explore the theory of fluid pumping applications common to industry. General troubleshooting and maintenance procedures will be stated and practiced during this competency lab-based course.

32462312
Bearings and Lubrication - Credits: 1
This course is designed to introduce the student to the applications of bearings and lubrication processes used in industries. Instruction will be given in the basic principles of operations, preventive maintenance, and repair procedures of all bearing types common to industry.

32462314
Machine Leveling and Alignments - Credits: 2
This course is designed to introduce the student to the standard applications of machine leveling and alignment of shafts, couplings, bearings, and machines common to industries. This course will cover several leveling and alignment procedures that meet industry standards.

32462317
Industrial Safety - Credits: 1
This course is designed to introduce the student to safety topics required by OSHA for general industries. Safety committees and their function in the workplace will also be discussed. The history of OSHA and the role it plays in industry, along with the roles of all workers and employers toward safety, will be the focus of this course.

32462320
Gears, Belts, and Chain Drives - Credits: 1
This course is designed to introduce the student to the applications of gears, belts, and chain drives used in industry. Instruction will be given in the basic principles of operation, installation, preventive maintenance, and repair procedures of these components to industry standards.

32462321
Conveyors (WBL) - Credits: 2
This course is designed to introduce the student to bulk handling belt conveyor systems common to many industries. While examining the different systems used that make up an effective belt conveyor, the student will design a system of their own. Standard applications, preventive maintenance, repair, and installation of conveyors will be the focus of this course. The screw, flat belt, and roller conveyors will also be examined. A strong background in mechanical drive and fabrication is recommended.

32462322
Conveyor Systems Repair Lab - Credits: 3
This course is designed to provide a "real" work-like environment where the student is placed in a team environment to build a conveyor from the design that was created in the conveyors theory class. All welding, machining, and the fabrication of the conveyor will be done by the team. The ordering of parts and components, along with creating a journal of the project, will be a team function. COREQUISITE: 32462321 Conveyors (WBL).

32462330
Fluid Systems Repair Lab (WBL) - Credits: 2
This course is designed to give the student a chance to apply fluid power system skills in a shop environment. Students will work on projects that will require troubleshooting of fluid systems and components, and construction of fluid systems common to industry. COREQUISITES: 32419301 Hydraulics/Pneumatics, 32462308 Piping Systems, and 32462309 Pump Applications.

Industrial Systems Specialist

31-631-1 Technical Diploma (one-year)

Campus: New Richmond

Program Overview

Process and manufacturing plants employ technicians to keep their machines and processing running and install and maintain equipment. With this one-year technical diploma, you will be prepared to be employed at the technician level or higher on industrial computer networks, programmable logic controllers (PLCs) and process instruments. You will have both classroom and hands-on laboratory instruction with several systems to gain an understanding of controller and PLC interfacing, control systems and network installation.

Special Feature

This is a unique program in the state.

This program is intended and recommended for individuals with a background in electrical equipment, electricity, or IT.

Inquire

For more information on this program, and how to apply, contact: Jon Haglin, Instructor at Jon.Haglin@NorthwoodTech.edu or 715.246.1844.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Industrial Systems Specialist graduates will be able to:

- Demonstrate safe practices and techniques
- Perform installations of controls hardware/software/cabling
- Perform programming and configuration of Programmable Logic Controllers (PLCs) and Distributed Control Systems (DCSs)
- Integrate control systems
- Troubleshoot hardware/software of PLCs, instrumentation, and control systems
- Develop system documentation

Career Outlook

Typical positions available after graduation include:

- Field Service Technician
- Instrumentation and Controls Technician (I&C)
- Electrical and Instrument Technician (E&I)
- Service Technician
- Electrical Maintenance Technician

Career Pathways

The Industrial Systems Specialist program is a pathway into the following program (page 217):

- Automation for Industrial Systems

Related Programs

- Automated Packaging Systems Technician
- IT - Systems Administration Specialist

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10605167	Electricity 1*	2 cr
10605168	Electricity 2*	2 cr.
10631100	Introduction to Process Control	2 cr.
10631102	Idustrial Power Electronics *	2 cr.
10631103	Process Control and Instrumentation*	3 cr.
10631104	Smart Instruments*	2 cr.
10631105	Industrial Networks and Communication Busses*	2 cr.
10631106	Supervisory and Distributed Control Systems*	3 cr.
10631107	Industrial Automation Case Project*	1 cr.
10631108	PLC Programming and Interfacing*	3 cr.
10631109	Industrial AC, Motor Control, and Pilot Devices *	3 cr.
10631110	Advanced PLC Programming and Interfacing*	3 cr.
TOTAL PROGRAM REQUIREMENTS		**28 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better

10605167
Electricity 1 - Credits: 2
Electricity 1 is a lecture/hands-on course designed to introduce students to basic electrical terminology, laws, concepts, instrumentation, and application. Hands-on activities will be stressed to reinforce electrical concepts related to practical applications dealing with computer networks. Topics covered will include electrical safety, terminology and symbols, electrical laws, basic circuits, multimeter use, DC power supplies, and troubleshooting. Critical-thinking skills are emphasized to develop competencies in problem solving and troubleshooting. COREQUISITE: 10804113 College Technical Mathematics 1A or 10804115 College Technical Math 1.

10605168
Electricity 2 - Credits: 2
This course is designed to introduce students to the basic concepts of alternating current. Emphasis is placed on circuit analysis and problem-solving skills necessary for the maintenance of modern industrial electric systems. PREREQUISITE: 10605167 Electricity 1.

10631100
Introduction to Process Control - Credits: 2
The Introduction to Process Control course explains the function of basic devices for measuring and controlling different kinds of variables in process control. It introduces closed-loop control, PID functions, analog and digital devices, and control system applications. It also covers instrumentation symbols and the interpretation and use of process diagrams.

10631102
Industrial Power Electronics - Credits: 2
The Industrial Power Electronics course is a hands-on course dealing with the electronics that are used to control, power, and operate machines and processes in the modern manufacturing plant. The course includes the study and use of the oscilloscope and digital multimeter, thyristors, ICs, and AC, DC, stepper and servo motor drive systems. PREREQUISITE: 10605167 Electricity 1 or equivalent.

10631103
Process Control and Instrumentation - Credits: 3
The Process Control and Instrumentation course offers hands-on skill exercises on controlling and manipulating temperature, pressure, flow, and level in the manufacturing process. Students will be able to identify, connect, operate, troubleshoot, and perform preventive maintenance on the components that form a process control system. PREREQUISITE: 10605167 Electricity 1 or equivalent and COREQUISITE: 10631100 Introduction to Process Control.

10631104
Smart Instruments - Credits: 2
The Smart Instruments course introduces students to smart instruments including temperature devices, pressure devices, and smart control valves. Students will be able to calibrate, configure, and troubleshoot smart devices. Students will be able to identify appropriate applications for smart instruments. PREREQUISITE: 10631100 Introduction to Process Control or equivalent.

10631105
Industrial Networks and Communication Busses - Credits: 2
This course introduces networks, communication busses, and protocols used in industrial applications. Students will be able to discuss strengths and weaknesses of each communications solution and pick the most appropriate for given applications. COREQUISITE: 10631110 Advanced PLC Programming and Interfacing.

10631106
Supervisory and Distributed Control Systems - Credits: 3
This course will provide an overview exposure to networked distributed control systems and data acquisition systems. Included are PLCs, data acquisition systems, Single Loop Controllers, Smart Devices, and Distributed Control Systems. Students will connect, configure, and operate a simulated process that includes the elements of distributed control and data acquisition systems. PREREQUISITES: 10631100 Introduction to Process Control and 10631108 PLC Programming and Interfacing or equivalent.

10631107
Industrial Automation Case Project - Credits: 1
The primary focus of this course is to have the students receive exposure and experience with an industrial process control or manufacturing automation system. Students will complete a project or research dealing with an existing process in an area industry or complete an advanced project in the lab dealing with applications of industrial networks, sensors, control, and data acquisition. PREREQUISITES: 10631100 Introduction to Process Control; 10631102 Industrial Power Electronics; 10631103 Process Control and Instrumentation; 10631108 PLC Programming and Interfacing; and 10631109 Industrial AC, Motor Control, and Pilot Devices.

10631108
PLC Programming and Interfacing - Credits: 3
PLC Programming and Interfacing offers students a hands-on approach to implementing industrial control by integrating typical plant floor electrical components with microprocessor-based controllers. Students will learn to identify and connect field inputs and outputs; communicate with, and program microprocessor-based controllers. Students will also connect, communicate with, and develop displays for computer-based operator interfaces. PREREQUISITE: 10605167 Electricity 1.

10631109
Industrial AC, Motor Control, and Pilot Devices - Credits: 3
This course gives students the opportunity to learn about AC theory, circuits, and control devices used in industry. The course begins with an overview of AC theory including resistance, inductance, and capacitance. The course includes topics on AC and DC motors, motor controls, and pilot devices. The student will engage in hands-on activities with real industrial components to enable them to recognize, select, apply, and troubleshoot industrial electrical control circuit components. PREREQUISITE: 10605168 Electricity 2 or equivalent.

10631110
Advanced PLC Programming and Interfacing - Credits: 3
Advanced PLC offers students a hands-on approach to implementing industrial control using modem controllers to implement programs that utilize advanced functions. Students will complete hands-on activities with Allen Bradley ControlLogix PLCs. The course will examine the use of basic instructions and addressing with RSLogix 5000 as well as more advanced PLC instructions in Ladder Logic and Function Block. Other topics include PLC configuration and commissioning, communications with RSLinx, OPC, and RSNetworx, HMI configuration using PanelView, Wonderware and/or RSView. PREREQUISITE: 10631108 PLC Programming and Interfacing.

Information Technology - Cybersecurity Specialist

10-151-2 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond, Rice Lake, Superior**

Full program available at the New Richmond, Rice Lake, and Superior campuses
*Only first year coursework available at the Ashland campus
** via Hybrid instruction

Northwood Technical College

Program Overview

The IT - Cybersecurity Specialist program will give students hands-on experience with networking, operation systems, virtualization and security. Students will build a strong IT base as they install and configure Windows and Linux environments and create networks for a business like environment. Students will study attacks and security practices to protect data as they configure security settings, test and monitoring configurations. Students will configure and test routers, switches, firewalls, VPNs, IDS/IPS, workstations and servers with using vendor tools and open source resources. The Cybersecurity program also supports remote learning through the use of equipment pods in their Netlab (24/7).

Special Features

Northwood Tech is affiliated with the following industry partners providing students with access to a variety of materials and software: Cisco, CompTIA, Microsoft, Palo Alto and VMware.
Northwood Tech locations are Cisco academies, and Northwood Tech is a CompTIA academy partner. VUE testing centers are available at each location.

The IT – Cybersecurity Specialist program prepares students for a number of certifications related to the field. Students may choose to complete certifications, many through the on campus VUE testing center. Industry certifications students may pursue include CompTIA A+, Network+, Linux+, Security+, PenTest+, CySA+, Cisco CCNA, Cisco Cyber-Ops, CEH and CISSP.

As a member of the Microsoft, Cisco, VMWare, and Red Hat academies, students in the IT programs receive free access to vendor software and tools. The Cybersecurity program also supports remote learning through the use of equipment pods in their Netlab (24/7).

Students in the IT – Cybersecurity Specialist-program have the opportunity to dual major with the IT – Systems Administration Specialist program by completing additional coursework (see page 135 for more information on the IT - Systems Administration Specialist program).

Graduates have the option to transfer coursework to complete a Bachelor's Degree at UW-Stout, and other institutions, with degree completion programs.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

IT - Cybersecurity Specialist graduates will be able to:

- Identify security strategies
- Implement secure infrastructures
- Conduct security testing
- Analyze security data
- Mitigate risk
- Develop security documentation

Career Outlook

Typical positions available after graduation include:

- Network Administrator
- Network Support Specialist
- Cyber Security Specialist
- Network Security Specialist
- Network Specialist
- Computer Specialist
- SOC Analyst

Career Pathways

The Information Technology - Cybersecurity Specialist program includes the following pathway options (page 229):

- IT - Network Technician

Related Programs

- IT - Systems Administration Specialist
- IT - Web and Software Developer

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10150102	Information Security*	3 cr.
10150109	Wireless Networking and Security*	3 cr.
10150111	Cisco CCNA 1 Introduction to Networks	3 cr.
10150112	Cisco CCNA 3 Enterprise Networking, Security and Automation*	3 cr.
10150113	Cisco CCNA 2 Routing and Switching Essentials*	3 cr.
10150117	Server Administration 1*	3 cr.
10150139	IT Essentials and Security	2 cr.
10150161	Network and Security Case Studies*	1 cr.
10150170	Coding with Python	2 cr.
10151101	Firewall and VPN Management*	3 cr.
10151102	Digital Forensics and Incident Response*	2 cr.
10151103	Penetration Testing*	3 cr.
10151104	Intrusion Detection and Prevention*	3 cr.
10151105	Logging and Analysis*	3 cr.
10151106	Networking Security Capstone*	2 cr.
10151107	Emerging Technologies in Cybersecurity*	3 cr.
10154103	Linux Operating Systems*	3 cr.
10154149	Windows Operating Systems	3 cr.
Technical Studies Total		48 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10804123	Math with Business Applications **or**	
10804113	College Technical Mathematics 1A or	
10804133	Mathematics and Logic	3 cr.
10809166	Introduction to Ethics: Theory and Application **or**	
10809172	Introduction to Diversity Studies **or**	
10809195	Economics	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		15 cr.
PROGRAM REQUIREMENTS		**63 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.

10150102
Information Security - Credits: 3
This course will cover hardware, software, and the physical environment related to IT security. The processes of defense, prevention, detection, and response will be studied. Typical types of attacks will be studied and potential solutions or defenses will be explored. Networking and operating system experience is required along with a code of ethics. This course covers topics related to the CompTIA Security+ exam. PREREQUISITE: 10154103 Linux Operating Systems.

10150109
Wireless Networking and Security - Credits: 3
In this course students will study the fundamentals of radio frequency (RF) and 802.11 technologies. They will be installing configuring, monitoring, securing and troubleshooting wireless devices. These skills will be applied to autonomous systems and wireless LAN controllers (WLC) to support business requirement. Site surveys will be conducted. Testing of secured implementations, identifying rouge devices and identify wireless attacks will be studied. This course will cover materials found on the Cisco Wireless Network Fundamentals (WIFUND) exam for the CCNA Wireless certification. PREREQUISITE: 10150113 Cisco CCNA 2 Routing and Switching Essentials.

10150111
Cisco CCNA 1 Introduction to Networks - Credits: 3
Cisco CCNA 1 Introduction to Networks (ITN) covers networking architecture, structure, and functions. The course introduces On Site4 and On Site6 addressing structure and design, the fundamentals of Ethernet concepts, media, and operations, the OSI and TCP/IP models and associated protocols to set a strong networking foundation. Wireshark is used to examine protocols on the network. Students configure and troubleshoot routers (IOS), switches and clients for a basic network.

10150112
Cisco CCNA 3 Enterprise Networking, Security and Automation - Credits: 3
The CCNA 3 v7 curriculum describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. Students gain skills to configure and troubleshoot OSPF, Access control lists, Network address translation (NAT), WAN technologies, quality of service (QoS), cyber security threats, mechanisms used for secure remote access (VPN), software-defined networking, virtualization, network management and network automation concepts (APIs) that support the digitalization of networks. PREREQUISITE: 10150113 Cisco CCNA 2 Routing and Switching Essentials.

10150113
Cisco CCNA 2 Routing and Switching Essentials - Credits: 3
Cisco CCNA 2 Routing and Switching Essentials (RSE) covers the architecture, components, and operations of routers and sNorthwood Techhes in a small network. Students learn how to configure, device management, sNorthwood Techh ports, security, VLANs, Static and Dynamic routing, DHCP (v4 and v6), NAT and ACLs on routers and sNorthwood Techhes. At the completion of this course student may achieve a discount voucher for the CCENT certification exam. PREREQUISITE: 10150111 Cisco CCNA1 Introduction to Networks.

10150117
Server Administration 1 - Credits: 3
This course provides students with the fundamental technologies needed to administer a Windows domain. Students will learn how to manage domain resources including users, workstations, servers and shared folders using Active Directory, role management, Server Manager and RSAT. Student will learn how to secure these domain resources using Group Policy, NTFS and file share permissions. Student will also learn how to use the Domain Naming System (DNS), an integral part of Windows domain environments. PREREQUISITE: 10154149 Windows Operating Systems.

10150139
IT Essentials and Security - Credits: 2
The IT Essentials and Security (ITES) course introduces students to the fundamentals of computer hardware and software, mobile devices, security and networking concepts, and the responsibilities of an IT professional. The latest release includes mobile devices, Linux, and client side virtualization, as well as expanded information about Microsoft Windows operating systems, security, networking, and troubleshooting. This course covers materials on the CompTia A+ certification exam.

10150161
Network and Security Case Studies - Credits: 1
The primary focus of this course is to have the students receive exposure and experience with a business information system. To accomplish this goal, students will get involved with industry or complete a business lab simulation by designing and implementing a business project. PREREQUISITE: 10150102 Information Security.

10150170
Coding with Python - Credits: 2
This course introduces Python for network engineering. It begins with basic programming topics such as variables, lists, decisions, loops and I/O. Using this knowledge the course teaches students how to automate the configuration of networking equipment. This course also introduces the "Internet of Things" (IoT) and how to use Python to program IoT devices.

10151101
Firewall and VPN Management - Credits: 3
This course covers the configuration and management of firewall and VPN technologies. Students will be exposed to products from manufactures like: CISCO, Palo Alto, Sonic Wall and Check Point. In depth hands-on exercises are used to instruct the student in the related technologies including NAT, PAT, ACL construction, application gateways, stateful packet inspection, application layer and URL filtering. Student will configure and test VPN connection for remote access and site-to-site connections. PREREQUISITE: 10150113 Cisco CCNA 2 Routing and Switching Essentials

10151102
Digital Forensics and Incident Response - Credits: 2
This course provides an overview of computer forensics. Operating system structures and file/disk structures (partitions, MBR, GPT) will be covered for Windows, Android and Linux. Imaging of dives and memory will be done using computer forensic hardware and software tools. The details of data acquisition will identify artifacts for the operating system, files system, browsers, and email. File and password recovery will be performed with data carving tools. Students will generate reports to document their activities. Tools used may include FTK, dd, Kali. PREREQUISITE: 10154103 Linux Operating Systems

10151103
Penetration Testing - Credits: 3
This course will provide an overview of the tools and techniques commonly used for exposing the vulnerabilities of an organization's IT systems. Hands-on labs are used to introduce the proper selection and application of a given tool, with a focus on security techniques to prevent or mitigate such attacks. Along with this, students will explore options for documenting and reporting on the outcome of the tests to stakeholders. PREREQUISITE: 10150102 Information Security

10151104
Intrusion Detection and Prevention - Credits: 3
This course provides a broad overview of the tools and techniques commonly used for detecting network sourced attacks. In depth hands-on exercised are used to instruct the student in the proper selection and application of a given tool for the intended task. Also included are basic strategies for documenting and reporting on detected events. The student must demonstrate the ability to plan, design, and implement a network IDS/IPS that fulfills the security needs of a common business or organization. Tools used may include: Security Onion, firepower, Palo Alto, tcpdump, snort, barnyard, etc... PREREQUISITE 10501102 Information Security

10151105
Logging and Analysis - Credits: 3
This course will examine different types of logs to identify issues and threats. Students will become familiar with policies, procedures, event correlation and continuous monitoring programs to help identify incidents. Network traffic will be monitored for anomalies. Tools used may include: Security Onion, SIEM OSSEC, ELK, OSSIM, solar wins, Prelude, splunk. PREREQUISITE 10150102 Information Security

10151106
Networking Security Capstone - Credits: 2
This capture the flag type course will focus and developing a complete network setup and the defending it. This course integrates all the skills students learn in the program and assesses their ability to put into practice their mastery of program outcomes. The student will also be attacking other student setups. Rouge devices may be introduced and topics such as social engineering will be acceptable. Attacks and defense will be the goals of the course! COREQUISITES: 10151104 Intrusion Detection and Prevention, 10151105 Logging and Analysis.

10151107
Emerging Technologies in Cybersecurity - Credits: 3
This exciting course provides the student with the opportunity to research and explore current and rapidly evolving technologies with an eye towards how they affect an organization. Students will discuss the disruptive nature of new technologies on individuals, businesses, and the society at large. Some of these technologies include robotics, encryption, social media, biometrics, SmartHome controllers, remote access, genetic tracing, and Big Data. The student will develop a project plan that implements a new technology into an existing business or organizational model and identify the impacts the new technology will have on the organization. PREREQUISITE: 10150112 Cisco CCNA 3 Enterprise Networking, Security and Automation

10154103
Linux Operating Systems - Credits: 3
In this course the Linux operating system is examined in-depth with emphasis on features, capabilities, tools, and configurations including an introduction to network configurations. PREREQUISITE: 10154149 Windows Operating Systems.

10154149
Windows Operating Systems - Credits: 3
A review of the most common command line operations and study of more advanced commands necessary to configure the Windows operating system for a variety of environments. Topics to be studied include creating directories, batch files, menus, custom configurations, file management, multitasking, windowing, security, and disk management utilities. There will be an introduction to usage, configuration, and tools of the Windows operating system.

Information Technology - Systems Administration Specialist

10-154-7 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond*, Rice Lake, Superior**

Full program available via On Site or Hybrid instruction at the Ashland or Rice Lake campus

*Only first year coursework fully available at the New Richmond campus. Second year coursework is available at other campus locations or through a combination of Online, Hybrid or On Site instruction at the New Richmond campus

**Full program available at the Superior campus via Hybrid instruction

Northwood Technical College

Program Overview

The first year of the IT-Systems Administration Specialist program provides you with a foundation in computer systems along with strong networking skills. These skills will allow you to support and manage computer systems and the networks connecting them.

The second year of the program focuses on server administration, database administration, virtualization and cloud computing concepts. Students learn how to securely install, configure and manage servers in a virtualized environment. The curriculum provides skills to help prepare students for the Microsoft Technology Associate (MTA), VMware Certified Professional (VCP), AWS Certified Solutions Architect, CompTIA A+, Network+, Linux+ and Server+ certifications.

Special Features

Northwood Tech is affiliated with the following industry partners providing students with access to a variety of materials and software: Cisco, CompTIA, Microsoft, and VMware.

Cisco Networking Academy

CompTIA Authorized Academy

vmware IT ACADEMY

aws academy

Northwood Tech locations are Cisco academies, and Northwood Tech is a CompTIA academy partner and does VUE testing.

As a member of the Microsoft, Cisco and VMware academies students in the IT programs receive free access to vendor software

Students in the IT – Systems Administration Specialist program have the opportunity to dual major with the IT – Cybersecurity Specialist program by completing additional coursework (see page 133 for more information on the IT - Cybersecurity Specialist program). Students can fulfill electives by taking classes from either program

Graduates have the option to transfer coursework to complete a Bachelor's Degree at UW-Stout, and other institutions, with degree completion programs.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Information Technology - Systems Administration Specialist graduates will be able to:

- Support server operations
- Manage virtualization technologies
- Manage client operating systems
- Manage services in a cloud environment
- Develop scripts for IT automation

Career Outlook

Typical positions available after graduation include:

- Systems Administrator
- Microsoft Server Administrator
- Network Technician
- VMware vSphere Administrator
- Database Administrator
- Cloud Technician

With additional education and/or work experience, graduates may find employment as:

- Network Administrator
- Information Security Analyst
- Data Center Manager

Career Pathway

The Information Technology - Systems Administration Specialist program includes the following pathway option (page 230):

- IT - Network Technician

Related Programs

- IT - Cybersecurity Specialist
- IT - Web and Software Developer
- Industrial Systems Specialist

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10150111	Cisco CCNA 1 Introduction to Networks	3 cr.
10150113	Cisco CCNA 2 Routing and Switching Essentials *	3 cr.
10150117	Server Administration 1*	3 cr.
10150118	Server Administration 2*	3 cr.
10150139	IT Essentials and Security	2 cr.
10150170	Coding with Python	2 cr.
10152100	Database Concepts and SQL	3 cr.
10154103	Linux Operating Systems*	3 cr.
10154141	VMware Certified Professional*	3 cr.
10154165	Introduction to System Center*	2 cr.
10154166	Introduction to PowerShell Automation*	3 cr.
10154144	Ethical Hacking*	3 cr.
10154145	Database Administration*	3 cr.
10154146	Cloud Computing*	3 cr.
10154147	Capstone Project*	2 cr.
10154148	IT Field Experience*	1 cr.
10154149	Windows Operating Systems	3 cr.
Technical Studies Total		45 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication or	
10801198	Speech	3 cr.
10804123	Math with Business Applications or	
10804113	College Technical Mathematics 1A or	
10804133	Mathematics and Logic	3 cr.
10809166	Introduction to Ethics: Theory and Application or	
10809172	Introduction to Diversity Studies or	
10809195	Economics	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		15 cr.
ELECTIVES		3 cr.
PROGRAM REQUIREMENTS		**63 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10150111
Cisco CCNA 1 Introduction to Networks - Credits: 3
Cisco CCNA 1 Introduction to Networks (ITN) covers networking architecture, structure, and functions. The course introduces On Site4 and On Site6 addressing structure and design, the fundamentals of Ethernet concepts, media, and operations, the OSI and TCP/IP models and associated protocols to set a strong networking foundation. Wireshark is used to examine protocols on the network. Students configure and troubleshoot routers (IOS), switches and clients for a basic network.

10150113
Cisco CCNA 2 Routing and Switching Essentials - Credits: 3
Cisco CCNA 2 Routing and Switching Essentials (RSE) covers the architecture, components, and operations of routers and sNorthwood Techhes in a small network. Students learn how to configure, device management, sNorthwood Techh ports, security, VLANs, Static and Dynamic routing, DHCP (v4 and v6), NAT and ACLs on routers and sNorthwood Techhes. At the completion of this course student may achieve a discount voucher for the CCENT certification exam. PREREQUISITE: 10150111 Cisco CCNA1 Introduction to Networks.

10150117
Server Administration 1 - Credits: 3
This course provides students with the fundamental technologies needed to administer a Windows domain. Students will learn how to manage domain resources including users, workstations, servers and shared folders using Active Directory, role management, Server Manager and RSAT. Students will learn how to secure these domain resources using Group Policy, NTFS and file share permissions. Students will also learn how to use the Domain Naming System (DNS), an integral part of Windows domain environments. PREREQUISITE: 10154149 Windows Operating Systems.

10150118
Server Administration 2 - Credits: 3
This course introduces students to some of the most important server roles for systems administrators. These roles will include DHCP, storage, and Hyper - V virturalization. Students will learn how to Manage IP addresses on a network. They will learn how to create and secure file and block level storage. They will also learn how to create, manage and network virtual machines in a secure environment. PREREQUISITE: 10154149 Windows Operating Systems.

10150139
IT Essentials and Security- Credits: 2
The IT Essentials and Security (ITES) course introduces students to the fundamentals of computer hardware and software, mobile devices, security and networking concepts, and the responsibilities of an IT professional. The latest release includes mobile devices, Linux, and client side virtualization, as well as expanded information about Microsoft Windows operating systems, security, networking, and troubleshooting. This course covers materials on the CompTIA A+ certification exam.

10150170
Coding with Python - Credits: 2
This course introduces Python for network engineering. It begins with basic programming topics such as variables, lists, decisions, loops and I/O. Using this knowledge the course teaches students how to automate the configuration of networking equipment. This course also introduces the "Internet of Things" (IoT) and how to use Python to program IoT devices.

10152100
Database Concepts and SQL - Credits: 3
This course is a comprehensive introduction to database concepts. The interaction between software applications and databases will be discussed. Database terminology will be introduced. Students will learn how to manage, design, and construct relational databases. Structured Query Language (SQL) will be used to define and access databases. Other topics include normalization, entity relationship diagrams, foreign key constraints, and indexes.

10154103
Linux Operating Systems - Credits: 3
In this course the Linux operating system is examined in-depth with emphasis on features, capabilities, tools, and configurations including an introduction to network configurations. PREREQUISITE: 10154149 Windows Operating Systems

10154141
VMware Certified Professional - Credits: 3
This course is an introduction to Enterprise virtualization using VMware vSphere, ESXi and vCenter. Students receive hands-on experience in the installation, configuration and management of VMware. This course also covers storage and networking concepts important to virtualization. This course fulfills the "VMware vSphere: Install, Configure, Manage" requirement to take the VCP certification exam. PREREQUISITE: 10150113 Cisco CCNA 2 Routing and Switching Essentials.

10154165
Introduction to System Center - Credits: 2
This course will introduce Microsoft System Center Configuration Manager (SCCM). Students will learn administrative procedures to setup a Configuration Manager environment, create and deploy applications and packages, manage software updates, deploy Windows operating systems, and perform basic reporting. PREREQUISITE: 10150117 Server Administration 1.

10154166
Introduction to PowerShell Automation - Credits: 3
Scripting technologies are used to automate system management tasks and create system management utilities. Students will learn basic programming logic concepts to develop scripts. Windows PowerShell is utilized to administer and automate tasks in Microsoft network environments. PREREQUISITE: 10150117 Server Adminstration 1.

10154144
Ethical Hacking - Credits: 3
Ethical hacking students will scan, test and secure their own systems. Students in the lab environment will apply practical experience to implement essential security for systems. Studies will include how perimeter defenses are applied to their own networks. The processes of escalating privileges, Intrusion Detection, Policy Creation, Social Engineering, DDoS Attacks, Buffer Overflows and Virus will be studied from an ethical and defense point of view to help secure resources in the information technology. PREREQUISITES: 10150117 Server Administration 1 and 10154103 Linux Operating Systems.

10154145
Database Administration - Credits: 3
This course covers basic concepts of database administration including setting up and securing users, tuning operations, database security, and backups. This course also covers web server administration and web site deployment as well as basics of SharePoint administration. PREREQUISITES: 10150118 Server Administration 2 and 10152100 Database Concepts and SQL.

10154146
Cloud Computing - Credits: 3
This course will examine how storage and virtualization technologies are making possible the enormous rise of cloud computing. The course will look at the impact that cloud computing is having on traditional datacenters. It will also discuss security and disaster recovery from a cloud computing perspective. PREREQUISITE: 10154141 VMware Certified Professional.

10154147
Capstone Project - Credits: 2
This course is the capstone work-based experience for the IT - Systems Administration Specialist program. Learners will design, develop, and perform a project either in an actual work experience or a simulated project. The project will be designed to utilize skills typical of a graduate in the field. Weekly simulated timesheets, job progress reports, and oral reports to management will be used to track project progress. Successful completion will require project documentation. COREQUISITE: 10154146 Cloud Computing.

10154148
IT Field Experience - Credits: 1
Provides work experience in IT Field related to course work within the program. The experience should complement program courses to implement practical application of skills students obtain. By consent of instructor, a special project(s) may be substituted for the field experience. COREQUISITE: 10154146 Cloud Computing.

10154149
Windows Operating Systems - Credits: 3
A review of the most common command line operations and study of more advanced commands necessary to configure the Windows operating system for a variety of environments. Topics to be studied include creating directories, batch files, menus, custom configurations, file management, multitasking, windowing, security, and disk management utilities. There will be an introduction to usage, configuration, and tools of the Windows operating system.

Information Technology - Web and Software Developer

10-152-7 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: New Richmond, Online

Program Overview

Web and software development teaches you how to solve problems. You will learn how to read/write in multiple languages, understand the concepts of object oriented programming, smart software design, troubleshooting, debugging and creating solutions.

Special Feature

The Information Technology - Web and Software Developer program is available online.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Information Technology - Web and Software Developer graduates will be able to:

- Design web and software applications
- Apply data persistence technologies
- Develop software applications
- Develop web applications
- Develop documentation
- Use infrastructures
- Analyze new technologies

Career Outlook

Typical positions available after graduation include:

- Web Developer
- Software Developer
- Database Developer
- Full Stack Developer

Related Programs

- IT - Cybersecurity Specialist
- IT - Systems Administration Specialist

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10152100	Database Concepts and SQL	3 cr.
10152101	Web Design and Development	3 cr.
10152102	Advanced Website Development*	3 cr.
10152106	Java Programming - Beginning*	3 cr.
10152107	Java Programming - Advanced*	3 cr.
10152108	Enterprise Java Programming*	3 cr.
10152110	Programming in SQL*	3 cr.
10152111	Systems Analysis and Design*	3 cr.
10152112	Server-Side Web Development*	3 cr.
10152113	Applications Development*	3 cr.
10152115	Beginning .NET Programming*	3 cr.
10152116	Web Tools of the Trade*	2 cr.
10152117	Advanced .NET Programming*	3 cr.
10152118	Enterprise Programming in .NET*	3 cr.
10152119	Development in Emerging Technologies*	3 cr.
10152135	Program Logic	3 cr.
Technical Studies Total		47 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication or	
10801198	Speech	3 cr.
10804123	Math with Business Applications or	
10804113	College Technical Mathematics 1 or	
10804133	Mathematics and Logic	3 cr.
10809166	Introduction to Ethics: Theory and Application or	
10809172	Introduction to Diversity Studies or	
10809195	Economics	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		15 cr.
PROGRAM REQUIREMENTS		**62 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions. You must earn a grade point of 2.0 or better in 10152113 Applications Development

10152100
Database Concepts and SQL - Credits: 3
This course is a comprehensive introduction to database concepts. The interaction between software applications and databases will be discussed. Database terminology will be introduced. Students will learn how to manage, design, and construct relational databases. The first eight weeks will focus on using Microsoft Access. The second eight weeks will work with Microsoft SQL Server learning how to work with the SQL language to create tables, join tables, query data, write summary queries, insert, update, and delete data.

10152101
Web Design and Development - Credits: 3
Students plan and develop well-designed websites that combine effective navigation and a balanced use of text, images, and color. Emphasis is on understanding HTML5, Cascading Style Sheets (CSS), accessibility, and responsive Web design. Students use media queries, CSS Flexbox and CSS Grid to create responsive websites that are easily viewable across a wide range of devices.

10152102
Advanced Website Development - Credits: 3
Students gain hands-on experience with the design and implementation of dynamic websites. Topics include JavaScript, jQuery, Ajax, and APIs with which students thoroughly explore event-driven techniques, data storage, accessing the DOM, and JSON. Students use media queries, CSS Flexbox and CSS Grid to create responsive websites that are easily viewable across a wide range of devices. Students deploy a website to a web server using FTP. PREREQUISITE: 10152101 Web Design and Development and 10152135 Program Logic.

10152106
Java Programming - Beginning - Credits: 3
This Java course familiarizes the student with the fundamentals of the Java language including data types, operators, expressions, and conditional statements. Students learn how to set up an environment for developing Java programs, define classes and utilize class objects. Students explore object-oriented programming concepts including encapsulation and abstraction. Other topics include string manipulation, Collections, Array Lists, Exception Handling, and creating professional looking end-user interfaces. This course covers software architectural patterns, such as model-view-controller (MVC). Students learn to communicate with a database. PREREQUISITE: 10152135 Program Logic and COREQUISITE 10152101 Web Design and Development.

10152107
Java Programming - Advanced - Credits: 3
This Java web-programming course provides an in-depth look at advanced features of the Java language. With a solid grasp of Java language basics, students explore more object-oriented concepts including inheritance and polymorphism. Students develop Java applications for the web using Java Server Pages (JSP), and Servlets. Topics include JSPs, Servlets, session management, Expression Language (EL), JSP Standard Tag Library (JSTL), and JavaBeans. Students develop applications that communicate with a database. PREREQUISITE: 10152106 Java Programming – Beginning and COREQUISITE: 10152102 Advanced Website Development.

10152108
Enterprise Java Programming - Credits: 3
The third course in the Java sequence continues exploring advanced Java topics within a Java web development platform. Students hone their skills in JSPs, Servlets, session management, Expression Language (EL), JSP Standard Tag Library (JSTL), and JavaBeans. New concepts include, working with form-based security, listeners, filters, encryption, as well as, working with HTTP requests and responses headers. Students develop applications that communicate with a database. PREREQUISITE: 10152107 Java Programming - Advanced.

10152110
Programming in SQL - Credits: 3
This course covers using Microsoft SQL Server and SQL Server Management Studio to design and create databases, tables, view, functions and stored procedures. Students will learn to script all creation and modification of tables, views, and stored procedures. Students will also explore how to encrypt data, and best practices for working with SQL server. PREREQUISITE: 10152100 Database Concepts and SQL.

10152111
Systems Analysis and Design - Credits: 3
This course covers the introduction to principles and techniques for analyzing and building requirements for a software solution. Included will be the definition of the problem, fact gathering, and evaluation of alternative solutions. A majority of the course will focus on understanding the importance of finding and documenting the business requirements for a project. Students will also work with various design and project management software tools. NOTE: This course should be taken in the fall semester, prior to the final spring semester. This course will be used to build the requirements for the final capstone project that will be completed in 10152113 Applications Development PREREQUISITE: 10152117 Advanced .NET Programming

10152112
Server-Side Web Development - Credits: 3
This course will familiarize the student with techniques to create Server Side processing for building fully functional Web applications. Topics covered include the use of Server Side Scripting, functions, sessions, GET, POST and session management. Students will work with PHP and MariaDB and will learn the fundamental programming concepts to build interactive data based web applications. PREREQUISITE: 10152117 Advanced .NET Programming and 10152102 Advanced Website Development and COREQUISITE: 10152110 Programming in SQL.

10152113
Applications Development - Credits: 3
The purpose of this capstone course is to provide the student with experience developing applications in a business environment. Students apply analysis, design, database, and programming techniques to develop a fully functional software application. The project progresses through all the stages of the development process including planning, analysis, design, construction, testing, and deployment. Students estimate their development effort and track actual time spent within each development phase. PREREQUISITES: 10152107 Java Programming - Advanced and 10152111 Systems Analysis and Design and COREQUISITE: 10152118 Enterprise Programming in .NET.

10152115
Beginning .NET Programming - Credits: 3
Introduction to the concepts and techniques of programming in the .NET environment using the C# language. Topics covered include requirement analysis, program design, coding, and debugging. The majority of projects will be Windows form applications. COREQUISITE: 10152135 Program Logic.

10152116
Web Tools of the Trade - Credits: 2
In Web Tools of the Trade, students explore ways to make use of third-party web tools, libraries, and APIs. Besides working with web tools, students will also explore current events and hot topics in technology. PREREQUISITE: 10152102 Advanced Website Development.

10152117
Advanced .NET Programming - Credits: 3
This course provides the student with an object-oriented view of the .NET development environment using C#. Topics include Lists, Classes, Debugging, Error Handling, Data Access connecting to an SQL server, and designing clean readable code. Windows Forms will be used for the majority of applications. PREREQUISITE: 10152115 Beginning .NET Programming and 10152135 Program Logic.

10152118
Enterprise Programming in .NET - Credits: 3
This course is designed to provide students with an enterprise view of the .NET development environment. The course will use Visual Studio development environment to create fully functional websites using ASP.NET and C#. Multiple techniques will be used for database access. Students will start with web forms and move into the MVC model for development. PREREQUISITE: 10152117 Advanced .NET Programming.

10152119
Development in Emerging Technologies - Credits: 3
This course focuses on the development of applications for mobile devices. Students learn best practices for programming, testing, and deploying mobile applications. Students use device emulators for coding and testing mobile applications. Students effectively use layouts, themes, menus, and preferences to produce professional looking mobile applications. Students create applications that communicating with a SQLite database. PREREQUISITES: 10152102 Advanced Website Development, 10152115 Beginning .NET Programming, and COREQUISITE: 10152107 Java Programming - Advanced.

10152135
Program Logic - Credits: 3
In Program Logic, students learn to develop clear consistent strategies to create computer-programming solutions. Student analyze problems, review requirements, develop test plans, and then create solutions. Students learn to focus on understanding the logic behind each solution. Students also learn the proper use data types, variables and variable scope, as well as, methods, decision structures and repetition structures. Although this course emphasizes programming logic, students develop working computer programs.

Injection Mold Set-Up (Plastic) Apprentice

50-420-1 Apprenticeship

Campuses: New Richmond

Program Overview

Injection molding machine setters set up and tend machines that transform plastic compounds into a wide variety of consumer goods such as toys, tubing and auto parts. They install plastic injection molds on the molding machine; make necessary connections of the electrical, hydraulic and cooling systems to the mold; ensure that the correct plastic material, plastic melt temperatures, shot size, injection speed and pressures are set; and cycle the machine and adjust the molding parameters until acceptable parts are produced.

Units of instruction include electricity, hydraulics and pneumatics; statistical process control; plastic mold design and blueprint reading; technical mathematics; basic tool room machine shop operations; and an overview of many of the plastic molding processes other than injection molding.

Special Features

- Four-year training program
- 7,744 hours on-the-job training
- 576 hours of paid related instruction
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last semester of the apprenticeship.

For more information on apprenticeships, see page 25

Qualifications Required by the Bureau of Apprenticeship Standards

- A high school graduate or equivalency and must be able to furnish record of schooling and grade obtained.
- Not less than 18 years of age and must be able to furnish proof of age.
- Physically able to perform the work of the occupation with reasonable accommodations and without hazard to themselves or others.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To become an apprentice in the state of Wisconsin, one must first be indentured by the State Bureau of Apprenticeships Standards (BAS).

- Contact an employer on your own. Employment is a requirement of entering an apprenticeship.
- Once you have an employer/sponsor, contact the Bureau of Apprenticeship Standards, to initiate the application process.

Admission Requirements

- Complete the paper Northwood Tech application form

  NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to the Bureau of Apprenticeship Standards (Eau Claire Office)
  The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprenticeship Training Representative, at long.vang@dwd.wisconsin.org

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Injection Mold Set-Up (Plastic) Apprentice graduates will be able to:

- Classify the structure and properties of plastics
- Install (and maintain) molds
- Set-up injection molding machines
- Compare plastic processes used in the industry
- Analyze mold design and construction
- Interpret industrial prints and schematics
- Apply mathematics to industrial situations
- Solve problems by troubleshooting equipment components and processes
- Apply automation principles to injection molding and plastics

Related Programs

- Technical Studies - Journeyworker (page 200)

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50413701	Fundamentals of Electricity for Apprentices	1 cr.
50419501	Hydraulics for Apprentices	1 cr.
50419502	Pneumatics for Apprentices	1 cr.
50463713	Schematics for Apprentices	1 cr.
50463714	Introduction to Injection Molding	2 cr.
50463715	Injection Mold Design	2 cr.
50463716	Fundamentals of Plastics Processing	2 cr.
50463717	Plastic Process Design & Troubleshooting	2 cr.
50664718	Automation for Apprentices	2 cr.
50664719	Automation for Injection Mold Setup Apprentices	1 cr.
Occupational Supportive Courses		
50804504	Industrial Math 1	1 cr.
PROGRAM REQUIREMENTS		**16 cr.**

50413701
Fundamentals of Electricity for Apprentices - Credits: 1
Explore the principles and applications of direct current and Ohm's Law, and examine the various types of circuits and meters during this apprenticeship course. Discuss additional topics such as electrical power, magnetism, relays, energy, and transducers. Electrical testing and measurement will be reviewed, and electrical safe work practices will be examined.

50419501
Hydraulics for Apprentices - Credits: 1
Gain the knowledge of the uses and applications of hydraulics required in the apprentice trades. Hydraulic systems, devices and components will be examined. Job duties and tasks related to safety, inspection, testing, maintenance and repair will be included.

50419502
Pneumatics for Apprentices - Credits: 1
Gain the knowledge of the uses and applications of pneumatics required in the apprentice trades. Pneumatic systems, devices and components will be examined. Job duties and tasks related to safety, inspection, testing, maintenance and repair will be included.

50463713
Schematics for Apprentices - Credits: 1
Explore the basics of schematic print reading for the injection mold set up apprentice, and study topics including hydraulics, pneumatics, and electrical schematics. Print types, symbols, technical specifications, and how this information is used by the trade are included.

50463714
Introduction to Injection Molding - Credits: 2
Build skills and apply reading electrical, hydraulic, and pneumatic schematics to plastic injection molding in this course designed for the injection mold setup apprentice. Study topics such as injection molding, thermosets and thermoplastics, mold set up and start up, and the structure and properties of plastic.

50463715
Injection Mold Design - Credits: 2
This course is designed to introduce apprentices to blueprint reading and mold design. Apprentices will be introduced to various aspects of piece part design, mold design, and mold construction as they build skills in interpreting industrial prints. Course competencies include mold teardown and analysis, 3D modeling, and rapid prototyping.

50463716
Fundamentals of Plastics Processing - Credits: 2
This course provide the injection mold setup person with an examination of plastics properties and structures; explores plastics processing and manufacturing; and reviews material selection and testing, material drying, and polymer heating, flow and solidification. Techniques for troubleshooting processes are introduced.

50463717
Plastic Process Design & Troubleshooting - Credits: 2
Study various molding processes, including the injection molding process, during this course for the injection mold set up apprentice. This course provides the injection mold setup person with an examination of process optimization, quality, product testing, scientific injection molding principles, and fundamentals of learning manufacturing. Project based activities will help develop problem-solving and troubleshooting skills in the apprentices' final semester of related instruction.

50664718
Automation for Apprentices - Credits: 2
Examine industrial automation and applications to various trades. Automation terminology, concepts and applications will be examined. Automated systems, components and devices will be reviewed. Robotics used in modern manufacturing plants will be compared and analyzed. Job duties and tasks associated with safety, inspection, testing, maintenance, repair and servicing will be the primary emphasis.

50664719
Automation for Injection Mold Setup Apprentices - Credits: 1
Automation principles will be applies to injection molding machines and set-up operations.

50804504
Industrial Math 1 - Credits: 1
Explore the topics of applied arithmetic and algebra. Study concepts related to measurement, fractions, decimals, percent, ratio and proportion, signed numbers, formula substitution, solutions to equations, tapers and gears. Calculate the areas and volumes of common geometric shapes.

Leadership Development

10-196-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

Leadership Development is designed for people who are, or aspire to become a manager, supervisor or leader in the business and professional world. The program provides you with the skills to deal with the everyday management processes of developing employees into high performing, cross-functional and interactive work teams.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Leadership Development graduates will be able to:

- Utilize quality strategies and tactics
- Apply effective leadership skills
- Apply Human Resource policies and procedures
- Perform supervisory management functions to achieve organizational objectives

Career Outlook

Typical positions available after graduation include:

- Supervisor
- Manager
- Team Leader
- Group Leader
- Department Head
- Coach
- Mentor

Career Pathway

The Leadership Development program includes the following pathway options (page 231):

- Leadership Essentials
- Supervisory Leadership Certificate

Related Programs

- Human Resource Management
- Nonprofit Leadership
- Business Management

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101176	Financial Accounting 1A	2 cr.
10103106	MS PowerPoint	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10106199	Business Technology and Success	1 cr.
10116100	Human Resource Management	3 cr.
10196108	Customer Service	1 cr.
10196134	Legal Issues for Supervisors	3 cr.
10196136	Safety in the Workplace	3 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10196145	Contemporary Business for Supervisors	2 cr.
10196164	Personal Skills for Supervisors	3 cr.
10196168	Organizational Development	3 cr.
10196170	Applied Supervision*	2 cr.
10196188	Project Management	3 cr.
10196189	Team Building and Problem Solving	3 cr.
10196190	Leadership Development	3 cr.
10196191	Supervision	3 cr.
10196192	Managing for Quality	3 cr.
Technical Studies Total		42 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech or	
10801196	Oral/Interpersonal Communication	3 cr.
10804123	Math with Business Applications	3 cr.
10809195	Economics	3 cr.
10809122	Introduction to American Government **or**	
10809196	Introduction to Sociology	3 cr.
10809188	Developmental Psychology **or**	
10809198	Introduction to Psychology	3 cr.
General Studies Total		18 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10106199
Business Technology and Success - Credits: 1
Designed to explore the impact of digital technology, communication, and media. Course learners will be able to apply organizational techniques and manage electronic files; explore computer hardware and the web using various software and apps while practicing security and safety techniques. Improve skills in critical thinking, innovation, and personal responsibility through experiential and problem-solving approaches for a workforce-ready mindset.

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10196108
Customer Service - Credits: 1
This course examines customer service as it relates to organizational quality. It addresses service models for internal and external customers, systems and strategies applied to customer service, and tools and techniques for gathering customer feedback and handling complaints.

10196134
Legal Issues for Supervisors - Credits: 3
Provides an overview of the general legal responsibilities of an organization. Analyzes the current employment laws in the U.S. and their impact on employer/employees. Examines the supervisor's role in dealing with harassment in the workplace. Compares how appeals can be addressed in both union and nonunion environment.

10196136
Safety in the Workplace - Credits: 3
An introduction to safety and loss prevention in the workplace with an emphasis on the supervisor's responsibility for maintaining a safe, productive environment. Students will study safety concepts, hazard controls, developing safety and health programs, and federal- and state-mandated regulations.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10196145
Contemporary Business for Supervisors - Credits: 2
In this course, you will review how the basic management styles affect the people, processes, and profitability of a business. You will also learn how to balance the organization's needs for profits with employees' basic needs within a global context. You will review and study the basic concepts and the supervisor's role regarding return on investment, return on equity, profit centers, financial statements, and overall departmental operations.

10196164
Personal Skills for Supervisors - Credits: 3
On Siteal Skills for Supervisors, the learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

10196168
Organizational Development - Credits: 3
In Organizational Development, the learner applies the skills and tools necessary to effectively deal with organization behavior and change. Each learner will demonstrate the application of the impacts of globalization on an organization, dealing with organization culture, dealing with change and future challenges affecting the total organization, organization decision making, vision, goals, performance management and planning, and the role of organization structur.

10196170
Applied Supervision - Credits: 2
This course emphasizes application of advanced principles of supervision and project management. These principles include planning and organizing; implementation and control; and assessment. Learners are provided the opportunity to design and complete supervisory projects. Beginning with the fundamentals and extending to application, this course allows learners to undertake improvement projects within their workplace. PREREQUISITE: Students must be enrolled in the Leadership Development program and have completed 40 credits.

10196188
Project Management - Credits: 3
In Project Management, the learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will demonstrate the application of the role of project management, developing a project proposal, use of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment.

10196189
Team Building and Problem Solving - Credits: 3
In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, evaluation, and documentation.

10196190
Leadership Development - Credits: 3
In Leadership Development, the learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

10196192
Managing for Quality - Credits: 3
In Managing for Quality, the learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identifying all stakeholder relationships, meeting/exceeding customer expectations, a system-focused approach, using appropriate models and tools, managing a quality improvement project, and measuring effectiveness of continuous improvement activities.

Leadership Essentials

30-196-6 Technical Diploma (less than one-year)

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

A series of courses to assist you in developing the skills of current and future managers to lead today's workforce. Leadership Essentials focuses on leading people within an organization toward strategic goals, through corporate changes, or in directing processes and procedures.

Admission Requirement

- Complete Online application form

Program Outcomes

Leadership Essentials graduates will be able to:

- Perform leadership functions to achieve organizational objectives
- Facilitate effective employee relations
- Select appropriate communication strategy to fit the situation

Career Outlook

Typical positions available after graduation include:

- Office Coordinator
- Office Supervisor
- Customer Service Specialist
- Group Coordinator
- Team Lead

Career Pathways

Leadership Essentials is a pathway into the following programs (pages 231 and 238):

- Leadership Development
- Nonprofit Leadership

Curriculum

Number	Course Title	Credits (cr.)
10196164	Personal Skills for Supervisors	3 cr.
10196189	Team Building and Problem Solving	3 cr.
10196190	Leadership Development	3 cr.
10196191	Supervision	3 cr.
PROGRAM REQUIREMENTS		**12 cr.**

Course Descriptions

10196164
Personal Skills for Supervisors - Credits: 3
On Siteal Skills for Supervisors, the learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

10196189
Team Building and Problem Solving - Credits: 3
In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, evaluation, and documentation.

10196190
Leadership Development - Credits: 3
In Leadership Development, the learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

Livestock Production

61-080-2 Pathway Certificate (less than one year)

Campus: Ashland*, New Richmond*, Rice Lake*, Superior*
Outreach Center: Balsam Lake*

*Combination of Hybrid and On Site instruction

Program Overview

The Livestock Production pathway certificate gives students the fundamentals of livestock management and husbandry along with an understanding of nutrition. Coupled with a class in farm records and analysis, students will leave with the skill set to manage and make critical decisions surrounding the day-to-day business of a livestock operation.

Special Features

Evening courses will be available for individuals needing to complete continuing education requirements for FSA loans.

Certificate is available part time or over 2 years.

Labs will be on Fridays at either the Home Campus or On - Farm (at regional farms or test plots).

Inquire

For more information on this program or schedule of courses, contact:
Julie Wadzinski, instructor at Julie.Wadzinski@Northwood Tech.edu or 715.788.7064.

How to Apply:

Complete the online application or contact Student Services. When completing an online application select the Livestock Production Certificate from the program of choice dropdown list.

Program Outcome

The Livestock Production Certificate will prepare you to:

- Evaluate livestock management plans

Career Outlook

Typical positions available after graduation include:

- Farm Laborers
- Feeder
- Animal/Livestock Handler

Career Pathway

Livestock Production is a pathway into the following program (page 222):

- Farm Operation

Related Programs

- Agricultural Business Fundamentals
- Crop Production

Curriculum

Number	Course Title	Credits (cr.)
31080373	Livestock Nutrition	3 cr.
31080374	Livestock Management	3 cr.
31080375	Farm Records and Analysis	3 cr.
CERTIFICATE REQUIREMENTS		**9 cr.**

Course Descriptions

31080373
Livestock Nutrition - Credits: 3
The Livestock Nutrition course will instruct the student in the following areas: anatomy and physiology of livestock; nutrient requirements for calves, heifers, and cows; ration balancing for calves, heifers, lactating cows, and dry cows; determine livestock feed needs; evaluate by-product feeds and feed additives; low input livestock feeding; metabolic disorders; and current issues in agriculture. Individualized instruction will be held at the student's on-the-job work location. The class also involves credit for on-the-job experience.

31080374
Livestock Management - Credits: 3
Animal agriculture has changed dramatically in the past decade and will continue to change at an even more rapid rate in the future. With advanced technology, animals have been cloned from tissue cells other than the gametes. This may allow us to produce animal products other than the traditional milk, meat, and fiber of the past. Along with positive changes, we have new animal diseases, concerns for the environment, human health, and these things are happening in a very volatile, economic climate. This course will help you analyze the current situation and make plans to take advantage of the changes in animal agriculture brought about by technological advances. Only by taking advantage of this change will we be able to survive economically in a world market.

31080375
Farm Records and Analysis - Credits: 3
This course emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. Includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business and finance strategy to meet the learner's needs. Production and financial decisions will be made based on the learner's farm business analysis. All competencies will be assessed using the learner's farm or with simulations established by the instructor.

Machine Tool Operation

31-420-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Ashland

Program Overview

Machine Tool Operation is a nine-month technical diploma program designed to provide in-depth study and hands-on skills in the machine processing of a variety of metals.

You will become proficient in the set up and operation of manual mills, lathes, grinders, drills and saws as you complete increasingly complex projects while holding tight tolerances. Various pieces of precision measuring equipment are used to check quality. Additional work in blueprint reading, heat-treating and computer numerical controlled (CNC) machining is required to complete the Machine Tool Operation program.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Machine Tool Operation graduates will be able to:

- Apply basic safety practices in the machine shop
- Interpret industrial/engineering drawings
- Apply precision measuring methods to part inspection
- Perform basic machine tool equipment set-up and operation
- Perform programming, set up, and operation of CNC machine tools

Career Outlook

Typical positions available after graduation include:

- Machine Operator
- Machinist Apprentice
- Machine Setup Operator

With further training, graduates may advance to:

- All-round Machinist
- Tool and Die Maker
- Machine Programming
- Machine Shop Operator
- Tool-machine Setup Operator

Career Pathway

Machine Tool Operation is a pathway into the following program (page 233):

- Machine Tool Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32420321	Print Reading for Machine Trades	1 cr.
32420325	Machine Tool Operation 1	4 cr.
32420326	Machine Tool Operation 2*	4 cr.
32420327	Machine Tool Operation 3*	4 cr.
32420328	Machine Tool Operation 4 (WBL)*	4 cr.
32420329	Machine Tool Theory 1	2 cr.
32420330	Machine Tool Theory 2	2 cr.
32420365	CNC Fundamentals	2 cr.
Occupational Specific Total		23 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804325	Applied Technical Math 1	3 cr.
Occupational Supportive Total		5 cr.
TOTAL PROGRAM REQUIREMENTS		**28 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Course Descriptions

32420321
Print Reading for Machine Trades - Credits: 1
This course will cover the basic principles of print reading. The emphasis is on interpreting standard lines and symbols in single- and multiple-view working drawings. Topics include print reading procedures, drawing changes, machining specifications, and the reading of prints in specialized areas including ANSI and ISO standards. Strongly recommend a basic understanding of mathematics concepts.

32420325
Machine Tool Operation 1 - Credits: 4
Students will be assigned introductory, specifically designed projects that will be machined using the engine lathe, milling machine, drill press, and various saws. Students will be in a job-like setting. The capability and safe use of machine tools will be stressed.

32420326
Machine Tool Operation 2 - Credits: 4
Students will be assigned basic, specifically designed projects that will be machined using the engine lathe, milling machine, drill press, and various saws. Students will also machine parts on conversationally-programmed CNC lathes and vertical mills. Students will be in a job-like setting. The capability and safe use of machine tools will be stressed. COREQUISITE: 32420325 Machine Tool Operation 1.

32420327
Machine Tool Operation 3 - Credits: 4
A continuation of Machine Tool Operation featuring advanced operations on milling machines, grinders, lathes, and drill presses. CNC operation and programming on a vertical mill and a turning center are introduced. Also included are machine maintenance and precision measurement. The capability and safe use of machine tools will be stressed. PREREQUISITE: 32420326 Machine Tool Operation 2.

32420328
Machine Tool Operation 4 (WBL) - Credits: 4
Machine Tool Operation 4 features advanced operations on milling machines, grinders, lathes, and drill presses. CNC programming and operation on vertical mills and turning centers will be emphasized. The capability and safe use of machine tools will be stressed. COREQUISITE: 32420327 Machine Tool Operation 3.

32420329
Machine Tool Theory 1 - Credits: 2
This course will cover the basic principles of machine tool theory. The course will emphasize safety in the machine shop, measurement, metal cutting technology, basic lathe and mill operations, drilling machines, saws, layout procedures, and an introduction to CNC machining. The capability and safe use of machine tools will be stressed.

32420330
Machine Tool Theory 2 - Credits: 2
This course will cover principles of machine tool theory emphasizing conventional and CNC machining operations. There will be in-depth training on the engine lathe, milling machines, CNC programming and operation, grinding machines, and metallurgy. The capability and safe use of machine tools will be stressed.

32420365
CNC Fundamentals - Credits: 2
This course introduces the student to the development and editing of Computer Numerical Control (CNC) programs. The basic elements of CNC machine setup and operation are covered for the production of acceptable parts. Safety concerns are also addressed. Strongly recommend a basic understanding of algebra, geometry, and trigonometry.

Machine Tool Operation - CNC (CNC Machine Operator/Programmer)

31-444-1 Technical Diploma (one-year) - Program Availability Varies **Financial Aid Eligible**

Campus: Rice Lake

Program Overview

Machine Tool Operation - CNC program is a 9-month technical diploma program designed to provide in-depth study and hands-on skills for the machine tool industry.

Students become proficient in the set up and operation of CNC mills and lathes, as well as manual mills, lathes, drills, and saws. Students write set sheets, build fixtures, program parts, set-up, and machine parts using the students' own processes and CNC programs. They also perform inspection to ensure quality and precision.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Machine Tool Operation - CNC graduates will be able to:

- Apply basic safety practices in the machine shop
- Interpret industrial/engineering drawings
- Apply precision measuring methods to part inspection
- Perform basic machine tool equipment set-up and operation
- Perform programming, set-up, and operation of CNC machine tools

Career Outlook

After completing this program, graduates will be ready for their career in a variety of positions such as:

- Machine Tool Operator
- Apprentice Machinist
- CNC Machinist
- Maintenance Machinist
- CNC Programmer

Career Pathways

The Machine Tool Operation - CNC program includes the following pathway option (page 232):

- CNC Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32420320	CAD/CAM Applications*	2 cr.
32420321	Print Reading for Machine Trades	1 cr.
32420361	Introduction to CAD/CAM	1 cr.
32444302	Machining Fundamentals	2 cr.
31144310	Milling and Turning 1	3 cr.
31444311	Milling and Turning 2*	5 cr.
31444312	Milling and Turning 3*	3 cr.
31444313	Milling and Turning 4*	4 cr.
31444314	Milling and Turning 5*	4 cr.
Occupational Specific Total		25 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804334	Applied Technical Math 2*	2 cr.
Occupational Supportive Total		7 cr.
TOTAL PROGRAM REQUIREMENTS		**32 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

31444310
Milling and Turning 1 - Credits: 3
This course includes instruction of CNC (Computer Numerical Control) lathes and mills including calling up programs in the machine control unit, loading and deleting programs; setting work offsets; loading and unloading parts; loading tooling and tool offsets; running programs to make parts; and part inspection. By the end of the course, learners will set up work pieces in machines, enter programs, set up tool offsets, enter work offsets, and complete parts and projects.

31444311
Milling and Turning 2 - Credits: 5
This course includes the operation of CNC (Computer Numerical Control) mills and lathes by providing instruction and practice in the use of milling and turning machines. This course will also provide an introduction to job planning for CNC lathes and mills using standard G and M codes, including the use of process plans, inspection sheets, and set up guides will also be covered. This course will also provide the opportunity for learners to write their own job planning and editing of provided programs. By the end of this course, learners will edit programs, change speeds and feeds as needed, and adjust tool and work offsets to produce parts within specified tolerances. COREQUISITE: 31444310 Milling and Turning 1

31444312
Milling and Turning 3 - Credits: 3
This course includes the operation of CNC (Computer Numerical Control) mills and lathes including selection of tools, custom-made fixtures and other work holding devices such 4-jaw chucks, collets, and use of tail stocks to provide part support. Use of fixed cycles are introduced. Learners will be provided the opportunity to set the project, load and edit programs, change and modify tooling and programs to complete the required parts without the need to have the changes approved. This is the first class that the students will have both the opportunity and skills to complete a project using their own process. PREREQUISITE: 31444311 Milling and Turning 2

31444313
Milling and Turning 4 - Credits: 4
This course includes more advanced processes and tooling as it builds upon skills learned in the previous courses in the Milling and Turning sequence. Applications include selection of tools and work-holding devices, auto setting of tool offsets and work coordinate positions, load and editing programs, proofing programs, and making machine parameter adjustments. Advanced level programming will include canned machine cycles and use of software to assist in complex profiles. Learners will write complete programs, machine processes and set-up instruction. Including monitoring tool wear and offset updates designing and building customer-made fixtures for manufacturing and inspection. Learners will machine multiple parts to prove out programs and produce projects. This course will also provide an introduction and instruction to manual surface grinding set ups and operations. PREREQUISITE: 31444311 Milling and Turning 2 and COREQUISITE: 31444312 Milling and Turning 3

31444314
Milling and Turning 5 - Credits: 4
This course will continue to develop the skills and knowledge needed for entry into a machining workplace environment by providing instruction and practice in the use of milling, turning and grinding machines and the various manufacturing processes performed on them. It also includes an introduction to the automated surface grinding machines. This course allows the students to perfect the skills learned in the pre-requisite Milling and Turning courses. Students will have the opportunity to complete the capstone project using the tooling, machines and processes they deem best to meet the project requirements, though guidance will be given as needed. Students will be responsible for all aspects of their project using the skills learned in earlier classes such as material selection, tooling, work holding, inspection requirements, programming, editing, assembly, and documentation of the project. PREREQUISITE: 31444311 Milling and Turning 2 and COREQUISITE: 31444313 Milling and Turning 4

32444302
Machining Fundamentals - Credits: 2
This course will provide the basic machining information needed by the learner in subsequent CNC Machine Tool Operation courses. It will also provide instruction and practice in the use of sawing and drilling machines and related processes.

32420320
CAD/CAM Applications - Credits: 2
Computer-Aided Design (CAD) and Computer-Assisted Manufacturing (CAM) have become standard tools used almost wherever CNC production in metalworking takes place. Students will use the CAD/CAM software to build geometry, tool and material libraries, and define cutting paths/patterns. Post-processing of these CAD/CAM files will generate CNC programs in machine-specific G-code format. PREREQUISITE: 32420361 Introduction to CAD/CAM or 32420365 CNC Fundamentals.

32420321
Print Reading for Machine Trades - Credits: 1
This course will cover the basic principles of print reading. The emphasis is on interpreting standard lines and symbols in single- and multiple-view working drawings. Topics include print reading procedures, drawing changes, machining specifications, and the reading of prints in specialized areas including ANSI and ISO standards. Strongly recommend a basic understanding of mathematics concepts.

32420361
Introduction to CAD/CAM - Credits: 1
This course will introduce students to computer-aided drafting (CAD) and computer-aided machining (CAM). Students will use appropriate CAD software to prepare mechanical drawings. Students will be introduced to CAD/CAM equipment.

Machine Tool Technician

32-420-1 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: Superior

Program Overview

The two-year machine tool technician program at Northwood Tech will prepare you to operate and set up machine tools for the machining industry. You will learn general machining skills based on the skills and knowledge identified by the Metalworking Industry Skill Standards Board. You will gain skills in production planning, quality control, metallurgical processes, precision measuring, using an engineer's handbook and interpreting prints. Computer-aided machining and programming techniques are emphasized.

Special Feature

Machine Tool Technician is scheduled over 1.5 years, including the summer term.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Machine Tool Technician graduates will be able to:

- Apply basic safety practices in the machine shop
- Interpret industrial/engineering drawings
- Apply precision measuring methods to part inspection
- Perform basic machine tool equipment set up and operation
- Perform programming, set up, and operation of CNC machine tools
- Perform advanced CNC machining operations

Career Outlook

Typical positions available after graduation include:

- Machine Tool Operator
- Apprentice Machinist
- Machine Setup Person
- Tool Room Machinist
- CNC Machinist
- Maintenance Machinist
- CNC Programmer

Career Pathway

The Machine Tool Technician program includes the following pathway option (page 232):

- Machine Tool Operation

Related Program

- Industrial Maintenance Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32420312	CNC Programming - Turning*	2 cr.
32420313	CNC Turning Operations*	2 cr.
32420315	CNC Programming - Milling*	2 cr.
32420316	CNC Milling Operations*	2 cr.
32420318	Production Machining 1*	4 cr.
32420320	CAD/CAM Applications*	2 cr.
32420321	Print Reading for Machine Trades	1 cr.
32420325	Machine Tool Operation 1	4 cr.
32420326	Machine Tool Operation 2*	4 cr.
32420327	Machine Tool Operation 3*	4 cr.
32420328	Machine Tool Operation 4 (WBL)*	4 cr.
32420329	Machine Tool Theory 1	2 cr.
32420330	Machine Tool Theory 2	2 cr.
32420377	Production Fixturing and Quality	1 cr.
32420378	Production Machining 2*	3 cr.
32420364	Multiaxis Programming and Operations	2 cr.
32420365	CNC Fundamentals	2 cr.
32420375	Job Shop Machining 1*	4 cr.
32420376	Job Shop Machining 2*	4 cr.
Occupational Specific Total		51 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804325	Applied Technical Math 1	3 cr.
Occupational Supportive Total		5 cr.
TOTAL PROGRAM REQUIREMENTS		**56 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

32420312
CNC Programming - Turning - Credits: 2
Students will learn about program structure (startup, work, shutdown), and basic G-codes including variations caused by machine type and programmer style. They will write simple programs and edit prewritten programs in order to hone their skill. The goal will be to start out simple and move to programs that are both efficient and effective. PREREQUISITE: 32420365 CNC Fundamentals or consent of instructor.

32420313
CNC Turning Operations - Credits: 2
CNC turning centers produce many of the cylindrical shapes machined in production machine shops today. This course will include machine/control familiarization, machine startup procedures, program transfers, work holding preparation, tooling preparation, setting tooling offsets, and part origins. In addition, students learn how to run the first part including dry runs and making minor tool offset adjustments. PREREQUISITE: 32420365 CNC Fundamentals or consent of instructor.

32420315
CNC Programming - Milling - Credits: 2
Productive users of CNC machining centers benefit from the execution of effective and efficient CNC programs. Students will become familiar with frequently used G-codes and will be exposed to canned cycles. They will learn how to convert print specifications into CNC G-code format using linear and circular interpolation functions as well as utilizing the benefits of canned cycles for drilling, reaming, tapping, and boring holes. Programs will be entered and edited on personal computers and at the CNC Machining Center. PREREQUISITE: 32420365 CNC Fundamentals or consent of instructor.

32420316
CNC Milling Operations - Credits: 2
CNC machining centers will be utilized in this course for the production of machined parts. This course will include machine/control familiarization, machine startup procedures, program transfers, work-holding preparation, tooling preparation, setting tooling offsets, and part origins. In addition, students will learn how to run the first part including dry runs and making minor tool offset adjustments. PREREQUISITE: 32420365 CNC Fundamentals or consent of instructor.

32420318
Production Machining 1 - Credits: 4
This course is intended to develop the advanced skills and knowledge needed for entry into a production machining environment. The student machinist will use knowledge and skills developed in previous study to solve production machining problems. Emphasis will be placed on machine elements and prototype development and testing. PREREQUISITES: 32420330 Machine Tool Theory 2 and 32420328 Machine Tool Operation 4 (WBL).

32420320
CAD/CAM Applications - Credits: 2
Computer-Aided Design (CAD) and Computer-Assisted Manufacturing (CAM) have become standard tools used almost wherever CNC production in metalworking takes place. Students will use the CAD/CAM software to build geometry, tool and material libraries, and define cutting paths/patterns. Post-processing of these CAD/CAM files will generate CNC programs in machine-specific G-code format. PREREQUISITE: 32420361 Introduction to CAD/CAM or 32420365 CNC Fundamentals.

32420321
Print Reading for Machine Trades - Credits: 1
This course will cover the basic principles of print reading. The emphasis is on interpreting standard lines and symbols in single- and multiple-view working drawings. Topics include print reading procedures, drawing changes, machining specifications, and the reading of prints in specialized areas including ANSI and ISO standards. Strongly recommend a basic understanding of mathematics concepts.

32420325
Machine Tool Operation 1 - Credits: 4
Students will be assigned introductory, specifically designed projects that will be machined using the engine lathe, milling machine, drill press, and various saws. Students will be in a job-like setting. The capability and safe use of machine tools will be stressed.

32420326
Machine Tool Operation 2 - Credits: 4
Students will be assigned basic, specifically designed projects that will be machined using the engine lathe, milling machine, drill press, and various saws. Students will also machine parts on conversationally-programmed CNC lathes and vertical mills. Students will be in a job-like setting. The capability and safe use of machine tools will be stressed. COREQUISITE: 32420325 Machine Tool Operation 1.

32420327
Machine Tool Operation 3 - Credits: 4
A continuation of Machine Tool Operation featuring advanced operations on milling machines, grinders, lathes, and drill presses. CNC operation and programming on a vertical mill and a turning center are introduced. Also included are machine maintenance and precision measurement. The capability and safe use of machine tools will be stressed. PREREQUISITE: 32420326 Machine Tool Operation 2.

32420328
Machine Tool Operation 4 (WBL) - Credits: 4
Machine Tool Operation 4 features advanced operations on milling machines, grinders, lathes, and drill presses. CNC programming and operation on vertical mills and turning centers will be emphasized. The capability and safe use of machine tools will be stressed. COREQUISITE: 32420327 Machine Tool Operation 3.

32420329
Machine Tool Theory 1 - Credits: 2
This course will cover the basic principles of machine tool theory. The course will emphasize safety in the machine shop, measurement, metal cutting technology, basic lathe and mill operations, drilling machines, saws, layout procedures, and an introduction to CNC machining. The capability and safe use of machine tools will be stressed.

32420330
Machine Tool Theory 2 - Credits: 2
This course will cover principles of machine tool theory emphasizing conventional and CNC machining operations. There will be in-depth training on the engine lathe, milling machines, CNC programming and operation, grinding machines, and metallurgy. The capability and safe use of machine tools will be stressed.

32420377
Production Fixturing and Quality - Credits: 1
This course will introduce the student to the elements involved in the manufacture of a product. The course will include designing and building fixtures for use on a production project. The student will also develop the process plans and create quality documentation for this production project.

32420378
Production Machining 2 - Credits: 3
This course will continue to develop the advanced skills and knowledge needed for entry into a production machining enviroment. The student machinist will use knowledge and skills to developed in previous study to solve production machining problems. Emphasis will be placed on the efficient manufacture of parts in higher quantities and of higher quality. PREREQUISITES: 32420330 Machine Tool Theory 2 and 32420328 Machine Tool Operation 4 (WBL) and COREQUISITE: 32420318 Production Machining 1.

32420364
Multiaxis Programming and Operations - Credits: 2
This course will provide the students the opportunity to program, set-up and operate 4th and 5th axis vertical CNC Milling Centers.

32420365
CNC Fundamentals - Credits: 2
This course introduces the student to the development and editing of Computer Numerical Control (CNC) programs. The basic elements of CNC machine setup and operation are covered for the production of acceptable parts. Safety concerns are also addressed. Strongly recommend a basic understanding of algebra, geometry, and trigonometry.

32420375
Job Shop Machining 1 - Credits: 4
This course is intended to develop the skills and knowledge needed in a job shop environment. The student machinist will use knowledge and skills developed in previous study to solve typical job shop problems. PREREQUISITES: 2420330 Machine Tool Theory 2 and 32420328 Machine Tool Operation 4 (WBL).

32420376
Job Shop Machining 2 - Credits: 4
This course is intended to develop the advanced skills and knowledge needed in a job shop environment. The student machinist will use knowledge and skills developed in previous study to solve typical job shop problems. This course builds on Job Shop Machining 1 experiences and provides additional skills in cutting tool selection and material characteristics. PREREQUISITES: 32420330 Machine Tool Theory 2 and 32420328 Machine Tool Operation 4 (WBL) and COREQUISITE: 32420375 Job Shop Machining 1.

Machine Tooling Technics

32-420-5 Technical Diploma (two-year) **Financial Aid Eligible**

Campus: New Richmond

Program Overview

The Machine Tooling Technics program emphasizes mold and toolmaking for the plastic injection molding industry including using computerized machining equipment. You will use basic machining skills along with math and print reading. You will gain skills in precision measurement, metallurgical processes, in-depth programming, operation on CNC milling machines and lathes, shop theory courses in toolmaking and CAD/CAM operation.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Machine Tooling Technics graduates will be able to:

- Apply basic safety practices in the machine shop
- Interpret industrial/engineering drawings
- Apply precision measuring methods to part inspection
- Perform basic machine tool equipment set-up and operation
- Perform programming, set up, and operation of CNC Machine Tools
- Perform tool, die, and/or mold operations

Career Outlook

Typical careers available after graduation include:

- Tool and Die Mold Maker
- Machinist Apprentice
- Machine Operator
- CNC Machinist
- Setup Person
- Programmer
- Maintenance Machinist

Career Pathways

The Machine Tooling Technics program includes the following pathway options (page 234):

- Entry Level Machining
- Multi-Axis CNC Milling

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32420306	Machine Shop Theory 1	2 cr.
32420307	Machine Shop Theory 2*	2 cr.
32420308	Applied Machine Tooling 1	4 cr.
32420309	Applied Machine Tooling 2*	4 cr.
32420311	Materials for Machine Tooling Technics	1 cr.
32420321	Print Reading for Machine Trades	1 cr.
32420334	CAD/CAM Demo*	2 cr.
32420336	Applied Machine Tooling 3*	4 cr.
32420337	Applied Machine Tooling 4*	4 cr.
32420338	CAD Basics	1 cr.
32420339	Mastercam*	2 cr.
32420343	Machine Tooling Technics 3*	3 cr.
32420344	Machine Tooling Technics 4*	3 cr.
32420357	Advanced Machining Concepts	1 cr.
32420370	Machine Tooling Technics 1*	4 cr.
32420371	Machine Tooling Technics 2*	4 cr.
32420391	Toolmaking Theory	2 cr.
Occupational Specific Total		44 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32801362	Advanced Communication Skills*	2 cr.
32804325	Applied Technical Math 1	3 cr.
32804335	Advanced Technical Math*	3 cr.
Occupational Supportive Total		10 cr.
TOTAL PROGRAM REQUIREMENTS		**54 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

32420306
Machine Shop Theory 1 - Credits: 2
This course provides the student with knowledge in the areas of safety, speed and feed calculations, layout equipment, cutting tools, and machine tool equipment. Also introduces and studies the more technical shop operations of threading, tapping, boring, carbide tooling, and principles of metal cutting. Principles of metal cutting include the machinability of metals and how it relates to chip formation. Students will study the makeup of carbide tooling, how carbide is affected by operating conditions, and various carbide characteristics, sizes, shapes, grades, and applications as identified by the American Standards Association. The content supports activities in Applied Machine Tooling 1 and 2.

32420307
Machine Shop Theory 2 - Credits: 2
This course is a continuation of Machine Shop Theory 1. This lecture-based course will use lecture, group work, and individual projects to introduce you to surface grinding, CNC theory, application, programming, and inspection procedures. PREREQUISITE: 32420306 Machine Shop Theory 1.

32420308
Applied Machine Tooling 1 - Credits: 4
This lab-based course will provide instruction in shop safety, measuring, print reading, and basic setup and operation of saws, mills, and lathes.

32420309
Applied Machine Tooling 2 - Credits: 4
This lab-based course will introduce the student to threading, boring, precision and taper turning, and inspection procedures using optical comparators and coordinate measuring machines. COREQUISITES: 32420308 Applied Machine Tooling 1 and 32420321 Print Reading for Machine Trades.

32420311
Materials for Machine Tooling Technics - Credits: 1
During this course students will learn the basic principles of metallurgy related to mechanical, physical, and chemical properties of materials used for Machine Tooling Technics. Materials covered will be steel, cast iron, aluminum, copper, and plastics. Lab activities will include hardening, tempering, and hardness testing. This course will give the student the ability to make material selections and perform problem solving for specific applications that they will encounter in industry.

32420321
Print Reading for Machine Trades - Credits: 1
This course will cover the basic principles of print reading. The emphasis is on interpreting standard lines and symbols in single- and multiple-view working drawings. Topics include print reading procedures, drawing changes, machining specifications, and the reading of prints in specialized areas including ANSI and ISO standards. Strongly recommend a basic understanding of mathematics concepts.

32420334
CAD/CAM Demo - Credits: 2
This course builds on CAD Basics and Mastercam with additional CAD drawing concepts and CAM projects. Learners will utilize Solidworks and Mastercam applications to complete their learning objectives. Students will gain competency in file management by saving, converting, and working with different file types. Learners will create geometry in each application and convert files between CAD and CAM. Students will apply various tool paths to the designs they have created. Surface creation and machining exercises will be demonstrated by each individual. Each learner will design and detail a plastic part including a plotted final drawing to the correct scale. PREREQUISITES: 32420321 Print Reading for Machine Trades and 32420339 Mastercam.

32420336
Applied Machine Tooling 3 - Credits: 4
Students will further build their skills in machining and develop confidence in their ability to produce good workpieces. Students will continue to use the tools and procedures introduced in Machine Shop Theory 1. Students will also be introduced to surface grinding, coordinate measuring machine inspection, optical comparator, and CNC programming, setup, and machining. PREREQUISITES: 32420306 Machine Shop Theory 1 and 32420309 Applied Machine Tooling 2.

32420337
Applied Machine Tooling 4 - Credits: 4
This lab-based course further develops students' skills in CNC vertical mill and CNC lathe setup, operation, and programming. Students will set up increasingly complex projects on both the CNC lathe and CNC vertical mill. Students will learn how to troubleshoot CNC setups, programs, and tooling variations. Students will also troubleshoot and run their own programs created in Machine Shop Theory 2 and Mastercam. Finally, students will complete surface grinding projects. COREQUISITES: 32420307 Machine Shop Theory 2 and 32420336 Applied Machine Tooling 3.

32420338
CAD Basics - Credits: 1
This course offers instruction on individual computer workstations in a computer lab. This computer-aided drafting (CAD) instruction uses SolidWorks software that is capable of creating 3D drawings. In this course you will spend a majority of the time creating 3D models and exploring the concepts of working in 3D space. Students will create complete and fully dimensioned 3-view part prints ready to be transferred to paper.

32420339
Mastercam - Credits: 2
This introductory course prepares students for using Computer-Aided Machining (CAM) software to create CNC machining programs. This CAM instruction utilizes Mastercam software that is capable of creating 2D and 3D wire drawings, from which toolpaths to machine part features can be generated. Students will complete a variety of exercises before working on 2D machining projects. Students will create complete CNC process projects including drawings, toolpaths, CNC code, and all setup sheets and diagrams. These projects will be shop ready for machining. PREREQUISITE: 32420338 CAD Basics.

32420343
Machine Tooling Technics 3 - Credits: 3
In this course, the learner will start to build one plastic injection mold. Learners will do several projects to gain competency, which will included milling and grinding blocks square, programing and machining a graphite electrode. Learners will gain additional skills in the operation of basic and advanced machine tools in the area of milling, drilling, boring, reaming, grinding, and CNC milling. PREREQUISITES: 32420321 Print Reading for Machine Trades, 32420371 Machine Tooling Technics 2, and COREQUISITE: 32420391 Toolmaking Theory.

32420344
Machine Tooling Technics 4 - Credits: 3
In this course, the learner complete building one plastic injection mold. Learners will do several projects to gain competency, which will included electrical discharge machining, grinding/fitting inserts to a pocket, grinding ejector pins to length, mold polishing, a project that requires problem solving set-up problems, and final assembly of a plastic injection mold. Learners will gain additional skills in the operation of basic and advanced machine tools in the area of milling, drilling, boring, reaming, grinding, CNC milling, and EDMing operations. PREREQUISITES: 32420321 Print Reading for Machine Trades, 32420371 Machine Tooling Technics 2, and COREQUISITE: 32420391 Toolmaking Theory, 32420343 Machine Tooling Technics 3.

32420357
Advanced Machining Concepts - Credits: 1
In this course students will learn about advanced CNC programming and setup techniques, electrical discharge machining, and advanced inspection techniques.

32420370
Machine Tooling Technics 1 - Credits: 4
In this course learners will learn to set up, program, and run CNC mills, lathes, and EDM equipment. Learners will continue to build competencies in surface grinding, tool and cutter grinding, and manual milling. PREREQUISITE: 32420337 Applied Machine Tooling 4.

32420371
Machine Tooling Technics 2 - Credits: 4
In this course learners will build upon their machining skills using CNC mills, lathes, and EDM equipment. Learners will continue to build competencies in surface grinding, tool and cutter grinding, and manual milling. Learners will create, program, and run CNC programs with helical interpolation, subroutines, cutter compensation, and multiple fixture offsets. Learners will practice final grinding and fitting operations. COREQUISITE: 32420370 Machine Tooling Technics 1.

32420391
Toolmaking Theory - Credits: 2
This course provides the classroom instruction that supports shop activities in semester four of the Machine Tooling Technics program. It is a lecture course that addresses the technology of various types of plastic injection mold dies. Major emphasis will be placed on the theory, design, and building of plastic injection molds. Small group activities will be utilized to enhance student learning.

Maintenance Mechanic/Millwright Apprentice

50-423-1 Apprenticeship

Campus: Rice Lake

Program Overview

Maintenance mechanic/millwright can lead to multiple career options. Manufactures of all types and sizes need maintenance mechanics/millwrights. You will have the opportunity to work in a career field that is both challenging and rewarding. In this program, you can start any semester that works for you.

As a maintenance mechanic, machine repairer or millwright, you will install, dismantle or move machinery and heavy equipment according to layout plans, blueprints or other drawings. You will keep machines, mechanical equipment or the structure of an establishment in repair. Duties may involve pipe fitting, boiler making, insulating, welding, machining, carpentry, repairing electrical or mechanical equipment, installing, aligning and balancing new equipment and repairing buildings, floors or stairs. Essentially you will repair the buildings and everything mechanically within its contents.

Special Features

- Four-year training program
- 7,424 hours on-the-job training
- 576 hours of paid related instruction
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last year of the apprenticeship.

For more information on apprenticeships, see page 25

Qualifications required by the Bureau of Apprenticeship Standards

- High School graduate or equivalency.
- Not less than 18 years of age.
- Must be physically able to perform the work of the trade with reasonable accommodations and without hazard to themselves or others. Applicants may be required to furnish a statement of physical condition from a physician at the time of the job offer. Applicants may be required to undergo drug or alcohol testing at the time of selection as an apprentice.
- Must be able to work in the United States.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To become an apprentice in the state of Wisconsin, one must first be indentured by the State Bureau of Apprenticeships Standards (BAS).

- Contact an employer on your own. Employment is a requirement of entering an apprenticeship.
- Once you have an employer/sponsor, contact the Bureau of Apprenticeship Standards, to initiate the application process.

Admission Requirements

- Complete the paper Northwood Tech application form

NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to the Bureau of Apprenticeship Standards (Eau Claire Office)
The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprenticeship Training Representative, at long.vang@dwd.wisconsin.org

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Maintenance Mechanic/Millwright Apprentice graduates will be able to:

- Demonstrate proper rigging techniques
- Select an appropriate power transmission system for a given application
- Identify suitable pumps for given applications
- Recommend bearings for given applications
- Plan for fabricating parts and assemblies according to specifications
- Apply operational and troubleshooting principles to fluid power systems
- Layout an equipment installation plan
- Plan maintenance schedules for a given system

Related Program

- Technical Studies - Journeyworker (page 200)

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50423501	Millwright 1	2 cr.
50423502	Millwright 2	2 cr.
50423503	Millwright 3	2 cr.
50423504	Millwright 4	2 cr.
50423505	Millwright 5	2 cr.
50423506	Millwright 6	2 cr.
50423507	Millwright 7	2 cr.
50423508	Millwright 8	2 cr.
TOTAL PROGRAM REQUIREMENTS		**16 cr.**

50423501
Millwright 1 - Credits: 2
This course introduces apprentices to pipe sizes, materials and schedules, examines fittings, tubing and valves, and develops skills related to layout, installation, and maintenance. The course compares different pump types and their applications. Apprentices will complete a field inspection of pumps and learn how to troubleshoot, remove, overhaul, install, and perform preventative maintenance on pumps. Apprentices will examine packing, seals, and gaskets and compare materials and applications.

50423502
Millwright 2 - Credits: 2
This course provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting pneumatic, hydraulics systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with pneumatic systems and components. This course introduces principles of vacuum systems and interpreting vacuum system schematics. Apprentices will then develop skills related to installing, repairing, replacing, and applying troubleshooting principles to vacuum systems and components.

50423503
Millwright 3 - Credits: 2
This course covers couplings and alignment; bearings; belts, sheaves, pulleys and drives. The course compares different coupling types and examines common misalignment problems. Skills development is related to inspecting, troubleshooting, aligning, lubricating, and preparing couplings for removal and installation. Apprentices will examine bearing types and applications. Skill development is related to bearing selection, removal, mounting, lubrication, and diagnosing bearing failure. Apprentices will develop skills related to inspecting, troubleshooting, removing, selecting, and installing belt drive systems.

50423504
Millwright 4 - Credits: 2
In this course, apprentices will compare types of rigging equipment and their uses; determine safe loads, rig and crib loads, and move a load with cranes and hoists in this course. Apprentices will lay out equipment installations, plan for moving equipment, and set and level equipment. This course examines chain, belt, and other types of conveyors and related components. Apprentices will compare fasteners and their uses, analyze fastener failures, and install mechanical fasteners.

50423505
Millwright 5 - Credits: 2
This course covers machining basics, pint reading, metallurgy, and precision measurements. Types of measuring instruments will be compared. Measuring skills using tapes, steel rules, micrometers, calipers, indicators, and gauges will be developed. Course competencies include comparing the types of prints, interpreting structural drawings, identifying parts from prints, and develops apprentice sketching drawing skills. Apprentices are introduced to the basic machines and procedures of machines common to the industrial maintenance. Skills are developed regarding metallurgical concepts.

50423506
Millwright 6 - Credits: 2
This course examines drive transmission systems and their applications, including roller chains. Apprentices will develop skills inspecting power transmission systems and troubleshooting mechanical drive systems. Apprentices will compare gear types and applications and develop skills inspecting gear assemblies, troubleshooting gear problems, removing gears and components, and reassembling gear drive systems. This course examines both preventative and predictive maintenance concepts as they apply to millwright work processes and machine maintenance.

50423507
Millwright 7 - Credits: 2
This course is designed to introduce the apprentices to the basic concepts of electricity. Apprentices will be introduced to basic electrical components such as resistors, switches, indicators, relays, and basic testing equipment. Reading wiring diagrams will be introduced during this course. The course introduces the apprentices to advanced interpretation of the various wiring and ladder diagrams used in electrical systems. The selection and application of interconnecting wiring and control devices used in industrial electrical control systems will be the focus of this course.

50423508
Millwright 8 - Credits: 2
This course compares common welding processes and develops apprentice skills related to welding, cutting, heating, and using oxy-gas. Welding with arc, MIG and TIG is included, along with common cutting and joining techniques. Apprentices will compare types of sheet metal and tools used by the trade and develop skills related to fabricating sheet metal and structural steel, and then erecting structural steel.

Management Certificate

17-196-9 Technical Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

Outreach Center: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice and On Site instruction.

Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

The Management Certificate is a series of courses to develop the practical skills for dealing with the day-to-day management of a business or organization.

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Management Certificate program from the program of choice dropdown list.

Outcomes

The Management Certificate will prepare you to:

- Make good management decisions
- Create healthy working relationships within organizations
- Determine the strategic direction of a department or organization
- Gain practical skills to overcome daily workplace challenges
- Categorize managerial styles
- Apply key management concepts to various situations
- Practice delegating tasks

Career Outlook

Managers are found in every field – manufacturing, food service, banking, retail, and education. The management positions can range from front-line supervisors to upper-level managers and executives. The need to fill management positions will continue to grow as organizations continue to look for employees who can work well with others, inspire those around them, and develop human resources.

Related Programs

- Business Management
- Leadership Development
- Human Resource Management

Curriculum

Number	Course Title	Credits (cr.)
10116100	Human Resource Management	3 cr.
10116105	Employee Relations and Labor Law*	2 cr.
10196136	Safety in the Workplace	3 cr.
10196192	Managing for Quality	3 cr.
CERTIFICATE REQUIREMENTS		**11 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10116105
Employee Relations and Labor Law - Credits: 2
The course provides students with both the common and complex issues related to human behavior in the workplace as it relates to employee relations, state and federal mandates and laws. In-depth examination of relationships among workers, management, laws and government are the major focus of this course. PREREQUISITE: 10116100 Human Resource Management.

10196136
Safety in the Workplace - Credits: 3
An introduction to safety and loss prevention in the workplace with an emphasis on the supervisor's responsibility for maintaining a safe, productive environment. Students will study safety concepts, hazard controls, developing safety and health programs, and federal- and state-mandated regulations.

10196192
Managing for Quality - Credits: 3
In Managing for Quality, the learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identifying all stakeholder relationships, meeting/exceeding customer expectations, a system-focused approach, using appropriate models and tools, managing a quality improvement project, and measuring effectiveness of continuous improvement activities.

Marine Repair Technician

31-461-4 Technical Diploma (three semesters) **Financial Aid Eligible**

Campus: Ashland

Program Overview

Students will be prepared for a career in the marina and marine service, and repair business. This three-semester program includes instruction in marine engine service, service in marine propulsion systems, operation, diagnosis, repair, equipment installation, maintenance, and rigging new boats. Students will work on two- and four-cycle gasoline engines, drive systems, transmissions, electrical systems, and consumer-supplied products.

Special Features

- Unique in the state of Wisconsin
- Service school options
- 6,000-square-foot lab
- EFI and direct injection engines
- American Boat and Yacht Council (ABYC)
- Association of Marine Technicians (AMTECH)
- Wisconsin Marine Association (WMA)
- Off-site training at local marinas and dealerships
- Actual service experience through community-supplied projects
- Students may enter the program either fall or spring semester

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Employers will expect the Marine Repair Technician graduate to be able to:

- Service marine engines
- Service marine propulsion systems
- Service diesel engines
- Demonstrate welding and metalworking skills
- Demonstrate industry-recognized safety practices

Career Outlook

Graduates of the Marine Repair Technician program find great demand for their skills. Typical positions available after graduation include:

- Inboard Engine Technician
- Outboard Motor Technician
- Boat Rigging Technician
- Electronic Equipment Installation Technician
- Marine Sales Representative
- Marine Service Technician
- Marine Service Supervisor

Career Pathway

The Marine Repair Technician program includes the following pathway option (page 235):

- Marine Repair Essentials

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31461314	Outboard Motors	5 cr.
31461315	Marine Electricity/Electronics*	2 cr.
31461330	Marine Welding*	1 cr.
31461317	Marine Engine Systems*	5 cr.
31461318	Outboard Gear Cases/Rigging*	5 cr.
31461319	Sterndrive Systems*	5 cr.
31461321	Introduction to Can-Bus Systems*	2 cr.
31461322	Inboard Engines*	5 cr.
31461323	Inboard Transmission Systems*	2 cr.
31461325	Marine Diesel*	1 cr.
31461326	Marine Engine Computer Control Systems*	4 cr.
Occupational Specific Total		37 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804303	Applied Math	2 cr.
Occupational Supportive Total		4 cr.
PROGRAM REQUIREMENTS		**41 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

31461314
Outboard Motors - Credits: 5
This course provides an introduction to the marine industry. Students will learn how to work safely in a shop environment and use service tools and information. Students will learn the theory of how two- and four-stroke outboard motors operate. This course will teach students how to repair, maintain, and rebuild two-stroke and four-stroke outboard motors. Also, students will learn about fuel, ignition, manual and electric starting systems, and charging systems. Small gearcase operation and repair are also covered.

31461315
Marine Electricity/Electronics - Credits: 2
This course is designed to teach the theory of DC electricity. Students will learn how to read electrical schematics and build and repair electrical circuits found in typical boats. The student will be able to diagnose, troubleshoot, and correctly use test equipment to repair boat and engine electrical problems. Emphasis is placed on safety, tools, proper use of test equipment, specifications, and schematics. Practical applications will include real world shop experiences that will reinforce learned electrical concepts. COREQUISITE: 31461314 Outboard Motors.

31461330
Marine Welding - Credits: 1
Marine Welding is intended to provide the technician with a sound basic background in the marine welding field. Upon completion, the student will be able to select the proper materials for repairing or fabricating welding projects, choose the correct welding method for a specific application, and complete a welding project safely. Tig welding for repair of aluminum fabrication items; MIG, ARC, and OXY acetylene principles are covered in this course. COREQUISITE: 31461314 Outboard Motors.

31461317
Marine Engine Systems - Credits: 5
This course will provide students with advanced theory and hands-on experience to troubleshoot and repair marine engine fuel, oiling, cooling, starting, charging, and ignition systems. Also, students will learn about carburetor/ignition system synchronization and linkage adjustments, and storage procedures. Students will complete complex troubleshooting projects on running marine engines. PREREQUISITES: 31461314 Outboard Motors.

31461318
Outboard Gear Cases/Rigging - Credits: 5
Outboard motor gearcases, hydraulic trim and tilt, and steering systems are covered in this course. Students will learn how to diagnose failures, rebuild, and shim a variety of gearcases. Different types and brands of steering systems are covered. Students will learn how to repair, install, and replace steering systems. Trim and tilt units will be tested and repaired. This will give students a good working knowledge of hydraulics and troubleshooting procedures for various brands of trim and tilt systems. Installation of outboard motors on boat transoms and mechanical, fuel, oil, and electrical connections will be covered. PREREQUISITE: 31461314 Outboard Motors.

31461319
Sterndrive Systems - Credits: 5
Sterndrive transmissions, sterndrive transom plates, sterndrive trim and tilt, and power steering are covered in this course. Students will learn how to diagnose failures, rebuild, and shim a variety of gearcases. Different types of transom plates will be covered and will include shift, bellows, gimble ring, and bell housing repairs. Hydraulic lift systems will be studied and the student will learn how to repair and diagnose failures of cylinders, pumps, motors, and electrical systems related to trim systems. Marine power steering systems include the study of control valves, power steering pumps, and boat steering systems. PREREQUISITE: 31461314 Outboard Motors.

31461321
Introduction to Can-Bus Systems - Credits: 2
This course will provide students with the operational theory of marine can-bus communication network systems. Students will understand how the marine engine and its accessories communicate with display systems located at the boat's helm. Students will view different manufacturers' systems and be able to adapt specialized connectors to NMEA standard connectors and aftermarket accessories. Students will assemble and calibrate a working can-bus system onto an engine and helm display unit and engine control assembly. PREREQUISITE: 31461314 Outboard Motors.

31461322
Inboard Engines - Credits: 5
This course will teach students the theory of how a four-stroke marine engine operates. Students will gain the skills needed to rebuild inboard four-stroke marine engines. Students will also learn the fundamentals of inboard fuel, ignition, starting, and charging systems. COREQUISITE: 31461314 Outboard Motors.

31461323
Inboard Transmission Systems - Credits: 2
Inboard straight shaft transmissions are covered in this course. Velvet Drive transmissions will be the main training project. Hurth and Paragon transmissions will be covered to a lesser degree. Related components such as engine alignment, shafts, couplers, stuffing boxes, struts, strut bearing replacement, etc., will be examined also. PREREQUISITE: 31461314 Outboard Motors.

31461325
Marine Diesel - Credits: 1
This course provides a basic working knowledge of marine diesel engines and their systems. Marine diesel theory, fuel and air delivery, and lubrication and cooling systems will be covered. Bleeding of fuel systems, adjustment of valve trains and injector pumps, and other maintenance issues will also be studied. COREQUISITE: 31461314 Outboard Motors.

31461326
Marine Engine Computer Control Systems - Credits: 4
In this course, students will understand the theory of computer-controlled fuel, ignition, oiling, and control systems used on inboard and outboard engines. Systems included are sterndrive and outboard motor EFI, and outboard direct fuel injection. Students will repair and troubleshoot these systems using a variety of computer diagnostic software. PREREQUISITE: 31461314 Outboard Motors.

Medical Administrative Professional

10-160-2 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

*Combination of Online, Your Choice or On Site instruction.

Program Overview

Are you looking for a career in the medical field that is interesting and exciting but does not require direct patient contact? Consider the Medical Administrative Professional program. This program prepares you to complete business-related tasks including scheduling appointments, registering patients, answering telephones, medical billing and completing insurance claims, preparing business correspondence, and maintaining medical records.

Admission Requirements

- Complete Online application form
- Review and sign Background Check Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

- Complete and sign Background Information Disclosure Form (BID)
- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check, and/or Minnesota Caregiver Background Check (if applicable), and other states, if applicable - Information from the Caregiver Background Check may affect ability to secure placement for the Medical Externship course and the ability to find employment after graduation
- Have current immunizations
- COVID vaccination---highly recommended

NOTE: Northwood Technical College cannot guarantee externship placement or ability to progress in the program if a student is not able to meet the externship site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other externship requirements required by the externship site. Northwood Technical College cannot guarantee externship placement if the externship site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the externship start date.

Program Outcomes

Medical Administrative Professional graduates will be able to:

- Perform financial practices through analysis of payer data and reimbursement methods
- Demonstrate professionalism in a healthcare setting
- Apply technology to administrative functions in a healthcare-related setting
- Apply HIPAA, federal and state law, and regulatory compliance in business health practices
- Use medical terminology and knowledge of the human body systems in performing essential functions of health business environment

Career Outlook

Typical positions available after graduation include:

- Medical Administrative Assistant
- Medical Records Specialist
- Patient Services Representative
- Medical Scheduler
- Hospital Admissions Representative
- Medical Billing Specialist
- Patient Account Representative
- Clinic Coder
- Health Unit Coordinator (HUC)
- Health Information Clerk

Career Pathways

The Medical Administrative Professional program includes the following pathway options (page 236):

- Health Office Professional
- Medical Billing Specialist
- Healthcare Receptionist

Related Programs

- Administrative Coordinator
- Gerontology - Aging Services Professional
- Leadership Development

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101176	Financial Accounting 1A	2 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103147	MS Word B*	1 cr.
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10105160	Medical Externship*#	1 cr.
10106110	Document Formatting	2 cr.
10160134	Medical Insurance Claims*	4 cr.
10160135	Introduction to Healthcare Documentation*	3 cr.
10160140	Medical Office Administration*	3 cr.
10160142	Patient Billing and Reimbursement*	3 cr.
10160143	Medical Office Procedures and Customer Service	2 cr.
10160145	Medical Administrative Practice	4 cr.
10106146	Proofreading for the Office	3 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10501101	Medical Terminology	3 cr.
10510135	Anatomy, Physiology, and Disease Concepts	2 cr.
10890116	Job Quest	1 cr.
Technical Studies Total		39 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.
10801197	Technical Reporting	3 cr.
10804123	Math with Business Applications	3 cr.
10809196	Introduction to Sociology **or**	
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		18 cr.
ELECTIVES		3 cr.
PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Criminal background checks will be required for this course.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103147
MS Word B - Credits: 1
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Word software. Students will use templates, building blocks, mail merge, the sort feature, and apply formatting skills to produce quality documents. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365 for Windows. COREQUISITE: 10103146 MS Word A

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10105160
Medical Externship - Credits: 1
An externship is actual work experience in a medical office which provides the student with a variety of tasks. The sites are usually clinics or hospitals but can be other medical-related offices as well. The instructor and student will work together to secure an externship which will be acceptable to all parties. PREREQUISITE: Prior to enrolling in this course, students must have successfully completed or are in good standing in all program courses and have the approval of program faculty. Ciminal Background checks will be required for this course.

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10160134
Medical Insurance Claims - Credits: 4
This course presents common health insurance terminology and selected private and government insurance coverages. Students are introduced to basic principles of disease coding and procedural coding from the physician/provider perspective and follow the life cycle of the medical insurance claim with the aim of accurate and efficient reimbursement for services provided. This is not for experienced coders. PREREQUISITE: 10501101 Medical Terminology.

10160135
Introduction to Healthcare Documentation - Credits: 3
This course is designed to expand the student's medical vocabulary and develop skill in keyboarding, formatting, editing, storing, and printing medical documents. Emphasis is placed on speed building and accuracy improvement. PREREQUISITES: 10501101 Medical Terminology and 10106110 Document Formatting or 10103146 MS Word A and COREQUISITE: 10103147 MS Word B.

10160140
Medical Office Administration - Credits: 3
Simulates handling patients and employees, applying customer service skills, and the use of computers in a medical/clinical setting. Hands-on experience in scheduling appointments, work in electronic medical records, establishing a fee schedule, and practice management. Utilizes Microsoft Office software, electronic billing software, electronic medical record software, telephone systems, internet, fax and e-mail. PREREQUISITE: 10160143 Medical Office Procedures and Customer Service.

10160142
Patient Billing and Reimbursement - Credits: 3
Emphasizes insurance preparation and reimbursement of claims to Commercial, Medicare, Medicaid and Worker's Compensation. Applies ICD, CPT and HCPCS coding resources to complete CMS 1500 and CMS 1450 insurance claims. Computerized billing software will be utilized throughout the course. PREREQUISITE: 10160134 Medical Insurance Claims.

10160143
Medical Office Procedures and Customer Service - Credits: 2
This course develops professional skills and attitudes needed in a medical business environment. Skills developed include an ability to communicate effectively with patients and other medical office staff, manage time effectively, schedule patients, greet patients, use the telephone properly, process mail, apply ergonomics and office safety, and use medical computer software efficiently.

10160145
Medical Administrative Practice - Credits: 4
Medical Administrative Practice is a capstone course for the Medical Administrative Professional degree, which brings together skills and knowledge learned in other classes and applies them in decision-making situations and in completing job tasks. This course provides the student with the training required to keep consistent with computer software that is used in the billing areas of the medical office. Topics covered are medical office procedures, practice management, basic billing skills and billing collection via real-life activities and simulations. Upon completion, students should be able to demonstrate the skills necessary to work in the medical office. PREREQUISITE: 10160140 Medical Office Administration. COREQUISITE: 10160134 Medical Insurance Claims.

10106146
Proofreading for the Office - Credits: 3
This course provides the learner with techniques used in proofreading office documents from both hard and soft copy (computer screen). Learners will incorporate the use of office reference manuals. This project-based course uses individual and group activities as well as in-class and out-of-class work.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10510135
Anatomy, Physiology, and Disease Concepts - Credits: 2
This course is a study of human anatomical structure, physiology, and the basic mechanisms of disease. It is designed to meet the unique educational needs of the medical secretary/office personnel. The course focuses on assessment, diagnosis, and treatment of commonly occurring medical conditions. The course will be structured to application of the content through case studies and group discussions. It is meant to provide a solid knowledge base for students entering work in health care settings. It is recommended that the student have a basic knowledge of medical terminology.

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

Medical Assistant

31-509-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Combination of On Site and Online instruction.

Program Overview

Medical assistants are multi-skilled health professionals specifically educated to work in ambulatory settings performing administrative and clinical duties. The practice of medical assisting directly influences the public's health and well-being, and requires mastery of a complex body of knowledge and specialized skills requiring both formal education and practical experience that serve as standards for entry into the profession.

The Medical Assistant program prepares individuals to assist physicians in their offices or other medical settings. Medical assistants, sometimes referred to as clinical assistants, perform a wide range of duties. The medical assistant is responsible for medical and surgical asepsis, taking vital signs, drawing blood, giving injections, assisting the physician with examinations and surgery, administering ECGs and administering medications. The business/administrative duties include patient reception, appointment making, record keeping, filing, bookkeeping, insurance handling, typing medical correspondence and transcription and computer applications. Laboratory functions include specimen collection, performance of basic laboratory tests and microscopic work.

The minimum goal for the Medical Assistant program, as identified by the AAMA, is to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), upon the recommendation of the Medical Assisting Education Review Board (MAERB).
Commission on Accreditation of Allied Health Education Programs,
9355 - 113th St. N, #7709, Seminole, FL 33775, phone: 727-210-2350, **www.caahep.org**, **www.aama-ntl.org**.

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states, if applicable (required at program start and prior to practicum)
- Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb)
- COVID vaccination---highly recommended
  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/ quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
- Possess current certification of First Aid and "BLS Basic Life Support" or equivalent
- Review and sign Health Sciences Confidentiality Statement
- Participate in a mandatory program orientation session

Program Outcomes

Medical Assistant graduates will be able to:

- Perform medical office administrative functions
- Provide patient care in accordance with regulations, policies, laws, and patient rights
- Perform medical laboratory procedures
- Demonstrate professionalism in a healthcare setting
- Demonstrate safety and emergency practices in a healthcare setting

Graduates of the program are eligible to sit for the Certified Medical Assistant examination.

Career Outlook

Typical positions available after graduation include:

- Medical Assistant
- Clinical Assistant
- Phlebotomist

Career Pathway

The Medical Assistant program includes the following pathway option (page 237):

- Patient Services Specialist

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31501308	Pharmacology for Allied Health*	2 cr.
31509301	Medical Assistant Administrative Procedures*	2 cr.
31509302	Human Body in Health and Disease*	3 cr.
31509303	Medical Assistant Laboratory Procedures 1*	2 cr.
31509304	Medical Assistant Clinical Procedures 1*	4 cr.
31509305	Medical Assistant Laboratory Procedures 2*	2 cr.
31509306	Medical Assistant Clinical Procedures 2*	3 cr.
31509307	Medical Office Insurance and Finance*	2 cr.
31509309	Medical Law, Ethics and Professionalism	2 cr.
31509310	Medical Assistant Practicum*	3 cr.
Occupational Specific Total		25 cr.
Occupational Supportive Courses		
10501101	Medical Terminology	3 cr.
10501107	Digital Literacy for Healthcare	2 cr.
10801136	English Composition 1#	3 cr.
Occupational Supportive Total		8 cr.
TOTAL PROGRAM REQUIREMENTS		**33 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
# See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required courses.

Note: program may be completed in two or more semesters.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501107
Digital Literacy for Healthcare - Credits: 2
The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined. Computer skills proficiency developed as a part of this course.

31501308
Pharmacology for Allied Health - Credits: 2
Introduces students to medication classification and basic pharmacology principles. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. PREREQUISITES: 10501101 Medical Terminology, 31509302 Human Body in Health and Disease, 31509303 Medical Assistant Laboratory Procedures 1, and 31509304 Medical Assistant Clinical Procedures 1 and COREQUISITES: 31509305 Medical Assistant Laboratory Procedures 2, 31509306 Medical Assistant Clinical Procedures 2 and 31509307 Medical Office Insurance and Finance.

31509301
Medical Assistant Administrative Procedures - Credits: 2
Introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. PREREQUISITE: Declared Medical Assistant program (315091) or Patient Services Specialist plan (305092) and COREQUISITES: 10501107 Digital Literacy for Healthcare, 10501101 Medical Terminology, 31509302 Human Body in Health and Disease, 31509303 Medical Assistant Laboratory Procedures 1, and 31509304 Medical Assistant Clinical Procedures 1.

31509302
Human Body in Health and Disease - Credits: 3
Students learn to recognize human body structure and function in health and disease states. Students explore the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of diseases commonly diagnosed and treated in the medical office setting. COREQUISITE: 10501101 Medical Terminology.

31509303
Medical Assistant Laboratory Procedures 1 - Credits: 2
Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform CLIA waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. PREREQUISITE: Admission to Medical Assistant program and COREQUISITES: 10501107 Digital Literacy for Healthcare, 10501101 Medical Terminology, 31509302 Human Body in Health and Disease, 31509301 Medical Assistant Administrative Procedures, and 31509304 Medical Assistant Clinical Procedures 1.

31509304
Medical Assistant Clinical Procedures 1 - Credits: 4
Introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting. Learner explores communication principles and psychology theories related to patient care. PREREQUISITE: Admission into the Medical Assistant program and COREQUISITES: 10501107 Digital Literacy for Healthcare, 31509302 Human Body in Health and Disease ,10501101 Medical Terminology, 31509301 Medical Assistant Administrative Procedures and 31509303 Medical Assistant Laboratory Procedures 1.

31509305
Medical Assistant Laboratory Procedures 2 - Credits: 2
Prepares students to perform phlebotomy and CLIA waived hematology, chemistry, immunology and laboratory procedures commonly performed by medical assistants in the ambulatory care setting. PREREQUISITES: 10501101 Medical Terminology, 31509302 Human Body in Health & Disease, 31509303 Medical Assistant Laboratory Procedures 1, and 31509304 Medical Assistant Clinical Procedures 1 and COREQUISITES: 31509306 Medical Assistant Clinical Procedures 2, 31509307 Medical Office Insurance and Finance, and 31501308 Pharmacology for Allied Health.

31509306
Medical Assistant Clinical Procedures 2 - Credits: 3
Prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, assisting with emergency preparedness in an ambulatory care setting. PREREQUISITES: 10501101 Medical Terminology, 31509302 Human Body in Health & Disease, 31509303 Medical Assistant Laboratory Procedures 1, and 31509304 Medical Assistant Clinical Procedures 1 and COREQUISITES: 31509305 Medical Assistant Laboratory Procedures 2, 31509307 Medical Office Insurance and Finance, and 31501308 Pharmacology for Allied Health.

31509307
Medical Office Insurance and Finance - Credits: 2
Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance-related duties. PREREQUISITES: 10501101 Medical Terminology and 31509302 Human Body in Health and Disease, 31509303 Medical Assistant Laboratory Procedures 1, and 31509304 Medical Assistant Clinical Procedures 1, and COREQUISITES: 10501107 Digital Literacy for Healthcare, 31509305 Medical Assistant Laboratory Procedures 2, 31509306 Medical Assistant Clinical Procedures 2, 31501308 Pharmacology for Allied Health.

31509309
Medical Law, Ethics and Professionalism - Credits: 2
Prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity.

31509310
Medical Assistant Practicum - Credits: 3
Requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. AAMA required Practicum - 160 minimum hours (AAMA minimum) up to 216 hours. PREREQUISITES: Current BLS Basic Life Support and first aid, successful completion or standing in all other program courses, approval of program faculty, compliance with Wisconsin Caregiver Law, and program Health Requirements are met.

Medical Billing Specialist (Medical Billing)

31-160-5 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

*Combination of Online, Your Choice or On Site instruction.

Program Overview

The Medical Billing Specialist technical diploma prepares you to perform billing functions in a clinic, hospital or specialty practice. This embedded technical diploma involves coursework on the patient-to-payment billing cycle in the medical facility. This embedded technical diploma fully ladders into the Medical Administrative Professional associates degree.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Medical Billing Specialist graduates will be able to:

- Perform routine healthcare administrative procedures
- Process insurance claims
- Apply technology skills to business and administrative tasks
- Maintain internal and external relationships
- Model professionalism in the workplace

Career Outlook

Typical positions available after graduation include:

- Hospital Medical Biller
- Physician's Office Medical Biller
- Laboratory Medical Biller
- Patient Account Representative
- Revenue Cycle Representative

Career Pathway

The Medical Billing Specialist program is a pathway into the following program (page 236):

- Medical Administrative Professional

Related Programs

- Health Office Professional
- Healthcare Receptionist
- Office Support Specialist

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10103151	MS Excel A	1 cr.
10103152	MS Excel B*	1 cr.
10106110	Document Formatting	2 cr.
10160134	Medical Insurance Claims*	4 cr.
10160140	Medical Office Administration*	3 cr.
10160142	Patient Billing and Reimbursement*	3 cr.
10160143	Medical Office Procedures and Customer Service	2 cr.
10160145	Medical Administrative Practice	4 cr.
10501101	Medical Terminology	3 cr.
Occupational Specific Total		23 cr.
Occupational Supportive Courses**		
10804123	Math with Business Applications	3 cr.
Occupational Supportive Total		3 cr.
PROGRAM REQUIREMENTS		**26 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103152
MS Excel B - Credits: 1
Students will learn to use MS Excel. Credit B activities will include using advanced features of formulas, object linking and embedding, multiple worksheets, 3-D references, macro basics and database basics. COREQUISITE: 10103151 MS Excel A.

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10160134
Medical Insurance Claims - Credits: 4
This course presents common health insurance terminology and selected private and government insurance coverages. Students are introduced to basic principles of disease coding and procedural coding from the physician/provider perspective and follow the life cycle of the medical insurance claim with the aim of accurate and efficient reimbursement for services provided. This is not for experienced coders. PREREQUISITE: 10501101 Medical Terminology.

10160140
Medical Office Administration - Credits: 3
Simulates handling patients and employees, applying customer service skills, and the use of computers in a medical/clinical setting. Hands-on experience in scheduling appointments, work in electronic medical records, establishing a fee schedule, and practice management. Utilizes Microsoft Office software, electronic billing software, electronic medical record software, telephone systems, internet, fax and e-mail. PREREQUISITE: 10160143 Medical Office Procedures and Customer Service.

10160142
Patient Billing and Reimbursement - Credits: 3
Emphasizes insurance preparation and reimbursement of claims to Commercial, Medicare, Medicaid and Worker's Compensation. Applies ICD, CPT and HCPCS coding resources to complete CMS 1500 and CMS 1450 insurance claims. Computerized billing software will be utilized throughout the course. PREREQUISITE: 10160134 Medical Insurance Claims.

10160143
Medical Office Procedures and Customer Service - Credits: 2
This course develops professional skills and attitudes needed in a medical business environment. Skills developed include an ability to communicate effectively with patients and other medical office staff, manage time effectively, schedule patients, greet patients, use the telephone properly, process mail, apply ergonomics and office safety, and use medical computer software efficiently.

10160145
Medical Administrative Practice - Credits: 4
Medical Administrative Practice is a capstone course for the Medical Administrative Professional degree, which brings together skills and knowledge learned in other classes and applies them in decision-making situations and in completing job tasks. This course provides the student with the training required to keep consistent with computer software that is used in the billing areas of the medical office. Topics covered are medical office procedures, practice management, basic billing skills and billing collection via real-life activities and simulations. Upon completion, students should be able to demonstrate the skills necessary to work in the medical office. PREREQUISITE: 10160140 Medical Office Administration. COREQUISITE: 10160134 Medical Insurance Claims.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

Medical Coding Specialist

31-530-2 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Online

Program Overview

The Medical Coding Specialist reviews medical documentation provided by physicians and other healthcare providers and translates this into numeric codes. The coding specialist assigns and sequences diagnostic and procedural codes using universally-recognized coding systems. Several uses of coded data are for payment of healthcare claims, statistics and medical research.

Special Features

- All courses will be offered online
- The program may be completed in a full-time or part-time format
- Students completing the one-year Medical Coding Specialist program have the option of returning to complete the associate degree Health Information Technology program; see page 112 for information on the Health Information Technology program

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Review and complete the computer skills inventory
- Review Medical Coding Specialist program orientation materials
- Meet with Medical Coding Specialist program advisor to determine program sequencing and completion goals

Program Outcomes

Medical Coding Specialist graduates will be able to:

- Collect health data
- Model professional behaviors and ethics
- Use electronic applications to support coding and data collection
- Apply coding and reimbursement systems

Career Outlook

Typical positions available after graduation include:

- Medical Coding Specialist
- Clinical Coding Specialist
- Claims Analyst

Career Pathway

The Medical Coding Specialist program is a pathway into the following program (page 225):

- Health Information Technology

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10501107	Digital Literacy for Healthcare	2 cr.
10530159	Healthcare Revenue Management*	3 cr.
10530162	Foundations of HIM*	3 cr.
10530165	Intermediate Coding*	3 cr.
10530182	Human Disease for the Health Professions*	3 cr.
10530184	CPT Coding*	3 cr.
10530197	ICD Diagnosis Coding*	3 cr.
10530199	ICD Procedure Coding*	2 cr.
Occupational Specific Total		22 cr.
Occupational Supportive Courses		
10501101	Medical Terminology	3 cr.
10806177	General Anatomy and Physiology#	4 cr.
Occupational Supportive Total		7 cr.
TOTAL PROGRAM REQUIREMENTS		**29 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required courses.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology

10501107
Digital Literacy for Healthcare - Credits: 2
The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined. Computer skills proficiency developed as a part of this course.

10530159
Healthcare Revenue Management - Credits: 3
Prepares learners to compare and contrast health care payers and evaluate the reimbursement cycle and compliance with regulations. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software. COREQUISITES: 10530162 Foundations of HIM, 10530182 Human Disease for the Health Professions, 10530184 CPT Coding, 10530197 ICD Diagnosis Coding, and 10530199 ICD Procedure Coding.

10530162
Foundations of HIM - Credits: 3
Introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. PREREQUISITE: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist and COREQUISITE: 10501107 Digital Literacy for Healthcare.

10530165
Intermediate Coding - Credits: 3
Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQUISITES: 10530184 CPT Coding and 10530197 ICD Diagnosis Coding and successful completion of COREQUISITE: 10530199 ICD Procedure Coding is required prior to taking Intermediate Coding.

10530182
Human Disease for the Health Professions - Credits: 3
Prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests and results, and medical treatments and surgical procedures. PREREQUISITE: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist and COREQUISITES: 10501101 Medical Terminology and 10806177 General Anatomy and Physiology.

10530184
CPT Coding - Credits: 3
Prepares learners to assign CPT/HCPCS codes, supported by medical documentation, with entry level proficiency. Learners apply instructional notations, conventions, rules, and official coding guidelines when assigning codes to case studies and actual medical record documentation. COREQUISITES: 10501101 Medical Terminology, 10530182 Human Disease for the Health Professions and 10806177 General Anatomy and Physiology.

10530197
ICD Diagnosis Coding - Credits: 3
Prepares students to assign ICD diagnosis codes supported by medical documentation. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist and COREQUISITES: 10501101 Medical Terminology, 10530182 Human Disease for the Health Professions and 10806177 General Anatomy and Physiology.

10530199
ICD Procedure Coding - Credits: 2
Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITES: Admission to plan 105301 Health Information Technology or 315302 Medical Coding Specialist 10501101 Medical Terminology, and 10806177 General Anatomy and Physiology and COREQUISITE: 10530182 Human Disease for the Health Professions.

Microsoft Office

30-106-6 Technical Diploma (less than one-year)

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

Using the Microsoft Office suite, you'll create letters, reports, forms or other material from rough draft, corrected copy or voice recording. In addition, you'll create spreadsheets, databases, calendars, emails or slides for presentations.

Admission Requirement

- Complete Online application form

Program Outcomes

Microsoft Office graduates will be able to:

- Apply Microsoft Office skills to workplace tasks
- Solve user level Microsoft Office issues

Career Outlook

Typical positions available after graduation include:

- Word Processor
- Clerk Typist
- Program Assistant

Career Pathway

The Microsoft Office program is a pathway into the following program (page 214):

- Administrative Coordinator

Related Programs

- Office Technology Assistant
- Office Support Specialist
- Healthcare Receptionist

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10103106	MS PowerPoint	1 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103162	MS Access A	1 cr.
10103184	Advanced Document Applications	2 cr.
10103185	Advanced Spreadsheets and Analytics	2 cr.
10106128	Software Integration	1 cr.
PROGRAM REQUIREMENTS		**10 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10103184
Advance Document Applications - Credits: 2
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, mail merge, desktop publishing, themes, templates, forms, sort, styles, references, captions, and macros. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365. COREQUISITE: 10103146 MS Word A

10103185
Advanced Spreadsheets and Analytics - Credits: 2
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Excel software. Students will use spreadsheet software apply advanced features, manage data using PivotTables, and macros. Use software to solve and analyze various business situations. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365 for Windows. COREQUISITE: 10103151 MS Excel A

10106128
Software Integration - Credits: 1
This course is designed to integrate computer applications. Participants will prepare and enhance documents using word processing, spreadsheets, database, and presentation graphics software. PREREQUISITES: 10103106 MS PowerPoint, 10103146 MS Word A, 10103181 Advanced Document Applications, 10103151 MS Excel A, 10103185 Advanced Spreadsheets and Analytics, 10103162 MS Access A.

Nonprofit Essentials

61-196-6 Pathway Certificate

Campus: Online

Program Overview

As a student in the Nonprofit Essentials career pathway program, you will explore the role of nonprofit organizations, develop volunteer and board relationships, and coordinate grant and fundraising strategies. Graduates of this certificate can find work with assisted living centers, hospice and home care agencies, childcare programs, domestic abuse and homeless shelters, and many more nonprofit organizations, both locally and nationally.

Special Feature

This is a unique program in the state

Admission Requirement

- Complete Online application form

Program Outcomes

The Nonprofit Essentials Cetificate will prepare you to:

- Explore the principles and concepts of nonprofit leadership
- Examine various grant and fundraising strategies commonly used in the nonprofit sector
- Plan, organize, and evaluate non-profit organizations based on its mission, vision, and goals

Career Outlook

Typical positions available upon completion include:

- Fundraising Coordinator
- Development Coordinator
- Youth Worker
- Youth Specialist

Career Pathways

The Nonprofit Essentials program is a pathway into the following programs (page 238):

- Nonprofit Leadership
- Nonprofit Professional

Related Program

- Leadership Essentials

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10104189	Social Media Marketing	3 cr.
10196123	Grant Writing and Management	2 cr.
10196127	Fundraising and Event Planning	3 cr.
10196131	Fundamentals of Nonprofit Management	3 cr.
10196149	Dynamics of Board Relations	1 cr.
10196158	Managing Volunteers	2 cr.
10196159	Nonprofit Field Experience	1 cr.
TOTAL CERTIFICATE REQUIREMENTS		**15 cr.**

Course Descriptions

10104189
Social Media Marketing - Credits: 3
This course follows social media's transformation of advertising from a mass medium to one-to-one communication with immediate feedback. Social media's use for public relations and advertising as well as how to create and deploy a social media campaign will be the main focus of the course. The history and development of social media platforms will be examined as well as today's ethical and legal implications of social media efforts.

10196123
Grant Writing and Management - Credits: 2
An introductory course designed to familiarize students to the language of grants. Specific topics include proposal development, funding sources and processes, writing grant proposals, creating budgets, developing effective evaluation tools, and managing grant funds.

10196127
Fundraising and Event Planning - Credits: 3
In this course students will deepen their understanding of raising funds in the nonprofit sector. Students learn about event planning and budgeting, income projections and ticketing, marketing outreach, food and beverage, and logistics management. Students will also categorize the various types of strategic tools currently used in conjunction with social media to increase fundraising campaigns.

10196131
Fundamentals of Nonprofit Management - Credits: 3
An introductory course aimed at providing an overview of the essential functions of a nonprofit organization. In this course students are introduced to the fundamentals of effective mission and vision statements, strategic planning, operations management, Board development, and budgeting.

10196149
Dynamics of Board Relations - Credits: 1
A dynamic course that focuses on developing a cohesive and strategic board of directors. Topics include defining the role of the board, strengthening the working relationship between staff members and board members, and organizing and facilitating effective meetings.

10196158
Managing Volunteers - Credits: 2
Successful management of volunteers is critical to a nonprofit organization. This investigative course is intended to prepare students to assume roles as volunteer program leaders and managers, or to improve their skills in existing roles with volunteer organizations. The fundamental design of the course is based on learning through critical thought in and about leadership and management roles with volunteers.

10196159
Nonprofit Field Experience - Credits: 1
This course is designed to provide students with a hands-on experience to practice the tasks and duties typically performed in a nonprofit organization. PREREQUISITE/ COREQUISITE: a minimum of 7 credits of the following courses: 10196123 Grant Writing and Management, 10196127 Fundraising and Event Planning, 10196131 Fundamentals of Nonprofit Management, 10196149 Dynamics of Board Relations, or 10196158 Managing Volunteers.

Nonprofit Leadership

10-196-6 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Center: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

As a student, you will explore the role of nonprofit organizations, developing volunteer and board relationships, coordinating grant and fundraising strategies, and managing fiscal resources. Graduates of this program could seek employment with government social services, YMCAs, assisted living centers, hospice, home care agencies, clinics, hospitals, Headstart and other childcare programs, domestic abuse and homeless shelters, and police, fire and EMS volunteer programs.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Nonprofit Leadership graduates will be able to:

- Apply sound decision-making about fiscal and financial resources
- Create individual professional development plans to meet organizational goals
- Facilitate effective employee relations
- Cultivate professional relationships to build community, board, and volunteer resources
- Select appropriate communication strategy to fit the situation
- Explore the principles and concepts of nonprofit leadership
- Examine various grant and fundraising strategies commonly used in the non-profit sector
- Plan, organize, and evaluate nonprofit organizations based on its mission, vision, and goals

Career Outlook

Typical positions available after graduation include:

- Program Coordinator
- Marketing and Communications Coordinator
- Volunteer Coordinator
- Director of Programs

Career Pathways

The Nonprofit Leadership program includes the following pathway options (page 238):

- Nonprofit Professional
- Nonprofit Essentials
- Leadership Essentials
- Supervisory Leadership Certificate

Related Programs

- Gerontology - Aging Services Professional
- Business Management
- Leadership Development

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10101138	Budgeting and Cost Control*	2 cr.
10101176	Financial Accounting 1A	2 cr.
10104189	Social Media Marketing	3 cr.
10116100	Human Resource Management **or**	
10104198	Managing Human Resources	3 cr.
10116104	Recruitment and Selection*	3 cr.
10196123	Grant Writing and Management	2 cr.
10196127	Fundraising and Event Planning	3 cr.
10196131	Fundamentals of Nonprofit Management	3 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10196149	Dynamics of Board Relations	1 cr.
10196157	Strategic Planning	1 cr.
10196158	Managing Volunteers	2 cr.
10196159	Nonprofit Field Experience	1 cr.
10196164	Personal Skills for Supervisors	3 cr.
10196189	Team Building and Problem Solving	3 cr.
10196190	Leadership Development	3 cr.
10196191	Supervision	3 cr.
10520103	Ethics in Human Services	3 cr.
Technical Studies Total		42 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech	3 cr.
10804123	Math with Business Applications **or**	
10804107	College Mathematics **or**	
10804189	Introductory Statistics* **or**	
10806112	Principles of Sustainability **or**	
10806177	General Anatomy and Physiology **or**	
10806198	Human Biology	3-4 cr.
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		15-16 cr.
ELECTIVES		3 cr.
TOTAL PROGRAM REQUIREMENTS		**60 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10101138
Budgeting and Cost Control - Credits: 2
By using the tools and techniques learned in the class, students will understand how to use financial information to manage a business, make better financial decisions, increase business profitability, and improve cash flow. With a detailed review of what the numbers in the financial statements represent and how managers and owners use that information to be more successful in controlling and growing their business operations, students will learn how to use financial information to build an effective and realistic budget that can be used to control costs, improve profits and gain a competitive advantage. COREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10104189
Social Media Marketing - Credits: 3
This course follows social media's transformation of advertising from a mass medium to one-to-one communication with immediate feedback. Social media's use for public relations and advertising as well as how to create and deploy a social media campaign will be the main focus of the course. The history and development of social media platforms will be examined as well as today's ethical and legal implications of social media efforts.

10116100
Human Resource Management - Credits: 3
In Human Resource Management, the learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. It is recommended that the learner have experience using a PC/MAC, using the MS Windows operating systems and software suite, browsing Web pages, downloading files, using e-mail, and exchanging files prior to enrolling in this course.

10104198
Managing Human Resources - Credits: 3
Introduces the functions of Human Resource Management in the legal and social context of today's dynamic business environment. Topics include human resource development, employee selection, performance, appraisal, compensation, training, labor relations, affirmative action, and career management.

10116104
Recruitment and Selection - Credits: 3
Getting the right employees in the right job is really an art. Learn the methods of recruitment used to attract employees to your organization. Once recruitment takes place, then selection of the most suitable candidate for an opening takes place. This process is highly governed by state and federal law which must be learned and used as the basis for lawful selection of employees. PREREQUISITE: 10116100 Human Resource Management.

10196123
Grant Writing and Management - Credits: 2
An introductory course designed to familiarize students to the language of grants. Specific topics include proposal development, funding sources and processes, writing grant proposals, creating budgets, developing effective evaluation tools, and managing grant funds.

10196127
Fundraising and Event Planning - Credits: 3
In this course students will deepen their understanding of raising funds in the nonprofit sector. Students learn about event planning and budgeting, income projections and ticketing, marketing outreach, food and beverage, and logistics management. Students will also categorize the various types of strategic tools currently used in conjunction with social media to increase fundraising campaigns.

10196131
Fundamentals of Nonprofit Management - Credits: 3
An introductory course aimed at providing an overview of the essential functions of a nonprofit organization. In this course students are introduced to the fundamentals of effective mission and vision statements, strategic planning, operations management, Board development, and budgeting.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10196149
Dynamics of Board Relations - Credits: 1
A dynamic course that focuses on developing a cohesive and strategic board of directors. Topics include defining the role of the board, strengthening the working relationship between staff members and board members, and organizing and facilitating effective meetings.

10196157
Strategic Planning - Credits: 1
Analyze current business strategy, recognize trends, develop vision and mission statements, identify benchmarks, measure business against benchmarks, recommend future directions.

10196158
Managing Volunteers - Credits: 2
Successful management of volunteers is critical to a nonprofit organization. This investigative course is intended to prepare students to assume roles as volunteer program leaders and managers, or to improve their skills in existing roles with volunteer organizations. The fundamental design of the course is based on learning through critical thought in and about leadership and management roles with volunteers.

10196159
Nonprofit Field Experience - Credits: 1
This course is designed to provide students with a hands-on experience to practice the tasks and duties typically performed in a nonprofit organization. PREREQUISITE/COREQUISITE: a minimum of 7 credits of the following courses: 10196123 Grant Writing and Management, 10196127 Fundraising and Event Planning, 10196131 Fundamentals of Nonprofit Management, 10196149 Dynamics of Board Relations, or 10196158 Managing Volunteers.

10196164
Personal Skills for Supervisors - Credits: 3
On Siteal Skills for Supervisors, the learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

10196189
Team Building and Problem Solving - Credits: 3
In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, evaluation, and documentation.

10196190
Leadership Development - Credits: 3
In Leadership Development, the learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

10520103
Ethics in Human Services - Credits: 3
This course explores the ethical, legal, and professional issues facing the human services worker. It is designed to teach a process of ethical decision-making and to increase awareness of the complexities in practice. Students are introduced to the current state and federal statutes, regulations, and judicial decisions that govern the professional practice in human services. Standards, code of ethics, clients' rights, and confidentiality are emphasized.

Nonprofit Professional

31-196-3 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select coures are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

As a student in the Nonprofit Professional embedded technical diploma program, you will explore the role of nonprofit organizations, develop volunteer and board relationships, explore grant and fundraising strategies, learn how to manage and control budgets, and communicate effectively. Graduates of this program can find employment with assisted living centers, hospice and home care agencies, hospitals, YMCAs, childcare programs, domestic abuse and homeless shelters, and many more nonprofit organizations, both locally and nationally.

Special Feature

This is a unique program in the state

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Nonprofit Professional graduates will be able to:

- Cultivate professional relationships to build community, board, and volunteer resources
- Select appropriate communication strategy to fit the situation
- Explore the principles and concepts of nonprofit leadership
- Examine various grant and fundraising strategies commonly used in the non-profit sector
- Plan, organize, and evaluate nonprofit organizations based on its mission, vision, and goals

Career Outlook

Typical positions available after graduation include:

- Fundraising Coordinator
- Relationship Manager
- Marketing Communications Associate
- Program Manager

Career Pathways

The Nonprofit Professional program includes the following pathway option (page 238):

- Nonprofit Essentials

Nonprofit Professional is also a pathway into the following program:

- Nonprofit Leadership

Related Programs

- Leadership Essentials
- Leadership Development

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10101138	Budgeting and Cost Control*	2 cr.
10101176	Financial Accounting 1A	2 cr.
10104189	Social Media Marketing	3 cr.
10196123	Grant Writing and Management	2 cr.
10196127	Fundraising and Event Planning	3 cr.
10196131	Fundamentals of Nonprofit Management	3 cr.
10196138	Conflict Resolution and Confrontation Skills	1 cr.
10196149	Dynamics of Board Relations	1 cr.
10196157	Strategic Planning	1 cr.
10196158	Managing Volunteers	2 cr.
10196159	Nonprofit Field Experience	1 cr.
10520103	Ethics in Human Services	3 cr.
Occupational Specific Total		24 cr.
Occupational Supportive Courses**		
10801136	English Composition 1	3 cr.
10801198	Speech	3 cr.
Occupational Supportive Total		6 cr.
TOTAL PROGRAM REQUIREMENTS		**30 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

10101138
Budgeting and Cost Control - Credits: 2
By using the tools and techniques learned in the class, students will understand how to use financial information to manage a business, make better financial decisions, increase business profitability, and improve cash flow. With a detailed review of what the numbers in the financial statements represent and how managers and owners use that information to be more successful in controlling and growing their business operations, students will learn how to use financial information to build an effective and realistic budget that can be used to control costs, improve profits and gain a competitive advantage. COREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10104189
Social Media Marketing - Credits: 3
This course follows social media's transformation of advertising from a mass medium to one-to-one communication with immediate feedback. Social media's use for public relations and advertising as well as how to create and deploy a social media campaign will be the main focus of the course. The history and development of social media platforms will be examined as well as today's ethical and legal implications of social media efforts.

10196123
Grant Writing and Management - Credits: 2
An introductory course designed to familiarize students to the language of grants. Specific topics include proposal development, funding sources and processes, writing grant proposals, creating budgets, developing effective evaluation tools, and managing grant funds.

10196127
Fundraising and Event Planning - Credits: 3
In this course students will deepen their understanding of raising funds in the nonprofit sector. Students learn about event planning and budgeting, income projections and ticketing, marketing outreach, food and beverage, and logistics management. Students will also categorize the various types of strategic tools currently used in conjunction with social media to increase fundraising campaigns.

10196131
Fundamentals of Nonprofit Management - Credits: 3
An introductory course aimed at providing an overview of the essential functions of a nonprofit organization. In this course students are introduced to the fundamentals of effective mission and vision statements, strategic planning, operations management, Board development, and budgeting.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10196149
Dynamics of Board Relations - Credits: 1
A dynamic course that focuses on developing a cohesive and strategic board of directors. Topics include defining the role of the board, strengthening the working relationship between staff members and board members, and organizing and facilitating effective meetings.

10196157
Strategic Planning - Credits: 1
Analyze current business strategy, recognize trends, develop vision and mission statements, identify benchmarks, measure business against benchmarks, recommend future directions.

10196158
Managing Volunteers - Credits: 2
Successful management of volunteers is critical to a nonprofit organization. This investigative course is intended to prepare students to assume roles as volunteer program leaders and managers, or to improve their skills in existing roles with volunteer organizations. The fundamental design of the course is based on learning through critical thought in and about leadership and management roles with volunteers.

10196159
Nonprofit Field Experience - Credits: 1
This course is designed to provide students with a hands-on experience to practice the tasks and duties typically performed in a nonprofit organization. PREREQUISITE/ COREQUISITE: a minimum of 7 credits of the following courses: 10196123 Grant Writing and Management, 10196127 Fundraising and Event Planning, 10196131 Fundamentals of Nonprofit Management, 10196149 Dynamics of Board Relations, or 10196158 Managing Volunteers.

10520103
Ethics in Human Services - Credits: 3
This course explores the ethical, legal, and professional issues facing the human services worker. It is designed to teach a process of ethical decision-making and to increase awareness of the complexities in practice. Students are introduced to the current state and federal statutes, regulations, and judicial decisions that govern the professional practice in human services. Standards, code of ethics, clients' rights, and confidentiality are emphasized.

Nursing Assistant

30-543-1 Technical Diploma (less than one-year)

Campuses: Ashland, New Richmond, Rice Lake, Superior
Outreach Center: Hayward
Health Education Center: Shell Lake

Program Overview

The Nursing Assistant program prepares students for employment as nursing assistants. The program also prepares students for other health-related programs. Students will be required to demonstrate the following skills under the supervision of a licensed nurse: communication, basic nursing assistant and personal care skills, attention to client's rights, and care of clients with dementias. The program is recognized by the Wisconsin Department of Health Services as a nurse-aide training program. Upon successful completion of the program, the student is eligible to take the Wisconsin Nursing Assistant competency evaluation for inclusion on the Wisconsin Nurse Aide Registry and employment in nursing homes, hospitals, home health agencies, hospices, CBRF's, assisted living centers and homes for the developmentally disabled.
The program is approved by the Wisconsin Department of Health Services, Office of Quality Assurance. After successfully completing this program, students will be eligible to complete the written and skills exams to be placed on the Wisconsin Nurse Aide Registry.

Admission Requirements

- Complete Online application form
- Be at least 16 years old at class start
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Review and sign Health Sciences Confidentiality Statement

Program-Specific Requirements

The following items must be completed prior to mandatory orientation:

- Submit Class Registration Form with Fee or Payment Authorization Form
- Submit Background Check fee
- Attend a mandatory orientation session scheduled prior to start of class
- Have an acceptable Wisconsin Caregiver Background Check
- Demonstrate negative status for tuberculosis (Tb)
- COVID vaccination---highly recommended
  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/ quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.

Program Outcomes

Nursing Assistant graduates will be able to:

- Communicate effectively with clients, family, and co-workers
- Protect rights of clients
- Demonstrate ethical and legal responsibilities
- Work cooperatively in a team environment
- Provide holistic, safe care to diverse populations
- Demonstrate reporting and documentation
- Assist clients with rehabilitation and restorative care
- Provide safe care for clients with acute and chronic health conditions
- Complete educational requirements for the WI NA competency evaluation

Career Outlook

Graduates of this program will be qualified for the following position:

- Nursing Assistant

Related Program

- Nursing - Associate Degree

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Course		
30543300	Nursing Assistant *	2 cr.
PROGRAM REQUIREMENTS		**2 cr.**

* This course requires a prerequisite and/or corequisite.

Qualifications for Entry on the Wisconsin Nurse Aide Registry

Upon completion of the program, students will be eligible to complete the written and skills exams to be placed on the Wisconsin Nurse Aid Registry.

Money Orders, Cashier's Checks and Facility Checks are accepted on behalf of candidates.
MasterCard or Visa payments are accepted from both candidates and facilities.

Exam Description	Price
Knowledge and Demonstration/Skills	$125
Oral and Demonstration/SKills	$130
Knowledge Only	$32
Oral Only	$37
Demonstration/Skills Only	$93

Please note, personal checks or cash ARE NOT accepted from candidates

Professional Licensure and/or Certification Information

Northwood Tech's Nursing Assistant program prepares students to obtain the required certification to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examinations, licensure, or certification for other states. Please click below to review more details about DHS approval.

Wisconsin Nurse Aide Registry

Course Description

30543300
Nursing Assistant - Credits: 2
The Nursing Assistant program prepares students for employment as nursing assistants. The program also prepares students for other health-related programs. Students will be required to demonstrate the following skills under the supervision of a licensed nurse: communication, basic nursing assistant and personal care skills, attention to client's rights, and care of clients with dementias. The program is recognized by the Wisconsin Department of Health Services as a nurse-aide training program. Upon successful completion of the program, the student is eligible to take the Wisconsin Nursing Assistant competency evaluation for inclusion on the Wisconsin Nurse Aide Registry and employment in nursing homes, hospitals, home health agencies, hospices, CBRF's, assisted living centers and homes for the developmentally disabled. PREREQUISITE: Admission to Nursing Assistant program

Nursing - Associate Degree

10-543-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*

* Students in health sciences programs will travel to the Shell Lake Health Education Center. Travel requirements are customized to meet individual program course competencies.

Program Overview

Nursing is the dynamic interpersonal goal-directed process that seeks to promote optimal health within the context of individuals, family, community and society. The concept of caring, which is central to nursing, is communicated through both attitude and action. Nursing uses the nursing process, a problem-solving approach to provide holistic care to individuals, families and groups within the healthcare system. Through collaboration with other healthcare professionals, nursing is responsive to the needs of the community across the health-illness continuum.

Special Features

Graduates of the Nursing - Associate Degree program have the option to transfer, with junior standing, into a baccalaureate nursing program at colleges in the University of Wisconsin System and some private colleges.

Pre-Nursing Admission Requirements

- Complete Online application form
- Complete Accuplacer entrance assessment to determine placement (waiver may apply with acceptable alternative test scores and/or postsecondary degree completion); NOTE: required Accuplacer entrance assessment scores for core Nursing coursework are higher than pre-Nursing scores
- Complete Northwood Tech pre-ADN Admissions Quiz
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

Pre-Nursing students must complete the petition process to be eligible for the core Nursing program. (See Nursing-Associate Degree program web page for detailed information.) In addition to the requirements above, students in this program must:

- Complete one year, or one credit, of high school chemistry or one credit of college-level chemistry with a 2.0 or better
- Complete a Nursing Assistant course with grade of 2.0 or better
- Complete priority petition for admission forms:
  - Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
  - Northwood Tech transcripts to verify course completion(priority admission is given to students who have completed the ADN program-required General Studies courses)
  - Review and sign Background Check Disclosure
  - Review and sign the Functional Abilities Disclosure
  - Complete and sign Intent to Enter form
- Prior to attendance in core Nursing coursework, student must:
  - Submit Background Check fee
  - Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states if applicable
  - Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb)
  - COVID vaccination---highly recommended

    NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
  - Possess current certification of "BLS Basic Life Support" or the equivalent
- Review and sign Health Sciences Confidentiality Statement
- Participate in a mandatory orientation session

Admission and Program-Specific Requirements for the following are located on the Nursing - Associate Degree program webpage:

- LPN to ADN
- Nursing - Associate Degree Transfer Student Requirements
- Northwood Tech/UWEC Nursing Alliance

Program Outcomes

ADN Graduates will be able to:

- Integrate professional nursing identity reflecting integrity, responsibility, and nursing
- Communicate comprehensive information using multiple sources in nursing practice
- Integrate theoretical knowledge to support decision making
- Integrate the nursing process into patient care across diverse populations
- Function as a healthcare team member to provide safe and effective care

Career Outlook

Graduates of this program will be qualified for the following position:

- Registered Nurse

Related Program

- Nursing Assistant

The Nursing-Associate Degree program at Northwood Technical College is accredited by the Accreditation Commission for Education in Nursing, Inc. (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, phone 404-975-5000. The most recent accreditation decision made by the ACEN Board of Commissioners for the associate degree nursing program is continuing accreditation.

The Nursing-Associate Degree program at Northwood Technical College is approved by the Wisconsin State Board of Nursing. Concerns may also be directed to the Board of Nursing, DSPS, PO Box 8366, Madison, WI 53708 – 8366.
Phone number: 608.266.2112
Email: dsps@wi.gov

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10543101	Nursing Fundamentals*	2 cr.
10543102	Nursing Skills*	3 cr.
10543103	Nursing Pharmacology*	2 cr
10543104	Nursing: Intro to Clinical Practice*	2 cr
10543105	Nursing Health Alterations*	3 cr
10543106	Nursing Health Promotion*	3 cr
10543107	Nursing: Clinical Care Across Lifespan*	2 cr
10543108	Nursing: Intro to Clinical Care Management*	2 cr
10543109	Nursing: Complex Health Alterations 1*	3 cr
10543110	Nursing: Mental Health and Community Concepts*	2 cr
10543111	Nursing: Intermediate Clinical Practice*	3 cr
10543112	Nursing Advanced Skills*	1 cr
10543113	Nursing: Complex Health Alterations 2*	3 cr
10543114	Nursing: Management and Professional Concepts*	2 cr
10543115	Nursing: Advanced Clinical Practice*	3 cr
10543116	Nursing Clinical Transition*	2 cr.
Technial Studies Total		38 cr
General Studies Courses**		
10801136	English Composition 1	3 cr
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr
10806177	General Anatomy and Physiology	4 cr
10806179	Advanced Anatomy and Physiology*	4 cr
10806197	Microbiology*	4 cr
10809188	Developmental Psychology	3 cr
10809196	Introduction to Sociology	3 cr
10809198	Introduction to Psychology	3 cr
General Studies Total		27 cr
ELECTIVES		5 cr
TOTAL PROGRAM REQUIREMENTS		**70 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

For all 10543XXX courses, course repeat and failure policies exist within the ADN program that allow for only a certain number of retakes and failures of these classes; please refer to these policies for details.

All courses in the ADN program (core nursing, science, general studies, prerequisites, and electives) must be completed with a grade of 2.0 or better, including 10806177 General Anatomy & Physiology and 10806179 Advanced Anatomy & Physiology.

Professional Licensure and/or Certification Information

Northwood Tech's Nursing program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee it's curriculum matches the requirements for preparation, examinations, or licensure for other states. Please click below to review more details details about accreditation and licensure.

For more information, visit:

National Council of State Boards of Nursing (NCSBN)
State of Wisconsin Department of Safety and Professional Services

10543101
Nursing Fundamentals - Credits: 2
This course focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients. PREREQUISITE: Admission to Nursing program and COREQUISITE: 10806177 General Anatomy and Physiology.

10543102
Nursing Skills - Credits: 3
This course focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. PREREQUISITE: Admission to Nursing program or current LPN license and COREQUISITE: 10806177 General Anatomy and Physiology.

10543103
Nursing Pharmacology - Credits: 2
This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. PREREQUISITE: Admission to the Nursing program and COREQUISITE: 10806177 General Anatomy and Physiology.

10543104
Nursing: Intro to Clinical Practice - Credits: 2
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration. COREQUISITES: 10543101 Nursing Fundamentals, 10543102 Nursing Skills, and 10543103 Nursing Pharmacology, 10801136 English Composition 1, 10809188 Developmental Psychology, and 10806177 General Anatomy and Physiology.

10543105
Nursing Health Alterations - Credits: 3
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of patients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It will also introduce concepts of leadership and management. PREREQUISITES: 10543101 Nursing Fundamentals, 10543102 Nursing Skills, 10543103 Nursing Pharmacology, 10543104 Nursing: Introduction to Clinical Practice, and 10806177 General Anatomy and Physiology.

10543106
Nursing Health Promotion - Credits: 3
This course focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, postpartum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyles choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. PREREQUISITES:10543101 Nursing Fundamentals, 10543102 Nursing Skills, 10543103 Nursing Pharmacology, 10543104 Nursing: Introduction to Clinical Practice, 10806177 General Anatomy and Physiology, and 10809188 Developmental Psychology and COREQUISITE: 10806179 Advanced Anatomy and Physiology.

10543107
Nursing: Clinical Care Across Lifespan - Credits: 2
This clinical experience applies nursing concepts and therapeutic interventions to patients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. COREQUISITE:10543106 Nursing Health Promotion.

10543108
Nursing: Intro to Clinical Care Management - Credits: 2
This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of patients across the lifespan. It also provides an introduction to leadership, management, and team building. COREQUISITES: 10543105 Nursing Health Alterations, 10806179 Advanced Anatomy and Physiology, and 10801196 Oral/Interpersonal Communication.

10543109
Nursing: Complex Health Alterations 1 - Credits: 3
Complex Health Alterations 1 prepares the learner to provide and evaluate care for patients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as patients with fluid/electrolyte and acid-base imbalance, and alterations in comfort. PREREQUISITES: 10543105 Nursing Health Alterations, 10543106 Nursing Health Promotion, 10543107 Nursing: Clinical Care Across the Lifespan, 10543108 Nursing: Introduction to Clinical Care Management, 10806179 Advanced Anatomy and Physiology, and COREQUISITE: 10806197 Microbiology.

10543110
Nursing: Mental Health and Community Concepts - Credits: 2
This course will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups. PREREQUISITES: 10543105 Nursing Health Alterations, 10543106 Nursing Health Promotion, 10543107 Nursing: Clinical Care Across the Lifespan, 10543108 Nursing: Introduction to Clinical Care Management, 10806179 Advanced Anatomy and Physiology, and COREQUISITE: 10809198 Introduction to Psychology.

10543111
Nursing: Intermediate Clinical Practice - Credits: 3
This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients across the lifespan and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. COREQUISITES: 10543109 Nursing Complex Health Alterations 1, 10543110 Nursing: Mental Health and Community Concepts, and 10543112 Nursing Advanced Skills, 10809198 Introduction to Psychology, and 10806197 Microbiology.

10543112
Nursing Advanced Skills - Credits: 1
This course focuses on the development of advanced clinical skills across the lifespan. Content includes advanced intravenous skills, blood product administration, chest tube systems, basic electrocardiogram interpretation and nasogastric/feeding tube insertion. PREREQUISITES: 10543105 Nursing Health Alterations, 10543106 Nursing Health Promotion, 10543107 Nursing: Clinical Care Across the Lifespan, 10543108 Nursing: Introduction to Clinical Care Management, and 10806179 Advanced Anatomy and Physiology.

10543113
Nursing: Complex Health Alterations 2 - Credits: 3
Complex Health Alterations 2 prepares the learner to provide and evaluate care for patients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, reproductive systems and shock, burns and trauma. The learner will also focus on management of care for patients with high-risk perinatal conditions and high-risk newborns. PREREQUISITES: 10543109 Nursing Complex Health Alterations 1, 10543110 Nursing: Mental Health and Community Concepts, 10543111 Nursing: Intermediate Clinical Practice, 10543112 Nursing Advanced Skills, and 10806197 Microbiology.

10543114
Nursing: Management and Professional Concepts - Credits: 2
This course covers nursing management and professional issues related to the role of the registered nurse. Emphasis is placed on preparing for practice as a registered nurse. PREREQUISITES: 10543109 Nursing: Complex Health Alterations 1, 10543110 Nursing: Mental Health and Community Concepts, 10543111 Nursing: Intermediate Clinical Practice, and 10543112 Nursing Advanced Skills.

10543115
Nursing: Advanced Clinical Practice - Credits: 3
This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized. COREQUISITES: 10543113 Nursing Complex Health Alterations 2, and 10809196 Introduction to Sociology.

10543116
Nursing Clinical Transition - Credits: 2
This clinical experience integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and works collaboratively with others to achieve client and organizational outcomes. Continued professional development is fostered. PREREQUISITES: 10543113 Nursing Complex Health Alterations 2, 10543114 Nursing Management and Professional Concepts, and 10543115 Nursing Advanced Clinical Practice.

Nursing - Associate Degree - Part Time (four years)

10-543-1 Associate Degree **Financial Aid Eligible**

Campus: Online

Clinical and Skills Labs will have On Site clinic and/or campus requirements (Shell Lake Health Education Center). Some travel required

Program Overview

Nursing is the dynamic interpersonal goal-directed process that seeks to promote optimal health within the context of individuals, family, community and society. The concept of caring, which is central to nursing, is communicated through both attitude and action. Nursing uses the nursing process, a problem-solving approach to provide holistic care to individuals, families and groups within the healthcare system. Through collaboration with other healthcare professionals, nursing is responsive to the needs of the community across the health-illness continuum.

Special Features

- Advisors will be available to coach, mentor and motivate you throughout the program. They will assist with academic-related issues, including enhancement of study skills and college success strategies and facilitate individual and/or study groups
- Classes will be available online with travel required to the College's Health Education Center located in Shell Lake for labs and clinical simulation.
- Graduates of the Nursing - Associate Degree program have the option to transfer, with junior standing, into a baccalaureate nursing program at colleges in the University of Wisconsin System and some private colleges.

Admission Requirements

Admission to the program is based on the date the student completes all admissions requirement and is first-come first-served.

- Complete Online application form
- Complete Accuplacer entrance assessment to determine placement (waiver may apply with acceptable alternative test scores and/or postsecondary degree completion); note: Core Nursing Accuplacer entrance assessment scores required
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date prior to term start
- Complete one year, or one credit, of high school chemistry or one credit of college-level chemistry with a 2.0 or better
- Complete a Nursing Assistant course with grade of 2.0 or better
- Complete admissions meeting with a Northwood Tech counselor

(academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Prior to attendance in core Nursing coursework, student must:
  - Submit Background Check fee
  - Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states if applicable
  - Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb)
  - COVID vaccination---highly recommended

    NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
  - Possess current certification of "BLS Basic Life Support" or equivalent
- Review and sign Health Sciences Confidentiality Statement
- Participate in a mandatory orientation session

Program Outcomes

ADN Graduates will be able to:

- Integrate professional nursing identity reflecting integrity, responsibility, and nursing
- Communicate comprehensive information using multiple sources in nursing practice
- Integrate theoretical knowledge to support decision making
- Integrate the nursing process into patient care across diverse populations
- Function as a healthcare team member to provide safe and effective care

Career Outlook

Graduates of this program will be qualified for the following position:

- Registered Nurse

Related Program

- Nursing Assistant

The Nursing-Associate Degree program at Northwood Technical College is accredited by the Accreditation Commission for Education in Nursing, Inc. (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, phone 404-975-5000. The most recent accreditation decision made by the ACEN Board of Commissioners for the associate degree nursing program is continuing accreditation.

The Nursing-Associate Degree program at Northwood Technical College is approved by the Wisconsin State Board of Nursing. Concerns may also be directed to the Board of Nursing, DSPS, PO Box 8366, Madison, WI 53708 – 8366. Phone number: 608.266.2112 Email: dsps@wi.gov

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10543101	Nursing Fundamentals*	2 cr.
10543102	Nursing Skills*	3 cr.
10543103	Nursing Pharmacology*	2 cr
10543104	Nursing: Intro to Clinical Practice*	2 cr
10543105	Nursing Health Alterations*	3 cr
10543106	Nursing Health Promotion*	3 cr
10543107	Nursing: Clinical Care Across Lifespan*	2 cr
10543108	Nursing: Intro to Clinical Care Management*	2 cr
10543109	Nursing: Complex Health Alterations 1*	3 cr
10543110	Nursing: Mental Health and Community Concepts*	2 cr
10543111	Nursing: Intermediate Clinical Practice*	3 cr
10543112	Nursing Advanced Skills*	1 cr
10543113	Nursing: Complex Health Alterations 2*	3 cr
10543114	Nursing: Management and Professional Concepts*	2 cr
10543115	Nursing: Advanced Clinical Practice*	3 cr
10543116	Nursing Clinical Transition*	2 cr.
Technial Studies Total		38 cr
General Studies Courses**		
10801136	English Composition 1	3 cr
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr
10806177	General Anatomy and Physiology	4 cr
10806179	Advanced Anatomy and Physiology*	4 cr
10806197	Microbiology*	4 cr
10809188	Developmental Psychology	3 cr
10809196	Introduction to Sociology	3 cr
10809198	Introduction to Psychology	3 cr
General Studies Total		27 cr
ELECTIVES		5 cr
TOTAL PROGRAM REQUIREMENTS		**70 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

For all 10543XXX courses, course repeat and failure policies exist within the ADN program that allow for only a certain number of retakes and failures of these classes; please refer to these policies for details.

All courses in the ADN program (core nursing, science, general studies, prerequisites, and electives) must be completed with a grade of 2.0 or better, including 10806177 General Anatomy & Physiology and 10806179 Advanced Anatomy & Physiology.

Professional Licensure and/or Certification Information

Northwood Tech's Nursing program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examinations, or licensure for other states. Please click below to review more details about accreditation and licensure.

National Council of State Boards of Nursing (NCSBN)

State of Wisconsin Department of Safety and Professional Services

10543101
Nursing Fundamentals - Credits: 2
This course focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients. PREREQUISITE: Admission to Nursing program and COREQUISITE: 10806177 General Anatomy and Physiology.

10543102
Nursing Skills - Credits: 3
This course focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. PREREQUISITE: Admission to Nursing program or current LPN license and COREQUISITE: 10806177 General Anatomy and Physiology.

10543103
Nursing Pharmacology - Credits: 2
This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. PREREQUISITE: Admission to the Nursing program and COREQUISITE: 10806177 General Anatomy and Physiology.

10543104
Nursing: Intro to Clinical Practice - Credits: 2
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration. COREQUISITES: 10543101 Nursing Fundamentals, 10543102 Nursing Skills, and 10543103 Nursing Pharmacology, 10801136 English Composition 1, 10809188 Developmental Psychology, and 10806177 General Anatomy and Physiology.

10543105
Nursing Health Alterations - Credits: 3
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of patients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It will also introduce concepts of leadership and management. PREREQUISITES: 10543101 Nursing Fundamentals, 10543102 Nursing Skills, 10543103 Nursing Pharmacology, 10543104 Nursing: Introduction to Clinical Practice, and 10806177 General Anatomy and Physiology.

10543106
Nursing Health Promotion - Credits: 3
This course focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, postpartum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyles choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. PREREQUISITES:10543101 Nursing Fundamentals, 10543102 Nursing Skills, 10543103 Nursing Pharmacology, 10543104 Nursing: Introduction to Clinical Practice, 10806177 General Anatomy and Physiology, and 10809188 Developmental Psychology and COREQUISITE: 10806179 Advanced Anatomy and Physiology.

10543107
Nursing: Clinical Care Across Lifespan - Credits: 2
This clinical experience applies nursing concepts and therapeutic interventions to patients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. COREQUISITE:10543106 Nursing Health Promotion.

10543108
Nursing: Intro to Clinical Care Management - Credits: 2
This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of patients across the lifespan. It also provides an introduction to leadership, management, and team building. COREQUISITES: 10543105 Nursing Health Alterations, 10806179 Advanced Anatomy and Physiology, and 10801196 Oral/Interpersonal Communication.

10543109
Nursing: Complex Health Alterations 1 - Credits: 3
Complex Health Alterations 1 prepares the learner to provide and evaluate care for patients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as patients with fluid/electrolyte and acid-base imbalance, and alterations in comfort. PREREQUISITES: 10543105 Nursing Health Alterations, 10543106 Nursing Health Promotion, 10543107 Nursing: Clinical Care Across the Lifespan, 10543108 Nursing: Introduction to Clinical Care Management, 10806179 Advanced Anatomy and Physiology, and COREQUISITE: 10806197 Microbiology.

10543110
Nursing: Mental Health and Community Concepts - Credits: 2
This course will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups. PREREQUISITES: 10543105 Nursing Health Alterations, 10543106 Nursing Health Promotion, 10543107 Nursing: Clinical Care Across the Lifespan, 10543108 Nursing: Introduction to Clinical Care Management, 10806179 Advanced Anatomy and Physiology, and COREQUISITE: 10809198 Introduction to Psychology.

10543111
Nursing: Intermediate Clinical Practice - Credits: 3
This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients across the lifespan and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. COREQUISITES: 10543109 Nursing Complex Health Alterations 1, 10543110 Nursing: Mental Health and Community Concepts, and 10543112 Nursing Advanced Skills, 10809198 Introduction to Psychology, and 10806197 Microbiology.

10543112
Nursing Advanced Skills - Credits: 1
This course focuses on the development of advanced clinical skills across the lifespan. Content includes advanced intravenous skills, blood product administration, chest tube systems, basic electrocardiogram interpretation and nasogastric/feeding tube insertion. PREREQUISITES: 10543105 Nursing Health Alterations, 10543106 Nursing Health Promotion, 10543107 Nursing: Clinical Care Across the Lifespan, 10543108 Nursing: Introduction to Clinical Care Management, and 10806179 Advanced Anatomy and Physiology.

10543113
Nursing: Complex Health Alterations 2 - Credits: 3
Complex Health Alterations 2 prepares the learner to provide and evaluate care for patients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, reproductive systems and shock, burns and trauma. The learner will also focus on management of care for patients with high-risk perinatal conditions and high-risk newborns. PREREQUISITES: 10543109 Nursing Complex Health Alterations 1, 10543110 Nursing: Mental Health and Community Concepts, 10543111 Nursing: Intermediate Clinical Practice, 10543112 Nursing Advanced Skills, and 10806197 Microbiology.

10543114
Nursing: Management and Professional Concepts - Credits: 2
This course covers nursing management and professional issues related to the role of the registered nurse. Emphasis is placed on preparing for practice as a registered nurse. PREREQUISITES: 10543109 Nursing: Complex Health Alterations 1, 10543110 Nursing: Mental Health and Community Concepts, 10543111 Nursing: Intermediate Clinical Practice, and 10543112 Nursing Advanced Skills.

10543115
Nursing: Advanced Clinical Practice - Credits: 3
This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized. COREQUISITES: 10543113 Nursing Complex Health Alterations 2, and 10809196 Introduction to Sociology.

10543116
Nursing Clinical Transition - Credits: 2
This clinical experience integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and works collaboratively with others to achieve client and organizational outcomes. Continued professional development is fostered. PREREQUISITES: 10543113 Nursing Complex Health Alterations 2, 10543114 Nursing Management and Professional Concepts, and 10543115 Nursing Advanced Clinical Practice.

Occupational Therapy Assistant

10-514-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake *

*via Hybrid instruction

* Students in health sciences programs will travel to the Shell Lake Health Education Center. Travel requirements are customized to meet individual program course competencies.

Program Overview

Occupational therapy assistants help people participate in things they want and need to do through the therapeutic use of everyday activities (occupations). Occupational therapy is both an art and a science. Being an occupational therapy assistant allows you to "think outside the box" while applying science in order to best meet the needs of clients

Occupational therapy assistants work with individuals of all ages, from the first day to last day of life. We work with those who are recovering from disability and disease, those who are working to overcome mental health challenges, and those who need support with healthy living and lifestyle changes.

In traditional settings, occupational therapy assistants work under the supervision of the registered occupational therapist to provide hands-on services. Some settings allow for more creativity than others but all settings require an occupational therapy assistant to use individualized approaches to help clients perform their daily occupations.

Occupational therapy assistants can work in a variety of settings such as hospitals, outpatient clinics, skilled nursing facilities, home health agencies, psychiatric facilities, day treatment, geriatric settings, community based practice and private practice.

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states, if applicable
- Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb)
- COVID vaccination---highly recommended
  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
- Possess current certification of "BLS Basic Life Support" or equivalent
- Review and sign Health Sciences Confidentiality Statement
- Participate in a mandatory program orientation session

Program Outcomes

Occupational Therapy Assistant graduates will be able to:

- Practice within the distinct role and responsibility of the occupational therapy assistant
- Serve a diverse population in a variety of systems that are consistent with entry level practice
- Seek out learning opportunities to keep current with best practice
- Apply occupational therapy principles and intervention tools to achieve expected outcomes
- Demonstrate professional behaviors, ethical standards, values, and attitudes of the occupational therapy profession
- Advocate for the profession, services, and consumers

Professional Licensure and/or Certification Information

Northwood Tech's Occupational Therapy Assistant program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examinations, or licensure for other states. Please click below to review more details about accreditation and licensure.

National Board for Certification in Occupational Therapy (NBCOT)

State of Wisconsin Department of Safety and Professional Services

Career Outlook

Typical positions available after graduation include:

- Occupational Therapy Assistant
- Certified Occupational Therapy Assistant (COTA)
- Activities Director/Coordinator
- Case Manager
- Community Support Worker
- Life Skills Trainer
- Mental Health Technician
- Community Educator
- Paraprofessional, Specialized

The Associate Degree level occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE's telephone number, c/o AOTA, is (301) 652-AOTA and its web address is www.acoteonline.org.

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). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). In addition, all states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

ACOTE®
Accreditation Council for Occupational Therapy Education

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10514171	Introduction to Occupational Therapy*	3 cr.
10514172	Medical and Psychosocial Conditions*	3 cr.
10514173	Activity Analysis and Applications*	2 cr.
10514174	OT Performance Skills*	4 cr.
10514175	Psychosocial Practice*	3 cr.
10514176	OT Theory and Practice*	3 cr.
10514178	Geriatric Practice*	3 cr.
10514179	Community Practice*	2 cr.
10514184	OTA Fieldwork I*	2 cr.
10514185	OT Practice and Management*	2 cr.
10514186	OTA Fieldwork IIA*	5 cr.
10514187	OTA Fieldwork IIB*	5 cr.
10514189	OT Phys Rehab Practice	4 cr.
10514190	OT Pediatric Practice	4 cr.
Technical Studies Total		45 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
10806177	General Anatomy and Physiology	4 cr.
10809188	Developmental Psychology	3 cr.
10809196	Introduction to Sociology	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		19 cr.
PROGRAM REQUIREMENTS		**64 cr.**

Fieldwork: Fieldwork IIA and IIB will be completed in two different settings under the supervision of a COTA or OTR. OTA students must complete Level II Fieldwork within 18 months following completion of the academic preparation.

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required courses.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details.

10514171
Introduction to Occupational Therapy - Credits: 3
Provides an overview of history, philosophy, ethics, and scope of occupational therapy practice. Examines legal responsibilities, professional resources, and organization. Students practice basic skills related to therapeutic relationships and determine their own suitability to a career in occupational therapy. PREREQUISITE: Admission to the OTA program and COREQUISITES: 10514173 Activity Analysis and Applications and 10514172 Medical and Psychosocial Conditions.

10514172
Medical and Psychosocial Conditions - Credits: 3
Introduces medical and psychosocial conditions as they relate to occupational therapy practice. Topics include etiology, symptomology, treatment, and contraindications. PREREQUISITE: Admission to OTA program and COREQUISITES: 10514171 Introduction to Occupational Therapy, 10514173 Activity Analysis and Appl, and 10806177 General Anatomy and Physiology.

10514173
Activity Analysis and Applications - Credits: 2
Provides instruction in activity analysis with hands-on experience in activities across the lifespan. Students apply the teaching/learning process and adhere to safety regulations. PREREQUISITE: Admission to OTA program and COREQUISITES: 10514171 Introduction to Occupational Therapy, 10514172 Medical and Psychosocial Conditions, and 10806177 General Anatomy and Physiology.

10514174
OT Performance Skills - Credits: 4
Emphasis on assessment in the areas of sensory perceptual skills, motor skills, cognition skills. PREREQUISITES: 10514171 Introduction to Occupational Therapy, 10514172 Medical and Psychosocial Conditions, 10514173 Activity Analysis and Applications, 10806177 General Anatomy and Physiology and COREQUISITES: 10514175 Psychosocial Practice, 10514176 OT Theory and Practice, and 10514178 Geriatric Practice.

10514175
Psychosocial Practice - Credits: 3
Examines the role of the OTA in the service delivery to individuals affected by mental health conditions. Provides opportunity for development of skills related to psychosocial assessment and interventions. PREREQUISITES: 10514171 Introduction to Occupational Therapy, 10514172 Medical and Psychosocial Conditions, 10514173 Activity Analysis and Applications, and 10806177 General Anatomy and Physiology and COREQUISITES: 10514174 OT Performance Skills completed with a grade point of 2.0 or better, 10514176 OT Theory and Practice completed with a grade point of 2.0 or better, and 10514178 Geriatric Practice.

10514176
OT Theory and Practice - Credits: 3
Examines the theoretical foundations that guide OT practice. Apply group dynamics and demonstrate leadership skills. PREREQUISITES: 10514171 Introduction to Occupational Therapy, 10514172 Medical and Psychosocial Conditions, 10514173 Activity Analysis and Applications, and 10806177 General Anatomy and Physiology and COREQUISITES: 10514174 OT Performance Skills, 10514175 Psychosocial Practice, and 10514178 Geriatric Practice.

10514178
Geriatric Practice - Credits: 3
Examines the role of the OT in the service delivery to elders in a variety of settings. Includes analysis of the impact of age-related changes and disease processes on the function of the elderly. PREREQUISITES: 10514171 Introduction to Occupational Therapy, 10514172 Medical and Psychosocial Conditions, 10514173 Activity Analysis and Applications, and 10806177 General Anatomy and Physiology and COREQUISITES: 10514174 OT Performance Skills completed with a grade point of 2.0 or better, 10514175 Psychosocial Practice, and 10514176 OT Theory and Practice completed with a grade point of 2.0 or better.

10514179
Community Practice - Credits: 2
Explores practice options and interventions for occupation-based community practice. Students articulate the unique role of occupational therapy within the community. PREREQUISITES: 10514171 Introduction to Occupational Therapy, 10514172 Medical and Psychosocial Conditions, 10514174 OT Performance Skills, 10514175 Psychosocial Practice, and 10514176 OT Theory and Practice, and 10514178 Geriatric Practice and COREQUISITES: 10514189 Phys Rehab Practice,10514190 OT Pediatric Practice, and 10514184 OTA Fieldwork I.

10514184
OTA Fieldwork I - Credits: 2
Integrate classroom theory and practice into a Fieldwork Level I experience. Provides experiences to assist in the development of communication, professional and observational skills. PREREQUISITES: 10514174 OT Performance Skills, 10514175 Psychosocial Practice, 10514176 OT Theory and Practice, and 10514178 Geriatric Practice and COREQUISITES: 10514179 Community Practice, 10514189 Phys Rehab Practice, and 10514190 OT Pediatric Practice.

10514185
OT Practice and Management - Credits: 2
Provides opportunities to practice clinical management skills, continuous quality improvement measurement, and administrative concepts and procedures. Students create a professional development plan. PREREQUISITES: All required courses with a grade point of 2.0 or better and COREQUISITES: 10514186 OTA Fieldwork IIA or 10514187 OTA Fieldwork IIB.

10514186
OTA Fieldwork IIA - Credits: 5
Develop skills and behaviors necessary for entry-level occupational therapy assistant practice. Provides a different clinical practice setting than OTA Fieldwork IIB. PREREQUISITES: All required courses with a grade point of 2.0 or better and COREQUISITES: 10514185 OT Practice and Management and 10514187 Fieldwork IIB.

10514187
OTA Fieldwork IIB - Credits: 5
Develop skills and behaviors necessary for entry-level occupational therapy assistant practice. Provides a different clinical practice setting than OTA Fieldwork IIA. PREREQUISITES: All required courses with a grade point of 2.0 or better and COREQUISITES: 10514185 OT Practice and Management and 10514186 Fieldwork IIA.

10514189
OT Phys Rehab Practice - Credits: 4
Explores interventions relative to major physical disability diagnoses seen in OT practice. Evaluation, treatment interventions, assistive technology and documentation are emphasized relative to the biomechanical newuodevelopmental and rehabilitative approaches to practice. PREREQUISITES: 10514174 OT Performance Skills, 10514175 Psychosocial Practice, 10514176 OT Theory and Practice, and 10514178 Geriatric Practice and COREQUISITES: 10514179 Community Practice, 10514190 OT Pediatric Practice, and 10514184 OTA Fieldwork 1.

10514190
OT Pediatric Practice - Credits: 4
Explores interventions relative to major pediatric diagnoses seen in OT practice. Evaluation, treatment interventions, assistive technology and documentation are emphasized within the context of the child's occupations. PREREQUISITES: 10514174 OT Performance Skills, 10514175 Psychosocial Practice, 10514176 OT Theory and Practice, and 10514178 Geriatric Practice and COREQUISITES: 10514179 Community Practice, 10514189 OT Phys Rehab Practice, 10514184 OTA Fieldwork I, and 10809188 Developmental Psychology.

Office Support Specialist

31-106-8 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Program Overview

Many of the skill subjects are competency based and available through alternate delivery methods. You can learn a living and earn your degree pretty much anytime, anywhere that fits your schedule. Once you have your Northwood Tech diploma, you can couple it with work experience and further your education to advance into positions with higher responsibility.

Admission Requirements

- Complete Online application form
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Office Support Specialist graduates will be able to:

- Perform accurate workplace communications
- Use technology skills for business tasks
- Perform routine office procedures
- Demonstrate professionalism and effective workplace relationships

Career Outlook

Typical positions available after graduation include:

- Office Support Specialist
- Receptionist/Secretary
- Data Entry Operator

Career Pathway

The Office Support Specialist program is a pathway into the following program (page 214):

- Administrative Coordinator

Related Programs

- Office Technology Assistant
- Microsoft Office
- Health Office Professional

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10101176	Financial Accounting 1A	2 cr.
10103106	MS PowerPoint	1 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103162	MS Access A	1 cr.
10103184	Advanced Document Applicatons	2 cr.
10106110	Document Formatting	2 cr.
10106139	Administrative Office Management*	3 cr.
10106146	Proofreading for the Office	3 cr.
10106165	Business Information Management	2 cr.
10106199	Business Technology and Success	1 cr.
10804123	Math with Business Applications	3 cr.
10890116	Job Quest	1 cr.
Occupational Specific Total		24 cr.
Occupational Supportive Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801198	Speech	3 cr.
Occupational Supportive Total		6 cr.
TOTAL PROGRAM REQUIREMENTS		**30 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10103106
MS PowerPoint - Credits: 1
A complete presentation graphics course that allows you to produce professional-looking presentations. It gives you the flexibility to make informal presentations using overhead transparencies, electronic presentations, formal presentations using 35mm slides, or virtual presentations. Additionally, you can create paper printouts, outlines, speaker notes, and audience handouts.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103162
MS Access A - Credits: 1
Learners create, edit, sort, and query a database. They also learn how to create and print basic forms and reports.

10103184
Advanced Document Applications - Credits: 2
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, mail merge, desktop publishing, themes, templates, forms, sort, styles, references, captions, and macros. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365. COREQUISITE: 10103146 MS Word A

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10106139
Administrative Office Management - Credits: 3
This course is designed to develop professional skills and attitudes needed in today's global business environment. Topics include making ethical decisions, working independently and as a team member, and managing time. Telecommunications, mail processing, travel arrangements and conferences, public relations, and ergonomics will be included. Previous word processing and proofreading experience is recommended. PREREQUISITES: 10106110 Document Formatting and 10106146 Proofreading for the Office.

10106146
Proofreading for the Office - Credits: 3
This course provides the learner with techniques used in proofreading office documents from both hard and soft copy (computer screen). Learners will incorporate the use of office reference manuals. This project-based course uses individual and group activities as well as in-class and out-of-class work.

10106165
Business Information Management - Credits: 2
This course will include coverage of the different indexing systems (alphabetic, numeric, subject, geographic, and chronological) as well as an overview of the entire records management function -- planning, designing, classifying, controlling, and evaluation. Electronic filing methods are utilized at locations where equipment is available.

10106199
Business Technology and Success - Credits:1
Designed to explore the impact of digital technology, communication, and media. Course learners will be able to apply organizational techniques and manage electronic files; explore computer hardware and the web using various software and apps while practicing security and safety techniques. Improve skills in critical thinking, innovation, and personal responsibility through experiential and problem-solving approaches for a workforce-ready mindset.

10890116
Job Quest - Credits: 1
Develop documents and skills to seek, obtain, and retain employment. Strengthen your professional image by developing self-awareness of elements affecting interpersonal and work relationships. Guidelines for determining appropriate grooming, dress, and poise will be covered. Personal life management along with career/life goal setting will be reinforced. This class should be taken in the last semester of the program.

Office Technology Assistant

30-106-1 Technical Diploma (less than one-year)

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice or On Site instruction. Select courese are available at the Northwood Tech Outreach Center. Please contact your local campus for specifics.

Program Overview

The Office Technology Assistant diploma prepares you for employment in positions such as customer service representative, file clerk, receptionist or office assistant. You'll be knowledgeable in various computer applications, general office procedures and bookkeeping skills necessary to work in today's business environment.

Admission Requirement

- Complete Online application form

Program Outcomes

Office Technology Assistant graduates will be able to:

- Use technology skills to accomplish basic business and administrative tasks
- Perform entry-level office procedures
- Demonstrate professionalism in the workplace

Career Outlook

Typical positions available after graduation include:

- Customer Service Representative
- File Clerk
- Receptionist/Information Clerk

Career Pathway

The Office Technology Assistant program is a pathway into the following program (page 214):

- Administrative Coordinator

Related Programs

- Office Support Specialist
- Microsoft Office

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10101174	QuickBooks Accounting - Beginning*	2 cr.
10101176	Financial Accounting 1A	2 cr.
10103125	MS Outlook	1 cr.
10103146	MS Word A	1 cr.
10103151	MS Excel A	1 cr.
10103184	Advanced Document Applications*	2 cr.
10106110	Document Formatting	2 cr.
10106123	Meeting and Event Planning	3 cr.
10106146	Proofreading for the Office	3 cr.
10106199	Business Technology and Success	1 cr.
PROGRAM REQUIREMENTS		**18 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Course Descriptions

10101174
QuickBooks Accounting - Beginning- Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

10101176
Financial Accounting 1A - Credits: 2
This is a basic accounting course for non-accounting program students. The scope of study focuses on an introduction to business and accounting, analyzing and recording accounting transactions, performing the adjusting process, and completing the accounting cycle. Understanding is based both on theory and application.

10103125
MS Outlook - Credits: 1
This course introduces the basics of Microsoft Outlook. Participants will use e-mail, calendar, files, and other features to effectively manage business and personal information.

10103146
MS Word A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, reports, desktop publishing basics, themes, sort, styles, and references. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365.

10103151
MS Excel A - Credits: 1
This is the first course in a sequence that develops foundational skills in the use of Microsoft Office Excel features to efficiently and effectively produce business spreadsheets. Students will apply Microsoft Excel skills to solve practical problems in a project-based format. Activities will work on creating a spreadsheet, incorporate appropriate formulas and functions to report accurate data, and chart results. Recommended computer foundations: Windows competency, including solid file management skills; basic math fundamentals. This course will use Microsoft Office 2019 or Office 365.

10103184
Advanced Document Applications - Credits: 3
This is the second course in a sequence that develops advanced skills in the use of Microsoft Office Word features to efficiently and effectively produce business documents. Students will apply Microsoft Word skills to solve practical problems in a project-based format. Explore best practices in document layout, collaboration, tables, mail merge, desktop publishing, themes, templates, forms, sort, styles, references, captions, and macros. Recommended computer foundations: Windows competency, including solid file management skills; ability to key 30 WPM. This course will use Microsoft Office 2019 or Office 365. COREQUISITE: 10103146 MS Word A

10106110
Document Formatting - Credits: 2
This hands-on course covers formatting styles of business letters, business and academic reports, memos, tables, and business documents. The course also includes drill work for improving keying speed and accuracy. Students should be able to key 40 words per minute.

10106123
Meeting and Event Planning - Credits: 3
In this course students will deepen their understanding of planning meetings and project management. Students learn about event planning and budgeting, negation and contracts, income projections, food and beverage coordination, technology utilization, and logistics management.

10106146
Proofreading for the Office - Credits: 3
This course provides the learner with techniques used in proofreading office documents from both hard and soft copy (computer screen). Learners will incorporate the use of office reference manuals. This project-based course uses individual and group activities as well as in-class and out-of-class work.

10106199
Business Technology and Success - Credits: 1
Designed to explore the impact of digital technology, communication, and media. Course learners will be able to apply organizational techniques and manage electronic files; explore computer hardware and the web using various software and apps while practicing security and safety techniques. Improve skills in critical thinking, innovation, and personal responsibility through experiential and problem-solving approaches for a workforce-ready mindset.

Paramedic Technician

10-531-1 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*

*Combination of On Site and Online Live instruction

Program Overview

The Paramedic Technician program offers you the opportunity to further your professional EMS career by pursuing a two-year associate degree. Paramedic Technicians can find a career in a variety of healthcare settings such as ambulance services, dispatch centers, first responder units, hospitals/emergency departments, industrial safety departments, rescue squads and urgent care facilities.

The program enhances the classroom lectures, skills, simulation trainings from the EMT-Paramedic program to round out the associate degree as a Paramedic Technician.

Special Features

- Core lecture coursework will be offered via Online Live on two evenings per week to all campus locations.
- On site skills labs will be scheduled every other Saturday, and select Fridays, at the Rice Lake Campus (per course schedule)

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide documentation upon graduation
- Complete the EMT-Paramedic program with a 2.0 or better in all required courses or equivalent program approved by Dean
- Provide proof of a current State of Wisconsin EMT license with expiration date
- Review and sign EMT Proof of Licensure Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Employers will expect graduates of this program to be able to:

- Prepare for incident response and EMS operations
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care
- Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters
- Communicate effectively with others
- Demonstrate professional behavior
- Meet state and national competencies listed for paramedic certification(s)

Career Outlook

Graduates of the program will be ready to start their career as a Paramedic Technician in a variety of healthcare settings including:

- Ambulance services
- Dispatch centers
- First responder units
- Hospitals/Emergency Departments
- Industrial Safety Departments
- Rescue squads
- Urgent care facilities

With further education, advancement potential may include:

- Critical Care Transport Paramedic
- Ambulance Service Training Coordinator
- EMS Shift Supervisor
- EMS Instructor
- Ambulance Service Manager
- Flight Paramedic

Career Pathway

The Paramedic Technician program includes the following pathway option (page 240):

- EMT - Paramedic

Related Programs

- Emergency Medical Technician
- Advanced EMT

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10501101	Medical Terminology	3 cr.
10531911	EMS Fundamentals*	2 cr.
10531912	Paramedic Medical Principles*	4 cr.
10531913	Adv. Patient Assessment Principles*	3 cr.
10531914	Adv. Pre-hospital Pharmacology*	3 cr.
10531915	Paramedic Respiratory Management*	2 cr.
10531916	Paramedic Cardiology*	4 cr.
10531917	Paramedic Clinical/Field 1#	3 cr.
10531918	Advanced Emergency Resuscitation*	1 cr.
10531919	Paramedic Medical Emergencies*	4 cr.
10531920	Paramedic Trauma*	3 cr.
10531921	Special Patient Populations*	3 cr.
10531922	EMS Operations*	1 cr.
10531923	Paramedic Capstone*	1 cr.
10531924	Paramedic Clinical/Field 2*#	4 cr.
10804138	Math for Health Professionals**	2 cr.
Technical Studies Total		43 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral/Interpersonal Communication **or**	
10801197	Technical Reporting **or**	
10801198	Speech	3 cr.
10806177	General Anatomy and Physiology	4 cr.
10806179	Advanced Anatomy and Physiology*	4 cr.
10806197	Microbiology *	4 cr.
10809196	Introduction to Sociology **or**	
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		24 cr.
PROGRAM REQUIREMENTS		**67 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# This course will be offered in various regional hospitals, clinical settings, and/or ambulance services.

You must earn a grade point of 2.0 or better in all required courses.

Professional Licensure and/or Certification Information

Northwood Tech's Paramedic Technician Associate Degree is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets the requirements for preparation, examinations, or licensure for other states. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10531911
EMS Fundamentals - Credits: 2
This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students will obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations will foster the development of effective written and oral communications with colleagues and other health care professionals. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission.

10531912
Paramedic Medical Principles - Credits: 4
This course addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing the paramedic students to the topics of shock, immunology, and bleeding. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission.

10531913
Adv. Patient Assessment Principles - Credits: 3
This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, the students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission. COREQUISITE: 10531912 Paramedic Medical Principles.

10531914
Adv. Pre-hospital Pharmacology - Credits: 3
This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission.

10531915
Paramedic Respiratory Management - Credits: 2
This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531914 Advanced Pre-hospital Pharmacology.

10531916
Paramedic Cardiology - Credits: 4
This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531915 Paramedic Respiratory Management.

10531917
Paramedic Clinical/Field 1 - Credits: 3
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Student may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission, 10531918 Advanced Emergency Resuscitation and 10531921 Special Patient Populations.

10531918
Advanced Emergency Resuscitation - Credits: 1
By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and 10531916 Paramedic Cardiology.

10531919
Paramedic Medical Emergencies - Credits: 4
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531918 Advanced Emergency Resuscitation.

10531920
Paramedic Trauma - Credits: 3
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531913 Advanced Patient Assessment Principles.

10531921
Special Patient Populations - Credits: 3
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma are also included within this course. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531913 Advanced Patient Assessment Principles.

10531922
EMS Operations - Credits: 1
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and 10531921 Special Patient Populations.

10531923
Paramedic Capstone - Credits: 1
This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical skills attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum. PREREQUISITE: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and COREQUISITE: 10531922 EMS Operations.

10531924
Paramedic Clinical/Field 2 - Credits: 4
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical compentency requirements at the paramedic level as defined by WI DHS EMS. PREREQUISITES: Emergency Medical Technician - Paramedic (315311) or Paramedic Technician AAS (105311) program admission and 10531917 Paramedic Clinical/Field 1.

Personal Care Worker

17-510-1 Technical Certificate

Campuses: Ashland, New Richmond, Rice Lake, Superior

Program Overview

The Personal Care Worker (PCW) course is a combination of online coursework coupled with a final 8-hour lab session with the course instructor. The online portion of the course is directed through a series of eight learning plans that carefully detail learning activities to help students learn the course content. Upon completion of the learning activities, students will contact the campus contact to schedule an 8-hour lab session that concludes with skills competency testing and the final written exam. The lab sessions are held on Saturdays and scheduled at the various Northwood Tech campuses (Ashland, New Richmond, Rice Lake, and Superior).

Special Features

This course allows you to work at your own pace to learn the content. You will work directly with an instructor to complete the written exam and skill demonstration. The course emphasizes core abilities for the workplace.

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Personal Care Worker program from the program of choice dropdown list.

Outcomes

The Personal Care Worker certificate will prepare you to:

- Provide personal care for clients
- Communicate effectively with clients, families, and healthcare teams
- Promote client rights

Career Outlook

Typical careers available upon completion include:

- Home care services
- County and private healthcare agencies
- Independent practices

Curriculum

Number	Course Title	Credits (cr.)
30510308	Personal Care Worker	1 cr.
CERTIFICATE REQUIREMENTS		**1 cr.**

Course Description

30510308
Personal Care Worker - Credits: 1
This course emphasizes aspects of providing personal and supportive/rehabilitative healthcare to clients needing assistance in their home or other care facilities. Basic knowledge and skills acquired through this course include clients' rights, communication, rehabilitation, positioning and transfer skills, infection control, and safety. Personal Care Worker is a 32-hour course that combines online coursework with a laboratory practice time and a final written exam and skills competency testing assessed under the guidance of a registered nurse.

Pharmacy Technician

31-536-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: New Richmond^ and Superior^

^via Hybrid instruction

Program Overview

The Pharmacy Technician program will prepare you for a rewarding, demanding and ever-evolving career as a pharmacy technician. Pharmacy technicians perform a variety of duties and responsibilities including preparation of prescriptions, record-keeping, inventory control, handling monetary transactions, filing third-party claims, preparing IV admixtures and unit dose medications and compounding.

Special Feature

The Pharmacy Technician program will be offered in the evening in a hybrid format.

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states, if applicable
- Pass a physical exam, have current immunizations, and demonstrate negative status for tuberculosis (Tb)
- COVID vaccination---highly recommended
  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
- Review and sign Health Sciences Confidentiality Statement
- Possess current certification of "BLS Basic Life Support" or equivalent
- Participate in a mandatory program orientation session
- Pass a mandatory drug test

Program Outcomes

Pharmacy Technician graduates will be able to:

- Demonstrate personal/interpersonal knowledge and skills in the practice of pharmacy
- Demonstrate foundational professional knowledge and skills for the practice of pharmacy
- Prepare prescriptions/medication orders and pharmaceutical products for dispensing, distribution, and disposal
- Compound sterile and nonsterile medications
- Follow established policies and procedures for procurement, billing, reimbursement and inventory management
- Utilize pharmacy technology and informatics
- Adhere to state and federal regulations governing the practice of pharmacy
- Apply the principles of quality assurance to the practice of pharmacy

Career Outlook

Typical positions available after graduation include:

- Pharmacy Technician – Hospital
- Pharmacy Technician – Nursing Home
- Pharmacy Technician – Community
- Home IV Specialist

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31536301	Fundamentals of Reading Prescriptions*	2 cr.
31536302	Pharmacy Business Applications*	3 cr.
31536303	Pharmaceutical Calculations*	3 cr.
31536304	Pharmacy Benefits Management*	1 cr.
31536305	Pharmacy Law*	2 cr.
31536306	Pharmacology	3 cr.
31536307	Pharmacy Drug Distribution Systems*	2 cr.
31536308	Pharmacy Parenteral Admixtures*	3 cr.
31536309	Pharmacy Community Clinical*	2 cr.
31536310	Pharmacy Hospital Clinical*	2 cr.
10501101	Medical Terminology	3 cr.
Occupational Specific Total		26 cr.
Occupational Supportive Courses		
10501107	Digital Literacy for Healthcare	2 cr.
32809380	Applied Interpersonal Skills**	2 cr.
10809198	Introduction to Psychology**	3 cr.
Occupational Supportive Total		7 cr.
TOTAL PROGRAM REQUIREMENTS		**33 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

You must earn a grade point of 2.0 or better in all required courses.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details.

31536301
Fundamentals of Reading Prescriptions - Credits: 2
In this course, students will develop the skills and knowledge required to complete the prescription filling process. Students will learn to read and identify required information on a written prescription such as abbreviations, medical terminology, and common medication names. The role of the pharmacy technician in medication error prevention will also be discussed. PREREQUISITE: Admission to the Pharmacy Technician program.

31536302
Pharmacy Business Applications - Credits: 3
This course prepares the learner to utilize pharmaceutical business terminology, procedures, customer service, record keeping, purchasing procedures, inventory control systems, pricing, merchandising, reference materials, ethics, roles, responsibilities, and relationships with patients and coworkers. PREREQUISITE: Admission to the Pharmacy Technician program.

31536303
Pharmaceutical Calculations - Credits: 3
This course prepares the learner to enlarge and reduce formulas and solve proportions, dilutions, alligations, and other calculations pertinent to the preparation of pharmaceuticals using metric, apothecary, avoirdupois, and household measuring systems. PREREQUISITE: Admission to the Pharmacy Technician program and COREQUISITES: 31536301 Fundamentals of Reading Prescriptions and 31536304 Pharmacy Benefits Management.

31536304
Pharmacy Benefits Management - Credits: 1
This course prepares the learner to utilize terminology pertinent to third party reimbursements in the field of pharmacy, analyze the various popular formulary systems, demonstrate calculations associated with the billing of prescription medications, analyze the role of the Pharmacy Benefits Manager in the health care system, and summarize medical coverage provided by government agencies. PREREQUISITE: Admission to the Pharmacy Technician program.

31536305
Pharmacy Law - Credits: 2
This course prepares the learner to apply Federal laws to the practice of pharmacy; apply Wisconsin State laws to the practice of pharmacy; select appropriate drug products for substitution in accordance with the law; explain the Investigational New Drug (IND) process; explain pharmacy equipment, license, and floor plan legal requirements; apply controlled substance laws to the procurement, processing, and record keeping of controlled substances; analyze the history of pharmacy law; and summarize drug law enforcement agencies. PREREQUISITE: Admission to the Pharmacy Technician program.

31536306
Pharmacology - Credits: 3
The purpose of this course is to provide a comprehensive overview of the principles of pharmacology and pharmacokinetics including the understanding of body system disease states and the effects of medications in treating disease conditions. Students will learn the cautions involved in adverse drug effects, food and drug interactions, and drug-disease contradictions. Students will learn the therapeutic classifications, indications, and common strengths for the most common drugs. PREREQUISITES: Admission to the Pharmacy Technician program and 31536301 Fundamentals of Reading Prescriptions.

31536307
Pharmacy Drug Distribution Systems - Credits: 2
This course introduces the learner to the basic drug distribution systems used in community and institutional pharmacies, including automation technology, pharmacist and pharmacy technician roles, and dispensing considerations. PREREQUISITE: Admission to the Pharmacy Technician program.

31536308
Pharmacy Parenteral Admixtures - Credits: 3
This course provides the learner with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients. PREREQUISITES: Admission to the Pharmacy Technician program and 31536303 Pharmaceutical Calculations.

31536309
Pharmacy Community Clinical - Credits: 2
This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories and fulfill duties in unique service areas. PREREQUISITES: Admission to the Pharmacy Technician program; 31536301 Fundamentals of Reading Prescriptions, 31536302 Pharmacy Business Applications, 31536303 Pharmaceutical Calculations, and 31536304 Pharmacy Benefits Management.

31536310
Pharmacy Hospital Clinical - Credits: 2
In this course, students will have the opportunity to experience the daily activities of a pharmacy technician in a hospital pharmacy setting. Students will learn how medication orders are prepared, processed, and delivered along with maintaining medication inventory in several areas, interacting with other medical staff and following policies and procedures of the hospital and pharmacy. PREREQUISITES: Admission to the Pharmacy Technician program, 31536303 Pharmaceutical Calculations; COREQUISITES: 31536308 Pharmacy Parenteral Admixtures and 31536309 Pharmacy Community Clinical.

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10501107
Digital Literacy for Healthcare - Credits: 2
The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined. Computer skills proficiency developed as a part of this course.

Phlebotomy

17-513-1 Technical Certificate

Campuses: New Richmond, Rice Lake

Program Overview

The Phlebotomy certificate provides practical training in the collection of blood specimens by venipuncture and capillary puncture for the purpose of lab analysis. Phlebotomy students are also trained in non-blood specimen collection procedures, specimen processing and basic laboratory skills. Customer service and communications are also covered to provide required skills for working directly with patients. A 100-hour clinical phlebotomy experience is required including a minimum of 100 successful blood collection procedures. Job opportunities for phlebotomist exist in hospital and clinical laboratories.

Admission Requirements

- Complete Online application/registration process and submit registration fee
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign the Functional Abilities Disclosure

After Admissions Requirements are complete, register for classes: http://www.NorthwoodTech.edu/current-students/registration.htm

Program-Specific Requirements

- Submit Background Check Fee
- Have acceptable results based on the Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background Check (if applicable), and other states, if applicable
- Pass a physical exam, have current immunizations, and demonstrate negative status for Tuberculosis (Tb)
- COVID vaccination---highly recommended

  NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.
- Review and sign Health Sciences Confidentiality Statement
- Possess current certification of "BLS Basic Life Support" or equivalent
- Participate in a mandatory session scheduled prior to the start of classes

Program Outcomes

After completion of this certificate, employers will expect students to be able to:

- Adhere to infection control and safety
- Perform specimen collection
- Process specimens
- Comply with legal regulations
- Model professional behaviors

Career Outlook

Upon completion of the certificate, typical settings for employment include:

- Clinical Laboratories
- Emergency Room Services
- Extended Care Facilities
- Insurance Companies
- Nursing Homes
- Outpatient Services

Related Program

- Medical Assistant

Curriculum

Number	Course Title	Credits (cr.)
10501101	Medical Terminology **or**	3
10806177	General Anatomy and Physiology#	4
10160143	Medical Office Procedures and Customer Service	2
10513110	Basic Lab Skills	1
10513111	Phlebotomy*	2
10513112	Phlebotomy Clinical*	2
10801196	Oral/Interpersonal Communication#	3
CERTIFICATE REQUIREMENTS		**13-14**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better

See pages 35-38 for course descriptions

You must earn a grade point of 2.0 or better in all required courses.

Course repeat policies exist that allow for only a certain number of retakes within this program; please refer to the policies for details.

Course Descriptions

10501101
Medical Terminology - Credits: 3
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

10160143
Medical Office Procedures and Customer Service - Credits: 2
This course develops professional skills and attitudes needed in a medical business environment. Skills developed include an ability to communicate effectively with patients and other medical office staff, manage time effectively, schedule patients, greet patients, use the telephone properly, process mail, apply ergonomics and office safety, and use medical computer software efficiently.

10513110
Basic Lab Skills - Credits: 1
This course explores health career options and the fundamental principles and procedures performed in the clinical laboratory. You will utilize medical terminology and basic laboratory equipment. You will follow required safety and infection control procedures and perform simple laboratory tests. PREREQUISITE: Admission to Phlebotomy certificate.

10513111
Phlebotomy - Credits: 2
This course provides opportunities for learners to perform routine venipuncture, routine capillary puncture and special collection procedures. PREREQUISITE: Admission to Phlebotomy certificate and COREQUISITES: 10513110 Basic Lab Skills and 10513112 Phlebotomy Clinical.

10513112
Phlebotomy Clinical - Credits: 2
Provides students with experiences at a hospital or clinic in order to complete phlebotomy activities. Students complete venipunctures, perform administration of glucose testing, collect specimens, perform bleeding times, observe or perform arterial blood gas collections and adhere to safety regulations as established by the clinical site. PREREQUISITES: Admission to Phlebotomy certificate and COREQUISITES: 10513110 Basic Lab Skills, 10513111 Phlebotomy, 10501101 Medical Terminology or 10806177 General Anatomy and Physiology, 10160143 Medical Office Procedures and Customer Service, 10801196 Oral/Interpersonal Communication and criminal background check.

Plumbing Apprentice

50-427-5 Apprenticeship

Campuses: Ashland, New Richmond, Rice Lake

Program Overview

The plumbing apprenticeship is an earn-while-you-learn program of on-the-job training combined with related classroom instruction. During the apprenticeship the apprentice works on-the-job learning the plumbing trade under the supervision of qualified journeymen. Apprentices are trained under a written training agreement called an indenture. While indentured, the employer agrees to teach the student the skills of the trade and the apprentice agrees to learn the skills involved.

As a plumbing apprentice you will learn to design, install, repair and maintain piping systems such as soil, waste, vent, potable water, wastewater treatment, gas systems (medical, propane, and natural) in residential, commercial, industrial buildings and at utility sites.

Special Features

- Five-year program
- 8,000 hours on-the-job-training
- 572 hours of paid related instruction
- 260 hours of unpaid related instruction
- First 12 months is the probationary period
- A state journeyperson examination at the completion of the apprenticeship
- Wage scale of apprentice systematically increases throughout the apprenticeship
- The 47455401 Transition to Trainer course (8 hours) is required for completion. Will be taken in the last year of the apprenticeship.

For more information on apprenticeships, see page 25

Qualifications required by the Bureau of Apprenticeship Standards

- Must be high school graduate or equivalency. Be able to provide transcript or proof of equivalency. Must be 18 years of age to be placed with contractor.
- Must take one of the following assessments and satisfy the minimum scores.
  ACT: 15 Math, 16 Reading. Accuplacer: 235 Algebra, 244 Reading, 237 Arithmetic
  Scores will be accepted 5 years from the test date.
- Must have the ability to get to and from school and work.
- Must be physically able and fit to for the occupation at the time of placement.
- Must be approved by the appropriate advisory committee (Northern Region Plumbing, Western WI Plumbing, or Eau Claire Area Plumbing), prior to being admitted to this apprenticeship.

Inquire

Contact, Eric Lockwood, Director, Apprenticeships and Academies, 715.246.1871, eric.lockwood@NorthwoodTech.edu

How to Get Started

To become an apprentice in the state of Wisconsin, one must first be indentured by the State Bureau of Apprenticeships Standards (BAS).

- Contact an employer on your own. Employment is a requirement of entering an apprenticeship

Once you have an employer/sponsor, contact the Bureau of Apprenticeship Standards, to initiate the application process.

Admission Requirements

- Complete the paper Northwood Tech application form

  NOTE: Prior to applying at Northwood Tech, students are also required to submit an application to the Bureau of Apprenticeship Standards (Eau Claire Office).
  The contact for the Bureau of Apprenticeship Standards is Long Vang, Apprenticeship Training Representative, at long.vang@dwd.wisconsin.org

- Complete Accuplacer Next Gen entrance assessment (individuals with valid ACT or Classic Accuplacer scores from within the last 5 years do not have to test) (academic admission requirements apply – see page 30 for more information)

Program-Specific Requirements

- Confirmation of admission from Northwood Tech Academic Affairs Apprenticeship Office

Program Outcomes

Plumbing Apprentice graduates will be able to:

- Apply state plumbing code requirements to the installation and repair of sanitary drain systems
- Apply state plumbing code requirements to the installation and repair of venting systems
- Apply state plumbing code requirements to the installation and repair of water supply systems
- Apply state plumbing code requirements to the installation and repair of storm drain systems
- Apply state plumbing code requirements to the installation and repair of POWTS systems
- Refer to the Wisconsin Administrative Plumbing codes
- Prepare for Journey level licensure examination

Related Programs

- Technical Studies - Journeyworker (page 201)
- After three years a journeyworker may pursue an exam to become a Master Plumber if all qualifications are met.

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
50427751	Sanitary Drains 1	2 cr.
50427752	Vents and Venting Systems	2 cr.
50427753	Water Distribution 1	2 cr.
50427754	Water Distribution 2	2 cr.
50427755	Sanitary Drains 2	2 cr.
50427756	Private Onsite Wastewater Treatment Systems (POWTS)	2 cr.
50427757	Green Plumbing Applications	2 cr.
50427758	Plumbing Advanced Topics / TSA	2 cr.
TOTAL PROGRAM REQUIREMENTS		**16 cr.**

Professional Licensure and/or Certification Information

Northwood Tech's Plumbing Apprenticeship meets the requirements of the Bureau of Apprenticeship Standards in Wisconsin. Northwood Tech has not made a determination whether it's programs meet licensure in states other than Wisconsin. Students who may be seeking professional licensure in states other than Wisconsin should contact the appropriate bureau or licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

50427751
Sanitary Drains 1 - Credits: 2
Plumbing related instruction of sanitary drain systems. Course includes a review of codes and trade practices related to sanitary drains, drainage systems, components and applications.

50427752
Vents and Venting Systems - Credits: 2
This course is designed to provide the apprentice with the skills to identify and design sanitary vent piping in a plumbing system in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.

50427753
Water Distribution 1 - Credits: 2
This course provides the apprentice with the skills to identify, design, install and service various applications for water supply systems that are listed in plumbing codes. Apprentices will use the code language and tables to in various plumbing systems in accordance with the Wisconsin Plumbing Code. Course topics will include commercial to single family and private well pump systems. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.

50427754
Water Distribution 2 - Credits: 2
This course provides the apprentice with the skills to identify, design, install and service cross connection controls, water treatment equipment and multi-purpose piping systems in various plumbing systems in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.

50427755
Sanitary Drains 2 - Credits: 2
This course provides the apprentice with the skills to identify, design, install and service various applications for storm water, clear water, and drainage systems. Apprentices will use the code language and tables in various plumbing systems in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.

50427756
Private Onsite Wastewater Treatment Systems (POWTS) - Credits: 2
This course provides the apprentice with the skills to identify, design, install and service various applications for private onsite wastewater treatment systems that are listed in plumbing codes or individual component manuals. Apprentices will use the code language and tables in various plumbing systems in accordance with the Wisconsin Plumbing Code. Other topics will include pre-treatment, soil evaluation, site planning and new technologies. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.

50427757
Green Plumbing Applications - Credits: 2
This course provides plumbing apprentices with an introduction to green applications and prepares students to take certification exams: Union Programs: UA Green Awareness Certification (geared toward journey workers, not apprenticeship) WTCS Programs: Green Plumbers USA Certification Program Learning materials from both certificate programs have been incorporated into the development of this course as appropriate.

50427758
Plumbing Advanced Topics / TSA - Credits: 2
This course provides the apprentice with the opportunity to select and complete an applied plumbing project in collaboration with the instructor. Projects will apply the skills required to identify, design, install and service various plumbing applications that are listed in plumbing codes. Apprentices will use the code language and tables to in various plumbing systems in accordance with the Wisconsin Plumbing Code. The course builds upon the theory, work experience, and the application of plumbing code principles addressed in previous coursework to support completing an applied hands-on project.

Power Sports Technician (Outdoor Power Equipment Technician)

31-461-3 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: New Richmond

Program Overview

The Power Sports Technician program will give you the hands-on experience to go to work in less than one year. Dealerships, repair shops, marinas and industry manufacturers desperately need entry-level people in their field. Power Sports is not only a career, it is a lifestyle.

Special Feature

Northwood Tech is an accredited Equipment & Engine Training Council (EETC) testing facility providing you with the opportunity to become industry certified.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Power Sports Technician graduates will be able to:

- Repair brake systems
- Repair 2-stroke engine
- Repair 4-stroke engines
- Repair drive lines
- Repair electrical systems
- Repair suspensions
- Repair fuel systems
- Repair hydraulic systems
- Develop a customer work order

Career Outlook

Typical positions available after graduation include:

- Motorcycle, Marine, and Outdoor Power Products Technician
- Motorcycle Technician
- Outboard Motor Technician
- Power Sports Technician
- Chainsaw Technician
- Lawn and Garden Equipment Technician
- ATV Technician
- Industrial Equipment Technician
- Partsperson
- Small Engine Shop Owner

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31461301	Engine and Chassis Repair 1*	5 cr.
31461302	Engine and Chassis Repair 2*	4 cr.
31461310	Introduction to 12-Volt Electrical Theory	1 cr.
31461312	Introduction to Hydraulics	1 cr.
31461335	Gas and Diesel Engine Theory*	2 cr.
31461339	Marine Service*	5 cr.
31461342	Motorcycle Service*	3 cr.
31461343	ATV Service*	3 cr.
32442307	Welding for Mechanics	2 cr.
Occupational Specific Total		26 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804303	Applied Math	2 cr.
Occupational Supportive Total		4 cr.
PROGRAM REQUIREMENTS		**30 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

31461301
Engine and Chassis Repair 1 - Credits: 5
You will diagnose, troubleshoot, tune up, and overhaul engines and service chassis on lawn and garden equipment and industrial equipment. Practical hands-on experience is gained in engine disassembly, measuring parts for wear, cylinder reconditioning, valve train servicing, governor adjusting, fuel and ignition system servicing, and reassembly techniques. You will service drive and chassis systems to ensure the operation of the complete unit. You will also order repair parts, prepare service report forms, and learn customer relations. COREQUISITES: 31461302 Engine and Chassis Repair 2 and 31461335 Gas and Diesel Engine Theory.

31461302
Engine and Chassis Repair 2 - Credits: 4
You will diagnose, troubleshoot, tune-up, and overhaul engines and service chassis on handheld, industrial and compact equipment and tractors. Practical hands-on experience is gained in engine disassembly, measuring parts for wear, cylinder reconditioning, valve train servicing, governor adjusting, fuel and ignition system servicing, and reassembly techniques. You will service drive and chassis systems to ensure the operation of the complete unit. You will also order repair parts, prepare service report forms, and learn customer relations. COREQUISITES: 31461301 Engine and Chassis Repair 1 and 31461335 Gas and Diesel Engine Theory.

31461310
Introduction to 12-Volt Electrical Theory - Credits: 1
This course is designed for the learner to understand basic 12-volt electrical circuits, wiring diagrams, starting, charging, and lighting systems. Classroom trainers will be used to apply electrical theory. Using hands-on activities, this course will help the learner to better understand basic 12-volt electrical systems.

31461312
Introduction to Hydraulics - Credits: 1
This course will provide a practical understanding of hydraulic components. Their design, application, operation and maintenance will be studied. Hydraulic training components will be used in the classroom.

31461335
Gas and Diesel Engine Theory - Credits: 2
This course provides the theory necessary to understand and perform the hands-on tasks of troubleshooting and repairing engines, their drive mechanisms, and their chassis. Theory is presented on the principles of operation and service of 4- stroke, 2-stroke, and small diesel engines in the outdoor power equipment and compact equipment areas. Drive and chassis operation is explained to enable the student to service the complete unit. COREQUISITE: 31461302 Engine and Chassis Repair 2.

31461339
Marine Service - Credits: 5
This course will provide the theory necessary to understand and troubleshoot the components and systems unique to the outboard marine engine area. Theory will be given in the specialty areas of fuel systems, ignition systems, cooling systems, lubrication systems, and gear cases. You learn to apply basic troubleshooting techniques and repair procedures of marine engine service and repair to marine engines with emphasis on practical hands-on experience. PREREQUISITES: 31461302 Engine and Chassis Repair 2 and 31461335 Gas and Diesel Engine Theory.

31461342
Motorcycle Service - Credits: 3
This course provides the theory necessary to understand and troubleshoot the components and systems unique to motorcycles. Theory is given in the specialty areas of carburetion, fuel injection, ignition, transmissions, clutches, and running gear. You will learn to apply basic techniques and procedures of motorcycle engine service and repair. This is a lecture- and lab-based course. Specialty areas dealing with transmissions and chassis on these units are covered with practical hands-on experience. PREREQUISITES: 31461302 Engine and Chassis Repair 2, 31461335 Gas and Diesel Engine Theory and COREQUISITE: 31461343 ATV Service.

31461343
ATV Service - Credits: 3
This course provides the theory necessary to understand and troubleshoot the components and systems unique to ATVs. Theory is given in the specialty areas of carburetion, fuel injection, ignition, transmissions, clutches, and running gear. You will learn to apply basic techniques and procedures of ATV engine service and repair. This is a lecture- and lab-based course. Specialty areas dealing with transmissions and chassis on these units are covered with practical hands-on experience. PREREQUISITES: 31461302 Engine and Chassis Repair 2, 31461335 Gas and Diesel Engine Theory and COREQUISITE: 31461342 Motorcycle Service.

32442307
Welding for Mechanics - Credits: 2
Instruction in safe setup and operation of plasma cutting (PAC), oxy-fuel cutting (OFC), SMAW (Stick), GMAW (Mig), FCAW, and/or GTAW (Tig) welding in applications related to general industry practices. Selection of appropriate welding processes with a specific emphasis on typical repair situations including metal identification will be stressed.

Preschool Education Professional (The Registry Preschool Credential)

61-307-9 Pathway Certificate

Campuses: New Richmond, Rice Lake, Superior, Online

Program Overview

Each age group requires a little something special and preschoolers are no exception. If you work with or are interested in working with preschool children, the Preschool Education Professional (The Registry Preschool Credential) will enhance your existing knowledge and skills and provide you with networking opportunities with other professionals in the field. The Preschool Education Professional (The Registry Preschool Credential) was developed with six courses from the Wisconsin Technical College System Statewide Curriculum for the associate degree in Early Childhood Education. Graduates of this certificate will be recognized as Wisconsin Registry Career Level 10 once they successfully complete the commission process.

Upon completion of certificate classes, students may apply to The Registry to commission for the Preschool Credential, 2908 Marketplace Drive, Suite 103, Fitchburg, WI 53719, 608.222.1123, wiregistry.org.

Special Features

All of the courses ladder into the E-Connect - Child Care Services Technical Diploma and E-CHiLD, Early Childhood Education Associate Degree programs.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Review and sign Background Check Disclosure

Program-Specific Requirements

- Submit Background Check information and fee
- Have an acceptable Wisconsin Caregiver Background Check and/or Minnesota Caregiver Background Check, as applicable
  - Information from the Caregiver Background Check may affect ability to secure fieldwork placement and the ability to find employment after graduation
- Complete Staff Health Report - Child Care Provider form (physical form)
- COVID vaccination---highly recommended

  NOTE: Northwood Technical College cannot guarantee practicum placement or ability to progress in the program if a student is not able to meet the practicum site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other practicum requirements required by the practicum site. Northwood Technical College cannot guarantee practicum placement if the practicum site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the practicum start date.

Professional Licensure and/or Certification Information

Northwood Tech's Preschool Education Professional (The Registry Preschool Credential) is designed prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Outcomes

The Preschool Education Professional (The Registry Preschool Credential) will prepare you to:

- Access the development of preschoool children
- Provide a healthy, safe, and nutritionally sound preschool environment
- Practice positive guidance strategies
- Create developmentally appropriate preschool enviroments
- Create developmentally appropriate preschool curriculum
- Integrate strategies that support diversity and anti-bias perspectives
- Demonstrate professionalism

Career Outlook

Upon completion of this certificate you will be ready for careers in:

- Child Care Centers
- Preschools
- Family Child Care Homes

Typical Positions Include:

- Child Care Teacher
- Assistant Child Care Teacher
- Family Child Care Provider

Career Pathways

The Preschool Education Professional (The Registry Preschool Credential) program is a pathway into the following programs (page 221):

- Early Childhood Education
- E-CHiLD
- E-Connect - Child Care Services
- Group Child Care Essentials

Related Program

- Professional Credential for Infant/Toddlers (Wisconsin)

Curriculum

Number	Course Title	Credits (cr.)
10307108	ECE: Early Language & Literacy	3 cr.
10307110	ECE: Social Studies, Art, & Music	3 cr.
10307167	ECE: Health, Safety, & Nutrition	3 cr.
10307175	ECE: Preschool Practicum*#+	3 cr.
10307179	ECE: Child Development	3 cr.
10307188	ECE: Guiding Children's Behavior	3 cr.
TOTAL CERTIFICATE REQUIREMENTS		**18 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
# An Experiential Portfolio and/or Challenge Exam cannot be used as credit for prior learning for this course.
+ You must earn a 2.0 or better in this course.

The Wisconsin Registry Process requires these courses be completed with a 2.0 or better in each course, prior to Commissioning for the Preschool Credential.

T.E.A.C.H. Early Childhood® WISCONSIN
A Project of Wisconsin Early Childhood Association

http://wisconsinearlychildhood.org/programs/teach/

youngstar
Wisconsin's Child Care Rating Program

Northwood Tech offers a wide array of credit-based early childhood education courses, credentials, and degree options that align with the Youngstar requirements. For more information, go to www.NorthwoodTech.edu/ece.

The Registry

10307108
ECE: Early Language and Literacy - Credits: 3
This course explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

10307110
ECE: Social Studies, Art, & Music - Credits: 3
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, and movement (SSAMM).

10307167
ECE: Health, Safety, & Nutrition - Credits: 3
This 3-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives, examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a safe early childhood environment, plan nutritionally sound menus, examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies, describe strategies to prevent the occurrence of Abusive Head Trauma (AHT) formerly known as Shaken Baby Syndrome (SBS), incorporate health, safety, and nutrition concepts into the children's curriculum.

10307175
ECE: Preschool Practicum - Credits: 3
This course will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers. PREREQUISITE: 10307174 ECE: Introductory Practicum. Prerequisite override required for students in the Preschool Education Professional (The Registry Preschool Credential)

10307179
ECE: Child Development - Credits: 3
The 3-credit course examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

10307188
ECE: Guiding Children's Behavior - Credits: 3
This 3-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identify strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the "24 hour Wisconsin" Pyramid Model training.

Professional Credential for Infants/Toddlers (Wisconsin)

17-307-3 Technical Certificate **Certificate Availability Varies**

Campus: Online

Program Overview

As a student taking the Wisconsin Professional Credential for Infants/Toddlers, you will gain a better understanding of the developmental stages for this age group, while learning how to best guide and nurture children under the age of three in both center-based and family settings. The themes of cultural diversity/sensitivity and reflective practice are woven throughout these courses. Graduates of this certificate will be recognized as Wisconsin Registry Career Level 9 once they successfully complete the commission process.

Upon completion of certificate classes, students may apply to The Registry to commission for the Infants/Toddlers Credential, 2908 Marketplace Drive, Suite 103, Fitchburg, WI 53719, 608.222.1123, wiregistry.org.

Outcomes

The Professional Credential for Infants/Toddlers (Wisconsin) will prepare you to:

- Apply developmental knowledge and observation to design, implement, and evaluate individual and group curriculum experiences for infants and toddlers
- Create respectful, healthy, and safe physical and interpersonal environments for infants and toddlers
- Utilize culturally responsive verbal and nonverbal caregiver strategies
- Select appropriate materials and promote health, safety, and nutrition guidelines specific to early care environments
- Design experiences and utilize caregiver strategies that support family involvement and reciprocal relationships
- Perform professionally and ethically, use self-reflection and knowledge, and access relevant resources

youngstar
Wisconsin's Child Care Rating Program

Northwood Tech offers a wide array of credit-based early childhood education courses, credentials, and degree options that align with the Youngstar requirements.

For more information, go to **www.NorthwoodTech.edu/ece**.

Career Outlook

- Professional advancement in the field of early care comes with increased specialized training in the unique needs of infants and toddlers

Related Programs

- Early Childhood Education
- E-CHiLD
- E-Connect - Child Care Services
- Group Child Care Essentials
- Preschool Education Professional (The Registry Preschool Credential)

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http://wisconsinearlychildhood.org/programs/teach/

The Registry

Curriculum

Number	Course Title	Credits (cr.)
10307115	ECE: Infant Toddler Capstone*+	3 cr.
10307151	ECE: Infant & Toddler Development	3 cr.
10307169	ECE: Infant Toddler Group Care	3 cr.
10307195	ECE: Family & Community Relationships	3 cr.
TOTAL CERTIFICATE REQUIREMENTS		**12 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

\+ You must earn a 2.0 or better in this course

Professional Licensure and/or Certification Information

Northwood Tech's Professional Credential for Infants/Toddlers (Wisconsin) is designed prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Course Descriptions

10307115
ECE: Infant Toddler Capstone - Credits: 3
This course, integrates the theory, practice, and reflection of courses 1 - 3 in the Professional Credential for Infants/Toddlers and requires demonstration of best practices. PREREQUISITES: 10307169 ECE: Infant Toddler Group Care, 10307151 ECE: Infant & Toddler Development, and 10307195 ECE: Family & Community Relationships.

10307151
ECE: Infant & Toddler Development - Credits: 3
In this 3-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

10307169
ECE: Infant Toddler Group Care - Credits: 3
This 3-credit course focuses on caring for infants and toddlers in a variety of settings, inclusive of center-based and family child care environments. Key course components will be based on elements of quality early care including philosophical foundation, structure and environments, health and safety responsive relationships, developmentally appropriate practice, culturally sensitive care, inclusion, brain development, assessment, and purposeful planning.

10307195
ECE: Family & Community Relationships - Credits: 3
In this 3-credit course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity, cultural responsiveness, and anti-bias perspectives when working with families and community; analyze contemporary family patterns and trends; identify strategies to strengthen and support families; explore effective communication strategies;discover strategies for developing respectful and reciprocal relationships with families; analyze strategies to promote family engagement in early childhood education programs; explore a variety of formats for meeting with families in their contexts; advocate for children and families; and explore community resources that provide a range of services for children and families.

Refrigeration Essentials

30-601-1 Technical Diploma (less than one year)

Campus: Superior

Program Overview

The Refrigeration Essentials program will allow students to complete coursework in Air Conditioning, Refrigeration and Basic Mechanical Fundamentals. Full-time students will be able to complete this short term technical diploma in one semester. Students will be prepared to test for the Technician EPA Section 608 Certification and NC3 Certifications. The certifications allow graduates of the program to perform installation and services on refrigeration and air conditioning systems with the oversight of an HVAC Technician.

Special Feature

Students are eligible to take the following Certification Exams:

- NC3: Building Performance Instruments (BPI) – Indoor Air Quality
- NC3: Building Performance Instruments (BPI) – Leak Detection
- NC3/Trane: Residential – Air Flow
- NC3/Trane: Residential - Refrigeration Diagnostics
- Technician EPA Section 608 Certification
- NC3/Snap-On: 575 Multimeter Certification

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure

Program Outcomes

Refrigeration Essentials graduates will be able to:

- Perform limited service on refrigeration and air conditioning systems
- Perform limited installation on refrigeration and air conditioning systems
- Demonstrate ability to solder, braze, and flare copper piping
- Demonstrate ability to troubleshoot electrical systems on refrigeration and air conditioning systems

Career Outlook

Typical positions available after graduation include:

- Refrigeration Technician
- Service Technician

Career Pathways

The Refrigeration Essentials program is a pathway into the following programs (page 226):

- Heating, Ventilation, and Air Conditioning/ Refrigeration (HVAC/R)
- HVAC Installation Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
32601300	Air Conditioning Fundamentals*#	2 cr.
32601301	Basic Mechanical Fundamentals*#	3 cr.
32601303	Principles of AC/DC*#	3 cr.
32601317	Refrigeration Fundamentals*#,##	3 cr.
Occupational Specific Total		11 cr.
Occupational Supportive Courses**		
32804325	Applied Technical Math 1	3 cr.
Occupational Supportive Total		3 cr.
PROGRAM REQUIREMENTS		**14 cr**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.
# NC3 Certification Exam Administered
Technician EPA Section 608 Certification Exam Administered.

Course Descriptions

32601300
Air Conditioning Fundamentals - Credits: 2
Topics covered include air conditioning principles and terms, physical principles of air movement and humidity, methods of conditioning air for comfort and health, the proper use of psychrometers, dry bulb thermometers, hygrometers, pitot tubes, recorders, manometers and barometers, and the reading and interpretation of psychrometric charts and scales. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the NC3/Trane: Residential – Air Flow AND NC3: Building Performance Instruments (BPI) – Indoor Air Quality certifications)

32601301
Basic Mechanical Fundamentals - Credits: 3
This course is designed to introduce the learner to the basic fundamental skills necessary to work in the HVAC/R Industry. Instruction will be given in learning the various types of piping and tubing used in air conditioning, heating, and refrigeration; types of fittings, bending, brazing, soft soldering tubing, black iron pipe work, using hand tools, and the recognition and practice of safety procedures while working on heating, air conditioning, and refrigeration systems. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the NC3: Building Performance Instruments (BPI) – Leak Detection certification)

32601303
Principles of AC/DC - Credits: 3
This course provides an introduction to DC and AC electricity. The students will be able to perform basic resistance, current, voltage, and power calculations and measurements in both DC and AC circuits. Knowledge and use of test equipment will focus on multimeters and oscilloscopes. Critical-thinking skills are emphasized to develop competencies in problem solving and troubleshooting. This is a lab- and lecture-based course that provides hands-on and theoretical learning. COREQUISITE: 32804325 Applied Technical Math 1. (This course will prepare you to take the NC3/Snap-On: 575 Multimeter Certification)

32601317
Refrigeration Fundamentals - Credits: 3
Topics include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration system components, use of electrical controls, refrigeration applications, and refrigeration tools and materials. PREREQUISITE: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan. (This course will prepare you to take the Technician EPA Section 608 Certification AND NC3/Trane: Residential – Refrigeration Diagnostics certification).

Substance Abuse Counselor Education

31-550-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Hybrid instruction

Program Overview

Help to address substance abuse challenges within our communities. The Substance Abuse Counselor Education technical diploma is pre-approved by the Wisconsin Department of Safety and Professional Services to meet the six content areas (360 hours) of educational requirements for Substance Abuse Counselors. This program will provide you with the foundational coursework necessary to begin working with individuals, families and groups in need of substance abuse assessment, treatment, and counseling. Upon completion, graduates pursuing various levels of Wisconsin Substance Abuse Counselor certification will also need to pass the required state examination and obtain supervised counseling hours, as designated by the Wisconsin Department of Safety & Professional Services. This technical diploma is also fully embedded within the Human Services Associate program, creating a direct pathway for graduates to continue their education and obtain their Human Services Associate of Applied Science degree.

Special Features

- Courses in this program are available in a variety of online and hybrid formats
- Graduates will meet the 360 hour educational requirements needed for Wisconsin Substance Abuse Counselor certification, as preapproved by the Wisconsin Department of Safety & Professional Services. (Certification also requires state application, examination and supervised counseling experience outside of this program, https://dsps.wi.gov/Documents/SACCurrentPreCertificationEducation.pdf)

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Substance Abuse Counselor Education graduates will be able to:

- Apply case management skills
- Identify professional SUDC documentation requirements
- Apply the client SUDC evaluation process
- Analyze professional conduct in the clinical setting
- Counsel Clients

Career Outlook

Typical positions available after graduation may include:

- Substance Abuse Counselor – In Training
- Assessment Counselor
- Intake Counselor
- Substance Abuse Counselor

*Career qualifications vary based on licensure application, examination and supervised practice/employment hours as specified and approved by the Wisconsin Department of Safety and Professional Services

Career Pathway

The Substance Abuse Counselor Education program is a pathway into the following program (page 228):

- Human Services Associate

Related Programs

- Nursing - Associate Degree
- Gerontology - Aging Services Professional
- Criminal Justice Studies
- Community-Based Residential Facility (CBRF) Caregiver

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
10520102	Interviewing	3 cr.
10520103	Ethics in Human Services #	3 cr.
10520104	Issues in Alcohol and Other Drug Abuse	3 cr.
10520105	Introduction to Counseling*	3 cr.
10520106	Methods of Social Casework	3 cr.
10520110	Group Facilitation*	3 cr.
10520112	Family Systems	3 cr.
10520115	Substance Abuse Assessment and Treatment*	3 cr.
Occupational Specific Total		24 cr.
Occupational Supportive Courses**		
10809198	Introduction to Psychology	3 cr.
Occupational Supportive Total		**3 cr.**
TOTAL PROGRAM REQUIREMENTS		**27 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Credit for prior learning not applicable for these courses.

You must earn a grade point of 2.0 or better in all 105XXXXX courses

Professional Licensure and/or Certification Information

Northwood Tech's Substance Abuse Counselor Technical Diploma is designed to meet the State of Wisconsin's Substance Abuse Counselor-In Training licensing criteria. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

10520102
Interviewing - Credits: 3
This course provides an introduction to interviewing and recordkeeping skills practiced in human service agencies. Students learn principles and techniques needed to conduct informational and supportive interviews including maintaining clinical records, documenting referrals, staffings, and supervision. Students practice interviewing skills during class.

10520103
Ethics in Human Services - Credits: 3
This course explores the ethical, legal, and professional issues facing the human services worker. It is designed to teach a process of ethical decision-making and to increase awareness of the complexities in practice. Students are introduced to the current state and federal statutes, regulations, and judicial decisions that govern the professional practice in human services. Standards, code of ethics, clients' rights, and confidentiality are emphasized.

10520104
Issues in Alcohol and Other Drug Abuse - Credits: 3
Students gain a basic understanding of the use and abuse of alcohol and other drugs. Emphasis is on historical and social perspectives of drug use, trends of use, and legal and social responses to problematic alcohol and illicit drug use. Additionally, this course provides an accurate description of the effects of psychoactive drugs, identifies methods of substance abuse treatment, and introduces the student to local treatment services.

10520105
Introduction to Counseling - Credits: 3
This course is designed to provide the student with an overview of the major counseling theories and techniques and applications to various situations. Students will apply concepts and skills through practice in initiating, structuring, and terminating counseling sessions. COREQUISITE: 10520106 Methods of Social Casework

10520106
Methods of Social Casework - Credits: 3
This course provides an introduction to case management theory, models, and techniques, along with the management and coordination of case records. Key components include intake assessment, creating a plan of service, coordinating care, referral techniques, client self-determination, and ethical issues.

10520110
Group Facilitation - Credits: 3
An introduction to theory and practice of group dynamics and processes are covered in this course. Knowledge areas include ethical considerations, effective group leadership, and stages of group development. Learners will record and critique practice group sessions, function as group members, and demonstrate effective group facilitation skills. COREQUISITE: 10510102 Interviewing.

10520112
Family Systems - Credits: 3
This course focuses on issues related to families and family functioning relevant to the human services field. Major areas of focus will include child maltreatment, domestic violence, and addiction, with emphasis on relevant helping skills and services.

10520115
Substance Abuse Assessment and Treatment - Credits: 3
This course will gain further understanding of substance abuse and dependence, assessment and treatment interventions. Emphasis is on assessment, diagnostics, and treatment of substance use disorders. Students will also gain further understanding of levels of care, community-based sober support, referrals and family system interventions. PREREQUISITE: 10520104 Issues in Alcohol and Other Drug Abuse and COREQUISITES: 10520110 Group Facilitation and 10520106 Methods of Social Casework

Supervisory Leadership

17-196-5 Technical Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online

Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, and On Site instruction. Select courses are available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

The Supervisory Leadership certificate allows you to customize your training with short, achievable goals. Rather than completing the entire associate degree, you may select course clusters that complement your degree choice.

How to Apply

Complete the online application or contact Student Services. When completing an online application, select the Supervisory Leadership program from the program of choice dropdown list.

Outcomes

The Supervisory Leadership Certificate will prepare you to:

- Maximize use of time and resources
- Minimize wasted effort
- Address difficult situations in positive ways
- Possess supervisory, communication, and leadership skills
- Understand what motivates people in the workplace
- Create efficient, customer-friendly processes
- Develop productive work teams

Career Outlook

After completing the Supervisory Leadership certificate, you may be employed in a variety of businesses and industries. This certificate provides you with the opportunity to upgrade your leadership and management skills in preparation for a supervisory position or for support in your present position.

Career Pathway

The Supervisory Leadership Certificate is a pathway into the following programs (pages 231 and 238):

- Leadership Development
- Nonprofit Leadership

Related Programs

- Business Management
- Human Resource Management
- Leadership Development
- Nonprofit Leadership

Curriculum

Number	Course Title	Credits (cr.)
10196190	Leadership Development	3 cr.
10196191	Supervision	3 cr.
101961XX	Three (3) credits of 196 coursework	3 cr.
10801136	English Composition 1#	3 cr.
10801196	Oral/Interpersonal Communication# or	
10801198	Speech#	3 cr.
10809198	Introduction to Psychology#	3 cr.
CERTIFICATE REQUIREMENTS		**18 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

See pages 35-38 for course descriptions.

10196190
Leadership Development - Credits: 3
In Leadership Development, the learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution.

10196191
Supervision - Credits: 3
In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem solving, team skills, motivation, and training.

10196108
Customer Service - Credits: 1
This course examines customer service as it relates to organizational quality. It addresses service models for internal and external customers, systems and strategies applied to customer service, and tools and techniques for gathering customer feedback and handling complaints.

10196123
Grant Writing and Management - Credits: 2
An introductory course designed to familiarize students to the language of grants. Specific topics include proposal development, funding sources and processes, writing grant proposals, creating budgets, developing effective evaluation tools, and managing grant funds.

10196127
Fundraising and Event Planning - Credits: 3
In this course students will deepen their understanding of raising funds in the nonprofit sector. Students learn about event planning and budgeting, income projections and ticketing, marketing outreach, food and beverage, and logistics management. Students will also categorize the various types of strategic tools currently used in conjunction with social media to increase fundraising campaigns.

10196134
Legal Issues for Supervisors - Credits: 3
Provides an overview of the general legal responsibilities of an organization. Analyzes the current employment laws in the U.S. and their impact on employer/employees. Examines the supervisor's role in dealing with harassment in the workplace. Compares how appeals can be addressed in both union and nonunion environment.

10196136
Safety in the Workplace - Credits: 3
An introduction to safety and loss prevention in the workplace with an emphasis on the supervisor's responsibility for maintaining a safe, productive environment. Students will study safety concepts, hazard controls, developing safety and health programs, and federal- and state-mandated regulations.

10196138
Conflict Resolution and Confrontation Skills - Credits: 1
In Conflict Resolution and Confrontation Skills the learner applies the skills and tools necessary to deal with conflict and confrontation in the workplace. The learner will identify the major causes of conflict, develop a working plan of action to confront difficult situations, and establish guidelines for gaining resolution to difficult situations. The learner will build greater personal skill and confidence in their ability to deal with conflict in their personal and professional life.

10196145
Contemporary Business for Supervisors - Credits: 2
In this course, you will review how the basic management styles affect the people, processes, and profitability of a business. You will also learn how to balance the organization's needs for profits with employees' basic needs within a global context. You will review and study the basic concepts and the supervisor's role regarding return on investment, return on equity, profit centers, financial statements, and overall departmental operations.

10196149
Dynamics of Board Relations - Credits: 1
A dynamic course that focuses on developing a cohesive and strategic board of directors. Topics include defining the role of the board, strengthening the working relationship between staff members and board members, and organizing and facilitating effective meetings.

10196157
Strategic Planning - Credits: 1
Analyze current business strategy, recognize trends, develop vision and mission statements, identify benchmarks, measure business against benchmarks, recommend future directions.

10196158
Managing Volunteers - Credits: 2
Successful management of volunteers is critical to a nonprofit organization. This investigative course is intended to prepare students to assume roles as volunteer program leaders and managers, or to improve their skills in existing roles with volunteer organizations. The fundamental design of the course is based on learning through critical thought in and about leadership and management roles with volunteers.

10196159
Nonprofit Field Experience - Credits: 1
This course is designed to provide students with a hands-on experience to practice the tasks and duties typically performed in a nonprofit organization. PREREQUISITE/COREQUISITE: a minimum of 7 credits of the following courses: 10196123 Grant Writing and Management, 10196127 Fundraising and Event Planning, 10196131 Fundamentals of Nonprofit Management, 10196149 Dynamics of Board Relations, or 10196158 Managing Volunteers.

10196164
Personal Skills for Supervisors - Credits: 3
On Siteal Skills for Supervisors, the learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

10196168
Organizational Development - Credits: 3
In Organizational Development, the learner applies the skills and tools necessary to effectively deal with organization behavior and change. Each learner will demonstrate the application of the impacts of globalization on an organization, dealing with organization culture, dealing with change and future challenges affecting the total organization, organization decision making, vision, goals, performance management and planning, and the role of organization structure.

10196188
Project Management - Credits: 3
In Project Management, the learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will demonstrate the application of the role of project management, developing a project proposal, use of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment.

10196189
Team Building and Problem Solving - Credits: 3
In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, evaluation, and documentation.

10196192
Managing for Quality - Credits: 3
In Managing for Quality, the learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identifying all stakeholder relationships, meeting/exceeding customer expectations, a system-focused approach, using appropriate models and tools, managing a quality improvement project, and measuring effectiveness of continuous improvement activities.

10196199
Ethics in Business - Credits: 3
This course will focus on business practices from an ethical point of view. The student will examine such topics as morality/ethical theory, utilitarianism, Kantian ethics, justice and the market system, whistle blowing, trade secrets/conflict of interest, privacy, advertising, product safety, corporate social responsibility, international business.

Tax Preparer Assistant

61-101-2 Pathway Certificate

Campuses: Ashland*, New Richmond*, Rice Lake*, Superior*, Online
Outreach Centers: Balsam Lake*, Hayward*, Ladysmith*

*Combination of Online, Your Choice, or On Site instruction. Select courses available at the Northwood Tech Outreach Centers. Please contact your local campus for specifics.

Northwood Technical College

Program Overview

When you've completed the Tax Preparer Assistant pathway certificate, you have the basic knowledge to prepare tax returns for individuals or small businesses.

How to Apply:

Complete the online application or contact Student Services. When completing an online application, select the Tax Preparer Assistant program from the program of choice dropdown list.

Outcomes

The Tax Preparer Assistant Certificate will prepare you to:

- Process financial transactions throughout the accounting cycle
- Perform individual and/or organizational tax accounting preparation, reporting, and analysis tasks

Career Outlook

Typical positions available after certificate completion include:

- Tax Accounting Clerk
- Tax Associate
- Tax Preparer Assistant

After you complete your Tax Preparer Assistant certificate, you can continue your education to obtain the Accounting associate degree and transfer your credits to another college to work towards your bachelor's degree. Northwood Tech has articulation agreements with a variety of four-year universitites. Some graduates may also choose to pursue professional certifications.

Career Pathway

The Tax Preparer Assistant program is a pathway into the following program (page 213):

- Accounting

Related Programs

- Accounting Assistant
- Billing and Posting Clerk

Curriculum

Number	Course Title	Credits (cr.)
10101101	Financial Accounting 1	4 cr.
10101123	Income Tax Accounting	4 cr.
10101174	QuickBooks Accounting - Beginning*	2 cr.
CERTIFICATE REQUIREMENTS		**10 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
You must earn a grade point of 2.0 or better in all required (10101XXX) courses.

Course Descriptions

10101101
Financial Accounting 1 - Credits: 4
Complete accounting cycle, special journals, payroll tax principles, special procedures, and financial statements. Accounting applications through practice set approach.

10101123
Income Tax Accounting - Credits: 4
This course will prepare you to complete and file individual federal and Wisconsin income tax returns including the 1040EZ/WIZ, 1040A/1A, and 1040/1 with most common supporting schedules. This course is lecture- and project-based with most returns done manually and some comprehensive problems being computerized.

10101174
QuickBooks Accounting - Beginning - Credits: 2
Students will learn the QuickBooks accounting software by performing tasks that involve the general ledger, accounts payable, accounts receivable, inventory, payroll, and financial statements. Students will be responsible for finding and correcting errors in the QuickBooks program. PREREQUISITE: 10101101 Financial Accounting 1 or 10101176 Financial Accounting 1A.

Technical Studies - Journeyworker

10-499-5 Associate Degree (two-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Program Overview

The apprenticeship associate degree in Technical Studies – Journeyworker is designed for current apprenticeship students or for those who have completed a qualifying apprenticeship program and are looking for a specialized course of instruction which is not available in existing programs. The program allows the student to receive advanced standing credit for previous apprenticeship work and then create a unique associate degree. Students will be required to complete a program plan with the Director, Apprenticeships and Academies to identify their career objectives and the courses that will help them meet those objectives.

Inquire

For more information on this program and how to apply, contact: Eric Lockwood, Director, Apprenticeships and Academies at eric.lockwood@NorthwoodTech.edu or 800.243.9482

Program Outcomes

This unique degree will:

- Provide direction to the student in pursuit of specific occupational outcomes
- Allow the student to meet individual career goals which cannot be achieved through enrollment in any single instructional program currently available at the college
- Meet the needs of students who want to pursue an Associate of Applied Science Degree on either a full- or part-time basis
- Help identify new and emerging occupations for new or modified programs

Career Outlook

The degree gives students the flexibility to meet the educational goals of new and emerging occupational fields. Employers also benefit from the flexible program that helps them meet their own specific employee training needs as new technologies and methods emerge in the business world.

Curriculum

Course Title	Credits
Communication	6
Social Science	3
Behavioral Science	3
Math and/or Science	3
Additional Electives	6
Total	**21**

(See list of General Studies courses on pages 35-38.)

Wisconsin Journey-Level Certificate Courses*	**39**

Degree completion requirement: possess a Wisconsin Apprenticeship Completion Certificate issued by the Department of Workforce Development - Bureau of Apprenticeship Standards registered apprenticeship program that requires a minimum of 3 years and 400 hours of paid related instruction in the Wisconsin Technical College System. The certificate will meet the 39-credit minimum Technical Studies - Journeyworker requirement for the Associate of Applied Science degree.

TOTAL PROGRAM CREDITS*	**60**

*Complete all required WTCS apprentice paid related technical instruction with a minimum course grade of C. There are no time limits on credit recognition.

Truck Driving

30-458-1 Technical Diploma (less than one-year)

Campus: New Richmond, Rice Lake

Program Overview

Professional truck drivers are responsible for the safe, efficient delivery of goods between locations. Spend time behind the wheel learning how to maneuver trucks in a variety of real-world scenarios. You will develop backing and driving skills through classroom, lab, range and roadway experiences. Non-technical skills such as communications will also be discussed. With successful completion of this program, you will have the ability to obtain your Commercial Driver's License. Opportunities to earn additional CDL endorsements will also be available.

The CDL test is not included within the Truck Driving program. Testing fees are set by the state of Wisconsin. To test and receive your CDL, you have the option to test at Northwood Tech or with any examiner in Wisconsin. Testing through Northwood Tech reduces some of the process for you. Please expect an additional fee for the test.

Special Feature

Northwood Technical College is a registered training provider in the Federal Motor Carrier Safety Administration's (FMCSA) Training Provider Registry (TPR). We provide theory, range, and behind-the-wheel training which meets new Entry-Level Driver Training (ELDT) regulations.

Updates on options for online and in-person training for CDL endorsements can be found on our website.

Program-Specific Requirements

(For detailed information on the items below, see the Northwood Tech Truck Driving web page at:

Program-Specific Requirements

The following requirements must be met before the first day of class:

- Submit an Online Northwood Tech Admissions Application
- Must be 18 years of age
- Verification of valid driver's license
- Pass the DOT physical exam and FMCSA Pre-Employment drug test
- Provide a copy of CDL Class A permit with air brakes
- Meet all Federal Motor Carrier Safety Regulations (FMCSR) requirements

NOTE: It is recommended that Truck Driving students enroll in all three Truck Driving courses (30458304, 30458305, and 30458303) at the same time to ensure space availability.

Program Outcomes

Truck Driving graduates will be able to:

- Perform basic truck driving operations
- Adhere to safe truck driving operating procedures
- Explain advanced operating practices
- Explain vehicle systems and reporting malfunctions
- Comply with non-driving activity activities

Career Outlook

Typical positions available after graduation include:

- Company Driver/Owner Operator
- Driver Manager
- Driver Mentor
- Local/Regional/Long Distance Driver
- Recruiting Specialist
- Dispatch Driver
- Over-the-Road Truck Driver
- Straight Truck Driver (Dump, Cement, Delivery)

Career Pathway

The Truck Driving program is a pathway into the following program
(page 241):

- Utility Construction Technician

Related Programs

- Diesel Equipment Technician

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
30458304	Truck Driving – Semi Level 1	3 cr.
30458305	Truck Driving – Semi Level 2*	3 cr.
30458303	Truck Driving – Semi Level 3*	4 cr.
		10 cr.
PROGRAM REQUIREMENTS		**10 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

Professional Licensure and/or Certification Information

Northwood Tech's Truck Driving program is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing agency in that state to verify that the Northwood Tech program meets licensure or certification requirements.

For more information visit:
Federal Motor Carrier Safety Administration

Course Descriptions

30458304
Truck Driving - Semi Level 1 - Credits: 3
This is the first of three courses in the 10-week Truck Driving technical diploma. Become prepared for entry-level positions as a commercial driver and understand basic information about trucks and their operation. You will need to present your DOT physical (Fed-Med) card and CDL Permit (CLP) prior to enrolling in the course. A scheduled drug screen is required prior to behind-the-wheel training. If you need assistance with passing the CLP, refer to the CDL Theory course designed to help you prepare for the test. NOTE: It is required that Truck Driving program students enroll in all three levels of truck driving (30458304, 30458305 and 30458303) at the same time to secure space. PREREQUISITE: Admission to the Truck Driving, Utility Construction Technician or Diesel Equipment Technician Plan.

30458305
Truck Driving - Semi Level 2 - Credits: 3
This is the second of three courses in the Truck Driving technical diploma. This course will focus on obtaining the Commercial Driver's License (CDL) while highlighting industry regulations, trip planning, hours of service, and driver safety. COREQUISITE: 30458304 Truck Driving - Semi Level 1. Corequisite override required for students enrolled as part of a contract through Workforce & Community Development (WCD). Work with Associate Dean of WCD for override.

32458303
Truck Driving - Semi Level 3 - Credits: 4
This is the third and final course in the Truck Driving technical diploma. Refine the skills learned in the first two levels assuring readiness for the industry (and to obtain a CDL). The primary focus includes entry-level requirements, program certifications, advanced operations, and technical backing skills. COREQUISITE: 30458305 Truck Driving - Semi Level 2.

University Transfer Degree - Associate to Bachelor's/Arts

20-800-1 Associate Degree (two-year) (Associate of Arts in Liberal Arts) **Financial Aid Eligible**

Campuses: Online or Online Live

Academic partnership with UW-Superior

Program Overview

With the University Transfer Degree - Associate to Bachelor's/Arts program, you will receive the cost savings and convenience of a liberal arts transfer degree while taking your classes Online or Online Live. The University Transfer Degree - Associate to Bachelor's/Arts program is an academic partnership with UW-Superior. However, Northwood Tech awards the degree and financial aid is awarded by Northwood Tech.

Upon completion of this program, you'll be able to transfer to most public or private colleges and universities, both inside and outside of Wisconsin. Up to 72 credits may transfer to satisfy university general education requirements (additional courses may be needed for specific majors or licensure requirements). Completion of the full University Transfer Degree - Associate to Bachelor's/Arts degree allows for maximum transfer. Typical transfer areas of study include English, Art, Humanities, Modern Language, and Communication.

Admission Requirements

- Complete an Online Northwood Tech application form
- Review and Sign the Academic Partnership with UW-Superior Disclosure Statement
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirement

- Each term a virtual joint advising session will be available for students between Northwood Tech and UW-Superior. Contact your Northwood Tech advisor for more information.

Program Outcomes

University Transfer Degree - Associate to Bachelor's/Arts graduates will be able to:

- Communication: Communicate with varied audiences by actively listening, reading and comprehending written materials, and synthesizing and organizing information for diverse audiences.
- Critical Thinking: Use identified critical thinking skills to pose questions, process information and make decisions.
- Ethics: Demonstrate professional behaviors.
- Global Awareness: Recognize the contributions of diverse cultures, historical periods, and art forms to the improvement of the human condition in a global society.
- Inclusive Social Interaction: Engage in collaborative activities toward a shared goal.
- Mathematical Principles: Compute and analyze quantitative data using mathematical, statistical and/or logical methods to solve problems.
- Science: Explore physical and social environments using scientific tools and methods.
- Technology: Access, evaluate, and use information technology to support academic, community, and career-related interests.
- Self-determination: Exhibit awareness and skills necessary to succeed in increasingly challenging academic environments.

Career Goal

Potential programs of study that your University Transfer Degree - Associate to Bachelor's/Arts program could transfer into include:

- Business
- Communications
- Criminal Justice
- Education
- English
- History
- Humanities
- Political Science
- Economics
- Psychology
- Sociology

Curriculum

(See pages 35-38 for Northwood Tech course descriptions)

University Transfer Degree - Associate to Bachelor's/Arts Curriculum

Number	Course Title	Credits (cr)

ENGLISH - 6 Credits Required

Northwood Tech Courses:

10801136	English Composition 1	3 cr.
10801197	Technical Reporting	3 cr.

UW - Superior Courses:

WRIT 102	Introduction to Academic Writing	3 cr.
WRIT 209	Introduction to Professional Writing	3 cr.

SPEECH - 3 Credits Required

Northwood Tech Courses:

10801198	Speech	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.

UW - Superior Courses:

COMM 110	Introduction to Communication	3 cr.
COMM 211	Interpersonal Communication	3 cr.

HUMANITIES - 12 Credits Required

Northwood Tech Course:

10809166	Introduction to Ethics: Theory and Application	3 cr.

UW - Superior Courses:

PHIL 211	Contemporary Moral Problems	3 cr.
HIST 111	Modern World History	3 cr.
HIST 151	US History to 1877	3 cr.
HIST 152	The United States Since 1877	3 cr.
ENGL 228	Multi-Ethnic American Literature (DV)	3 cr.
ENGL 229	Literature by Women (DV)	3 cr.
ENGL 241	World Literature I	3 cr.
ENGL 242	World Literature II	3 cr.
FREN 101	Beginning French 1	3 cr.
MUSI 161	Music and World Culture (DV)	3 cr.
PHIL 151	Introduction to Philosophy	3 cr.
JAPA 101	Beginning Japanese 1	3 cr.
SPAN 101	Spanish 101	3 cr.

SOCIAL SCIENCE - 12 Credits Required

Northwood Tech Courses:

10809122	Introduction to American Government	3 cr.
10809143	Microeconomics	3 cr.
10809144	Macroeconomics	3 cr.
10809195	Economics	3 cr.
10809196	Introduction to Sociology	3 cr.
10809198	Introduction to Psychology	3 cr.
10809159	Abnormal Psychology*	3 cr.
10809188	Developmental Psychology	3 cr.

UW - Superior Courses:

POLS 230	U.S. National, State and Local Government	3 cr.
ECON 235	Economics in Society	3 cr.
ECON 250	Principles of Microeconomics	3 cr.
ECON 251	Principles of Macroeconomics	3 cr.
SOCI 101	Introduction to Sociology	3 cr.
PSYC 101	Introduction to Psychology	3 cr.
PSYC 362	Psychological Disorders	3 cr.
GEOG 100	World Regional Geography (DV)	3 cr.
PSYC 230	Social Cognition	3 cr.

MATHEMATICS AND NATURAL SCIENCE -10 Credits Required

(Requires a minimum of 10 total credits in math and natural science)

MATHEMATICS - 3-4 Credits Required

(Must include 3-4 credits at level of Intermediate Algebra or above. Or Quantitative Reasoning or equivalent, or 4-6 credits in Math for Elementary Teachers (Education Students only)

Northwood Tech Math Courses:

10804118	Intermediate Algebra with Applications	4 cr.
20804224	College Algebra with Applications*	4 cr.
10804189	Introductory Statistics*	3 cr.
10804196	Trigonometry with Applications*	3 cr.

UW -Superior Math Courses:

MATH 130	Elementary Statistics	4 cr.
MATH 115	Precalculus	5 cr.
MATH 113	Algebra with Applications	3 cr.
MATH 151	Calculus for Business, Life and Social Sciences	3 cr.

NATURAL SCIENCE - 7-8 Credits Required

(One lab course required)

Northwood Tech Natural Science Courses:

10806112	Principles of Sustainability	3 cr.
10806114	General Biology (lab)	4 cr.
10806134	General Chemistry (lab)	4 cr.
10806177	General Anatomy & Physiology (lab)	4 cr.
10806179	Advanced Anatomy & Physiology*(lab)	4 cr.
10806197	Microbiology* (lab)	4 cr.
10806198	Human Biology (lab)	4 cr.

UW-Superior Natural Science Courses:

BIOL 123	Concepts in Biology	4 cr.
BIOL 270	Human Anatomy & Physiology I (LS)	4 cr.
BIOL 280	Human Anatomy & Physiology II (LS)	4 cr.
BIOL 355	Microbiology	4 cr.
BIOL 115	Human Biology (LS)	4 cr.
PHYS 100	Astronomy (LS)	4 cr.
PHYS 107	Algebra-Based Physics 1	4 cr.
PHYS 160	Physical Science	4 cr.

HEALTH/WELLNESS/PHYSICAL EDUCATION - 1 Credit Required

UW-Superior Course:

HHP 102	Health and Wellness	3 cr.

WORLD/FOREIGN LANGUAGE - 4 Credits Required

(may be met with one year high school, with a grade of "C" or better, or one semester in college)

UW-Superior Courses:

FREN 101	Beginning French 1	3 cr.
FREN 102	Beginning French 2	3 cr.
JAPA 101	Beginning Japanese 1	3 cr.
JAPA 102	Beginning Japanese 2	3 cr.
SPAN 101	Spanish 101	3 cr.
SPAN 102	Spanish 102	3 cr.

DIVERSITY & ETHNIC STUDIES - 3 Credits Required

(Courses that meet this requirement may also count toward Humanities or Social Science)

Northwood Tech Course:

10809172	Introduction to Diversity Studies	3 cr.

UW-Superior Courses:

SOCI 273	Race and Ethnicity	3 cr.
ART 224	Visual Arts in Non-Western Societies	3 cr.
ART 221	Art History Survey: The Ancient World to the Renaissance	4 cr.
ART 222	Art History Survey: Renaissance to Modern Art	4 cr.
ENGL 228	Multi-Ethnic American Literature	3 cr.
ENGL 229	Literature by Women	3 cr.
GEOG 100	World Regional Geography	3 cr.
MUSI 161	Music and World Culture	3 cr.

ELECTIVES - 10 Credits Required

(Select any college transfer courses beyond the minimum requirements. Two credits of health and physical education beyond the Health/Wellness/Physical Education credit may be selected.)

PROGRAM REQUIREMENTS **61 cr.**

Student must take both BIO 270 Human Anatomy & Physiology I and BIO 280 Human Anatomy & Physiology II to transfer in for 10806177 General Anatomy & Physiology and 10806179 Advanced Anatomy & Physiology.

*Requires a prerequisite and/or corequisite that must be completed with a 2.0 or better.

UW-Superior course descriptions are available in the UW-Superior College Catalog.

KEY: LS: Lab Science Requirement; DV: Diversity Requirement; ES: Environmental Science Requirement

University Transfer Degree - Associate to Bachelor's/Science

20-800-2 Associate Degree (two-year) (Associate of Science in Liberal Arts) **Financial Aid Eligible**

Campuse: Online or Online Live

Academic partnership with UW-Superior

Program Overview

With the University Transfer Degree - Associate to Bachelor's/Science program, you will receive the cost savings and convenience of a complete liberal arts transfer degree while taking your classes Online or Online Live. The University Transfer Degree - Associate to Bachelor's/Science program is an academic partnership with UW-Superior. However, Northwood Tech awards the degree and financial aid is awarded by Northwood Tech.

Upon completion of this program, you'll be able to transfer to most public or private colleges and universities, both inside and outside of Wisconsin. Up to 72 credits may transfer to satisfy university general education requirements (additional courses may be needed for specific majors or licensure requirements). Completion of the full University Transfer Degree - Associate to Bachelor's/Science degree allows for maximum transfer. Typical transfer areas of study include Science, Engineering, Business, Health, or Technology.

Admission Requirements

- Complete an Online Northwood Tech application form
- Review and Sign the Academic Partnership with UW-Superior Disclosure Statement
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirement

- Each term a virtual joint advising session will be available for students between Northwood Tech and UW-Superior. Contact your Northwood Tech advisor for more information.

Program Outcomes

University Transfer Degree - Associate to Bachelor's/Science graduates will be able to:

- Communication: Communicate with varied audiences by actively listening, reading and comprehending written materials, and synthesizing and organizing information for diverse audiences.
- Critical Thinking: Use identified critical thinking skills to pose questions, process information and make decisions.
- Ethics: Demonstrate professional behaviors.
- Global Awareness: Recognize the contributions of diverse cultures, historical periods, and art forms to the improvement of the human condition in a global society.
- Inclusive Social Interaction: Engage in collaborative activities toward a shared goal.
- Mathematical Principles: Compute and analyze quantitative data using mathematical, statistical and/or logical methods to solve problems.
- Science: Explore physical and social environments using scientific tools and methods.
- Technology: Access, evaluate, and use information technology to support academic, community, and career-related interests.
- Self-determination: Exhibit awareness and skills necessary to succeed in increasingly challenging academic environments.

Career Goal

Potential programs of study students completing the University Transfer Degree - Associate to Bachelor's/ Science program could transfer into include:

- Accounting
- Biology
- Business Administration
- Chemistry
- Computer Science
- Economics
- Environmental Science
- Finance
- Health Care
- Horticulture
- Information Technology
- Management
- Marketing
- Mathematics
- Medicine
- Physics
- Science

Curriculum

(See pages 35-38 for Northwood Tech course descriptions)

University Transfer Degree - Associate to Bachelor's/Science Curriculum

Number	Course Title	Credits (cr.)

ENGLISH - 6 Credits Required

Northwood Tech Courses:

10801136	English Composition 1	3 cr.
10801197	Technical Reporting	3 cr.

UW - Superior Courses:

WRIT 102	Introduction to Academic Writing	3 cr.
WRIT 209	Introduction to Professional Writing	3 cr.

SPEECH - 3 Credits Required

Northwood Tech Courses:

10801198	Speech	3 cr.
10801196	Oral/Interpersonal Communication	3 cr.

UW - Superior Courses:

COMM 110	Introduction to Communication	3 cr.
COMM 211	Interpersonal Communication	3 cr.

HUMANITIES - 6 Credits Required

Northwood Tech Course:

10809166	Introduction to Ethics: Theory and Application	3 cr.

UW - Superior Courses:

PHIL 211	Contemporary Moral Problems	3 cr.
HIST 111	Modern World History	3 cr.
HIST 151	US History to 1877	3 cr.
HIST 152	The United States Since 1877	3 cr.
ENGL 228	Multi-Ethnic American Literature (DV)	3 cr.
ENGL 229	Literature by Women (DV)	3 cr.
ENGL 241	World Literature I	3 cr.
ENGL 242	World Literature II	3 cr.
FREN 101	Beginning French 1	3 cr.
MUSI 161	Music and World Culture (DV)	3 cr.
PHIL 151	Introduction to Philosophy	3 cr.
JAPA 101	Beginning Japanese 1	3 cr.
SPAN 101	Spanish 101	3 cr.

SOCIAL SCIENCE - 6 Credits Required

Northwood Tech Courses:

10809122	Introduction to American Government	3 cr.
10809143	Microeconomics	3 cr.
10809144	Macroeconomics	3 cr.
10809195	Economics	3 cr.
10809196	Introduction to Sociology	3 cr.
10809198	Introduction to Psychology	3 cr.
10809159	Abnormal Psychology*	3 cr.
10809188	Developmental Psychology	3 cr.

UW - Superior Courses:

POLS 230	U.S. National, State and Local Government	3 cr.
ECON 235	Economics in Society	3 cr.
ECON 250	Principles of Microeconomics	3 cr.
ECON 251	Principles of Macroeconomics	3 cr.
SOCI 101	Introduction to Sociology	3 cr.
PSYC 101	Introduction to Psychology	3 cr.
PSYC 362	Psychological Disorders	3 cr.
GEOG 100	World Regional Geography (DV)	3 cr.
PSYC 230	Social Cognition	3 cr.

MATH AND NATURAL SCIENCE - 20 Credits Required

(Requires a minimum of 20 total credits in math and natural science)

MATHEMATICS

(Mathematics at the level of College Algebra, Statistics, Quantitative Reasoning or higher)

Northwood Tech Math Courses:

10804118	Intermediate Algebra with Applications	4 cr.
20804224	College Algebra with Applications*	4 cr.
10804189	Introductory Statistics*	3 cr.
10804196	Trigonometry with Applications*	3 cr.

UW -Superior Math Courses:

MATH 130	Elementary Statistics	4 cr.
MATH 115	Precalculus	5 cr.
MATH 113	Algebra with Applications	3 cr.
MATH 151	Calculus for Business, Life and Social Sciences	3 cr.

NATURAL SCIENCE

(Must include 2 lab courses, one from each of 2 different science disciplines)

Northwood Tech Natural Science Courses:

10806112	Principles of Sustainability	3 cr.
10806114	General Biology (lab)	4 cr.
10806134	General Chemistry (lab)	4 cr.
10806177	General Anatomy & Physiology (lab)	4 cr.
10806179	Advanced Anatomy & Physiology* (lab)	4 cr.
10806197	Microbiology* (lab)	4 cr.
10806198	Human Biology (lab)	4 cr.

UW-Superior Natural Science Courses:

BIOL 123	Concepts in Biology	4 cr.
BIOL 270	Human Anatomy & Physiology I (LS)	4 cr.
BIOL 280	Human Anatomy & Physiology II (LS)	4 cr.
BIOL 355	Microbiology	4 cr.
BIOL 115	Human Biology (LS)	4 cr.
PHYS 100	Astronomy (LS)	4 cr.
PHYS 107	Algebra-Based Physics 1	4 cr.
PHYS 160	Physical Science	4 cr.

HEALTH/WELLNESS/PHYSICAL EDUCATION - 1 Credit Required

UW-Superior Course:

HHP 102	Health and Wellness	3 cr.

WORLD/FOREIGN LANGUAGE - 4 Credits Required

(may be met with one year high school, with a grade of "C" or better, or one semester in college)

UW-Superior Courses:

FREN 101	Beginning French 1	3 cr.
FREN 102	Beginning French 2	3 cr.
JAPA 101	Beginning Japanese 1	3 cr.
JAPA 102	Beginning Japanese 2	3 cr.
SPAN 101	Spanish 101	3 cr.
SPAN 102	Spanish 102	3 cr.

DIVERSITY & ETHNIC STUDIES - 3 Credits Required

(Courses that meet this requirement may also count toward Humanities or Social Science)

Northwood Tech Course:

10809172	Introduction to Diversity Studies	3 cr.

UW-Superior Courses:

SOCI 273	Race and Ethnicity	3 cr.
ART 224	Visual Arts in Non-Western Societies	3 cr.
ART 221	Art History Survey: The Ancient World to the Renaissance	4 cr.
ART 222	Art History Survey: Renaissance to Modern Art	4 cr.
ENGL 228	Multi-Ethnic American Literature	3 cr.
ENGL 229	Literature by Women	3 cr.
GEOG 100	World Regional Geography	3 cr.
MUSI 161	Music and World Culture	3 cr.

ELECTIVES - 12 Credits Required

(Select any college transfer courses beyond the minimum requirements. Two credits of health and physical education beyond the Health/Wellness/Physical Education credit may be selected.)

PROGRAM REQUIREMENTS **61 cr.**

Student must take both BIO 270 Human Anatomy & Physiology I and BIO 280 Human Anatomy & Physiology II to transfer in for 10806177 General Anatomy & Physiology and 10806179 Advanced Anatomy & Physiology.

*Requires a prerequisite and/or corequisite that must be completed with a 2.0 or better.

UW-Superior course descriptions are available in the UW-Superior College Catalog.

KEY: LS: Lab Science Requirement; DV: Diversity Requirement; ES: Environmental Science Requirement

Utility Construction Technician

31-476-2 Technical Diploma (one-year) **Financial Aid Eligible**

Campus: Rice Lake

Program Overview

This program will introduce outside plant cabling practices, installed as aerial cable between poles, in an underground conduit system, or by direct burial. Students will understand the basic electricity, blue print reading and facility location. Students will have the ability to obtain the CDL class A permit. They will practice basic construction practices techniques for outside plant services. Students will analyze work zone safety practices and receive OSHA 10 permit.

Special Features

- Unique in the state of Wisconsin
- The Utility Construction Technician program was developed in collaboration with and is endorsed by the Power and Communication Contractors Association (PCCA). PCCA is the national trade association for companies constructing electric power facilities, including transmission and distribution lines and substations and telephone, fiber optic, and cable television systems.
- Industry Certifications awarded to students include: OSHA 10, WIS DOT Flagger Certification, and First Aid, CPR, AED.
- Industry Certifications that students may have the ability to obtain include: CDL Class A and ETA Fiber Optic Installer Certification.
- The following simulator training is available: Truck Driving, Excavator and Backhoe
- Additional scholarships available from: Wisconsin State Telecommunications Association (WSTA) and the International Brotherhood of Electrical Workers (IBEW)

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program-Specific Requirements

The following must be met before the first day of class:

- Must be 18 years of age or older
- Provide verification of valid driver's license
- Pass the DOT physical exam and FMCSA Pre Employment drug test
- Provide a copy of CDL Class A permit with air brakes
- Meet all Federal Motor Carrier Safety Regulations (FMCSR) requirements

Program Outcomes

Utility Construction Technician graduates will be able to:

- Demonstrate safe practices and techniques
- Perform site location and preparation
- Perform construction practices
- Apply basic electrical principles
- Demonstrate customer service
- Complete CDL-A licensure
- Analyze broadband principles
- Demonstrate heavy equipment operation
- Utilize construction plans
- Perform preventative maintenance practices

Career Outlook

Typical positions available after graduation include:

- Utility Service Operator
- Vibratory Plow Operator
- Horizontal Directional Drill Operator
- Excavator Operator
- Truck Driver Equipment Hauler
- Fiber Optic and Copper Slicer
- Utility Service Flagger
- Underground Facilities Locator
- Utility Service Laborer

Many other opportunities available

Career Pathway

The Utility Construction Technician program includes the following pathway option (page 241):

- Truck Driving

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
30458304	Truck Driving – Semi Level 1*	3 cr.
30458305	Truck Driving – Semi Level 2*	3 cr.
30458303	Truck Driving - Semi Level 3*	4 cr.
31476303	Broadband and Power Installation	4 cr.
31476304	Work Zone Training and Cable Locating	3 cr.
31476305	Utility Construction Concerns	1 cr.
31476306	Aerial Installation Field Training	4 cr.
31476307	Preventative and Predictive Maintenance	2 cr.
32476305	Construction Practices 1	4 cr.
32476306	Construction Practices 2	4 cr.
32451370	Broadband Fiber Service 201	3 cr.
Occupational Specific Total		35 cr.
Occupational Supportive Courses**		
32804303	Applied Math	2 cr.
Occupational Supportive Total		2 cr.
PROGRAM REQUIREMENTS		37 cr.

*Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

** See pages 35-38 for course descriptions.

Professional Licensure and/or Certification Information

Northwood Tech's Utility Construction Technician program is designed to prepare students to obtain the required licensure to be employed/practice in the state of Wisconsin. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing agency in that state to verify that the Northwood Tech program meets licensure or certification requirements.

For more information, visit: Federal Motor Carrier Safety Administration

30458304
Truck Driving - Semi Level 1 - Credits: 3
This is the first of three courses in the 10-week Truck Driving technical diploma. Become prepared for entry-level positions as a commercial driver and understand basic information about trucks and their operation. You will need to present your DOT physical (Fed-Med) card and CDL Permit (CLP) prior to enrolling in the course. A scheduled drug screen is required prior to behind-the-wheel training. If you need assistance with passing the CLP, refer to the CDL Theory course designed to help you prepare for the test. NOTE: It is required that Truck Driving program students enroll in all three levels of truck driving (30458304, 30458305 and 30458303) at the same time to secure space. PREREQUISITE: Admission to the Truck Driving, Utility Construction Technician or Diesel Equipment Technician Plan.

30458305
Truck Driving - Semi Level 2 - Credits: 3
This is the second of three courses in the Truck Driving technical diploma. This course will focus on obtaining the Commercial Driver's License (CDL) while highlighting industry regulations, trip planning, hours of service, and driver safety. COREQUISITE: 30458304 Truck Driving - Semi Level 1. Corequisite override required for students enrolled as part of a contract through Workforce & Community Development (WCD). Work with Associate Dean of WCD for override.

30458303
Truck Driving - Semi Level 3 - Credits: 4
This is the third and final course in the Truck Driving technical diploma. Refine the skills learned in the first two levels assuring readiness for the industry (and to obtain a CDL). The primary focus includes entry-level requirements, program certifications, advanced operations, and technical backing skills. COREQUISITE: 30458305 Truck Driving – Semi Level 2

31476303
Broadband and Power Installation - Credits: 4
The student will be introduced to electrical concepts applied to AC and DC circuits. Covers resistive circuits, voltage and current laws, and analog and digital circuit analysis. Course explains general, personal, and test equipment for E&I safety. Covers measuring current, voltage, and resistance and the types of meters used. Describes types and applications of conductors as well as their installation techniques. Covers installation, termination, and testing power & broadband cabling systems. Introduces the types of equipment and methods used in power & broadband drop installations.

31476304
Work Zone Training and Cable Locating - Credits: 3
Students will complete the OSHA 10-Hour Construction certification. Students will complete Wisconsin Flagger Handbook Training Certification Course. Students will understand how underground utility systems operate and work together with Diggers Hotline. This course will include the following locating facilities and general plant basics: utility system layouts, utility construction and installation methods, manholes and vaults, termination of facilities, aboveground indicators of buried facilities, abandon facilities, access points, and general print reading concepts.

31476305
Utility Construction Concerns - Credits: 1
This course will introduce the students to the utility construction service industry. It will help them understand how they operate independently, as well as together as a team, and provide exceptional customer services. Students will examine current trends in utility construction industry. Students will prepare for utility construction interview. Students will track progress construction projects using spreadsheets. Students will provide operational status reports as used in construction industry.

31476306
Aerial Installation Field Training - Credits: 4
This course introduces the student to the safe use and care of aerial construction equipment. Students will be introduced to climbing equipment (belt/climbers), lashing equipment, ladders, and bucket truck operation. It will familiarize the student with aerial construction specifications and installation practices used in the broadband industry.

31476307
Preventative and Predictive Maintenance - Credits: 2
Students will be introduced to preventive and predictive maintenance and basic techniques for testing and inspections. Students will safely operate power tools, generators, air compressors, lubrication techniques, hydraulics and trash pumps. Students will learn how to prime diesel fuel systems, operate ground rod pounders, and jack hammers.

32476305
Construction Practices 1 - Credits: 4
This course introduces the student to buried construction practices used in the utility service industry. Student will safely use hardware components and the equipment used in industry for rigging and installation procedures. Students will be safely introduced to a variety of construction machinery and operate in a controlled construction site environment setting. Students will load and unload machinery to safety specifications and secure loads to meet DOT regulations.

32476306
Construction Practices 2 - Credits: 4
Introduces the process of planning and executing underground utility services on various types of construction projects. The use of heavy equipment such as bulldozers, directional drills, excavators, tractor loader backhoe and other specialized equipment

32451370
Broadband Fiber Service 201 - Credits: 3
This course will introduce the students to fiber optic communication systems. Topics covered include fiber optic design, installation, test and maintenance for multimode and singlemode networks. This class will benefit those with little or no fiber experience.

Veterinary Technician

10-091-1 Associate Degree **Financial Aid Eligible**

Campus: New Richmond

Program Overview

Veterinary Technician graduates will be prepared to obtain patient history and perform the initial physical exam, place intravenous catheters and give injectable medications, anesthetize and monitor patients, and assist in surgery. Graduates will also be trained to do dental cleanings on dogs and cats and can handle care for lab animals. Additionally, graduates will be qualified to apply bandages and splints, as well as evaluate lab samples under the microscope.

Admission Requirements

- Complete Online application form
- Have earned a high school diploma or GED certificate; current high school seniors must provide both a current high school transcript and a final (official) transcript with confer date
- Review and sign Background Check Disclosure
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor (academic admission requirements apply - see page 30 for more information)

Program-Specific Requirements

- Submit Background Check fee
- Have an acceptable Wisconsin Caregiver Background Check, National Criminal Background Check, Minnesota Caregiver Background CheckS (if applicable), and other states, if applicable. Background check may affect ability to secure internship placement and the ability to find employment after graduation
- Complete and submit Veterinary Technician Job Shadow Form documenting an 8-hour volunteer shadowing experience in an approved clinical setting prior to registering for Veterinary Technician core coursework.
- Participate in a mandatory program orientation session.
- Complete vaccinations against rabies
- COVID vaccination---highly recommended

NOTE: Northwood Technical College cannot guarantee clinical placement or ability to progress in the program if a student is not able to meet the clinical site requirements including but not limited to; influenza vaccine, covid vaccine, negative tb skin test/quantiferon, up to date acceptable background check, or any other clinical requirements required by the clinical site. Northwood Technical College cannot guarantee clinical placement if the clinical site must be changed due to students inability to meet the site specific requirements. Many sites require the student information 4-6 weeks prior to the clinical start date.

Admission and Program-Specific Requirements for the UWRF Animal Science Transfer Students is located on the Veterinary Technician program webpage.

Program Outcomes

Veterinary Technician graduates will be able to:

- Manage veterinary business functions
- Integrate all aspects of patient management for anesthetic, surgical, and medical nursing procedures
- Produce diagnostic radiographic images
- Perform laboratory procedures
- Administer prescribed drugs

Career Outlook

Typical positions available after graduation include:

- Veterinary Technician
- Laboratory Animal Technician

Veterinary Technicians work in veterinary clinics and hospitals, humane societies, education, pharmaceutical supplies, research, zoos and wildlife parks, military, public health and government. They collect patient history and perform initial examinations, run laboratory tests, take x-rays, administer anesthesia, and assist in surgery.

Career Pathway

The Veterinary Technician program includes the following pathway option (page 242):

- Veterinary Assistant

Professional Licensure and/or Certification Information

Northwood Tech's Veterinary Technician Associate Degree is designed to meet the State of Wisconsin's licensing criteria. However, Northwood Tech has not made a determination whether this program meets licensure requirements in states other than Wisconsin. Students who may be seeking professional licensure or certification in states other than Wisconsin should contact the appropriate licensing board in that state to verify that the Northwood Tech program meets licensure or certification requirements.

Veterinary Technician programs are accredited by the American Veterinary Medical Association - Committee on Veterinary Technician Education and Activities (AVMA-CVTEA) at 1931 North Meacham Road, Suite 100, Schaumburg, IL 60173-4360, phone: 800.248.2862. Graduates of AVMA-CVTEA accredited programs are eligible to take the Veterinary Technical National Exam (VTNE) and the Wisconsin state exam directly with the American Associate of Veterinary State Boards (AAVSB) at AAVSB.org upon graduation. The Committee on Veterinary Technical Education and Activities (CVTEA) of the American Veterinary Medical Association (AVMA) has granted Initial Accreditation to Northwood Tech's Veterinary Technology Program, effective February 4, 2021. All students will be eligible to take the VTNE and Wisconsin state exam upon graduation. After successful completion of the exams, the individual will be a Certified Veterinary Technician (CVT).

Curriculum

Number	Course Title	Credits (cr.)
Technical Studies Courses		
10091100	Animal Care and Management*	3 cr.
10091101	Veterinary Business Practices*	3 cr.
10091102	Veterinary Medical Terminology	2 cr.
10091103	Clinical Pathology 1 for Vet Sciences*	4 cr.
10091104	Clinical Pathology 2 for Vet Sciences*	4 cr.
10091105	Surgical Procedures 1 for Vet Sciences*	3 cr.
10091106	Surgical Procedures 2 for Vet Sciences*	3 cr.
10091107	Imaging for Veterinary Sciences*	3 cr.
10091108	Veterinary Pharmacology	3 cr.
10091120	Lab Animals and Non-Traditional Pets*	3 cr.
10091110	Clinical Skills 1 for Vet Sciences*	2 cr.
10091111	Clinical Skills 2 for Vet Sciences*	2 cr.
10091112	Veterinary Technician Certification Review*	3 cr.
10091113	Anesthesia for Veterinary Sciences*	3 cr.
10091114	Veterinary Technician Clinical Internship*	4 cr.
Technical Studies Total		45 cr.
General Studies Courses**		
10801136	English Composition 1	3 cr.
10801196	Oral /Interpersonal Communication	3 cr.
10806105	Principles of Animal Biology	4 cr.
10806197	Microbiology*	4 cr.
10809166	Introduction to Ethics: Theory and Application **or**	
10809196	Introduction to Sociology **or**	
10809172	Introduction to Diversity Studies	3 cr.
10809198	Introduction to Psychology	3 cr.
General Studies Total		20 cr.
PROGRAM REQUIREMENTS		**65 cr.**

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

**See pages 35-38 for course descriptions.
You must earn a grade point of 2.0 or better in all required courses (technical studies/core and general studies).

Course repeat policies exist that allow for only a certain number of retakes within the program (for technical studies/core courses); please refer to the policies for details.

Course Descriptions

(See pages 35-38 for General Studies course descriptions)

10091100
Animal Care and Management - Credits: 3
In this course, students explore basic nutrition, housing needs, and behavior of common domestic animals to develop skills that enable them to assess animal condition. Upon completion of this course, students will be able to obtain a thorough history, perform a physical exam, administer medications, collect samples, and use proper restraint techniques. PREREQUISITE: Admission to Veterinary Technician plan and Completion of Job Shadow Experience and COREQUISITE: 10806105 Principles of Animal Biology.

10091101
Veterinary Business Practices - Credits: 3
In this course, students develop practical workplace techniques for veterinary office procedures to develop customer service and veterinary team support skills. Upon completion of this course, students will be able to use veterinary software to manage records and financial applications, maximize client interactions, and participate in day-to-day operations of a veterinary facility. PREREQUISITE: Admission to Veterinary Technician plan and COREQUISITE: 10091100 Animal Care and Management.

10091102
Veterinary Medical Terminology - Credits: 2
In this course, students explore the construction, meaning, and pronunciation of veterinary medical terms to establish understanding and facilitate communication among veterinary team members. Upon completion of this course, students will be able to correctly formulate veterinary medical terms to describe specific concepts. PREREQUISITE: Admission to Veterinary Technician plan and Completion of Job Shadow Experience.

10091103
Clinical Pathology 1 for Vet Sciences - Credits: 4
In this course, students examine basic laboratory equipment and procedures, as well as features of common veterinary diseases, to acquire skills needed to perform various diagnostic tests. Upon completion of this course, students will be able to collect and process appropriate samples for hematology, blood chemistry, urinalysis, and parasitology, and correlate veterinary clinical pathology findings to clinical signs. PREREQUISITES: 10091100 Animal Care and Management, 10091101 Veterinary Business Practices, and 10806105 Principles of Animal Biology.

10091104
Clinical Pathology 2 for Vet Sciences - Credits: 4
In this course, students examine additional laboratory procedures and other veterinary disease processes to establish understanding of appropriate methodology and recognition of accurate results. Upon completion of this course, students will be able to collect and process appropriate samples for mycology, cytology, serology, endocrinology, and coagulation and reproductive evaluations, and correlate veterinary clinical pathology findings to clinical signs. PREREQUISITE: 10806197 Microbiology and COREQUISITE: 10091105 Surgical Procedures 1 for Vet Sciences.

10091105
Surgical Procedures 1 for Vet Sciences - Credits: 3
In this course, students investigate surgical equipment and procedures to develop skills needed to assist with surgical care of animals. Upon completion of this course, students will be able to identify surgical instruments, develop sterile technique, maintain and operate surgical equipment, and assist with patient preparation, monitoring, and recovery. PREREQUISITE: 10091103 Clinical Pathology 1 for Vet Sciences.

10091106
Surgical Procedures 2 for Vet Sciences - Credits: 3
In this course, students explore the veterinary technician's role in surgery to develop skills needed to manage veterinary patients in the pre-, intra-, and post-operative phases. Upon completion of this course, students will be able to anticipate needs of the surgeon, provide veterinary surgical assistance, manage wounds and incisions, and perform dental prophylaxis in dogs and cats. PREREQUISITE: 10091108 Veterinary Pharmacology and COREQUISITE: 10091113 Anesthesia for Veterinary Sciences.

10091107
Imaging for Veterinary Sciences - Credits: 3
In this course, students explore veterinary imaging concepts and apply veterinary imaging techniques to use radiographic equipment and support diagnostic studies. Upon completion of this course, students will be able to properly position veterinary patients, produce diagnostic images, process exposed films, and maintain equipment. PREREQUISITE: 10091103 Clinical Pathology 1 for Vet Sciences.

10091108
Veterinary Pharmacology - Credits: 3
In this course, students examine drugs, vaccines, and other substances used in veterinary medicine to establish a knowledge base of their therapeutic use, administration, and side effects. Upon completion of this course, students will be able to accurately calculate dosages, prepare dispensed medications, safely administer drugs, and recognize normal and abnormal responses to medications. PREREQUISITE: Admission to Veterinary Technician plan.

10091110
Clinical Skills 1 for Vet Sciences - Credits: 2
In this course, students assimilate skills in a clinical setting to develop proficiency in animal nursing techniques. Upon completion of this course, students will be able to perform routine veterinary clinic procedures such as venipuncture, urine collection, and subcutaneous injection. PREREQUISITES: 10091108 Veterinary Pharmacology and 10091105 Surgical Procedures 1 for Vet Sciences.

10091111
Clinical Skills 2 for Vet Sciences - Credits: 2
In this course, students further assimilate skills in a clinical setting to develop proficiency in animal nursing techniques. Upon completion of this course, students will be able to perform more complex clinical procedures such as monitor patients in the anesthetic and recovery periods, properly restrain small animals, and prepare patients for surgery. PREREQUISITE: 10091110 Clinical Skills 1 for Vet Sciences.

10091112
Veterinary Technician Certification Review - Credits: 3
This is a summary course reviewing the skills, knowledge, and Veterinary Technician abilities acquired throughout the program. This course will serve to assist the student in preparing for the Veterinary Technician National Exam (VTNE) and Wisconsin State Exam required for certification. The course will also review critical laboratory skills and professional development issues. COREQUISITE: 10091106 Surgical Procedures 2 for Vet Sciences. NOTE: This class does not guarantee passage of the national and state Veterinary Technician Certification Exams, but is designed as a studying aid by reviewing the knowledge and skills that a veterinary technician student should possess upon graduation.

10091113
Anesthesia for Veterinary Sciences - Credits: 3
In this course, students investigate anesthetic delivery and monitoring equipment, pain management strategies, and appropriate responses to patient compromise to acquire skills needed to coordinate anesthetic events in veterinary patients. Upon completion of this course, students will be able to choose and administer appropriate veterinary anesthetic protocols, monitor and maintain patient status throughout anesthetic events, and maintain equipment and accurate anesthetic records. PREREQUISITES: 10091108 Veterinary Pharmacology, and COREQUISITE: 10091106 Surgical Procedures 2 for Vet Sciences.

10091114
Veterinary Technician Clinical Internship - Credits: 4
In this course, students hone animal nursing skills in a clinical setting to achieve proficiency needed to function in the role of veterinary technician according to the standards set by CVTEA. Upon completion of this course, students will have the skills and knowledge required of an entry level veterinary technician. PREREQUISITE: 10091110 Clinical Skills 1 for Vet Sciences.

10091120
Lab Animals and Non-Traditional Pets - Credits: 3
In this course, students explore characteristics, basic care, illness, and treatment of animals that may be encountered in research settings and/or kept as pets, to develop skills needed to participate in caring for these animals. Upon completion of this course, students will be able to provide basic husbandry and medical care to laboratory animals, exotic animals, and non-traditional pets. COREQUISITE: 10091103 Clinical Pathology 1 for Vet Sciences.

Welding

31-442-1 Technical Diploma (one-year) **Financial Aid Eligible**

Campuses: Ashland, New Richmond, Rice Lake, Superior

Program Overview

The Welding program teaches safety during all aspects of welding and cutting. Safety is the most important aspect of proper workmanship. Next, you will be taught the science and art of cutting, fabricating and welding using the latest equipment and technologies. Most entry-level welders can expect to be employed full time with full fringe benefits. Their duties can include fabricating parts and assemblies by reading blueprints, codes, specifications, weld symbols and drawings. Beginners can assist with material preparation, tack up, fitting and finally welding when you prove your ability in the workplace. The work can be physically demanding. Welding requires good manual dexterity and hand-eye coordination. Other essential employability skills include paying attention to details, working well with others in teams, having good communication skills, a positive attitude, excellent attendance and punctuality, and a good work ethic. Manual, semi-automatic and robotic welding will all continue to enjoy strong demand for the foreseeable future.

Admission Requirements

- Complete Online application form
- Review and sign Functional Abilities Disclosure
- Complete admissions meeting with a Northwood Tech counselor

Program Outcomes

Welding graduates will be able to:

- Demonstrate industry-recognized safety practices
- Interpret welding drawings
- Produce shielded metal arc welds (SMAW)
- Produce gas metal arc welds (GMAW)
- Produce flux core welds
- Produce gas tungsten arc welds (GTAW)
- Perform cutting operations

Career Outlook

Typical positions available after graduation include:

- Production Welder
- Construction Welder
- Maintenance Welder
- Welder/Fitter
- Welder Helper
- Welding Machine Operator
- Flame Cutter/Machine Operator

Career Pathways

The Welding program includes the following pathway options (page 243):

- Shielded Metal Arc Welding
- Gas Metal Arc Welding
- Flux Cored Arc Welding
- Gas Tungsten Arc Welding
- Welding/Maintenance and Fabrication

Curriculum

Number	Course Title	Credits (cr.)
Occupational Specific Courses		
31442321	Print Reading - Welding Trades	2 cr.
31442325	Welding Fabrication/Production (WBL) *	3 cr.
31442370	Gas Metal Arc Welding 1	3 cr.
31442371	Gas Metal Arc Welding 2*	2 cr.
31442372	Gas Metal Arc Welding 3*	1 cr.
31442373	Shielded Metal Arc Welding 1	3 cr.
31442374	Shielded Metal Arc Welding 2*	2 cr.
31442375	Shielded Metal Arc Welding 3*	2 cr.
31442376	Oxyfuel and Arc Cutting Processes	2 cr.
31442377	Flux Cored Arc Welding 1	2 cr.
31442378	Flux Cored Arc Welding 2*	2 cr.
31442379	Gas Tungsten Arc Welding 1	2 cr.
31442380	Gas Tungsten Arc Welding 2*	2 cr.
Occupational Specific Total		28 cr.
Occupational Supportive Courses**		
32801361	Applied Communications	2 cr.
32804303	Applied Math	2 cr.
Occupational Supportive Total		4 cr.
PROGRAM REQUIREMENTS		**32 cr.**

The Welding program is funded with $491,723 in WTCS Grant Funds.

* Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.
** See pages 35-38 for course descriptions.

31442321
Print Reading - Welding Trades - Credits: 2
Orthographic projection, sketching, dimensioning, section and auxiliary views, structural shape identification, weld symbols, welding symbol nomenclature, welded joint geometry, metric conversion, and interpretation of fabrications from prints.

31442325
Welding Fabrication/Production (WBL) - Credits: 3
This course introduces the student to the basics of metal fabrication including the use of layout tools and principles, and blueprint interpretation. Also, weldment fit-up, tacking, distortion, and flame straightening are covered. The use of shears, drilling, taping, painting, and CNC cutting equipment for fabrication purposes is also covered. PREREQUISITES: 31442321 Print Reading - Welding Trades, 31442370 Gas Metal Arc Welding 1, 31442373 Shielded Metal Arc Welding 1, 31442374 Shielded Metal Arc Welding 2, 31442376 Oxyfuel and Arc Cutting Processes, and COREQUISITE: 31442375 Shielded Metal Arc Welding 3.

31442370
Gas Metal Arc Welding 1 - Credits: 3
This course introduces the student to the basics of GMAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques.

31442371
Gas Metal Arc Welding 2 - Credits: 2
This course introduces the student to the next level of GMAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques. COREQUISITE: 31442370 Gas Metal Arc Welding 1.

31442372
Gas Metal Arc Welding 3 - Credits: 1
This course introduces the student to an advanced level of GMAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques. COREQUISITE: 31442371 Gas Metal Arc Welding 2.

31442373
Shielded Metal Arc Welding 1 - Credits: 3
This course introduces the student to the basics of SMAW welding. It includes the study of the type of metals and equipment utilized when welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard welding techniques.

31442374
Shielded Metal Arc Welding 2 - Credits: 2
This course introduces the student to the next level of SMAW welding. It includes the study of the type of metals and equipment utilized when welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard welding techniques. COREQUISITE: 31442373 Shielded Metal Arc Welding 1.

31442375
Shielded Metal Arc Welding 3 - Credits: 2
This course introduces the student to an advanced level of SMAW welding. It includes the study of the type of metals and equipment utilized in SMAW welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard welding techniques. COREQUISITE: 31442374 Shielded Metal Arc Welding 2.

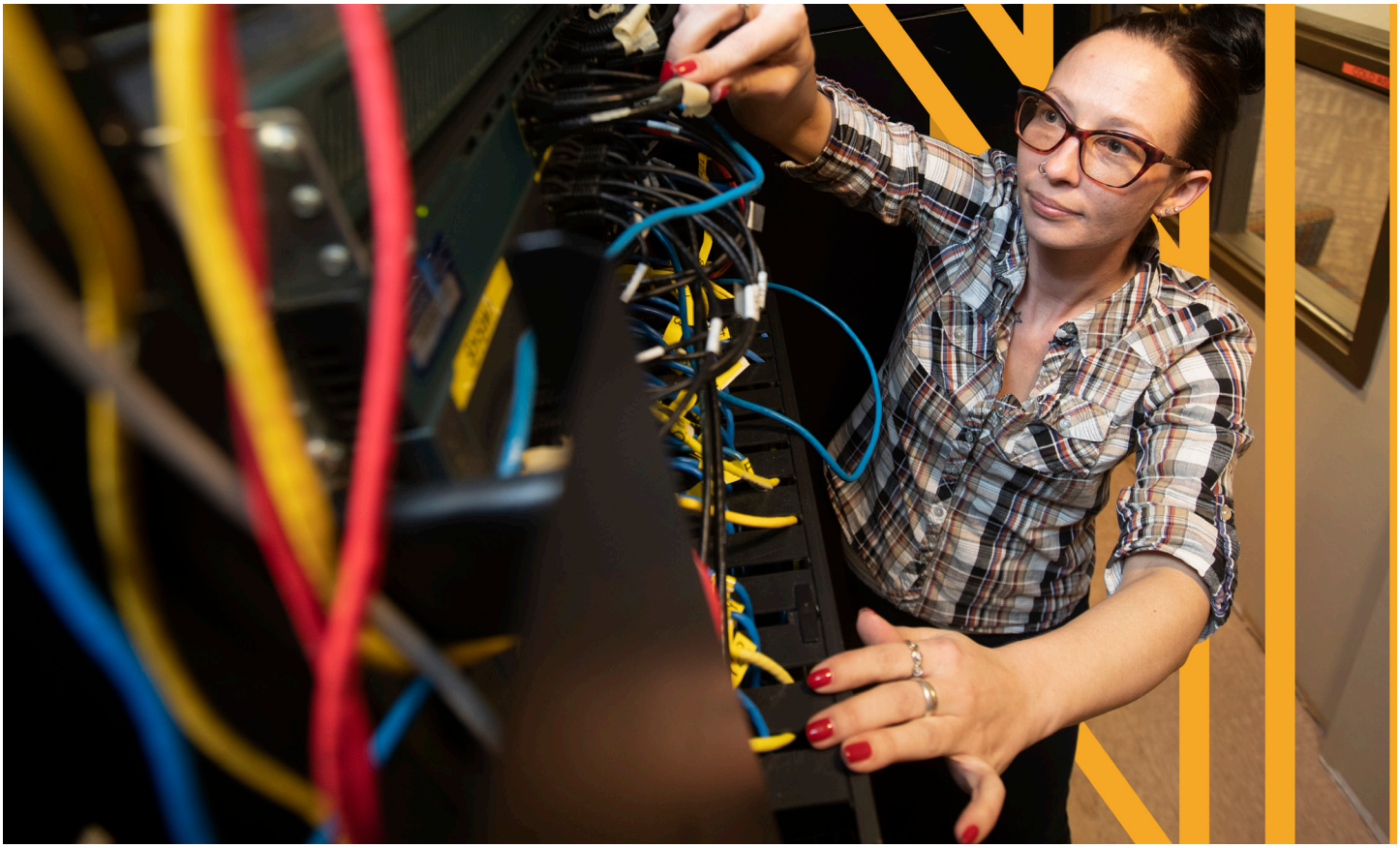
31442376
Oxyfuel and Arc Cutting Processes - Credits: 2
This course introduces the student to the basics of cutting and gouging operations. It includes the study of the common processes, techniques, and equipment utilized when cutting and gouging. The instruction emphasizes accepted applications in the use of carbon steel, stainless steel, and aluminum.

31442377
Flux Cored Arc Welding 1 - Credits: 2
This course introduces the student to the basics of FCAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques.

31442378
Flux Cored Arc Welding 2 - Credits: 2
This course introduces the student to the next level of FCAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques. COREQUISITE: 31442377 Flux Cored Arc Welding 1.

31442379
Gas Tungsten Arc Welding 1 - Credits: 2
This course introduces the student to the basics of GTAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing standard industry techniques.

31442380
Gas Tungsten Arc Welding 2 - Credits: 2
This course introduces the student to the next level of GTAW welding operations. It includes the study of the type of metals and equipment utilized in welding. The instruction emphasizes accepted applications in butting and joining metals utilizing the standard industry techniques. COREQUISITE: 31442379 Gas Tungsten Arc Welding 1.



CAREER PATHWAY MAPS

Accounting Pathway

You could take this first and get a credential.

Billing and Posting Clerk

Technical Diploma

13 Credits/ Less than 1 year

Potential Careers

Payroll Assistant, Payroll Clerk, Accounts Payable Clerk, Accounts Receivable Clerk, Bookkeeper, Accounting Technician

Tax Preparer Assistant

Pathway Certificate

10 Credits / 1 Year Part Time

Potential Careers

Tax Accounting Clerk, Tax Associate, Tax Preparer Assistant

Continue your education to obtain this technical diploma.

Accounting Assistant

Technical Diploma

30 Credits

Potential Careers

Accounting Clerk, Accounts Receivable Clerk, Accounts Payable Clerk, Payroll Clerk

Continue your education to obtain an associate degree.

Accounting

Associate Degree

60 credits

Potential Careers

Accountant, Bookkeeper, Accounts Receivable Specialist, Accounts Payable Specialist, Payroll Specialist, Cost Accounting Specialist, Tax Accounting Specialist

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Superior+
UW-Whitewater
UM-Crookston+
Bellevue University
Concordia University Wisconsin
Franklin University+
Lakeland University+
Milwaukee School of Engineering (MSOE)
Northland College+

Professional Certification
Students are also able to pursue professional certifications

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement / transfer guide directly related to Accounting

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Administrative Coordinator Pathway

You could take this first and get a credential.

Office Technology Assistant

Technical Diploma

18 Credits / Less Than 1 Year
Part Time

Potential Careers

Customer Service Representative, File Clerk, Receptionist/Information Clerk

Microsoft Office

Technical Diploma

10 Credits / Less Than One Year
Part Time

Potential Careers

Word Processor, Clerk Typist, Program Assistant

You could take this first and get a credential

Office Support Specialist

Technical Diploma

30 Credits / 1 Year Full Time; Part Time Options Available

Potential Careers

Office Support Specialist, Receptionist/Secretary, Data Entry Operator

Continue your education to obtain this associate degree.

Administrative Coordinator

Associate Degree

60 credits

Potential Careers

Administrative Coordinator, Executive Assistant, Office Manager, Virtual Assistant

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + This college has developed an agreement / transfer guide directly related to Administrative Coordinator

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Architectural Commercial Design Pathway

You could take this first and get a credential.

Drafting Technician

Technical Diploma

26 Credits / 1 Year Full Time

Potential Careers

Designer, CAD Technician, CAD Designer

Continue your education to obtain an associate degree.

Architectural Commercial Design

Associate Degree

63 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

CAD Technician, Store Planner, Project Manager, Technical Coordinator, Design Technician, CAD Technician, Architectural Technician, BIM Technician

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Become An Architect

The four steps include: Education, Experience, Examination and Licensure & Certification

For details, please go to the National Council of Architectural Registration Boards website: www.ncarb.org/become-architect/basics

Transfer Options

UW-Stout

UW-Whitewater

Bellevue University

Concordia University Wisconsin

Franklin University

Lakeland University

Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Automated Packaging Systems Technician Pathway

Embedded in the Automated Packaging Systems Technician program.

Mechatronics Basics

Technical Diploma

14 Credits / 1 Year Part Time

Potential Careers

Entry Level Electro-Mechanical Assembler, Maintenance Technician, Manufacturing Customer Service

You could earn this technical diploma.

Automated Packaging Systems Technician

Technical Diploma

63 Credits / 2 Years Full Time

Potential Careers

Packaging Systems Assembler, Maintenance Technician, Field Service Technician, Line Mechanic/ Adjuster, Packaging Systems Operator

The Automated Packaging Systems Technician program is funded with $295,458 in WTCS Grant Funds.

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Automation for Industrial Systems Pathway

Embedded in the Automation for Industrial Systems program.

IT-Network Technician

Technical Diploma

19 Credits / Less than 1 Year Part Time

Potential Careers

Computer Technician, Network Technician

Industrial Systems Specialist

Technical Diploma

28 Credits / 1 Year Full Time

Potential Careers

Field Service Technician, Instrumentation and Controls Technician (I&C), Electrical and Instrument Technician (E&I), Service Technician, Electrical Maintenance Technician

Continue your education to obtain an associate degree.

Automation for Industrial Systems

Associate Degree

64 Credits / 2 Years Full Time; 3 Years Part Time

Potential Careers

Control Systems Technician, Instrument Technician, Programmable Logic Controller (PLC) Technician, Industrial Automation Technician, Computer Technician, Network Technician, Controls Engineer, Automation Engineer

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + This college has developed a transfer guide directly related to Automation for Industrial Systems.

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Automotive Technician Pathway

Embedded in the Automotive Service Tech and Automotive Tech programs.

Automotive Maintenance and Light Repair Technician

Technical Diploma

11 Credits / 1 Semester

Potential Careers

Lube Technician, Automotive Maintenance and Light Repair Technician, Quick Service Technician

▼

You could earn this technical diploma.

Automotive Service Technician

Technical Diploma

28 Credits / One Year / 2 Semesters Full Time

Potential Careers

Automotive Service Technician, Drivability Technician, Brake Technician, Suspension and Alignment Technician, Quick Service Technician, Lube Technician, Auto Service Writer, Automotive Parts Technician.

▼

Continue your education to obtain this technical diploma.

Automotive Technician

Technical Diploma

54 Credits / Two Years Full Time

Potential Careers

Brake Technician, Air Conditioning Technician, Auto Transmission Technician, Automotive Electrical Technician, Service Writer, Drive Train Technician, Suspension and Alignment Technician, Drivability Technician, Automotive Technician

▼

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, www.transferology.com, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Business Management - General Emphasis Pathway

You could take this first and get a credential.

Customer Service Manager

Technical Diploma

30 Credits / 1 Year Full Time; Part Time Options Available

Potential Careers

Account Coordinator, Customer Service Specialist, Help Desk Specialist, Account Representative

Continue your education to obtain an associate degree.

Business Management - General Emphasis

Associate Degree

60 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

Store Manager, Customer Service, Assistant Manager, Management Trainee, Department Manager, Branch Manager, Operations Assistant, Coordinator, Owner/Entrepreneur, Sales, Agent, Client Services

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Superior+
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University+
Lakeland University+
Milwaukee School of Engineering (MSOE)
Northland College+
UM-Crookston+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement directly related to the Business Management field

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Construction and Cabinetmaking Pathway

You could take this first and get a credential.

Construction Essentials

Technical Diploma

9 Credits / 1 Year Part Time

Potential Careers

Construction Worker, Construction/ Carpenter Laborer, Carpenter Assistant, Carpentry Framer

Architectural Woodworking & Cabinetmaking

Technical Diploma

29 Credits / 1 Year

Potential Careers

Cabinetmaker, Cabinet Installer, Furniture Maker, Machine Operator, Interior Finish Carpenter

Continue your education to obtain this technical diploma.

Construction and Cabinetmaking

Technical Diploma

62 Credits / 2 Years Full Time

Potential Careers

Carpenter, Woodworking Machine Operator, Furniture Finisher, Millperson, Machine Setup Person, Cabinetmaker/Furniture Maker, Salesperson, Estimator, Draftsperson, Material Handling Specialist, Interior/Exterior Finisher

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

-Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Early Childhood Education Pathway

You could take this first and get a credential.

Group Child Care Essentials

Pathway Certificate

6 Credits / 1 Semester Part Time

Potential Careers

Child Care Teacher, Assistant Child Care Teacher

Preschool Education Professional (The Registry Preschool Credential)

Pathway Certificate

18 Credits / 2 Semesters Part Time

Potential Careers

Child Care Teacher, Assistant Child Care Teacher, Family Child Care Provider

Continue your education to obtain this technical diploma.

E-Connect-Child Care Services

Technical Diploma

27 Credits / 1 Year / 2 Semesters Full Time; Part Time Option Available

Potential Careers

Child Care Teacher, Child Care Assistant Teacher, Family Child Care Provider, Infant or Toddler Caregiver, Au Pair/Nanny, Early Childhood Special Needs Assistant, Public School Teacher Aide/Assistant

Continue your education to obtain an associate degree.

Early Childhood Education/E-CHiLD

Associate Degree

60 Credits / Associate Degree - 2 Year

Potential Careers

Child Care Teacher, Preschool Teacher, Family Child Care Provider, Infant or Toddler Caregiver, Early Childhood Special Needs Assistant, , Public School Teacher Aide / Assistant, Head Start Teacher/Assistant, Program Director / Administrator, Au Pair/Nanny

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Green Bay+ | UW-Oshkosh+ | UW-Milwaukee+ |UW-River Falls+ | UW-Stevens Point+ | UW-Stout+ | UW-Superior+ |UW-Whitewater+ | Bellevue University | Concordia University Wisconsin | Franklin University | Lakeland University+ | Milwaukee School of Engineering | Northland College+ | Viterbo University+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement directly related to the Early Childhood Education Program and/or similar programs such as Elementary Education and Human Development & Family Studies

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

-Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Farm Operation Pathway

You could take this first and get a credential.

Crop Production

Pathway Certificate

9 Credits / less than one year

Potential Careers

Field Technician, Field Applicator, Custom Operator, Agricultural Equipment Operator

Livestock Production

Pathway Certificate

9 Credits / less than one year

Potential Careers

Farm Laborers, Feeder, Animal / Livestock Handler

Agricultural Business Fundamentals

Pathway Certificate

11 Credits / less than one year

Potential Careers

Farm Bookkeeper, Agricultural Administrative Assistant

Continue your education to obtain this technical diploma.

Farm Operation

Technical Diploma

27 Credits / 1 Year

Potential Careers

CSA Owner, Organic Farmer, Farm Owner, Farm Manager / Operator, Farm / Field Crop Manager, Livestock Farmer, Breeder, Farm Worker, Dairy Laborer, Dairy Herdsperson

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed below

-The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at the four year college listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Financial Services Pathway

You could take this first and get a credential.

Financial Services Customer Representative

Technical Diploma

14 Credits / 1 Semester Full Time; Part Time Options Available

Potential Careers

Bank Teller, Customer Service Associate, Member Services Representative, Cashier, Sales Associate, Loan Analyst, Loan Processor

Continue your education to obtain an associate degree.

Financial Services

Associate Degree

60 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

Business Manager or Owner, Loan Officer or Personal Banker, Sales or Sales Manager, Financial Analyst, Investment Advisor, Insurance Sales or Broker, Real Estate Sales or Broker, Stockbroker, Accountant / Bookkeeper

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Superior+
UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)
Northland College+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement directly related to the Financial Services field

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Gerontology - Aging Services Professional Pathway

You could take this first and get a credential.

Dementia Care

Pathway Certificate

12 Credits / 1 Year Part Time

Potential Career Settings:

Hospitals, Hospice, Home Health Care and Assisted Living, Long Term Care, Nursing Homes and Group Homes, Adult Care, Senior Centers, Community, Non-Profit and Government Agencies, Counseling Centers, Business and Industry

Gerontology for Healthcare Professionals

Pathway Certificate

12 Credits / 1 or 2 semesters / Fall Only

Potential Career Settings:

Hospitals, Hospice, Home Health Care and Assisted Living, Long Term Care, Nursing Homes and Group Homes, Adult Care, Senior Centers, Community, Non-Profit and Government Agencies, Counseling Centers, Business and Industry

Continue your education to obtain an associate degree.

Gerontology - Aging Services Professional

Associate Degree

61 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

Aging Services Provider, Advocacy Specialist, Geriatric Care Specialist, Dementia Care Specialist/Provider, Benefits Coordinator, Client Navigation Specialist, Activity/Recreation Coordinator, Housing/ Transportation Specialist, Program Planner

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Eau Claire+
UW-Stout+
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed below

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement / transfer guide directly related to the Gerontology - Aging Services Professional program

- To learn how your education, or previous college credits, will transfer, talk to transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, www.transferology.com, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Health Information Technology Pathway

You could take this first and get a credential.

Medical Coding Specialist

Technical Diploma

29 Credits / 1 Year Full Time; Part Time Option Available

Potential Careers

Medical Coding Specialist, Clinical Coding Specialist, Claims Analyst

Continue your education to obtain an associate degree.

Health Information Technology

Associate Degree

62 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

Health Information Technician, HIM Supervisor, Insurance/Business Specialist

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-La Crosse+
UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)
The College of St. Scholastica+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement / transfer guide directly related to the Health Information Technology Program

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Heating, Ventilation, and Air Conditioning/Refrigeration Pathway

You could take this first to get a credential.

Refrigeration Essentials

Technical Diploma

14 Credits / Less than One Year

Potential Careers

Service Technician, Refrigeration Technician

Continue your education to obtain this technical diploma.

HVAC Installation Technician

Technical Diploma

27 Credits / 1 Year Full Time

Potential Careers

HVAC Installer, HVAC Mechanic, Service Technician, Systems Mechanic

Continue your education to obtain this technical diploma.

Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)

Technical Diploma

54 Credits / 2 Years Full Time

Potential Careers

Residential HVAC/R Technician, Commercial HVAC/R Technician, Industrial HVAC/R Technician, Mechanical Contractor HVAC/R Technician, Facilities HVAC/R Technician, Wholesale Service Representative

With additional education and/or work experience, graduates may find other opportunities for employment, including:
- Energy Management Technician
- Business Owner HVAC/R
- Practice Engineering of HVAC/R Systems

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Human Resource Management Pathway

You could take this first and get a credential.

Human Resources and Payroll Generalist

Technical Diploma

27 Credits / 2 Years Part Time

Potential Careers

Human Resources Administrative Assistant, Human Resources Associate, Human Resources Coordinator, Human Resources Generalist, Human Resources Technician, Human Resources Assistant, Payroll Assistant, Payroll Coordinator, Payroll Specialist

Continue your education to obtain an associate degree.

Human Resource Management

Associate Degree

61 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

Compensation and Benefits Specialist, Employment Specialist, Human Resources Coordinator, Human Resources Specialist, Recruitment Specialist, Training and Development Specialist, Payroll Analyst, Human Resources Generalist, Human Resources Assistant

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University+
Lakeland University+
Milwaukee School of Engineering (MSOE)
Northland College+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement directly related to the Humand Resource Management field

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Human Services Associate Pathway

You could take this first and get a credential.

Community-Based Residential Facility (CBRF) Caregiver

Technical Diploma

2 Credits / 1 Course / 1 Semester Part Time

Potential Careers

CBRF Caregiver program graduates will be well prepared to use their knowledge, skills and abilities in a variety of positions in diverse CBRF settings, such as:

Assisted Living, Memory Care, Group Homes, Transitional Housing

Substance Abuse Counselor Education

Technical Diploma

27 Credits / 1 Year Full Time

Potential Careers

Substance Abuse Counselor - In Training, Assessment Counselor, Intake Counselor, Substance Abuse Counselor

Career qualifications vary based on licensure application, examination and supervised practice/employment hours as specified and approved by the Wisconsin Department of Safety and Professional Services

Continue your education to obtain an associate degree.

Human Services Associate

Associate Degree

60 Credits / 2 Years Full Time

Potential Careers

Case Worker, Community Outreach/Support Worker, Income Maintenance Worker, Human Services / Information and Referral Specialist, Substance Abuse Counselor (with specialized field experience), Intake Worker, Prevention Worker, Residential Manager, Social Services Assistant, Volunteer Coordinator, Adult Day Care Worker, Human Services Technician, Counselor Assistant, Residential Counselor, Youth Care Counselor, Family Advocate, Activities Assistant, Visitation Worker, Program Aide

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Eau Claire+
UW-Stout+
UW-Superior+
UW-Whitewater
Bellevue University
Concordia University Wisconsin+
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)
The College of St. Scholastica+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement / transfer guide directly related to the Human Services and/or similar programs such as Social Work, Human Services, and Human Development & Family Studies

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Information Technology - Cybersecurity Specialist Pathway

Embedded in the IT-Cybersecurity Specialist program.

IT - Network Technician

Technical Diploma

19 Credits / Less than 1 Year Part Time

Potential Careers

Computer Technician, Network Technician

You could earn this associate degree.

IT - Cybersecurity Specialist

Associate Degree

63 Credits / 2 Years Full Time; 3 Years Part Time

Potential Careers

Network Administrator, Network Support Specialist, Cyber Security Specialist, Network Security Specialist, Network Specialist, Computer Specialist, SOC Analyst

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout+
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement related directly to the Information Technology (IT) Program

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Information Technology - Systems Administration Specialist Pathway

Embedded in the IT-Systems Administration Specialist.

IT - Network Technician

Technical Diploma

19 Credits / Less than 1 Year Part Time

Potential Careers

Computer Technician, Network Technician

You could earn this associate degree.

Information Technology - Systems Administration Specialist

Associate Degree

63 Credits / 2 Years Full-Time; 3 Years Part Time

Potential Careers

Systems Administrator, Microsoft Server Administrator, Network Technician, VMware vSphere Administrator, Database Administrator, Cloud Technician

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout+
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement directly related to the Information Technology (IT) Program

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools assist your transfer process

Leadership Development Pathway

You could take this first and get a credential.

Leadership Essentials

Technical Diploma

12 Credits / Less than 1 Year

Potential Careers

Office Coordinator, Office Supervisor, Customer Service Specialist, Group Coordinator, Team Lead

Supervisory Leadership

Technical Certificate

18 Credits / Less than 1 Year

Continue your education to obtain an associate degree.

Leadership Development

Associate Degree

60 Credits / 2 Years Full Time; Part Time Options Available

Potential Careers

Supervisor, Coach, Manager, Team Leader, Group Leader, Department Head, Mentor

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Whitewater
UM-Crookston+
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University+
Milwaukee School of Engineering (MSOE)
Northland College+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- +These colleges have developed an agreement / transfer guide direclty related to the Leadership Development program

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Machine Tool Operation - CNC Pathway

Embedded in the Machine Tool Operation - CNC program.

CNC Technician

Technical Diploma

15 Credits / 1 Semester

Potential Careers

CNC Machine Operator, CNC Set-up Operator, CNC Operator, Machinist

This academy is funded with $162,170 in WTCS Grant Funds.

You could earn this technical diploma.

Machine Tool Operation - CNC

Technical Diploma

32 Credits / 1 Year Full Time

Potential Careers

Machine Tool Operator, Apprentice Machinist, CNC Machinist, CNC Programmer, Maintenance Machinist

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Machine Tool Technician Pathway

You could take this first and get a credential.

Machine Tool Operation

Technical Diploma

28 Credits / 1 Year Full Time

Potential Careers

Machine Operator, Machinist Apprentice, Machine Setup Operator

Continue your education to obtain this technical diploma.

Machine Tool Technician

Technical Diploma

56 Credits / 2 Years Full Time

Potential Careers

Machine Tool Operator, Apprentice Machinist, Machine Setup Person, Tool Room Machinist, CNC Machinist, Maintenance Machinist, CNC Programmer

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com,* or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Machine Tooling Technics Pathway

Embedded in the Machine Tooling Technics program.

Entry Level Machining

Technical Diploma

27 Credits

Potential Careers

Machine Operator, Machine Repair Person, Machinist, Maintenance Machinist, Production Machinist, Set-Up Machinist

Multi-Axis CNC Milling

Technical Diploma

14 Credits

Potential Careers

CNC Machinist, Programmer

You could earn this technical diploma.

Machine Tooling Technics

Technical Diploma

54 Credits / 2 Years Full Time

Potential Careers

Tool and Die Mold Maker, Machinist Apprentice, Machine Operator, CNC Machinist, Setup Person, Programmer, Maintenance Machinist

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Marine Repair Technician Pathway

Embedded in the Marine Repair Technician program.

Marine Repair Essentials

Pathway Certificate

14 Credits / 1 Semester Full Time

Potential Careers

Outboard Motor Technician, Marine Service Technician, Marine Mechanic, Small Engine Technician, Dock Attendant/Dock Hand, Marine Fuel Dock Attendant

Continue your education to obtain this technical diploma.

Marine Repair Technician

Technical Diploma

41 Credits / 3 Semesters Full Time

Potential Careers

Inboard Engine Technician, Outboard Motor Technician, Boat Rigging Technician, Electronic Equipment Installation Technician, Marine Sales Representative, Marine Service Technician, Marine Service Supervisor

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Medical Administrative Professional Pathway

You could take this first and get a credential.

Healthcare Receptionist

Technical Diploma

15 Credits / One Semester Full Time; Part Time Options Available

Potential Careers

Patient Services Representative, Medical Scheduler, Medical Information Clerk, Appointment Coordinator, Patient Access Representative

Continue your education to obtain a technical diploma.

Health Office Professional

Technical Diploma

30 Credits / One year Full Time; Part Time Options Available

Potential Careers

Medical Office Specialist, Medical Records Specialist, Patient Services Representative, Hospital Admissions Representative, Customer Service Representative, Medical Scheduler, Health Information Clerk

Medical Billing Specialist

Technical Diploma

26 Credits

Potential Careers

Hospital Medical Biller, Physician's Office Medical Biller, Laboratory Medical Biller, Patient Account Representative, Revenue Cycle Representative

Continue your education to obtain an associate degree.

Medical Administrative Professional

Associate Degree

60 Credits / Two Years Full Time; Part Time Options Available

Potential Careers

Medical Administrative Assistant, Medical Records Specialist, Patient Services Representative, Medical Scheduler, Hospital Admissions Representative, Medical Billing Specialist, Patient Account Representative, Clinic Coder, Health Unit Coordinator (HUC), Health Information Clerk

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin Universtiy+
Lakeland University+
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed transfer guides directly related to Medical Administrative Professional

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Medical Assistant Pathway

Embedded in the Medical Assistant program.

Patient Services Specialist

Technical Diploma

17 Credits / 1 Year / 2 Semesters Part Time

Potential Careers

Medical Insurance Clerk, Medical Receptionist, Patient Scheduler, Healthcare Customer Service Representative

You could earn this technical diploma.

Medical Assistant

Technical Diploma

33 Credits / 1 Year Full Time; Part Time Options Available

Potential Careers

Medical Assistant, Clinical Assistant, Phlebotomist

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your educaton, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Nonprofit Leadership Pathway

You could take this first and get a credential.

Nonprofit Essentials

Pathway Certificate

15 Credits / Less than 1 Year

Potential Careers

Fundraising Coordinator, Development Coordinator, Youth Worker, Youth Specialist

Supervisory Leadership

Technical Certificate

18 Credits / Less than 1 Year

Supervisory Leadership ladders into the Nonprofit Leadership program

Leadership Essentials

Technical Diploma

12 Credits / Less than 1 Year

Potential Careers

Office Coordinator, Office Supervisor, Customer Service Specialist, Group Coordinator, Team Lead

Continue your education to obtain this technical diploma.

Nonprofit Professional

Technical Diploma

30 Credits / 1 Year

Potential Careers

Fundraising Coordinator, Relationship Manager, Marketing Communications Associate, Program Manager

Continue your education to obtain an associate degree.

Nonprofit Leadership

Associate Degree

60 Credits | 2 Years Full-Time; Part Time Options Available

Potential Careers

Program Coordinator, Marketing and Communications Coordinator, Volunteer Coordinator, Director of Programs

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

UW-Whitewater

Bellevue University

Concordia University Wisconsin

Franklin University

Lakeland University+

Milwaukee School of Engineering (MSOE)

Northland College+

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement/transfer guide directly related to Nonprofit Leadership

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com,* or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Nursing - Associate Degree Pathway

Nursing Assistant is required for Nursing - Associate Degree.

Nursing Assistant

Technical Diploma (Not embedded, but a requirement for the Nursing programs)

2 Credits / 90 Hour Course

Potential Careers

Nursing Assistant

Licensed Practical Nurse (LPN)

If you are a Licensed Practical Nurse (LPN) and are interested in becoming an associate degree nurse.

Credits vary depending upon previously completed courses

Potential Careers

Licensed Practical Nurse

You could earn this associate degree.

Nursing - Associate Degree

Associate Degree

70 Credits / At Least 2 Years
Full Time or Part Time Options available

Potential Careers

Registered Nurse

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Eau Claire+***
UW-Eau Claire NWNA+
UW-Green Bay+***
UW-Madison+***
UW-Milwaukee+***
UW-Oshkosh+***
UW-Stevens Point+***
UW-Stout
UW-Superior+
UW-Whitewater
Alverno College+
Bellevue University
Cardinal Stritch University+
Carthage College+
Chamberlain University+
Concordia University Wisconsin
Franklin University+
Herzing University+
Grand Canyon University+
Lakeland University+
Marian University+
Milwaukee School of Engineering (MSOE)
Mount Mary University+
Purdue University Northwest+
University of Arkansas Grantham+
Viterbo University+

***Current Registered Nurses and Graduates of the Nursing – Associate Degree program (after May 1996) are eligible to receive a total 60 transfer credits to be applied to a Bachelor of Science in Nursing degree from a UW System Collaborative Nursing Program (CNP)/BSN@Home.

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + These colleges have developed an agreement / transfer guide directly related to the Nursing - Associate Degree Program***

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Paramedic Technician Pathway

EMT is required for the EMT-Paramedic and Parmedic Technician Programs.

Emergency Medical Technician

Technical Diploma (Not embedded, but a requirement for the Paramedic Programs)

5 Credits / 180 Required Hours

Potential Careers

Emergency Medical Technician (EMT)

Continue your education to obtain this technical diploma.

EMT-Paramedic

Technical Diploma

38 Credits / 16 months Full Time

Potential Careers

Graduates of the program will be ready to start their career in a variety of healthcare settings including:

Ambulance Service, Dispatch Centers, First Responder Units, Hospitals/ Emergency Departments, Industrial Safety Departments, Rescue Squads, Urgent Care Facilities

Continue your education to obtain an associate degree.

Paramedic Technician

Associate Degree

67 Credits / 2 Years Full Time; Part Time Option Available

Potential Careers

Graduates of the program will be ready to start their career in a variety of healthcare settings including:

Ambulance Service, Dispatch Centers, First Responder Units, Hospitals/Emergency Departments, Industrial Safety Departments, Rescue Squads, Urgent Care Facilities

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process.

Utility Construction Technician Pathway

Embedded in the Utility Construction Technician.

Truck Driving

Technical Diploma

10 Credits / Less than 1 Year

Potential Careers

Company Driver/Owner Operator, Driver Manager. Driver Mentor, Local/Regional/Long Distance Driver, Recruiting Specialist, Dispatch Driver, Over-the-Road Truck Driver, Straight Truck Driver (Dump, Cement, Delivery)

Continue your education to obtain this technical diploma.

Utility Construction Technician

Technical Diploma

37 Credits / 1 Year

Potential Careers

Utility Service Operator, Vibratory Plow Operator, Horizontal Directional, Drill Operator, Excavator Operator, Truck Driver Equipment Hauler, Fiber Optic and Copper Slicer, Utility Service Flagger, Underground Facilities Locator, Utility Service Laborer

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Veterinary Technician Pathway

Technical diploma embedded in the Veterinary Technician program.

Veterinary Assistant

Technical Diploma

32 Credits / 1 Year Full Time

Potential Careers

Veterinary Assistant

Veterinary assistants can work as assistants, receptionists and kennel workers. Veterinary assistants handle animals and provide nursing assistance, feed and exercise animals, fill prescriptions and keep exam rooms and reception desks running smoothly.

You could earn this associate degree.

Veterinary Technician

Associate Degree

65 Credits / 2 Years Full Time

Potential Careers

Veterinary Technician, Laboratory Animal Technician

Veterinary Technicians work in veterinary clinics and hospitals, humane societies, education, pharmaceutical supplies, research, zoos and wildlife parks, military, public health and government. They collect patient history and perform initial examinations, run laboratory tests, take x-rays, administer anesthesia, and assist in surgery.

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-River Falls+
UW-Stout
UW-Whitewater
Bellevue University
Concordia University Wisconsin
Franklin University
Lakeland University
Milwaukee School of Engineering (MSOE)

Important Notes on Transferring:

- Check out *NorthwoodTech.edu/transfer* for details on specific agreements listed

- The colleges listed have developed an Associate Degree to Bachelor Degree Articulation Agreement with Northwood Tech

- + This college has developed an agreement directly related to the Veterinary Technician Program

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Welding Pathway

Embedded in the Welding program.

Shielded Metal Arc (SMAW)

Technical Diploma

7 Credits / Less Than 1 Year
Part Time

Potential Careers

Production Welding,
Welder Helper

Gas Metal Arc Welding (GMAW)

Technical Diploma

7 Credits / Less Than 1 Year
Part Time

Potential Careers

Production Welder,
Welder Helper

Embedded in the Welding program.

Flux Cored Arc Welding (FCAW)

Technical Diploma

6 Credits / Less than 1 Year
Part Time

Potential Careers

Production Welder,
Welder Helper

Gas Tungsten Arc Welding (GTAW)

Technical Diploma

8 Credits / Less than 1 Year
Part Time

Potential Careers

Production Welder,
Welder Helper

Embedded in the Welding program.

Welding/Maintenance and Fabrication

Technical Diploma

14 Credits / Less Than 1 Year Part Time

Potential Careers

Production Welding, Welder / Fitter, Flame Cutter / Machine Operator

You could earn this technical diploma.

Welding

Technical Diploma

32 Credits / 1 Year Full Time

Potential Careers

Production Welder, Construction Welder, Maintenance Welder, Welding Machine Operator, Welder/Fitter, Welder Helper, Flame Cutter/Machine Operator

The Welding program is funded with $491,723 in WTCS Grant Funds.

Continue your education to obtain a bachelor's degree.

BEYOND Northwood Tech

Transfer Options

UW-Stout

Important Notes on Transferring:

- Check out NorthwoodTech.edu/transfer for details on specific agreements listed

- The college listed has developed a Technical Diploma to Bachelor Degree Articulation Agreement with Northwood Tech

- To learn how your education, or previous college credits, will transfer, talk to a transfer coordinator, at any of the four year colleges listed, to learn how to maximize your credit transfer opportunities

- Transferology, *www.transferology.com*, or Transfer Evaluation System (TES), may be helpful tools to assist your transfer process

Administration, Faculty, and Management Staff

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M.S., U of Wisconsin-River Falls
PH.D., U of Minnesota-Twin Cities

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La siguiente persona ha sido designada para supervisar que se cumplan las disposiciones del Tftulo IX de las Enmiendas sobre Educación (Education Amendments) de 1972 y el artfculo 504 de la Ley de Rehabilitación (Rehabilitation Act) de 1973, y para manejar las consultas relativas a las politicas contra la discriminación de la universidad: Amanda Gohde, Affirmative Action/ Equal Opportunity Officer/ Title IX Coordinator/Director, Human Resources (Responsable de Acciones Afirmativas/Igualdad de Oportunidades/Coordinadora del Tftulo IX/Directora de Recursos Humanos), 1900 College Drive, Rice Lake WI 54868, 715-645-7042, TTY 711, Amanda.Gohde@NorthwoodTech.edu.

Lub Tsev Kawm Qib Siab Northwood Technical (Northwood Tech) tsis ciav-cais leej twg vim nws hom haiv neeg, cev nqaij daim tawv, caj ces, kev ntseeg, poj niam txiv neej, kev pab cuam hauv cov kev pabcuam hauv lub cev tsoos tsho, qhov xwm txheej qub tub rog, teb chaws yug, hnub nyoog, kev xiam oob qhab, kev nyiam rau fab kev sib deev, kev muaj txij nkawm los sis tsev neeg, cev xeeb tub, cov mob

los sis xwm txheej ntsig txog cev xeeb tub hauv ib pab pawg neeg uas muaj kev tiv thaiv los ntawm xeev los sis hauv cheeb tsam txoj cai lij choj hauv kev ua hauj lwm, kev lees paub los sis nws cov hauj lwm los sis cov tes dej num. Northwood Tech qhib qhia cov qib kawm, daim ntawv pov thawj, kev kawm ua hauj lwm thiab daim ntawv pov thawj hauv Kev Ua Liaj Ua Teb, Ua Khoom Noj, thiab Pab Pawg Cov Peev Txheej Hav Zoov Hav Tsuag, Pab Pawg Kev Tsim Vaj Tse thiab Kev Tsim Kho, Kev Lag Luam, Kev Tswj Xyuas, Kev Tuav Tswj, thiab Pab Pawg Nyiaj Txiag, Pab Pawg Tsev Neeg thiab Cov Neeg Siv Khoom, Pab Pawg Tshawb Fawb Txog Kev Noj Qab Haus Huv, Pab Pawg Tos Qhua thiab Kev Ncig Teb Chaws, Pab Pawg Saib Xyuas Thev Naus Laus Zis Ntaub Ntawv, Pab Pawg IT Hauv Kev Tsim Khoom, Kev Cai Lij Choj, Kev Nyab Xeeb Rau Pej Xeem, thiab Pab Pawg Kev Ruaj Ntseg, Kev Kawm Txog Kev Ywj Pheej, Pab Pawg Kev Tsim Khoom, Kev Tsim Lub Program Npaj thiab Kev Thauj Mus Los, Pab Pawg Xa Faib Khoom thiab Kev Xa Khoom.

Tus neeg hauv qab no tau muab xaiv los saib xyuas Title IX ntawm Kev Hloov Kho Kev Kawm Ntawv ntawm xyoo 1972 thiab Tshooj 504 ntawm Txoj Cai Kev Kho Kom Rov Ua Tau Hauj Lwm Xyoo 1973 thiab los daws cov lus nug txog Tsev Kawm Qib Siab txoj cai tsis muaj kev ntxub ntxaug: Amanda Gohde, Kev Lees Paub Txog Kev Nqis Tes Ua / Tus Tub Ceev Xwm Saib Kev Muab Lub Hwv Tsam Kom Sib Npaug Zog / Title IX Tus Tub Tuav Hauj Lwm/Tus Thawj Coj , Chaw Saib Xyuas Peev Txheej Rau Pej Xeem, 1900 College Drive, Rice Lake WI 54868, 715-645-7042, TTY 711, Amanda.Gohde@NorthwoodTech.edu.

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Northwood Tech has four campuses that are part of the Northwood Technical College district. Together they serve the educational and career needs of more than 17,000 residents of northwestern Wisconsin each year. Each campus offers career-focused associate degree programs, technical diplomas, customized training for area businesses, and a wide array of courses for personal or career enrichment. Northwood Tech is also part of the statewide technical college system.

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