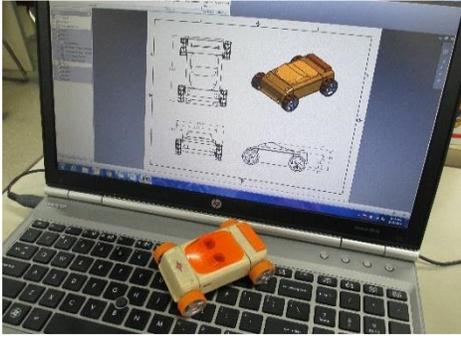




CAREER PATHWAYS

Planning Guide 2020-2021



Career Planning Overview

- 3 Career Planning Overview
- 4 North Dakota Choice Ready
- 5 Graduation Requirements
- 34 Career Ready Work Experience
- 35 Extended Learning Experience

Planning & Support

- 6 North Dakota Scholarship Requirements
- 7 North Dakota Scholarship Checklist
- 8 Why Career Pathways
- 9-10 FPS Career Planning
- 11 Critical 21st Century Skills
- 36 Four-Year Plan Template

Fargo & Cass County CTE Center Career Cluster Pathways

- 12 Agriculture & Natural Resources
- 14 Architecture & Construction
- 16 Arts, AV Tech, & Communication
- 18 Business Management & Administration
- 20 Health Sciences
- 22 Human Services – FACS & Education
- 24 Information Technology
- 26 Manufacturing
- 28 Marketing & Sales
- 30 STEAM
- 32 Transportation





Dear Students, Parents, and Community members:

Students are often asked,

“What do you want to be when you grow up?”

From kindergarten through elementary, middle school to high school, learners in the Fargo Public Schools are afforded access to academic, career-based, and extra-curricular activities to begin this journey. Academic foundations provide the knowledge and essential skills learners need to be successful across all disciplines. Extra-curricular experiences often promote teamwork, leadership and perseverance, while career-based curriculums open the door for career awareness, exploration and preparation related to specific career clusters.

Career and technical education and academic elective courses are designed to enrich learner education through a career lens including career awareness, real-world projects, industry aligned skills, technology integration, job shadowing, and post-secondary partnerships. Learner self-reflection compels students to discover interests and acknowledge aptitudes which can set the stage for beginning exploration of career pathways in high school.

The Fargo Career Pathways booklet is a resource to inform learners and families on this quest to:

- provide awareness of the 16 Career Clusters for career discovery
- outline the coursework for Fargo career pathways
- communicate essential information to students, parents, staff, and community stakeholders
- connect high school academic and career and technical education coursework with students to begin career exploration
- align student interests and aptitude with career pathways
- inform learners about future viable job opportunities related to each career pathway
- provide information about North Dakota post-secondary colleges and degree programs aligned to each career pathway
- provide parents and students with tools to plan and make informed decisions
- promote requirements to be eligible for the North Dakota Academic, CTE scholarship and Choice-Ready indicators
- outline Fargo graduation requirements and Profile of a Graduate disposition
- communicate important assessments for self-reflection and college preparation
- connect essential career support resources with students and families

Fargo Public School’s mission is “Educating and empowering all students to succeed!” The exploration of career pathways provides choice to engage students in their own learning and discovery in passion areas. Coursework exposes students to future career options and skills to prepare them for the next steps beyond high school. With so many career options to choose from, making the most of the high school experience is critical! The Career Pathway Guide is a resource to inform and begin intentional four-year planning to make sure all Fargo learners graduate Choice-Ready, and ultimately, understand their options on their pathway as an adult!

Thank you for your support and participating in the career planning for student success!

NORTH DAKOTA CHOICE READY



ESSENTIAL SKILLS

Earn a *North Dakota high school diploma* or *GED* and

Complete a *9-week Career Education/Individual Counseling* (15.1-21-18), *Financial Literacy* (15.1-21-21), and pass *ND Civics Test* (15.1-21-27) and **four or more** additional indicators:

- 25 hours of Community Service
- 95% Attendance (not counting school related absences)
- Workplace Learning Experience
- Two or more years in organized Co-Curricular Activities
- Two or more years in organized Extra-Curricular Activities
- Successfully complete a Capstone Project
- Successfully complete an on-line learning course
- Demonstrate competency in 21st Century Skills

Students shall then complete **two or more** of the **CHOICE READY** components below.



POST-SECONDARY READY

Complete a *Four Year Rolling Career Plan*, earn a **2.8 GPA or greater**, and complete one academic indicator set below:

ACT Composite score of 22 or greater

OR

ACT / SAT minimum or subsection scores

- ACT English – 18 ▪ SAT Reading/Writing – 480
- ACT Reading – 22 ▪ SAT Math – 530
- ACT Math – 21
- ACT Science – 23

OR

Two or more additional indicators:

- Advanced Placement Course (A, B or C)
- Dual Credit Course (English or Math) (A, B or C)
- Algebra II (A, B or C)
- Advance Placement Exam (3+)
- International Baccalaureate Exam (4+)
- 3.0 GP in core course requirement for NDUS admission
- CLEM/CREAM (Eng/Math) Course (70% or greater)



WORKFORCE READY

Complete a *Four Year Rolling Career Plan*, and complete two or more additional indicators:

- Complete three CTE courses or more (A, B or C)
- Complete Career Ready Practices (3.0)
- Dual Credit Course (A, B or C)
- Work Keys (Gold or Silver)
- Technical Assessment / Industry Credential
- Work-place Learning Experience (75 hours)
- CLEM/CREAM (Eng/Math) Course (70% or greater)
- NDSA (Reading/Math) Level 3 or greater or (ACT for Accountability: English 19/Mathematics 22)



MILITARY READY

- Complete a *Four Year Rolling Career Plan*,
- **ASVAB score of 31 or greater** (as determined by branch),
- **Quality Citizenship** (No Expulsions/Suspensions), **Physically Fit** (Students who have successfully completed required PE courses (A, B, or C) and Complete **two or more** additional indicators from the **Post-Secondary** or **Workforce** options.



The proper selection of courses by students is an important matter. Each course should be carefully selected as an integral part of the student's four-year educational plan. **Carefully thought-out course selections are equally important to the school district because commitments for staffing for the ensuing year are based on the student selections. Therefore, follow building guidelines for schedule change requests.**

Graduation requirements are minimum standards. Students are encouraged to take additional courses during the school year and summer school sessions.

Fargo Graduation Requirements

<u>Required Course</u>	<u>Credits</u>
English	4
Math.....	3
• Algebra I	
• Geometry	
• one other math credit	
Science.....	3
• Physical Science	
• Biology or AP Biology	
• one other Science Credit	
Physical Education.....	1½
• PE 1 (1/2), PE2 (1/2), and other PE Elective (1/2)	
Health.....	½
Social Studies (listed below)	
• Western Civilization or AP European History	1
• US History or AP US History.....	1
• Government or AP Government	½
• Economics or AP Economics.....	½
World Language, Fine Arts, Career Technical Education	3
Elective Credits	6
Credits Required for Graduation.....	24

The **Advanced Placement Program**, a part of *College Board*, encourages high schools to offer challenging college-level work to able students. The Advanced Placement exam scores provide an opportunity for high school students to earn college credit. Fargo high school students may qualify for the examinations in most areas by taking the AP courses offered at Davies, North, or South High Schools. The exact cost of the exam will be announced before students order their tests and is payable at the time of the order.

Students in grade 10 - 12 are allowed to earn [dual credit](#) for some classes and apply the credit earned to both their high school and college transcripts.

**Refer to the Program of Studies for more details related to graduation requirements .

North Dakota

Academic and CTE Scholarship

In planning your future, every dollar counts!



North Dakota resident students may apply for either the Academic Scholarship or Career and Technical Education Scholarship to attend any North Dakota institution of higher education. The amount of each scholarship is \$750 per semester or \$500 per quarter. Students may be eligible for up to \$6,000 within six academic school years (do not have to be consecutive years) after graduation from high school. Applications are submitted online and will be accepted from January 6 - June 5, 2020. (One Unit = One Full Credit)

Common Requirements for Both Scholarships

1. ND resident graduating from a ND high school, a public high school in a bordering state according to NDCC 15.1-29, **or** a nonpublic school in a bordering state while residing with a custodial parent in ND (NDCC 15.1-21-02.4), **or** (15.1-21-02.5) completes a program of home education supervised in accordance with NDCC chapter 15.1-23
2. Any 4 units of English
3. 3 units of Science: Biology (1 unit), and either Physics (1 unit) AND Chemistry (1 unit) **or** Physical Science (1 unit) AND any other science course (1 unit)
4. 3 units of Social Studies: US History (1 unit), Problems of Democracy (1 unit) **or** US Government (½ unit) AND Economics (½ unit), and any other social studies course (1 unit)
5. 3 units of Mathematics: Algebra II (1 unit) and any other math courses (2 units). This may include a computer science course (1 unit) approved by the Superintendent of Public Instruction.
6. Physical education (1 unit) **or** physical education (½ unit) AND Health (½ unit)
7. Earn no grade lower than a “C” on any unit required for the scholarship
8. Earn a cumulative GPA of a 3.0 or higher on a 4.0 scale

ND Academic Scholarship

1. Complete: 1 unit of math for which Algebra II is a prerequisite; 2 units of the same foreign language, the same Native American language, American Sign Language, **or** 2 units of CTE from a coordinated plan of study or the 3 credit educational pathway approved by NDDPI
2. Any 5 additional units
3. Complete 1 unit of an AP course AND exam, **or** ½ unit of a dual credit course, **or** 1 unit of an early entrance college course from a college which has a physical presence in North Dakota
4. Earn a composite score of 24 or higher on an ACT

ND Career and Technical Education Scholarship

1. Complete: 4 units of CTE in which two units must be in a coordinated plan of study **or** 2 units of CTE and the 3 credit educational pathway approved by NDDPI
2. Any 3 additional units
3. Earn a composite score of 24 or higher on an ACT **or** score of at least “5” on each of the 3 designated WorkKeys assessments

ND Department of Public Instruction:

<https://www.nd.gov/dpi/uploads/85/DirectionstoStudentsAcademicorCareerTechEducationScholarshipApp.pdf>

Student Name: _____

Year of Graduation: _____

The six items below are **Common Eligibility requirements for both the Academic and CTE Scholarship Programs** – the student must complete all of the six following requirements for either scholarship.

Check the boxes below as the six common eligibility requirements are met.

- 1. North Dakota resident.
- 2. Graduate from a high school in North Dakota, from a public high school in a bordering state (according to provisions set forth in ND Century Code 15.1-29), from a nonpublic high school in a bordering state while the student resides with a custodial parent in ND (NDCC 15.1-21-02.6), or completes a program of home education supervised in accordance with NDCC chapter 15.1-23.
- 3. Complete the diploma requirements from sections 1-7 listed on page 1 (NDCC 15.1-21-02.2)
- 4. Obtain a grade of at least "C" in each unit **OR** 1/25 unit required by each respective scholarship.
- 5. Obtain a cumulative grade point of at least a 3 on a 4.0 scale based on the 23 units required by ND for high school graduation, including specific scholarship course requirements. The GPA must be rounded to the nearest hundredth for eligibility purposes.
- 6. Complete 1 unit of Algebra II.

ND Career and Technical Education Scholarship Eligibility Requirements

Check the boxes below as the CTE Scholarship eligibility requirements are met. Transfer information to the first page.

In addition to the common eligibility requirements listed above, the student must also complete the following:

- Four units of career and technical education in which two units must be from a coordinated plan of study recommended by the ND Dept of Career and Technical Education. Coordinated Plans of Study may be viewed at: <http://www.nd.gov/cte/programs/career-dev/plans-of-study.html>
- List the Name of the Coordinated Plan of Study: _____
- One unit selected from foreign languages, Native American languages, American Sign Language, fine arts, or career and technical education
- Receive a composite score of at least 24 on an ACT, or a score of at least '5' on each of the three designated WorkKeys assessments listed below. (*Deadline is the March ACT national test date from senior year.**)

List the ACT Composite Score OR

ACT Composite Score

List the 'Level Score' for each WorkKeys assessments

Applied Math score
 Graphic Literacy score
 Workplace Documents score

ND Academic Scholarship Eligibility Requirements

Check the boxes below as the Academic Scholarship eligibility requirements are met. Transfer information to the first page.

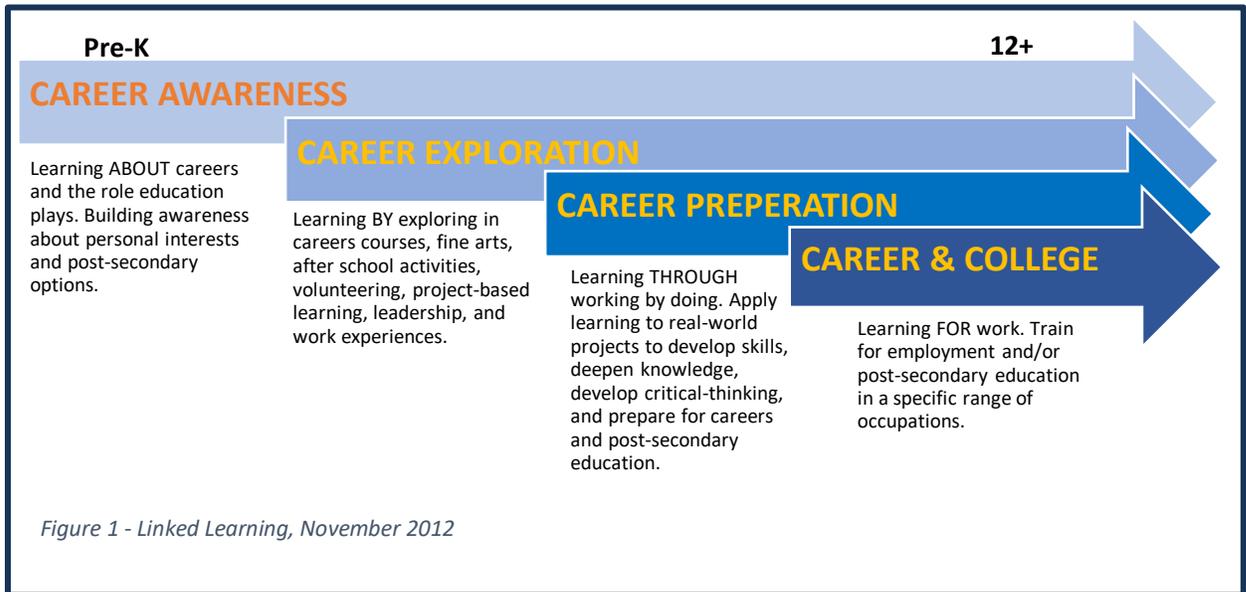
- In addition to the common eligibility requirements listed above, the student must also complete the following:
One unit of mathematics for which Algebra II is a prerequisite
- Two units of the same foreign language; the same Native American language; American Sign Language; or career and technical education from a coordinated plan of study
- One unit selected from foreign languages; Native American languages; American Sign Language; fine arts; or career and technical education
- One unit of an advanced placement course and examination; or ½ unit of a dual credit course; or one unit of an early entrance college course from a college which has a physical presence in North Dakota
- Receive a composite score of at least 24 on an ACT (*Deadline is the March ACT national test date from senior year.**)

**Any ACT tests taken later than the deadline have no guarantee that the results will be back by the June 1 deadline. Any official results for ACT tests taken after the March deadline must be sent to NDDPI by the student.*

CAREER PATHWAYS

**What are you passionate about?
Can you identify your strengths and skills?
Where do you see yourself after high school?**

The Career Pathway process allows you to explore who you are, discover interests, and select courses to help you think critically, develop creativity, communicate, collaborate, and prepare a plan for high school and your future!



What are career pathways?

They are 16 clusters of careers sharing common interests, skills, and strengths. Each pathway outlines courses that will provide learners options to explore content and develop skills necessary for each career cluster. Since there are many roads to success, learners are not locked into one pathway, but can begin by exploring those of interest first. As learners experience more, they will develop a better understanding of themselves and best options for their future.



How will you know which pathway is a good fit?

In Fargo Public Schools, ALL students are provided with “Career Education” curriculum focused on understanding themselves in relation to their career. Beginning in kindergarten and continuing through graduation, students participate in planned activities that focus on learning about themselves including their strengths, interests, natural abilities, aptitudes, likes, and dislikes. The findings are compared and contrasted to information about various careers in which the students have an interest. Through these exercises’ students become more informed and are better able to develop career goals for themselves. They also gain a deeper appreciation for the inter-relatedness between what they learn in school and what they need to know to be successful employees.

← FARGO K-12 CAREER PATHWAY ACTIVITIES →

Career Awareness	Career Exploration	Career Preparation
K – Career Lessons	6th – Career Cluster Interests & Passions	9th – Career Lessons Career Expo – Fargo Dome
1st – Career Lessons	7th - RU Ready Work Values Sorter, Soft Skills, Interpersonal, Work Skills Career on Wheels	10th – Career Lessons Career Interest Profiler SAT, Pre-ACT
2nd – Career Lessons		
3rd – PAWS in Jobland		
4th – Career Interest Inventory	8th – RU Ready Career Cluster Survey & Interest Profile Fantasy Future & Goal Setting HS Counselor visit – POS & 4-Year Plans State Scholarship & College Resources	11th – Career Lessons Personality Inventory Job Shadow ACT
5th – Career Lessons Transition to Middle School		12th – Senior Conference College Application Job Shadow Plan Your Future, Career Day

**Do You Need Help?
Stop by the Counseling Center!**

- Interest inventory results
- Assessment resources
- Career information and exploration
- Job shadowing experiences
- Service-learning experiences
- Post-secondary education options
- College catalogs, view books, & applications
- Letter of recommendation form
- Scholarship & financial aid information
- Job-find support
- Student career portfolios
- One-on-one career planning

Davies High School Counseling Team 701-446-5600
North High School Counseling Team 701-446-2412
South High School Counseling Team 701-446-2015
Woodrow Wilson Counseling Team 701-446-3020



How will you start planning your career?

Assessments and interest inventories are designed to capture and quantify learner information and skills to guide them in their selection of career pathways, high school courses, and to create a career plan for the future. Results are viewed with students and School Counselors, Career Specialists, and/or parents and guardians. Learners are also encouraged to hold a part-time job, job shadow, volunteer, and/or participate in extra-curricular activities to explore interests and careers beyond the school setting as they offer real-world experiences and leadership opportunities.

Important Assessments for College and Career Planning

PreACT™ is a multiple-choice assessment that helps students prepare for the experience of taking the ACT® test and provides information regarding their future performance on the exam.

ASVAB is a multiple-aptitude battery that measures developed abilities and helps predict future academic and occupational success in the military and civilian careers.

PSAT is a three hour practice version of the SAT exam which can be taken once per year. Many students take the test in both 10th and 11th grade. A high score on the PSAT can qualify students to receive a National Merit Scholarship.

ACT® college readiness assessment is a standardized test for high school achievement and college admissions in the United States.

SAT measures critical reading skills, math problem-solving skills and writing skills.

Work Keys® Assessments measure foundational skills required for success in the workplace. The three

North Dakota Choice Ready - Four-Year Rolling Plan

The four-year plan is intended to serve as a guide for students and parents to navigate high school and beyond. The plan begins in eighth grade and focuses on academics, college, career, and military readiness, which allows students to project their four year goals for high school and into the future for their education and career. Each year, students will meet with a staff member who is familiar with Choice Ready from their school and best suited to discuss the student's needs to complete or update their plan. [ESSA Guide to Four-Year Rolling Plan](#)

Fargo Career Planning with RU Ready

RU Ready is a free online career resource available to all North Dakota K-12 schools to assist in career planning and lessons, assessments and activities. RU Ready is supported by the Department of Career and Technical Education.

Students will:

1. Complete career activities and interest assessments. Results are viewed at www.ruready.nd.gov.
2. Meet with a School Counselor or Career Specialist to find the career pathway that most closely matches interests and skills.
3. Look up course descriptions in the [Program of Studies](#) and develop a 4-Year Plan to include required courses and career specific electives to complete their Career Pathway of choice.
4. Follow, and revise, the 4-Year Plan to include required courses and career specific electives to complete a Career Pathway(s).
5. Consider exploring activities and courses, such as Career & Technical Education (CTE), Advanced Placement (AP), and Dual Credit (DC) college courses, that are related to the career pathway you choose

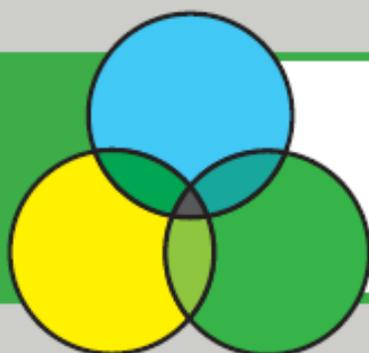
21st Century Skills

Metro 4Cs Rubric Performance Areas



Critical Thinking

- Information & Discovery
- Interpretation & Analysis
- Reasoning
- Constructing Arguments
- Problem Solving
- Systems Thinking



Collaboration

- Leadership & Initiative
- Cooperation
- Flexibility
- Responsibility & Productivity
- Collaborate Using Digital Media
- Responsiveness & Constructive Feedback



Communication

- Engaging in Conversations & Discussions
- Communicate Using Digital Media
- Communicating in Diverse Environments
- Delivering Oral Presentations
- Effective Listening

Writing to:

- Inform
- Support an Argument With Claims
- Engage and Entertain



Creativity

- Idea Generation
- Idea Design & Refinement
- Openness & Courage to Explore
- Work Creatively with Others
- Creative Production & Innovation

Shared Performance Areas for All 4Cs:

- Digital Citizenship & Ethical use
- Self Regulation & Reflection



Agriculture, Food & Natural Resources Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Agribusiness Systems	Sales Manager • Ag Lender • Ag Economist • Ag Products Buyer/Distributor • Feed-Supply Store Manager • Farm Investment Manager • Ag Commodity Broker
Animal Systems	Wildlife Biologist • Animal Nutritionist • Livestock Buyer • Livestock Geneticist • Veterinarian • USDA Inspector • Aquaculturist • Equine Manager
Environmental Service Systems	Pollution Prevention Technician • Hazardous Materials Handler • Water Quality Manager • Health and Safety Sanitarian • Toxicologist
Food Products & Processing Systems	Food Scientist • Quality Control Specialist • Biochemist-Nutritionist • Dietician • Microbiologist • Bacteriologist • Food and Fiber Engineer • Produce Buyer
Natural Resources Systems	Park Manager • Range Technician • Ecologist • Fish & Game Officer • Forest Technician • Geology Technician • Mining Engineers • Hydrologist
Plant Systems	Soil/Water Specialist • Botanist • Tree Surgeon • Plant Pathologist • Commodity Marketing Specialist • Golf Course Superintendent • Custom Hay/Silage Operator
Power, Structural & Technical Systems	Remote Sensing Specialist • Equipment/Parts Manager • Welder • GPS Technician • Machinist • Heavy Equipment Maintenance Technician



Is this Pathway for you?

- Do you get satisfaction from helping people, animals and/or the environment?
- Are you interested in how things grow and make the best use of the earth's natural resources?
- Are you curious about how machines and systems work?
- Are you someone who likes to work with data to solve problems?
- Are you interested in science and enjoy spending time with nature?
- Do you like to be outdoors in all kinds of weather?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Do you like to plan, work with budgets, and keep records?

Agriculture, Food & Natural Resources Career Cluster	
Environmental Services Systems or Plant Systems	
Course Name	Cr
Introduction to Agriculture	.5
Plant Science I	.5
Plant Science II	.5
World & International Agriculture	.5
Cooperative Education	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Agriculture Pathway Preparation
<p>CTE Electives</p> <p>Basics of Business, Exploring Business Software Personal Finance, Accounting 1, Web Design Marketing, Management/Entrepreneurship Exploring Foods, Cultures & Cuisine Civil Engineering & Architecture Intro to Engineering Design, Principles of Engineering Manufacturing Woods 1, 2 Welding I, II</p> <p>Academic Electives</p> <p>Foreign Language, Human Geography AP Biology, Anatomy/Physiology Environmental Science, Chemistry Genetics, Earth Science, Field Biology **AP options may exist for some courses</p>



North Dakota Agriculture, Food & Natural Resources Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Agribusiness Systems	<input type="checkbox"/> Agriculture (BSC, DCB, NDSCS) <input type="checkbox"/> Agricultural Sales and Service (DSU) <input type="checkbox"/> Agriculture transfer (BSC, DCB, NDSCS, WSC) <input type="checkbox"/> Farm/Ranch Management (BSC, DSU, NDSCS) <input type="checkbox"/> Precision Agriculture (LRSC)	<input type="checkbox"/> Agribusiness (NDSU, VCSU) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Agricultural Communication (NDSU) <input type="checkbox"/> Agricultural Economics (NDSU) <input type="checkbox"/> Agricultural Education (NDSU) <input type="checkbox"/> Agricultural Studies (DSU) <input type="checkbox"/> Agricultural Systems Management (NDSU) <input type="checkbox"/> General Agriculture (NDSU)	<input type="checkbox"/> Agribusiness and Applied Economics (NDSU) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Agricultural Education (NDSU) <input type="checkbox"/> International Agribusiness (NDSU)
Animal Systems	<input type="checkbox"/> Animal Science (NDSCS) <input type="checkbox"/> Pre-Veterinary Medicine transfer (BSC, DCB, TMCC) <input type="checkbox"/> Wildlife Management (DCB, NDSCS, TMCC)	<input type="checkbox"/> Animal Science (NDSU) <input type="checkbox"/> Equine Science (NDSU) <input type="checkbox"/> Fisheries and Wildlife Science (UND, VCSU) <input type="checkbox"/> Vet Technology (NDSU)	<input type="checkbox"/> Animal Science (NDSU)
Environmental Service Systems	<input type="checkbox"/> Energy Technician (SBC) <input type="checkbox"/> Environmental Science/Technology (CCCC, DCB, NHSC, SBC, TMCC, UTTC) <input type="checkbox"/> Water & Wastewater Treatment (BSC)	<input type="checkbox"/> Energy Management (BSC) <input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC)	<input type="checkbox"/> Environmental and Conservation Science (NDSU) <input type="checkbox"/> Environmental Science (SBC) <input type="checkbox"/> Environmental Engineering (NDSU, UND)
Food Products & Processing Systems		<input type="checkbox"/> Food Safety (NDSU) <input type="checkbox"/> Food Science (NDSU)	<input type="checkbox"/> Cereal Science (NDSU) <input type="checkbox"/> Food Safety (NDSU)
Natural Resources Systems	<input type="checkbox"/> Land Management (DCB) <input type="checkbox"/> Natural Resources Management (CCCC)	<input type="checkbox"/> Natural Resources Management (NDSU)	<input type="checkbox"/> Natural Resources Management (NDSU) <input type="checkbox"/> Sustainable Energy Engineering (UND)
Plant Systems	<input type="checkbox"/> Agriculture Industry and Technology-Agronomy (BSC) <input type="checkbox"/> Crop Production Sales & Technology (NDSCS) <input type="checkbox"/> Forestry (DCB) <input type="checkbox"/> Horticulture (DCB) <input type="checkbox"/> Sustainable Vegetable Production (DCB)	<input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Crop and Weed Sciences (NDSU) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Range Science (NDSU) <input type="checkbox"/> Soil Science (NDSU) <input type="checkbox"/> Sports and Urban Turfgrass Management (NDSU)	<input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Plant Pathology (NDSU) <input type="checkbox"/> Plant Sciences (NDSU) <input type="checkbox"/> Range Science (NDSU) <input type="checkbox"/> Soil Science (NDSU)
Power, Structure, & Technical Systems	<input type="checkbox"/> Caterpillar Dealer Service Technician (NDSCS) <input type="checkbox"/> Diesel Technology: Case IH, Gen. Diesel, Komatsu (NDSCS) <input type="checkbox"/> John Deere Tech (NDSCS) <input type="checkbox"/> Nuclear Power Technology (BSC) <input type="checkbox"/> Oil Drilling/Operations (NHSC, SBC, TMCC) <input type="checkbox"/> Petroleum Engineering Technology (BSC) <input type="checkbox"/> Petroleum Production Technology (BSC, WSC) <input type="checkbox"/> Power Plant Technology (BSC) <input type="checkbox"/> Process Plant Technology (BSC, TMCC) <input type="checkbox"/> Renewable Generation Technology (BSC) <input type="checkbox"/> Wind Energy Technician (LRSC)	<input type="checkbox"/> Energy Management (BSC)	



The National FFA Organization is a local, state, and national co-curricular student association serving high school, college and middle school students enrolled in Agriculture Education courses. The National FFA is dedicated to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. Fargo students enrolled in agriculture courses in collaboration with Northern Cass or Central Cass Agriculture Education will have the opportunity to participate in the National FFA Chapter. Contact your FFA Advisor to join.



Architecture & Construction Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Construction	Carpenter • Drywall Installer • Painter • Equipment and Materials Manager • Electrician • Plumber • Specialty Contractor • Project Inspector • Construction Engineer
Design/Pre-Construction	Building Code Official • Interior Designer • Architect • Surveying and Mapping Technician • Specification Writer • Drafter • Regional and Urban Planner
Maintenance/Operations	Code Official • Construction Engineer • Estimator • System Installer • Subcontractor • Hazardous Material Remover • Security and Fire Alarm System Manager



Is this Pathway for you?

- Are you curious to read and/or follow instructions, blueprints?
- Can you picture in your mind what a finished product could look like?
- Do you like to work with your hands?
- Are you attentive when completing work that requires patience and precise results?
- Are you interested in learning how to apply math to real projects?
- Do you work best with logical, step-by-step procedures to solve technical problems?
- Do you like to create or design projects that interest others?
- Does it interest you to use tools, technology, and/or operate machines?
- Can you see yourself working as a member of a team?

Trade & Industry – Coordinated Plan of Study	
Construction	
Course Name	Cr
Construction Technology 1	1
Construction Technology 2	2
Construction Cooperative Education	.5-1
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Trade & Industry Pathway Preparation
<p>CTE Electives</p> <p>Woods 1, 2</p> <p>Construction Technology</p> <p>Intro to Engineering, Civil Engineering & Architecture</p> <p>Explore Business Software, Business Law, Personal Finance</p> <p>Basics of Business</p> <p>Marketing</p> <p>Housing and Interior Design</p> <p>Living on Your Own</p> <p>Academic Electives</p> <p>Art Electives</p> <p>Geometry, Informal Geometry, Calculus</p> <p>Environmental Science, Earth Science</p> <p>Public Speaking</p>





North Dakota Architecture & Construction Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Construction	<input type="checkbox"/> Building Construction Technology (NDSCS, TMCC) <input type="checkbox"/> Building Trades (SBC) <input type="checkbox"/> Carpentry (BSC, BJCC, CCCC) <input type="checkbox"/> Concrete (SBC, TMCC) <input type="checkbox"/> Construction Management/Technology (CCCC, NDSCS, NHSC) <input type="checkbox"/> Electrical Technology (NDSCS, SBC, TMCC) <input type="checkbox"/> Framing (SBC) <input type="checkbox"/> Heating Ventilation & Air Conditioning (BSC, CCCC, NDSCS, TMCC) <input type="checkbox"/> Interior Construction (SBC) <input type="checkbox"/> Land Surveying and Civil Engineering Technology (NDSCS) <input type="checkbox"/> Plumbing (NDSCS) <input type="checkbox"/> Sustainable Construction Technology (BSC)	<input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Construction Management (NDSU)	<input type="checkbox"/> Construction Management (NDSU)
Design/Pre-Construction	<input type="checkbox"/> Architectural Drafting and Estimating Technology (NDSCS) <input type="checkbox"/> Land Surveying and Civil Engineering Technology (NDSCS)	<input type="checkbox"/> Architecture (NDSU) <input type="checkbox"/> Civil Engineering (NDSU) <input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Landscape Architecture (NDSU)	<input type="checkbox"/> Architecture (NDSU) <input type="checkbox"/> Civil Engineering (NDSU)
Maintenance/Operations	<input type="checkbox"/> Facilities Maintenance (BJCC) <input type="checkbox"/> Mechanical Systems (NDSCS) <input type="checkbox"/> Mechanical Maintenance Technology (BSC)		



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Ask about your SkillsUSA Advisor to learn more.



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Audio and Video Technology and Film	Audio Systems Technician • Audio-Video Designer and Engineer • Technical Computer Support • Videographer • Special Effects and Animation Designer Technician
Journalism and Broadcasting	Control Room Technician • Design Director • Broadcast Technician • Editor • Producer • Station Manager • Audio-Video Operator
Performing Arts	Actor/Actress • Lighting Designer • Scenic Designer • Musician • Composer • Makeup Artist • Playwright • Digital, Video and State Production Manager
Printing Technology	Desktop Publishing Specialist • Computer Typography • Pre-production Technician • Plate Maker • Graphics Equipment Operator • Web Page Designer • Lithographer
Telecommunications	Network Designer • Telecommunications Technician • Telecommunication Equipment: Cable, Line Repair and Installation • Computer Programmer and Systems Analyst
Visual Arts	Fashion Designer • Commercial Artist • Commercial Photographer: Digital, Still, Video, Film • Illustrator • Textile Designer • Interior Designer • Computer Animator



Is this Pathway for you?

- Do ideas inspire you to create?
- Are you passionate to overcome obstacles?
- Do you find multiple ways to express your creativity?
- Do you like to communicate your ideas?
- Do you enjoy drawing, performing or writing stories?
- Do you seek opportunities to learn about and be engaged in history or culture?
- Does the idea of working in or being a part of a community that creates excite you?
- Do you enjoy exploring new technologies?
- Are you able to communicate your ideas to diverse audiences?

Arts, AV Technology & Communication – Coordinated Plan of Study	
Visual Arts	
Course Name	Cr
Photography 1	.5
Photography 2	.5
Video Communication	.5
Communication Technology	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Arts, AV Technology, & Communication Pathway Preparation
<p>CTE Electives</p> <p>Basics of Business, Exploring Business Software Marketing, Sports & Entertainment Marketing Management and Entrepreneurship Housing & Interior Design, Construction Technology Web Design 1 & 2, Yearbook 1 & 2 IT Essentials 1 & 2, Cisco 1 & 2, Intro to Coding</p>
<p>Academic Electives</p> <p>Performing Arts, Theatre Arts Visual Arts: Drawing, Painting, Design, and Clay Sculpture Geometry, Informal Geometry Music: Band, Choir, Orchestra, Music Composition Communications, Creative Writing, Journalism 1 & 2 Exploratory Mas Media/Communication Psychology 1 & 2 Sociology, Humanities, Philosophy</p>



North Dakota Arts, A/V Technology & Communications Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Audio and Video Technology and Film	<input type="checkbox"/> Digital Audio Production (BSC) <input type="checkbox"/> Web Page Development and Design (BSC, NDSCS)	<input type="checkbox"/> Multimedia Studies (MiSU) <input type="checkbox"/> New Media & Web Design (NDSU)	<input type="checkbox"/> Library/Information Technology (VCSU)
Journalism and Broadcasting	<input type="checkbox"/> English transfer (BSC, DCB, TMCC) <input type="checkbox"/> Mass Communications (BSC) <input type="checkbox"/> Speech Communication transfer (BSC)	<input type="checkbox"/> Broadcasting (MiSU) <input type="checkbox"/> Communication (DSU, MaSU, MiSU, UJ, UND, VCSU) <input type="checkbox"/> English (DSU, MaSU, MiSU, NDSU, UJ,UM,UND,VCSU) <input type="checkbox"/> English Education (DSU, MaSU, MiSU, NDSU, UM,VCSU) <input type="checkbox"/> Journalism/Professional Writing (NDSU) <input type="checkbox"/> Mass Communications (UM)	<input type="checkbox"/> Communication (NDSU) <input type="checkbox"/> English (NDSU) <input type="checkbox"/> Mass Communications (NDSU) <input type="checkbox"/> Speech Communication (NDSU)
Performing Arts	<input type="checkbox"/> Music transfer (BSC, NDSCS, TMCC, WSC) <input type="checkbox"/> Theatre Arts - Performance (BSC) <input type="checkbox"/> Theatre Arts – Technical Theatre (BSC)	<input type="checkbox"/> Music (DSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Music Education (DSU, MiSU, UM, UND, VCSU) <input type="checkbox"/> Music Performance (UM, UND) <input type="checkbox"/> Musical Theatre (UND) <input type="checkbox"/> Theatre Arts (DSU, MiSU, NDSU, UND) <input type="checkbox"/> Theatre Education (MiSU)	<input type="checkbox"/> Music (NDSU, UND) <input type="checkbox"/> Theatre Arts (NDSU)
Printing Technology		<input type="checkbox"/> Print Communications Concentration (MiSU)	
Telecommunications	<input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics/Telecommunications Technology (BSC)	<input type="checkbox"/> Communication (DSU, MaSU, MiSU, UJ, UND, VCSU) <input type="checkbox"/> Strategic Communication (NDSU)	
Visual Arts	<input type="checkbox"/> Art transfer (DCB, TMCC) <input type="checkbox"/> Fine Art (CCCC) <input type="checkbox"/> Graphic Arts/Design (CCCC, RC, UTTC) <input type="checkbox"/> Graphic Design & Communications (BSC) <input type="checkbox"/> Photography (DCB) <input type="checkbox"/> Visual Art transfer (BSC)	<input type="checkbox"/> Apparel, Retail Merchandising, and Design (NDSU) <input type="checkbox"/> Art/Art Studies (DSU, MiSU, NDSU, UJ, VCSU) <input type="checkbox"/> Arts Administration (MiSU) <input type="checkbox"/> Art Education (DSU, MiSU, NDSU, VCSU) <input type="checkbox"/> Art Entrepreneurship (DSU) <input type="checkbox"/> Fine Arts (MiSU) <input type="checkbox"/> Graphic Design (RC) <input type="checkbox"/> Graphic Design & New Art Media (UND) <input type="checkbox"/> Graphic Design Technology (UND) <input type="checkbox"/> Interior Design (NDSU) <input type="checkbox"/> Visual Arts (UND)	<input type="checkbox"/> Visual Arts (UND)

The **Mission of Trollwood** is simple “to inspire those we serve through the arts to realize their full potential and be a positive influence in the global community.” Trollwood’s youth arts programs include a wide array of arts centered classes and performing opportunities. Trollwood’s youth programs includes 12 annual arts education, youth leadership and performance programs. Explore <http://trollwood.org/> to learn more.

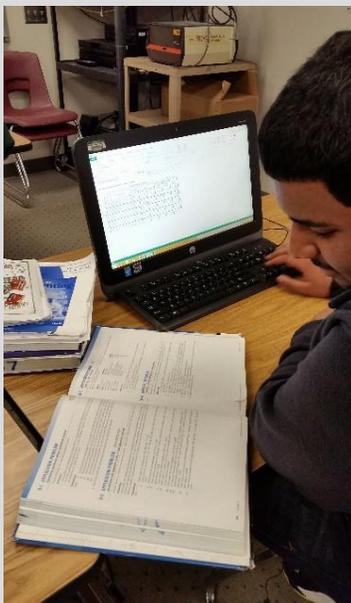




Business Management & Administration Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Administrative Support	Administrative Assistant • Office Manager • Customer Service Assistant • Desktop Publisher • Data Entry Specialist • Receptionist • Medical Transcriptionist • Legal Secretary
Business Information Management	Information Systems Manager • Accounting Clerk or Supervisor • Adjuster • Chief Technology Officer • Budget Analyst • Auditor • Business Consultant
General Management	General Manager • Business & Development Manager • Risk Manager • Public Relations Manager • Chief Executive Officer • Entrepreneur
Human Resources Management	Human Resource Manager • Industrial Relations Director • Compensation & Benefits Manager • Corporate Trainer • Personnel Recruiter • Public Relations Manager
Operations Management	Training & Development Manager • Sales Representative or Manager • Budget Analyst • Research & Development Manager • E-Commerce Analyst



Business Education – Coordinated Plan of Study					
Business Management & Administration Career Cluster				Finance Career Cluster	
Administrative Support		General Management		Accounting	
Course Name	Cr	Course Name	Cr	Course Name	Cr
Exploring Business Software	.5	Exploring Business Software	.5	Exploring Business Software	.5
Intro to Computer Usage	.5	Basics of Business	.5	Basics of Business	.5
Accounting 1	1	Accounting 1	1	Accounting 1	1
Accounting 2	1	Accounting 2	1	Accounting 2	1
Personal Finance	.5	Personal Finance	.5	Personal Finance	.5
Business & Personal Law	.5	Business & Personal Law	.5	Business & Personal Law	.5
Skills for Success in School	.5	Skills for Success in School	.5	Skills for Success in School	.5
Web Design 1	.5				
Web Design 2	.5				
Yearbook 1: Desktop	.5				
Yearbook 2: Coop.	1				
Must earn at least 2 credits in a pathway to qualify for the CTE Scholarship Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship					

Is this Pathway for you?

- Are you someone who likes to work with data to solve problems?
- Do you like to interact with all kinds of people?
- Do you like to come up with new ideas?
- Do you like to follow directions to complete a task?
- Do you consider yourself a leader who could be part of a team?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you enjoy using math to solve problems?

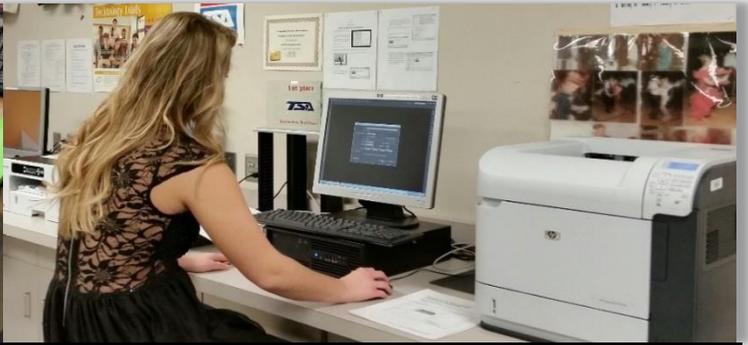
Other Electives to Consider for Business Education Pathway Preparation

CTE Electives

IT Essentials 1 & 2, Intro to Coding & Gaming
Culinary Arts, Exploring Foods, Restaurant Skills
Entertainment and Sports Marketing, Marketing, Store
Manager, Management/Entrepreneurship
Photography 1 & 2

Academic Electives

Mathematics in Action, AP Math
Communications; Creative Writing, Yearbook
Foreign Language
Microeconomics, Publications/Media
Psychology 1 & 2, Sociology
Public Speaking, Debate



North Dakota Business Management & Administration Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Administrative Support	<input type="checkbox"/> Administrative Assistant (BSC, DCB, LRSC, NHSC) <input type="checkbox"/> Bookkeeping (DCB) <input type="checkbox"/> Business/Office Technology (CCCC, NDSCS, SBC, UTTC) <input type="checkbox"/> Computer Applications (CCCC) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Office Administration (BJCC, DSU) <input type="checkbox"/> Reception Services (DCB)		
Business Information Management	<input type="checkbox"/> Business Management (MaSU, NDSCS, RC, UTTC, WSC) <input type="checkbox"/> Computer Information Systems (BSC, DCB, NDSCS) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Tech/Management (DCB, LRSC, NDSCS, NHSC, RC, SBC, WSC) <input type="checkbox"/> Management Information Systems (NDSCS) <input type="checkbox"/> Small Business Management (DCB)	<input type="checkbox"/> Applied Business Information Technology (MiSU) <input type="checkbox"/> Business Communication (UM) <input type="checkbox"/> Business Process Integration Management (VCSU) <input type="checkbox"/> Computer Information Systems (MaSU, UM, UND) <input type="checkbox"/> Information Technology Management (RC, UM) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Management Information Systems (MiSU, NDSU)	<input type="checkbox"/> Information Systems (MiSU)
General Management	<input type="checkbox"/> Business Administration transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, TBC, TMCC) <input type="checkbox"/> Business Education transfer (BSC, DCB) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Entrepreneurship (BSC, CCCC, NDSCS, SBC, TMCC) <input type="checkbox"/> Management (BSC)	<input type="checkbox"/> Applied Management (MiSU) <input type="checkbox"/> Business Administration (DSU, MaSU, NDSU, SBC, TBC, UTTC, UJ, UM, VCSU) <input type="checkbox"/> Business Education (DSU, MiSU, UM, VCSU) <input type="checkbox"/> Entrepreneurship (UND) <input type="checkbox"/> International Business (MiSU) <input type="checkbox"/> Management (MiSU, NDSU, RC, UND, VCSU) <input type="checkbox"/> Public Administration (UND)	<input type="checkbox"/> Business (UM) <input type="checkbox"/> Business Administration (NDSU, UM, UND) <input type="checkbox"/> Management (MiSU) <input type="checkbox"/> Project Management (UM) <input type="checkbox"/> Public Administration (UM, UND)
Human Resources Management	<input type="checkbox"/> HR and Organizational Leadership (RC)	<input type="checkbox"/> Human Resource Management (DSU, UND, VCSU) <input type="checkbox"/> Human Resources and Organizational Leadership (RC)	
Operations Management		<input type="checkbox"/> Business Economics (UND) <input type="checkbox"/> Business Management (RC, UM) <input type="checkbox"/> Business Systems Analysis (RC) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Operations & Supply Chain Management (UND)	



Future Business Leaders of America is a co-curricular student organization for students enrolled in Business Education courses. FBLA inspires and prepares students to become community-minded business leaders in a global society through relevant career preparation and leadership experiences. FBLA focuses on leadership development, academic competitions, high school programs, membership benefits, community service, and awards. Contact your high school FBLA Advisor to learn what it takes to become a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Biotechnology Research & Development	Research Scientist/Assistant • Microbiologist • Biostatistician • Cell Biologist • Biomedical Chemist • Geneticist • Genetics Lab Assistant • Quality Assurance Technician
Diagnostic Services	Clinical Lab Technician • Phlebotomist • Geneticist • Nutritionist • Magnetic Resonance (MR) Technologist • Radiologist • Pathologist • Exercise Physiologist
Health Informatics	Health Information Coder • Admitting Clerk • Transcriptionist • Medical Librarian • Public Health Educator • Ethicist • Medical Assistant • Epidemiologist
Support Services	Dietary Aide • Hospital Maintenance Engineer • Environmental Services Manager • Industrial Hygienist • Biomedical Engineer • Transport Technician
Therapeutic Services	Dental Assistant/Hygienist • Occupational Therapist • EMT/Paramedic • Physician • Nurse • Veterinarian • Social Worker • Massage Therapist • Physical Therapist • Pharmacist



Is this Pathway for you?

- Do you get satisfaction from helping people, animals, and/or the environment?
- Do you enjoy dealing with a problem that isn't easily solved or doesn't have the correct answer?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Are you interested in math and science?
- Do you like listening and working with others who have differing viewpoints?
- Do you enjoy puzzles, exploring and solving problems?
- Can you respond quickly and calmly in unexpected situations?
- Do you like to volunteer and do service work that focuses on helping other people or the environment?

Health Science – Coordinated Plan of Study	
Therapeutic Services	
Course Name	Cr
Certified Nurse Assistant	.5
Health Science I	1
Health Science II	1
Medical Terminology - Online & Dual Credit Option	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Health Science Pathway Preparation
<p>CTE Electives</p> <ul style="list-style-type: none"> Exploring Business Software Child Development, Intro to Teaching, Child Care Careers Exploring Foods, Food Revolution Intro to Engineering Design, Principles of Engineering Marketing Management/Entrepreneurship <p>Academic Electives</p> <ul style="list-style-type: none"> Communications, College Learning Lab Foreign Language Junior Educator of Tomorrow (JET) AP Statistics, Pre-Calculus, AP Calculus, College Learning Lab Anatomy/Physiology, Athletic Injuries AP Biology, AP Chemistry, AP Physics I Psychology I, II, AP Psychology Sociology



North Dakota Health Science Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Biotechnology Research & Development	<input type="checkbox"/> Biotechnology transfer (NDSCS) <input type="checkbox"/> Pharmacy Technician (NDSCS, RC, TMCC)	<input type="checkbox"/> Bioinformatics (MiSU) <input type="checkbox"/> Biotechnology (NDSU) <input type="checkbox"/> Pharmaceutical Sciences (NDSU)	<input type="checkbox"/> Biomedical Sciences (UND) <input type="checkbox"/> Genomics and Bioinformatics (NDSU) <input type="checkbox"/> Pharmaceutical Sciences/Pharmacy (NDSU)
Diagnostic Services	<input type="checkbox"/> Clinical Laboratory Science transfer (NDSCS) <input type="checkbox"/> Dialysis Technician (NDSCS) <input type="checkbox"/> EMT – Paramedic Technician (BSC, DCB, NDSCS) <input type="checkbox"/> Medical Laboratory Technician (BSC, TMCC) <input type="checkbox"/> Medical Laboratory transfer (BSC) <input type="checkbox"/> Phlebotomy Technician (BSC, TMCC)	<input type="checkbox"/> Medical Lab Science (MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Communication Sciences and Disorders (UM, UND) <input type="checkbox"/> Radiologic Technology (MiSU, NDSU, UJ, UM)	<input type="checkbox"/> Medical Lab Science (UND)
Health Informatics	<input type="checkbox"/> Community Health Worker (SBC) <input type="checkbox"/> Health Information Technician/Management (DCB, NDSCS) <input type="checkbox"/> Medical Administrative Asst. (BJCC, DCB, RC) <input type="checkbox"/> Medical Coding/Billing (DCB, NDSCS, RC, UTTC, WSC)	<input type="checkbox"/> Community Nutrition (UND) <input type="checkbox"/> Forensic Science (UND) <input type="checkbox"/> Healthcare Management (RC) <input type="checkbox"/> Health Administration (UM) <input type="checkbox"/> Health Communication (NDSU)	<input type="checkbox"/> Health Care Administration (UM) <input type="checkbox"/> Nurse Administrator (UM) <input type="checkbox"/> Public Health (NDSU, UND)
Support Services	<input type="checkbox"/> Caregiver Services (DCB) <input type="checkbox"/> Environmental Public Health (TMCC) <input type="checkbox"/> Fitness Trainer Technician (LRSC) <input type="checkbox"/> Social Work transfer (BSC, CCCC, NDSCS, TMCC, WSC)	<input type="checkbox"/> Corporate Fitness/Wellness (MaSU, MiSU) <input type="checkbox"/> Exercise Science (DSU, NDSU, UJ, UM) <input type="checkbox"/> Kinesiology (UND) <input type="checkbox"/> Social Work (MiSU, UM, UND)	<input type="checkbox"/> Clinical Exercise Physiology (UM) <input type="checkbox"/> Exercise Science and Nutrition (NDSU) <input type="checkbox"/> Exercise Physiology/Kinesiology (UM, UND) <input type="checkbox"/> Social Work (UND)
Therapeutic Services	<input type="checkbox"/> Addictions Studies Transfer (NHSC) <input type="checkbox"/> Dental Assisting/Hygiene (NDSCS) <input type="checkbox"/> Health/Medical Assistant (CCCC, DCB) <input type="checkbox"/> Massage Therapy (JSHDF, JSHDGF, TSPA, WSC) <input type="checkbox"/> Mental Health/Addictions Technician (WSC) <input type="checkbox"/> Nursing transfer (BSC, CCCC, DCB, LRSC, NDSCS, SBC, WSC) <input type="checkbox"/> Occupational Therapy Assistant (NDSCS) <input type="checkbox"/> Practical Nursing (BSC, BJCC, DCB, DSU, NDSCS, NHSC, SBC, TMCC, UTTC, WSC) <input type="checkbox"/> Pre-Professional transfer (BSC, DCB, MaSU, NDSCS, TMCC, WSC) <input type="checkbox"/> Surgical Technology (BSC)	<input type="checkbox"/> Addiction Studies (MiSU) <input type="checkbox"/> Athletic Training (MiSU, UM, UND) <input type="checkbox"/> Dietetics (NDSU, UND) <input type="checkbox"/> Music Therapy (UND) <input type="checkbox"/> Nursing (DSU, MaSU, MiSU, NDSU, RC, UJ, UM, UND) <input type="checkbox"/> Pre-Professional Programs (MaSU, MiSU, UM) <input type="checkbox"/> Rehabilitation and Human Services (UND) <input type="checkbox"/> Respiratory Care/Therapy (NDSU, UM)	<input type="checkbox"/> Advanced Nursing Practice (NDSU) <input type="checkbox"/> Advanced Athletic Training (NDSU) <input type="checkbox"/> Dietetics (NDSU) <input type="checkbox"/> Health, Nutrition and Exercise Science (NDSU) <input type="checkbox"/> Gerontology (NDSU) <input type="checkbox"/> Nursing (NDSU, UM, UND) <input type="checkbox"/> Nutrition (UND) <input type="checkbox"/> Occupational Therapy (UM, UND) <input type="checkbox"/> Physical Therapy (UJ, UM, UND) <input type="checkbox"/> Physician Assistant (UND) <input type="checkbox"/> Psychological Clinical Science (NDSU) <input type="checkbox"/> Respiratory Therapy (UM)



HOSA is an international student organization recognized by the Health Science Education (HSE) Division of ACTE. HOSA's goal is to encourage all health science instructors and students to join and be actively involved in leadership and demonstrate these skills through local, state and national competitions. HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary, postsecondary, adult, and collegiate students enrolled in health science education and biomedical science programs or have interests in pursuing careers in health professions. Contact your HOSA Advisor to learn more. Currently offered at Fargo North.



Human Services Career Cluster

Family & Consumer Science



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Consumer Services	Customer Service Representative • Financial Advisor • Market Researcher • Consumer Credit Counselor • Certified Financial Planner • Sales Consultant
Counseling & Mental Health Services	Career Counselor • Mental Health Counselor • Psychologist • Vocational Rehabilitation Counselor • School Counselor • Sociologist
Early Childhood Development & Services	Child Care Worker • Nanny • Preschool Teacher/Teacher Assistant • Child Care Center Director • Parent Educator
Family & Consumer Services	Human Services Worker • Religious Leader • Volunteer Coordinator • Social Worker • Day Care Worker • Emergency Relief Worker • Social Services Worker
Personal Care Services	Cosmetologist • Personal Trainer • Personal and Home Care Aide • Funeral Director • Massage Therapist • Exercise Physiologist • Nail Technician

Family and Consumer Science – Coordinated Plan of Study									
Human Services Career Cluster				Hospitality & Tourism Career Cluster		Arts, AV Technology & Communications Career Cluster		Education & Training Career Cluster	
Family and Community Services		Early Childhood Development		Restaurant/Food Service		Visual Arts		Teaching/Training	
Course Name	Cr	Course Name	Cr	Course Name	Cr	Course Name	Cr	Course Name	Cr
Exploring Food	.5	Child Development	.5	Exploring Foods	.5	Sewing and Fashion	.5	Child Development	.5
Child Development	.5	Relationships	.5	Food Revolution	.5	Textile Arts	.5	Childcare Careers	1
Food Revolution	.5	Living on your own	.5	Cultures & Cuisine	.5	Housing & Interior Design	.5	Intro to Education	.5
Relationships	.5	Childcare Careers	1	Culinary Arts	.5	Living on your own	.5	Teaching Field Experience	.5
Living on your own	.5	Child Careers Coop.	.5	Living on your own	.5			Educating the Exceptional Student	.5
			.5	Restaurant Skills, Restaurant Coop.	1 .5				

Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship

Is this Pathway for you?

- Are you open-minded when helping others solve problems?
- Are you self-motivated?
- Do you enjoy working as a team?
- Are you compassionate and empathetic?
- Do you have a desire for a career in public service?
- Do you have an interest in human development and behavior?
- Do you consider yourself a leader who could be a part of a team?
- Are you curious to design, create, and/or work with your hands?

Other Electives to Consider for Family & Consumer Science Pathway Preparation

CTE Electives

Accounting 1 & 2
Basics of Business, Exploring Business Software
Business & Personal Finance, Marketing
Health Science I, CNA

Academic Electives

Art courses
Mathematics in Action
Communications, Creative Writing, Public Speaking
Foreign Language, Junior Educator of Tomorrow (JET)
Microeconomics, Publications/Media
Psychology 1 & 2, AP Psychology, Sociology



North Dakota Human Services Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Consumer Services	<input type="checkbox"/> Business Administration transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TBC, TMCC) <input type="checkbox"/> Management (BSC, DCB, RC, SBC, UTTC, WSC)	<input type="checkbox"/> Business Administration (NDSU, UJ, SBC, TBC, UTTC, VCSU) <input type="checkbox"/> Management (MiSU, NDSU, RC, UTTC, UM, UND, VCSU)	<input type="checkbox"/> Business Administration (NDSU)
Counseling & Mental Health Services	<input type="checkbox"/> Addiction Studies (NHSC) <input type="checkbox"/> Mental Health/Addictions Technician (WSC) <input type="checkbox"/> Psychology transfer (BSC, DCB, NDSCS, TMCC, WSC)	<input type="checkbox"/> Addiction Studies (MiSU) <input type="checkbox"/> Applied Psychology (MaSU) <input type="checkbox"/> Psychology (MiSU, NDSU, UJ, UM, UND, VCSU)	<input type="checkbox"/> Clinical Counseling (UJ) <input type="checkbox"/> Counseling (NDSU, UM, UND) <input type="checkbox"/> Counseling Education and Supervision (NDSU) <input type="checkbox"/> Counseling Psychology & Community Services (UND) <input type="checkbox"/> Couple and Family Therapy (NDSU) <input type="checkbox"/> Psychology (NDSU, UND)
Early Childhood Development & Services	<input type="checkbox"/> Child Development (DCB, NHSC) <input type="checkbox"/> Early Childhood (MaSU) <input type="checkbox"/> Early Childhood Education transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, RC)	<input type="checkbox"/> Early Childhood (MaSU) <input type="checkbox"/> Early Childhood Education (MaSU, MiSU, RC, SBC, UM, UND) <input type="checkbox"/> Human Development & Family Science (NDSU)	<input type="checkbox"/> Early Childhood Education (UND) <input type="checkbox"/> Developmental Science (NDSU) <input type="checkbox"/> Human Development & Family Science (NDSU)
Family & Community Services	<input type="checkbox"/> Biblical Studies (TBC) <input type="checkbox"/> Caregiver Services (DCB) <input type="checkbox"/> Community Health Worker (SBC) <input type="checkbox"/> Human Services/Eligibility Worker (BSC, NHSC, RC, SBC) <input type="checkbox"/> Religion transfer (BSC, WSC) <input type="checkbox"/> Social Work transfer (BSC, CCCC, DSU, NDSCS, TMCC, WSC)	<input type="checkbox"/> Catholic Studies (UM) <input type="checkbox"/> Human Development & Family Science (NDSU) <input type="checkbox"/> Human Services (RC, VCSU) <input type="checkbox"/> Pastoral/Youth/Children's Ministry (TBC, UM) <input type="checkbox"/> Rehabilitation and Human Services (UND) <input type="checkbox"/> Religious/Theology/Biblical Studies (UJ, UM, UND, TBC) <input type="checkbox"/> Social Work (MiSU, UM, UND)	<input type="checkbox"/> Gerontology (NDSU) <input type="checkbox"/> Human Development & Family Science (NDSU) <input type="checkbox"/> Missional Leadership (TBC) <input type="checkbox"/> Public Health (NDSU, UND) <input type="checkbox"/> Social Work (UND)
Personal Care Services	<input type="checkbox"/> Fitness Trainer Technician (LRSC) <input type="checkbox"/> Barbering and Cosmetology (MBC) <input type="checkbox"/> Cosmetology (HAHD, JSHDF, JSHDGF, JSHDW, JZT, THA, TSPA) <input type="checkbox"/> Esthetician/Skin Care (JSHDGF, JSHDW, THA, TSPA) <input type="checkbox"/> Massage Therapy (JSHDGF, JSHDW, TSPA, WSC) <input type="checkbox"/> Nail Technology (JSHDW, JZT, THA, TSPA)	<input type="checkbox"/> Athletic/Fitness Training (MiSU, UM, UND) <input type="checkbox"/> Exercise Science (DSU, NDSU, UJ, UM) <input type="checkbox"/> Sport Management (NDSU)	<input type="checkbox"/> Advanced Athletic Training (NDSU) <input type="checkbox"/> Clinical Exercise Physiology (UM) <input type="checkbox"/> Exercise Science and Nutrition (NDSU)



FCCLA is a national Career and Technical Student Organization that provides personal growth, leadership development, and career preparation opportunities for students in Family and Consumer Sciences education. **Our Mission** is to promote personal growth and leadership development through Family and Consumer Sciences education. Focusing on the multiple roles of family member, wage earner and community leader, members develop skills for life through: character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation. Ask who your FCCLA advisor is to learn more about becoming a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Information Support & Services	Database Administrator • Account Manager • Help Desk Specialist • Information Systems Architect • Systems Analyst • Instructional Designer • Testing Engineer
Network Systems	User Support Specialist • Network Administrator • Network Engineer • Information Technology Engineer • Network Security Analyst • Telecommunications Network Technician
Programming & Software Development	Computer Engineer • Software Applications Specialist • Game Developer • Software Applications Tester • Project Lead • Software Design Engineer
Web & Digital Communications	Multimedia Specialist • Web Designer • Web Site Developer • Animator • Blog Developer • Streaming Media Specialist



Information Technology - Coordinated Plan of Study			
Information Technology Career Cluster			
Network Systems		Computer Programming	
Course Name	Cr	Course Name	Cr
IT Essentials 1	.5	Intro to Coding and Gaming	.5
IT Essentials 2	.5	Computer Programming Java I	.5
CISCO I	.5	Mobile App Development & Cyber Security	.5
CISCO II	.5	AP Computer Programming Java II	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Other Electives to Consider for Information Technology Pathway Preparation

CTE Electives

Accounting 1 & 2
 Aviation IA, Aviation IB, Aviation II, UAV
 Business & Personal Finance, Business Law
 Exploring Business Software, Web Design 1 & 2
 Marketing, Management/Entrepreneurship
 Intro to Engineering Design, Principles of Engineering

Academic Electives

Communications
 College Algebra, AP Calculus, AP Statistics
 Physics
 Publications/Broadcast
 STEM

Is this Pathway for you?

- Do you enjoy working with computers?
- Are you curious to learn reasoning and logic to solve complex problems?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Are you interested in how procedures make machines work?
- Do you like to read technical materials and diagrams and solve technical problems?
- Are you patient when problem-solving to find a solution?
- Do you enjoy working as a team or independently?
- Do you like playing video games and figuring out how they work?
- Can you concentrate for long periods without being distracted?

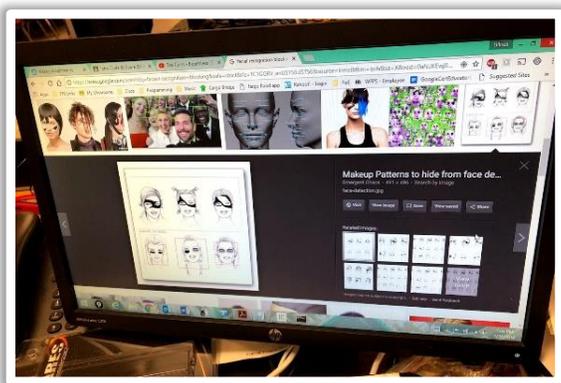
Cyber Security & Coding



Connecting the world!

North Dakota Information Technology Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Information Support & Services	<input type="checkbox"/> Computer Applications (CCCC) <input type="checkbox"/> Computer Information Systems (BSC, DCB) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Computer Technology/Information Technology (DCB) <input type="checkbox"/> Geographic Information Systems Technician (BSC) <input type="checkbox"/> Information Systems Administrator (NDSCS) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Management (NHSC, RC) <input type="checkbox"/> Information Technology (LRSC, NDSCS, RC, SBC, WSC) <input type="checkbox"/> IT Forensics (NDSCS) <input type="checkbox"/> Management Information Systems transfer (NDSCS)	<input type="checkbox"/> Applied Business Information Technology (MiSU) <input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Information Security (RC) <input type="checkbox"/> Management Information Science (UJ) <input type="checkbox"/> Information Technology (UJ) <input type="checkbox"/> Information Technology Management (RC, UM) <input type="checkbox"/> Technology Education (DSU, VCSU)	<input type="checkbox"/> Information Systems (MiSU) <input type="checkbox"/> Library/Information Technology (VCSU) <input type="checkbox"/> Technology (UND)
Network Systems	<input type="checkbox"/> Information Management (NHSC, RC) <input type="checkbox"/> Information Technology (LRSC, NDSCS, RC, SBC, WSC)	<input type="checkbox"/> Computer Information Systems (MaSU, UM, VCSU) <input type="checkbox"/> Information Systems (UND) <input type="checkbox"/> Management Information Systems (NDSU)	<input type="checkbox"/> Computer Science (NDSU, UND) <input type="checkbox"/> Electrical and Computer Engineering (NDSU)
Programming & Software Development	<input type="checkbox"/> Computer Science transfer (BSC, NDSCS) <input type="checkbox"/> Mobile Application Developer (NDSCS) <input type="checkbox"/> Software Application Development (RC)	<input type="checkbox"/> Computer Engineering (NDSU) <input type="checkbox"/> Computer Science (DSU, MiSU, NDSU, RC, UJ, UM, UND) <input type="checkbox"/> Electrical and Computer Engineering (NDSU) <input type="checkbox"/> Software Engineering (VCSU)	<input type="checkbox"/> Electrical and Computer Engineering (NDSU) <input type="checkbox"/> Software Engineering (NDSU)
Web & Digital Communications	<input type="checkbox"/> Computer Technology/Webmaster and Web Design (DCB) <input type="checkbox"/> Web Design (NDSCS) <input type="checkbox"/> Web Developer (NDSCS) <input type="checkbox"/> Web Page Development and Design (BSC) <input type="checkbox"/> Web Programming (RC)	<input type="checkbox"/> New Media and Web Design (NDSU)	



Cyber Patriot Tech Wars Esports



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Health, Safety & Environmental Assurance	Environmental Engineer • Health and Safety Specialist • Safety Team Leader • Environmental Specialist • Safety Coordinator • Environmental Field Technician
Logistics & Inventory Control	Dispatcher • Freight/Stock/Material Mover • Industrial Truck & Tractor Operator • Materials Handler • Logistical Engineer • Quality Control Technician
Maintenance, Installation & Repair	Computer Repair Technician • Boilermaker • Communication Systems Installer • Laser Systems Technician • Industrial Machinery Mechanic • Instrument Calibration Technician
Manufacturing Production Process Development	Industrial Engineer • Manufacturing Technician • Purchasing Agent • Precision Inspector, Tester and Grader • Production Manager • Electronics Engineer
Production	Welder • Calibration Technician • Precision Layout Worker • Assembler • Tool & Die Maker • Sheet Metal Worker • Micro and Nano Fabrication Technicians
Quality Assurance	Process Control Technician • Inspector • Quality Control Technician • Calibration Technician • Lab Technician • Statistical Process Control (SPC) Coordinator



Trade & Industry – Coordinated Plan of Study	
Production	
Course Name	Cr
Manufacturing I, 2 or 3 (South High)	1 to 3
Welding I (NDSCS-Fargo)	1
Welding II (NDSCS-Fargo)	1
Manufacturing Cooperative Education	.5-1
Technology & Engineering	
Manufacturing Production Process Development	
Construction Technology	.5
Intro to Engineering	1
Principles of Engineering	1

Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you like to interact with all kinds of people?
- Do you enjoy creating, inventing, or imaging new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?

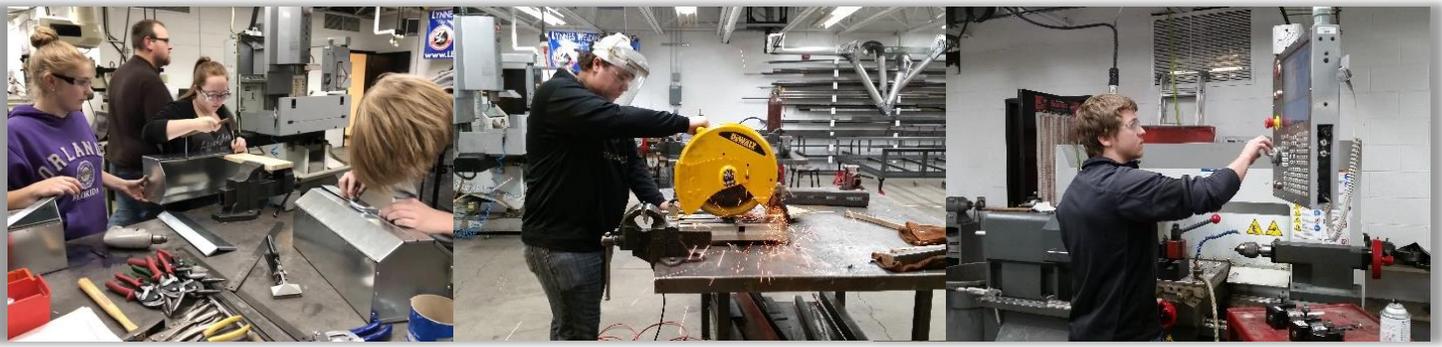
Other Electives to Consider for Manufacturing Pathway Preparation

CTE Electives

Civil Engineering & Architecture
 Computer Applications, Business and Personal Finance
 Fundamentals of Business
 Marketing
 Living on Your Own
 Woods 1 & Woods 2

Academic Electives

Arts
 Consumer Math; Geometry
 Environmental Science, Earth Science
 Public Speaking



North Dakota Manufacturing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Health, Safety & Environmental Assurance	<input type="checkbox"/> Emergency Management transfer (NDSCS) <input type="checkbox"/> Environmental Public Health (TMCC) <input type="checkbox"/> Environmental Technology/Science transfer (NHSC, SBC, TMCC, UTTC, WSC)	<input type="checkbox"/> Emergency Management (NDSU) <input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC) <input type="checkbox"/> Health Communication (NDSU)	<input type="checkbox"/> Emergency Management (NDSU) <input type="checkbox"/> Environmental and Conservation Sciences (NDSU, SBC) <input type="checkbox"/> Environmental Engineering (NDSU, UND)
Logistics & Inventory Control	<input type="checkbox"/> Information Technology (DCB) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Management Information Systems (NDSCS)	<input type="checkbox"/> Business Process Integration Management (VCSU) <input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Energy Economics and Finance (MiSU) <input type="checkbox"/> Management Information Systems (MiSU, NDSU) <input type="checkbox"/> Operations and Supply Chain Management (UND)	<input type="checkbox"/> Transportation and Logistics (NDSU)
Maintenance, Installation & Repair	<input type="checkbox"/> Electrical Lineworker (BSC) <input type="checkbox"/> Electrical Power Technology (BSC) <input type="checkbox"/> Electrical Transmission Systems Technology (BSC) <input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics and Telecommunications Technology (BSC) <input type="checkbox"/> Mechanical Maintenance Technology (BSC) <input type="checkbox"/> Welding Technology (BSC, BJCC, LW, NDSCS, NHSC, SBC, TMCC, UTTC, WSC) <input type="checkbox"/> Wind Energy Technician (LRSC)	<input type="checkbox"/> Industrial Technology (UND)	
Manufacturing Process Production Development	<input type="checkbox"/> Engineering Technology (BSC) <input type="checkbox"/> Power Plant Technology (BSC) <input type="checkbox"/> Process Plant Technology (BSC, TMCC) <input type="checkbox"/> Energy Services & Renewable Technician (BSC)	<input type="checkbox"/> Engineering Science (UJ, UM) <input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU)	<input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU)
Production	<input type="checkbox"/> Heating, Ventilation, and Air Conditioning (BSC, CCCC, NDSCS, TMCC) <input type="checkbox"/> Precision Machining Technology (NDSCS) <input type="checkbox"/> Production Operations/Refinery Training (NHSC) <input type="checkbox"/> Robotics, Automation and Mechatronics Technology (NDSCS) <input type="checkbox"/> Welding Technology (BSC, BJCC, LW, NDSCS, NHSC, SBC, TMCC, UTTC, WSC)	<input type="checkbox"/> Energy Management (BSC)	<input type="checkbox"/> Materials and Nanotechnology (NDSU)
Quality Assurance	<input type="checkbox"/> Instrumentation and Control Technology (BSC)	<input type="checkbox"/> Industrial Engineering and Management (NDSU)	<input type="checkbox"/> Industrial Engineering and Management (NDSU)



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Contact your SkillsUSA Advisor to learn more.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Marketing Communications	Account Executive • Advertising Manager • Creative Director • Media Buyer • Marketing Associate • Public Information Director • Interactive Media Specialist
Marketing Management	Database Manager • Customer Service Representative • Brand Manager • Director of Market Development • Marketing Services Manager • Planning Analyst
Marketing Research	Research Associate • Research Specialist • Market Research Manager • Strategic Planner • Research Analyst • Forecasting Manager • Marketing Strategist
Merchandising	Merchandise Buyer • Operations Manager • Retail Marketing Coordinator • Receiving Clerk • Visual Merchandise Manager • Department Manager • Sales Associate
Professional Selling	Account Executive • Broker • Manufacturer's Representative • Field Representative • Sales Executive • Solutions Advisory • Client Relationship Manager



Marketing Education - Coordinated Plan of Study			
Marketing Career Cluster			
Professional Sales/Merchandising		Marketing Management	
Course Name	Cr	Course Name	Cr
Entertainment & Sports Marketing	.5	Marketing	1
Marketing	1	Management/Entrepreneurship	1
Management/Entrepreneurship	1	Store Manager	.5-1
Store Manager	.5-1	Marketing Cooperative Work	.5
Marketing Cooperative Work	.5-1		
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Is this Pathway for you?

- Are you someone who likes to work with data to solve problems?
- Do you like to interact with all kinds of people?
- Do you like to come up with new ideas?
- Do you like to follow directions to complete a task?
- Do you consider yourself a leader who could be part of a team?
- Are you interested in being a team captain, officer, or having a role in an organization?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?

Other Electives to Consider for Marketing Pathway Preparation

CTE Electives

Computer Applications, Web Design 1 & 2
Accounting I, II
Business & Personal Finance, Business Law
Culinary Arts, Cultures & Cuisine, Exploring Foods,
Restaurant Skills, Housing and Interior Design

Academic Electives

Communications, Journalism 1 & 2
Exploratory Mass Media/Communication
Creative Writing, Debate
AP Statistics, AP Human Geography
Foreign Language
AP Macroeconomics, AP Microeconomics
Sociology



North Dakota Marketing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Marketing Communications	<input type="checkbox"/> Advertising and Marketing (DCB) <input type="checkbox"/> Advertising transfer (WSC) <input type="checkbox"/> Information & Communications Technology (NDSCS) <input type="checkbox"/> Mass Communications (BSC)	<input type="checkbox"/> Business Communication (UM) <input type="checkbox"/> Communication (UND) <input type="checkbox"/> Mass Communication (UM) <input type="checkbox"/> Public Relations (UM)	
Marketing Management	<input type="checkbox"/> Advertising & Marketing (DCB) <input type="checkbox"/> Business Management (NDSCS, RC, UTTC, WSC) <input type="checkbox"/> Information Management (NHSC) <input type="checkbox"/> Management (BSC) <input type="checkbox"/> Management Entrepreneurship (BSC) <input type="checkbox"/> Marketing (LRSC, RC) <input type="checkbox"/> Marketing and Management transfer (DCB) <input type="checkbox"/> Small Business Management (DCB)	<input type="checkbox"/> Business Management (RC, UM, VCSU) <input type="checkbox"/> Management (MiSU, NDSU, UND) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Marketing (MiSU, NDSU, RC, UM, UND, VCSU) <input type="checkbox"/> Sport & Leisure Management (UM)	<input type="checkbox"/> Management (MiSU)
Marketing Research	<input type="checkbox"/> Business Systems Analysis (RC)	<input type="checkbox"/> Business Systems Analysis (RC)	
Merchandising	<input type="checkbox"/> Art Marketing (UTTC) <input type="checkbox"/> Marketing (LRSC, RC)	<input type="checkbox"/> Apparel, Retail Merchandising, & Design (NDSU) <input type="checkbox"/> Operations and Supply Chain Management (UND)	<input type="checkbox"/> Merchandising (NDSU)
Professional Selling	<input type="checkbox"/> Entrepreneurship (CCCC, NDSCS, SBC, TMCC)	<input type="checkbox"/> Art Entrepreneurship (DSU) <input type="checkbox"/> Computer Information Systems/ Customer Relationship Management (VCSU) <input type="checkbox"/> Entrepreneurship (UND)	



DECA is a co-curricular student organization that connects the Marketing Education classroom curriculum to leadership experiences. DECA's mission is to prepare emerging leaders in marketing, finance, hospitality and management. North Dakota DECA was chartered in 1954 and continues to provide opportunities for its members today. DECA members are encouraged to be involved in local, state and national competitions, community service projects, and leadership. Contact your DECA advisor to learn more about what you can do to get involved.



Marketing education students also can compete in Junior Achievement's Titan Competition where students apply their knowledge of business to compete in an interactive business simulation or the JA Company Program which challenges student entrepreneurial spirit to start, operate, and liquidate their own company brand. Individual and team scholarship awards are available.

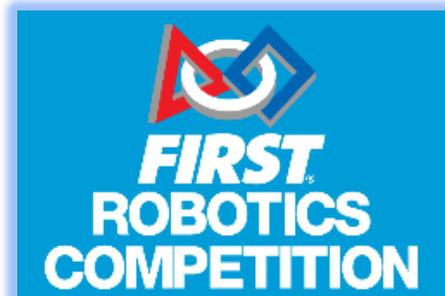


Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Engineering & Technology	Aerospace Engineer • Architectural Engineer • Automotive Engineer • CAD Technician • Civil Engineer • Computer Programmer • Electrical Engineer • Mapping Technician • Mining Engineer • Metallurgist • Petroleum Engineer • Survey Technician • Biomedical Engineer • Agricultural Technician • Application Engineer
Science & Mathematics	Anthropologist • Astronomer • Chemist • Geneticist • Ecologist • Environmental Scientist • Geologist • Research Technician • Economist • Analytical Chemist • Meteorologist • Nuclear Chemist/Technician • Statistician • Atmospheric Scientist • Zoologist • Astrophysicist • Quality-Control Scientist

Technology & Engineering Courses <i>* Indicated 1 credits</i>	Agriculture	The Arts	Aviation	Business
	<ul style="list-style-type: none"> • Intro to Agriculture • Plant Science I • Plant Science II • World Agriculture 	<ul style="list-style-type: none"> • Visual Arts • Performing Arts • Music • Music Composition 	<ul style="list-style-type: none"> • Photography • Yearbook • Theatre Arts • Tech * 	<ul style="list-style-type: none"> • Aviation IA & Aviation 1B • Aviation II* • Unmanned Aerial Vehicle • AFJROTC 1, 2, 3, 4
	Engineering	Graphic Design	Information Technology	Medical
<ul style="list-style-type: none"> • Robotics • PLTW—Intro to Engineering* • PLTW—Principles of Engineering* • Project Lead the Way—Civil Engineering* • Engineering Design Capstone 	<ul style="list-style-type: none"> • Communication Tech • Video Communications • Digital Photography 1 & 2 	<ul style="list-style-type: none"> • AP Computer Science – Java • CISCO 1, 2 • IT Essentials 1 & 2 • Computer Programming Java I • Introduction to Coding & Gaming • Mobile App Development & Security 	<ul style="list-style-type: none"> • CNA Skills • Health Science 1 & 2* • Medical Terminology • Athletic Injuries 	

Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you like to interact with all kinds of people?
- Do you enjoy creating, inventing, or imaging new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?
- Are you curious how math/science can be applied to build things or solve problems?





North Dakota STEM Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Engineering & Technology	<input type="checkbox"/> Architectural Drafting & Estimating Technology (NDSCS) <input type="checkbox"/> Engineering Technology (BSC) <input type="checkbox"/> Land Surveying and Civil Engineering (NDSCS) <input type="checkbox"/> Nanoscience Technology (NDSCS) <input type="checkbox"/> Nuclear Power Technology (BSC) <input type="checkbox"/> Petroleum Engineering Technology (BSC) <input type="checkbox"/> Petroleum Production Technology (BSC, NHSC, WSC) <input type="checkbox"/> Engineering transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TMCC, WSC) <input type="checkbox"/> Robotics, Automation & Mechatronics Technology (NDSCS) <input type="checkbox"/> Simulator Maintenance Technology (LRSC) <input type="checkbox"/> Technical Studies (BSC, NDSCS)	<input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Chemical Engineering (UND) <input type="checkbox"/> Civil Engineering (NDSU, UND) <input type="checkbox"/> Computer Engineering (NDSU) <input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Electrical Engineering (NDSU, UND) <input type="checkbox"/> Engineering Science (UM) <input type="checkbox"/> Geological Engineering (UND) <input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Industrial Technology (UND) <input type="checkbox"/> Manufacturing Engineering (NDSU) <input type="checkbox"/> Mechanical Engineering (NDSU, UJ, UND) <input type="checkbox"/> Petroleum Engineering (UND)	<input type="checkbox"/> Aerospace Sciences (UND) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Chemical Engineering (UND) <input type="checkbox"/> Civil Engineering (NDSU, UND) <input type="checkbox"/> Electrical/Computer Engineering (NDSU, UND) <input type="checkbox"/> Environmental Engineering (NDSU, UND) <input type="checkbox"/> Geological Engineering (UND) <input type="checkbox"/> Industrial Engineering & Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU) <input type="checkbox"/> Mechanical Engineering (NDSU, UND) <input type="checkbox"/> Software Engineering (NDSU) <input type="checkbox"/> Sustainable Energy Engineering (UND) <input type="checkbox"/> Technology (UND)
	<input type="checkbox"/> Biology transfer (BSC, DCB, TMCC, WSC) <input type="checkbox"/> Biotechnology transfer (NDSCS) <input type="checkbox"/> Chemistry transfer (BSC, DCB, NDSCS, TMCC, WSC) <input type="checkbox"/> Environmental Science Transfer (CCCC, NHSC, TMCC, WSC) <input type="checkbox"/> Environmental Technology (DCB) <input type="checkbox"/> Mathematics transfer (BSC, DCB, NDSCS, NHSC, TMCC, WSC) <input type="checkbox"/> Natural Science transfer (NDSCS, TMCC) <input type="checkbox"/> Pharmacy transfer (WSC) <input type="checkbox"/> Physical Science transfer (NDSCS, WSC) <input type="checkbox"/> Physics transfer (BSC, WSC) <input type="checkbox"/> Science transfer (CCCC, NHSC) <input type="checkbox"/> Tribal Environmental Science (UTTC)	<input type="checkbox"/> Atmospheric Sciences (UND) <input type="checkbox"/> Biochemistry and Molecular Biology (NDSU) <input type="checkbox"/> Biology/Biological Science (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Biotechnology (NDSU) <input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Chemistry (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Computer Science (DSU, MiSU, RC, UM, UND) <input type="checkbox"/> Earth Science (MiSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC, UND) <input type="checkbox"/> Forensic Science (UND) <input type="checkbox"/> Geology (MiSU, NDSU, UND) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Mathematics (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Microbiology (NDSU) <input type="checkbox"/> Molecular and Integrative Biology (UND) <input type="checkbox"/> Physics (NDSU, UND) <input type="checkbox"/> Statistics (NDSU) <input type="checkbox"/> Unmanned Aircraft Systems Operations (UND) <input type="checkbox"/> Zoology (NDSU)	<input type="checkbox"/> Atmospheric Sciences (UND) <input type="checkbox"/> Biochemistry/Biomedical Sciences (NDSU) <input type="checkbox"/> Biology/Biological Science (NDSU, UND) <input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Cellular and Molecular Biology (NDSU) <input type="checkbox"/> Chemistry (NDSU, UND) <input type="checkbox"/> Coatings and Polymeric Materials (NDSU) <input type="checkbox"/> Entomology (NDSU) <input type="checkbox"/> Environmental & Conservation Science (NDSU, SBC) <input type="checkbox"/> Geology (UND) <input type="checkbox"/> Materials and Nanotechnology (NDSU) <input type="checkbox"/> Mathematics (NDSU, UND) <input type="checkbox"/> Microbiology (NDSU) <input type="checkbox"/> Physics/Astrophysics (NDSU, UND) <input type="checkbox"/> Plant Pathology (NDSU) <input type="checkbox"/> Plant Sciences (NDSU) <input type="checkbox"/> Space Studies (UND) <input type="checkbox"/> Statistics (NDSU) <input type="checkbox"/> Zoology (NDSU)



The Technology Student Association is a local, state, and national student organization created to develop skills in science, technology, engineering, and mathematics as well as business education. TSA aims to develop leadership, academic, and business management skills in the workplace among students and leaders within the community. Students currently or previously enrolled in Technology & Engineering courses join TSA and extend their learning and leadership through intracurricular activities, and competitions. Contact your school's TSA Advisor to get involved.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Facility & Mobile Equipment Maintenance	Automotive Service Technician • Collision Repair Technician • Diesel Engine Specialist • Marine Technician • Service Manager • Electrical/Electronic Technician • Industrial Electrician • Motorcycle & UTV Technician
Health, Safety & Environmental Management	Industrial Health & Safety Engineer • Safety Analyst • Environmental Scientist • First Responder • Environmental Compliance Specialist • Risk Manager
Logistics Planning & Management Services	Logistic Manager • Logistics Analyst • Logistician • Logistic Consultant • International Logistics Specialists • Logistic Engineer
Sales & Service	Marketing Manager • Sales Representative • Cargo and Freight Agent • Customer Service Representative • Customer Order and Billing Clerk • Sales Manager
Transportation Operations	Pilot • Flight Engineer • Truck Driver • Bus Driver • Dispatchers • Air Traffic Controller • Transportation Managers • Locomotive Engineer • Flight Attendant
Transportation Systems/Infrastructure Planning, Management & Regulation	Aviation Inspector • Logistics System Manager • Surveying and Mapping Technician • Motor Vehicle Inspector • Transportation Engineer • Freight Inspector
Warehousing & Distribution Center Operations	Warehouse Manager • Shipping & Receiving Clerk • Production/Planning/Expediting Clerk • Laborer & Material Handler • Industrial and Packaging Engineers



Transportation, Distribution & Logistics Career Cluster			
Transportation Operations		Facility and Mobile Equipment Maintenance	
Course Name	Cr	Course Name	Cr
Aviation Technology IA	.5	Automotive Technology I	1
Aviation Technology IB	.5	Automotive Technology II Bock	2
Aviation Technology II	1	Diesel Technology I	1
Unmanned Aerial Vehicle	.5	Diesel Technology II Bock	2
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Is this Pathway for you?

- Are you someone who likes to work with your hands to solve problems?
- Do you like to interact with all kinds of people?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?
- Does travel and moving from one place to another interest you?
- Are you interest in designing or working with a system to make things faster or more efficient?
- Do you like to work with your hands?

Other Electives to Consider for Transportation, Distribution & Logistics Pathway Preparation
<p>CTE Electives</p> <ul style="list-style-type: none"> Exploring Business Software, Basics of Business Business and Personal Finance IT Essentials 1 & 2 Intro to Engineering Design, Principles of Engineering Construction Technology 1 & 2 Management/Entrepreneurship Manufacturing 1, 2, & 3 Welding I, II <p>Academic Electives</p> <ul style="list-style-type: none"> AFJROTC Chemistry, Physics Consumer Math, Advanced Math, Pre-Calculus, AP Calculus Communications, Public Speaking Psychology



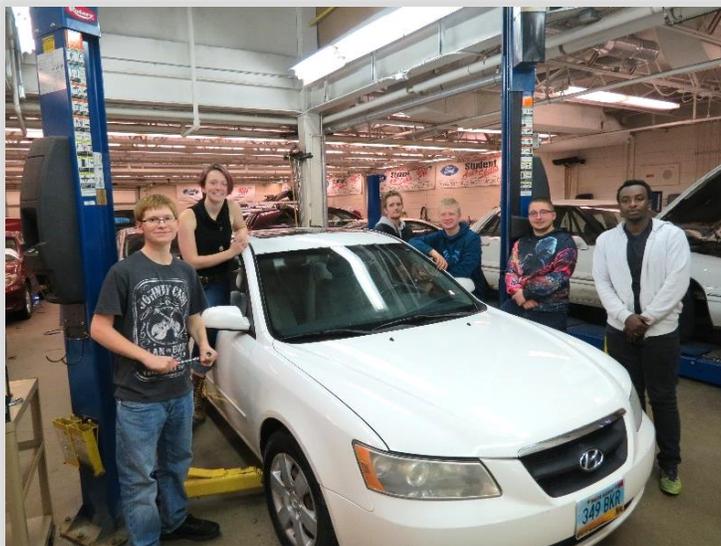
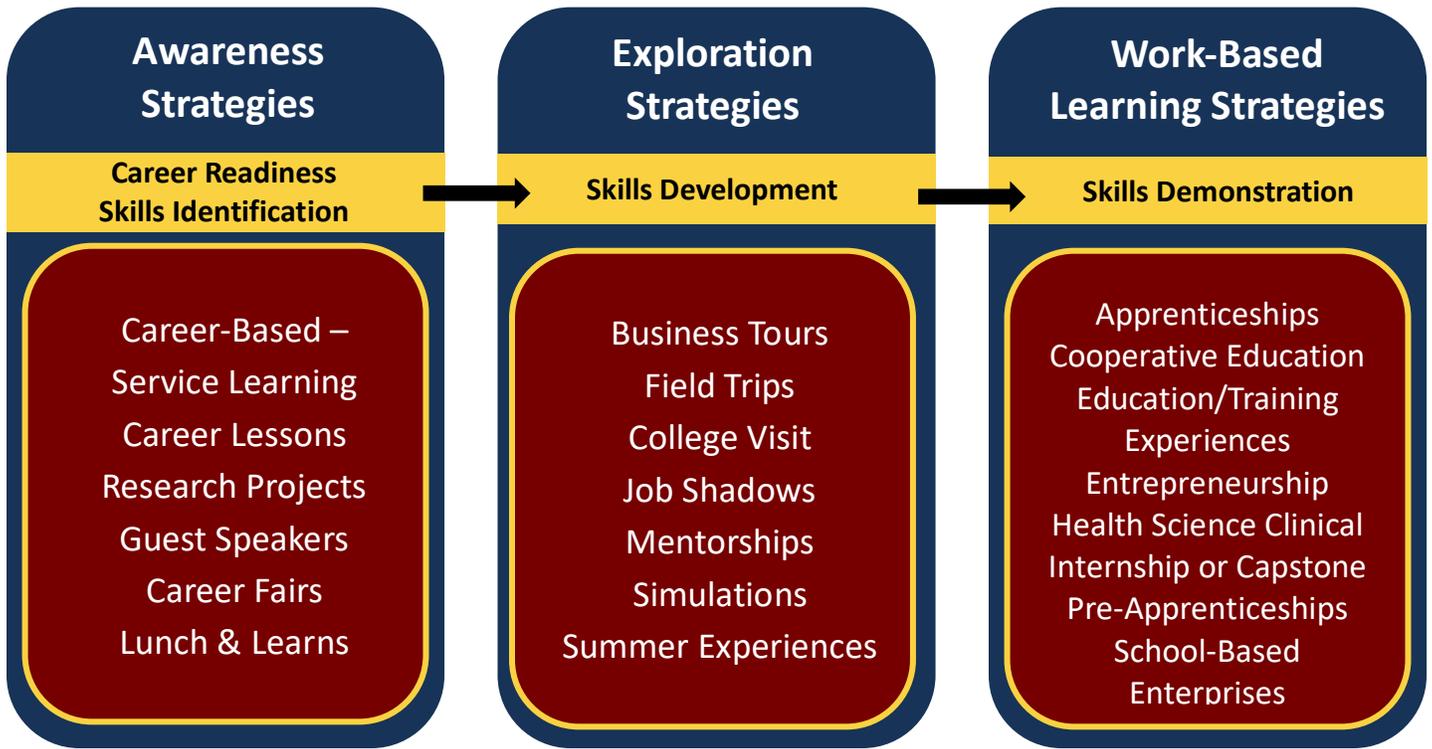
North Dakota Transportation, Distribution & Logistics Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Facility & Mobile Equipment Maintenance	<input type="checkbox"/> Auto Collision Technology (BSC, NDSCS) <input type="checkbox"/> Auto Technology (BSC, BJCC, CCCC, LRSC, NDSCS, UTTC) <input type="checkbox"/> Diesel Technology (NDSCS) <input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics & Telecommunications Technology (BSC) <input type="checkbox"/> Facilities Maintenance (BJCC) <input type="checkbox"/> Geographic Information Systems Technology (BSC) <input type="checkbox"/> Power Sport Technology (NDSCS) <input type="checkbox"/> Transportation Technician (WSC)		
Health, Safety & Environmental Management	<input type="checkbox"/> Environmental Public Health (TMCC)	<input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Health (DSU)	
Logistics Planning & Management Services	<input type="checkbox"/> Information Management Systems (DCB, NHSC, RC) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Technology (DCB, LRSC, NDSCS, WSC) <input type="checkbox"/> Management Information Systems (NDSCS)	<input type="checkbox"/> Business Administration/Business Process Integration Management (VCSU) <input type="checkbox"/> Business Management (UM) <input type="checkbox"/> Information Technology Management (DSU, UM) <input type="checkbox"/> Management Information Systems (MiSU, NDSU, RC, UND) <input type="checkbox"/> Operations/Supply Chain & Logistics (RC, UND)	<input type="checkbox"/> Business Administration/Project Management (UM) <input type="checkbox"/> Transportation and Logistics (NDSU)
Sales & Service	<input type="checkbox"/> Business Management (WSC) <input type="checkbox"/> Marketing & Management transfer (DCB, LRSC, RC)	<input type="checkbox"/> Airport Management (UND) <input type="checkbox"/> Marketing (MiSU, NDSU, RC, UM, UND)	<input type="checkbox"/> Merchandising (NDSU)
Transportation Operations	<input type="checkbox"/> Airline Transport Pilot (FFS) <input type="checkbox"/> CDL/Heavy Equipment (CCCC, NHSC, SBC, TMCC, UTTC) <input type="checkbox"/> Commercial Pilot (EATC, FFS, GFKFS) <input type="checkbox"/> Heavy Equipment Operator (UTTC) <input type="checkbox"/> Instrumental/Multi-Engine Rating (EATC, FFS, GFKFS) <input type="checkbox"/> Private Pilot (EATC, FFS, GFKFS) <input type="checkbox"/> Recreational/Sport Pilot (EATC, FFS)	<input type="checkbox"/> Air Traffic Control (UND) <input type="checkbox"/> Commercial Aviation (UND) <input type="checkbox"/> Aviation Management (UND) <input type="checkbox"/> Aviation Technology Management (UND) <input type="checkbox"/> Flight Education (UND) <input type="checkbox"/> Unmanned Aircraft Systems Operations (UND)	<input type="checkbox"/> Aerospace Sciences (UND) <input type="checkbox"/> Aviation (UND)
Transportation Systems/ Infrastructure Planning, Management & Regulation		<input type="checkbox"/> Airport Management (UND) <input type="checkbox"/> Aviation Technology Management (UND) <input type="checkbox"/> Operations/Supply Chain & Logistics (RC, UND) <input type="checkbox"/> Public Policy ()	<input type="checkbox"/> Transportation and Urban Systems (NDSU)
Warehousing & Distribution Center Operations	<input type="checkbox"/> Management (BSC)	<input type="checkbox"/> Business Administration/Business Process Integration Management (VCSU)	



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Contact your SkillsUSA Advisor to join.

Career-Ready Work Experiences



Fargo high school students are encouraged to participate in work related experiences to develop employability, leadership, and job-related skills.

Students completing over 75 hours of Work-based Learning or 25 hours of Community Service are Career Ready candidates toward North Dakota's Choice Ready Pathways.

Cooperative work-based learning experiences may be measured on Career Ready Practice categories for Responsible Employee, Technical Skills, Communication, Problem-solving and Teamwork.

Extended Learning Experience refers to the knowledge and skills that can be gained in a work setting. These glimpses into the real-world can help students make more informed education and career decisions.

It is important for students to identify some of the career fields that best fit their interest before beginning formal career work experience planning. The following are the extended learning experience options available for students in Fargo high schools

Job Shadow/Observation:

A Job Shadow or Observation is an opportunity to pair a student with a person who does the kind of work the student wants to explore. Job Shadow/Observations generally last 2-8 hours and are typically limited to observing the worker. Job Shadows or Observations offer the student:

- A first-hand look at the occupation
- An opportunity to observe and ask questions
- A possible “contact” in the field of work

Interested? Talk with your career advisor, school counselor, or with a career and technical education (CTE) instructor.

Job Application / Interview:

Creating a resume that catches an employer’s attention, correctly completing an application form, and knowing how to interview for a job are not inherent skills. Students may work with the Career Center staff to learn and practice these skills.

Cooperative Education:

Cooperative Education (co-op) is a job placement directly related to a student’s classroom instruction in career and technical education (CTE). This experience must be arranged through a CTE instructor and career advisor. As a co-op student you:

- Are monitored and evaluated by your instructor and your employer.
- Receive a grade for the co-op experience.
- May be paid by the employer.
- A student is able to obtain a maximum of 2 credits during their high school experience. Hours are calculated as 75 hours for ½ credit, and 150 for 1 credit.

Capstone Experience:

A Capstone Experience is a project-based activity culminating at the end of coursework requiring the application and demonstration of essential skills outlined for the project.

Junior Educators of Tomorrow (JET):

A service-learning program to experience a teaching career in the elementary or middle school setting.

- Students must be in 12th grade, have a GPA of at least 2.0, and be registered for at least five additional classes at the high school.

Service Learning: Community Leadership Impact

Service learning offers students an opportunity to do something significant for other people in their community while enhancing their educational experience and personal growth. Students may earn up to one credit toward graduation by serving as a volunteer in the school system or through a non-profit agency.

Volunteer Opportunities: Social Inclusion

Post-secondary institutions and future employers look positively upon those who have given back to their communities. In addition to opening the doors of opportunity, participation in volunteer activities allows students to gain experience in areas of interest while helping others.



Four Year Plan – Student Planning Template

Student Name: _____ School Year: _____ Current Career Goal: _____

School Counselor: _____ Career Advisor: _____ ACT Score: _____

Career Cluster #1: _____ Career Pathway: _____ Occupations: _____

Career Cluster #2: _____ Career Pathway: _____ Occupations: _____

Career Cluster #3: _____ Career Pathway: _____ Occupations: _____

	9 th Grade			10 th Grade			11 th Grade			12 th Grade		
COURSE	Course Name	Gr.	Cr.		Gr.	Cr.		Gr.	Cr.		Gr.	Cr.
ENGLISH	English or Honors English		1	English II or Honors English		1	English III or AP English III		1	English IV or AP English IV		1
MATH	Algebra I or Geometry		1	Geometry or Algebra II		1	Algebra II or Upper-level math course		1	Upper-level math (recommended)		.5 or 1
SOCIAL STUDIES	World Geography		.5	Western Civilization		1	US History or AP US History		1	Government or AP Government .5 and Economics or Microeconomics .5		1
SCIENCE	Physical Science or Biology		1	Biology or Chemistry		1	3 rd Science or Physics		1			
PE/HEALTH	PE and Health 9	.5	1	PE		.5	PE		.5	PE (Class of 2019 & 2020)		.5
	Total Required Credits		4.5	Total Required Credits		4.5	Total Required Credits		4.5	Total Required Credits ^(19&20)		2.5
ELECTIVE										Total Required Credits 2021+		2
ELECTIVE												
ELECTIVE												
ELECTIVE												
CREDITS/YEAR			6, 6.5 or 7			6, 6.5 or 7			6, 6.5 or 7			6, 6.5 or 7
WORK-BASED LEARNING HOURS			Hrs.			Hrs.			Hrs.			Hrs.