

# Career OUTLOOK

38th Edition  
2020-2021

NORTH DAKOTA CAREER RESOURCE NETWORK





## ACKNOWLEDGEMENTS

The Career Outlook is a publication of the North Dakota Department of Career and Technical Education's Career Resource Network (CRN).

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**Thank you to all who  
have contributed to the  
production of this year's  
Career Outlook.**

Dear Students:

Career exploration and planning is an important step in planning for the future. Whether you are preparing for a transition to college, researching an apprenticeship, considering military service or entering the workforce, it is an exciting time in your life.

Career and Technical Education (CTE) courses provide a wide range of academic and work-based learning experiences in Agriculture, Business, Family and Consumer Sciences, Information Technology, Marketing, Technology Education, and Trades, Industry, Technical and Health Science. These opportunities are the foundation for your chosen career field.

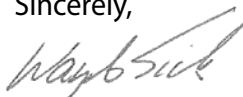
Career and Technical Student Organizations (CTSOs), including DECA, FBLA, FCCLA, FFA, SkillsUSA and TSA, will help you develop leadership and employability skills. Applying for a chapter office, volunteering your time for a project, finding ways to support your community, and preparing for state and national competitive events are some of the many ways you can benefit from membership.

Thoughtful, deliberate planning will help you choose a career that is satisfying and fulfills a critical need in your community. Future employers will be looking for individuals who have the knowledge, technical skills, and attitude necessary to be globally competitive.

The *Career Outlook* magazine contains valuable information about the many opportunities available to you in North Dakota. Education and training requirements, the earning potential within a career field, and the number of available jobs can all be found in this issue. Use this magazine as a resource when making decisions about your future.

This valuable resource will help you make informed decisions.

Sincerely,



Wayde Sick, Director  
ND Department of Career and Technical Education



# CONTENTS

- 2 Acknowledgements
- 2 From the Director
- 5 CTE Presidential Scholar



## SELF-ASSESSMENT

- 10 Career Clusters Interest Survey
- 33 RUPrepare.ND.gov
- 46 Are You Ready to Be an Entrepreneur?
- 62 Budgeting for Beginners



## OCCUPATIONAL RESEARCH

- 4 Feature Articles
- 9 Job Service North Dakota
- 12 How to Use the Occupational Section
- 13 Occupational Section Directory
- 16 Apprenticeship
- 28 Energy and Natural Resources
- 33 RUPrepare.ND.gov
- 54 Youth Forward



## FINANCING YOUR EDUCATION

- 8 North Dakota Academic and Career and Technical Education Scholarship Programs
- 33 RUPrepare.ND.gov
- 56 Cut College Costs
- 56 FAFSA
- 57 Student Loans Are Not Free Money
- 63 ND Postsecondary Programs and Estimated On-Campus Budgets



## EMPLOYMENT

- 6 ND Top Careers by Education and Total Openings
- 9 Job Service North Dakota
- 62 Finding Your First Job as a Teen



## EDUCATION AND TRAINING

- 33 RUPrepare.ND.gov
- 39 Aviation/Unmanned Aerial Systems
- 52 Why Choose a NDUS School?
- 53 Checklist for Admission to a College or University
- 53 NDUS Admission Requirements
- 53 NDUS Distance Education Courses
- 54 Dual Credit Courses
- 54 ND Center for Distance Education (NDCDE)
- 55 AmeriCorps
- 55 Job Corps – Job Training and Career Placement
- 58 ND Army National Guard
- 59 Military Branch Information
- 60 Vocational Rehabilitation
- 61 Adult Education/Adult Learning Centers and GED
- 64 CTE Leadership Opportunities  
ND Career and Technical Student Organizations



## ON THE COVER

- 49 Mike Bahm,  
FFA Alumni

# FEATURE ARTICLES

The CTSO members featured in this edition have pursued careers combining their interests and skills. Read more about their journey throughout the magazine.



**“Find what you’re good at, become excellent at it, and pursue opportunities where those skills are in demand.”**

*Eric Sinoway*



# GARY WU

## CTE Presidential Scholar

Grand Forks Central High School



**QUESTION:** What are your next steps? If you are planning on college, where will you enroll?

**ANSWER:** I'm taking a gap year before attending Harvard University.

**QUESTION:** If you have selected a college major, what is it and what appeals to you about the major?

**ANSWER:** Currently, I'm leaning towards studying Economics. One of the issues I care about is automation's rapidly growing impact on the economy, and jobs that will be displaced by that technology. Studying economics gives me a strong background in this area and will help when I eventually begin my own initiative to combat this issue.

**QUESTION:** If you were talking to a group of students and/or parents, how would you advocate and promote the benefits of Career and Technical Education (CTE) and student organizations such as DECA?

**ANSWER:** Essentially, what makes Career and Technical Student Organizations (CTSOs) like DECA stand out, compared to other student groups, is real-world practice. You can learn a lot about marketing or agriculture in a class, but you won't get the chance to apply that knowledge in real-life scenarios without becoming involved in CTOS. They are also full of fun events, and it's likely that you'll meet some of your best friends in these student organizations.



**QUESTION:** Describe how your involvement in DECA has prepared you for leadership.

**ANSWER:** Serving as a state officer with Mr. Kevin Reisenauer, State DECA Advisor, has given me the invaluable opportunity to help DECA members across the state. Filling leadership positions at the school and statewide levels in high school is great practice for future leadership.

**QUESTION:** What kinds of things are you looking forward to as you transition to the next chapter of your life?

**ANSWER:** I'm looking forward to seeing how I can further apply the skills I've gained through CTE. At college and beyond, I'm hoping to incorporate the many lessons CTE has given me into the work I'll be involved in.

**QUESTION:** You are a high school senior with exceptional academic ability who has also demonstrated ability and accomplishment in CTE. Describe what this recognition means to you.

**ANSWER:** It's an incredible honor. To me, this recognition is a reminder that CTE has had a tremendous impact on my life. I'll forever be thankful for the many opportunities given to me through DECA.

**QUESTION:** Is there anything else you'd like to share?

**ANSWER:** I would recommend that every single high schooler in North Dakota join a CTOS. It's helped me carve out my future career path, given me some of my best friends, and taught me many lessons in leadership and empathy.



# NORTH DAKOTA TOP CAREERS BY EDUCATION

Typical Entry Level Education & Career		Total Openings	Average 2019 Wage	Examples of Tasks Performed
<b>High School Diploma or Equivalent</b>				
1	<b>Office Clerks, General</b>	11,444	\$42,310	Perform office tasks, including answering telephones, word processing, copying documents, and maintaining records.
2	<b>Personal Care Aides</b>	11,260	\$33,330	Assist the elderly, convalescents, or persons with disabilities with daily living activities at the person's home or in a care facility.
3	<b>Customer Service Representatives</b>	9,128	\$38,310	Handle customer complaints, process orders, and provide information about products and services.
4	<b>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</b>	8,098	\$38,070	Perform clerical functions such as correspondence, appointments, and organizing files.
5	<b>Bookkeeping, Accounting, and Auditing Clerks</b>	7,787	\$38,560	Produce financial records for organizations including transactions, statements, and checking records for accuracy.
6	<b>Stock Clerks and Order Fillers</b>	7,779	\$30,760	Receive, store, and issue sales floor merchandise, materials, equipment, and other items from stockroom or warehouse.
7	<b>Childcare Workers</b>	7,629	\$25,380	Care for children's basic needs, such as bathing and feeding, when family members are unavailable.
8	<b>Teacher Assistants</b>	6,371	\$33,080	Work under a teacher's supervision to give students additional attention and instruction.
9	<b>Supervisors of Retail Sales Workers</b>	4,898	\$46,350	Duties may include management functions, such as purchasing, budgeting, accounting, personnel work, and supervisory duties.
10	<b>Maintenance and Repair Workers, General</b>	4,768	\$41,420	Duties may involve pipe fitting; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment.
11	<b>Electricians</b>	4,616	\$64,620	Install and maintain electrical power, communications, lighting, and control systems in homes and factories.
12	<b>Supervisors of Construction Trades and Extraction Workers</b>	4,521	\$77,860	Supervise activities of construction workers and inspect work progress to ensure project specifications are met.
13	<b>Supervisors of Food Preparation and Serving Workers</b>	4,377	\$38,190	Supervise activities of food preparation workers; perform financial activities related to bills and payments.
14	<b>Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products</b>	4,292	\$76,130	Sell goods to businesses or groups of individuals. Work requires substantial knowledge of items sold.
15	<b>Operating Engineers and Other Construction Equipment Operators</b>	3,936	\$55,190	Operate equipment such as graders, bulldozers or front-end loaders to excavate earth; pour concrete or surface pavement.
<b>Postsecondary Non-Degree Award*</b>				
1	<b>Heavy and Tractor-Trailer Truck Drivers</b>	18,199	\$53,990	Transport goods from one location to another. Most tractor-trailer drivers are long-haul drivers.
2	<b>Nursing Assistants</b>	9,169	\$34,320	Provide basic care for patients in hospitals and residents of long-term care facilities, such as nursing homes.
3	<b>Welders, Cutters, Solderers, and Brazers</b>	2,942	\$54,480	Weld and solder components, dismantle metal assemblies, and analyze blueprints.
4	<b>Hairdressers, Hairstylists, and Cosmetologists</b>	2,597	\$31,260	Determine and recommend beauty treatment, hair styles, and cut hair.
5	<b>Automotive Service Technicians and Mechanics</b>	2,486	\$47,530	Examine vehicles, compile estimates of repair costs, and secure approval to perform repairs.
6	<b>Licensed Practical Nurses</b>	2,255	\$46,760	Observe patients, chart and report changes in patients' conditions.
7	<b>Bus and Truck Mechanics and Diesel Engine Specialists</b>	2,252	\$56,040	Perform routine maintenance such as lubricating equipment and machinery.
8	<b>Mobile Heavy Equipment Mechanics, Except Engines</b>	1,361	\$62,530	Diagnose, repair, or overhaul mechanical equipment such as bulldozers, graders, and conveyors used in construction.
9	<b>Industrial Machinery Mechanics</b>	1,354	\$66,310	Repair, install or maintain industrial production and processing machinery.
10	<b>Farm Equipment Mechanics and Service Technicians</b>	1,212	\$49,200	Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors and harvesters.
11	<b>Heating, Air Conditioning, and Refrigeration Mechanics and Installers</b>	1,131	\$53,270	Reassemble and test equipment following repairs.
12	<b>Medical Assistants</b>	1,020	\$37,170	Administrative duties include scheduling appointments, maintaining records, billing, and coding information.
13	<b>Dental Assistants</b>	924	\$47,140	Assist dentist, set up equipment, prepare patient for treatment, and keep records.
14	<b>Emergency Medical Technicians and Paramedics</b>	862	\$35,150	Administer first-aid treatment and life-support care to persons in a pre-hospital setting.
15	<b>Phlebotomists</b>	837	\$34,150	Draw blood for tests, transfusions, donations, or research. May explain the procedure to patients.



	Typical Entry Level Education & Career	Total Openings	Average 2019 Wage	Examples of Tasks Performed
<b>Associates Degree</b>				
1	Computer User Support Specialists	1,397	\$66,930	Answer user inquiries regarding computer software or hardware to resolve problems.
2	Preschool Teachers, Except Special Education	1,224	\$28,350	Educate and care for children, ages 3 to 5, in a way that young children can understand.
3	Civil Engineering Technicians	568	\$58,170	Calculate dimensions, profile and component specifications, and material quantities.
4	Paralegals and Legal Assistants	555	\$46,660	Prepare legal documents, including briefs, pleadings, appeals, wills, and contracts.
5	Dental Hygienists	554	\$72,550	Clean teeth, examine gums, develop x-ray film and watch for signs of decay or gum disease.
6	Computer Network Support Specialists	454	\$47,870	Analyze, test, troubleshoot, and evaluate existing network systems. Perform network maintenance to ensure networks operate correctly.
7	Radiologic Technologists	417	\$55,400	Operate x-ray equipment, process radiographs, review and evaluate x-ray images.
8	Dietetic Technicians	375	\$31,990	Assist in the provision of food service and nutritional programs, under the supervision of a dietitian.
9	Life, Physical, and Social Science Technicians, All Other	357	\$53,090	Compile laboratory test data and perform appropriate analyses. Complete documentation needed to support procedures.
10	Electrical and Electronic Engineering Technicians	352	\$65,150	Apply electrical and electronic theory to design, build, repair, and modify components, circuitry, controls, and machinery.
11	Architectural and Civil Drafters	348	\$56,460	Prepare detailed architectural drawings of buildings and topographical relief maps used in civil engineering projects.
12	Power Plant Operators	341	\$86,870	Control, operate, or maintain machinery to generate electric power. Includes auxiliary equipment operators.
<b>Bachelor's Degree</b>				
1	General and Operations Managers	7,150	\$102,850	Oversee activities directly related to making products or providing services.
2	Registered Nurses	6,643	\$66,290	Monitor all aspects of patient care, modify treatment, and consult with healthcare team.
3	Accountants and Auditors	4,708	\$64,260	Prepare, examine, or analyze accounting records, financial statements, or financial reports.
4	Elementary School Teachers, Except Special Education	3,345	\$55,630	Instruct elementary students individually and in groups using various teaching methods.
5	Business Operations Specialists, All Other	2,800	\$74,790	Plan, direct, or coordinate the operations of public or private sector organizations.
6	Secondary School Teachers, Except Special and Career/Technical Education	2,172	\$56,250	Instruct students through lectures, discussions, and demonstrations in one or more subjects.
7	Chief Executives	1,782	\$163,790	Direct an organization to fund operations, maximize investments, and increase efficiency.
8	Human Resources Specialists	1,571	\$62,420	Perform activities in the human resource area. Includes employment specialists who screen, recruit, interview, and place workers.
<b>Master's, Doctoral, or Professional Degree</b>				
1	Lawyers	1,061	\$113,280	Advise clients, prosecute or defend lawsuits, legal rights, and obligations.
2	Educational, Guidance, School, and Vocational Counselors	922	\$59,740	Counsel individuals and provide group educational and vocational guidance services.
3	Physical Therapists	465	\$81,630	Prepare and carry out individually designed programs of physical treatment for patients.
4	Education Administrators, Elementary and Secondary School	459	\$101,020	Review, modify or approve new programs, and submit program proposals to school board.
5	Healthcare Social Workers	440	\$53,070	Provide psychosocial support needed to cope with chronic, acute, or terminal illnesses.

**METHODOLOGY:** These careers were selected based on the projected growth and replacement openings published in Job Service North Dakota's 2016-2026 Long-Term Employment Projections report.

**TYPICAL ENTRY-LEVEL EDUCATION:** Typical entry-level education describes the education level most workers need to enter the occupation.

**TOTAL OPENINGS:** Total openings are the summation of numeric change, labor force exit openings, and occupational transfer openings.

**AVERAGE 2019 WAGES:** Wage data is from the 2019 Occupational Employment Statistics (OES) survey. Excludes overtime pay and earnings from most self-employed workers.

\* Postsecondary Nondegree Award: These programs lead to a certificate or other award, but not a degree.

# NORTH DAKOTA

## Academic and Career & Technical Education Scholarship Programs

North Dakota resident students may apply for either the ND Academic or Career and Technical Education Scholarship. The amount of each scholarship is \$750 per semester or \$500 per quarter based on full-time enrollment in an accredited higher education institution in the state, both public and private. Students may be eligible for up to \$6,000 within six academic school years after graduation from high school.

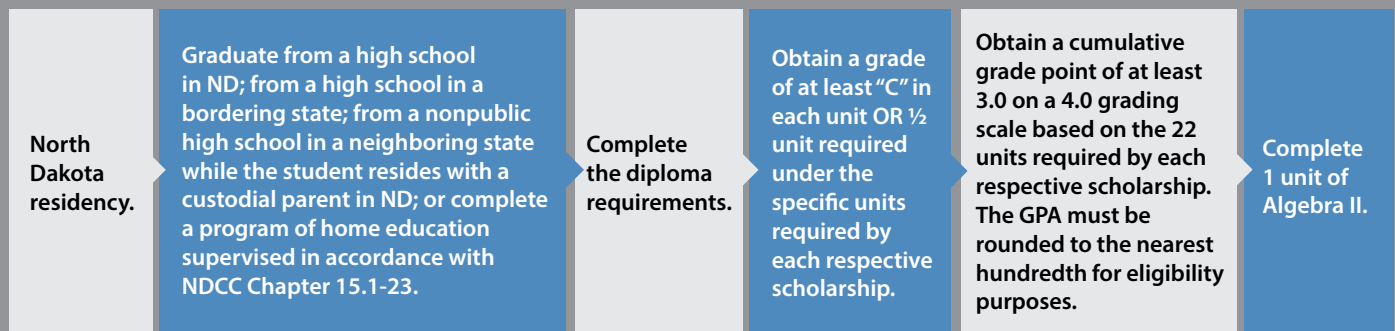
The scholarship is renewable provided the student is enrolled full-time in North Dakota, maintains a 2.75 GPA while attending college and maintains progress toward degree completion. For purposes of eligibility, "full-time" is defined by the

institution the student is attending.

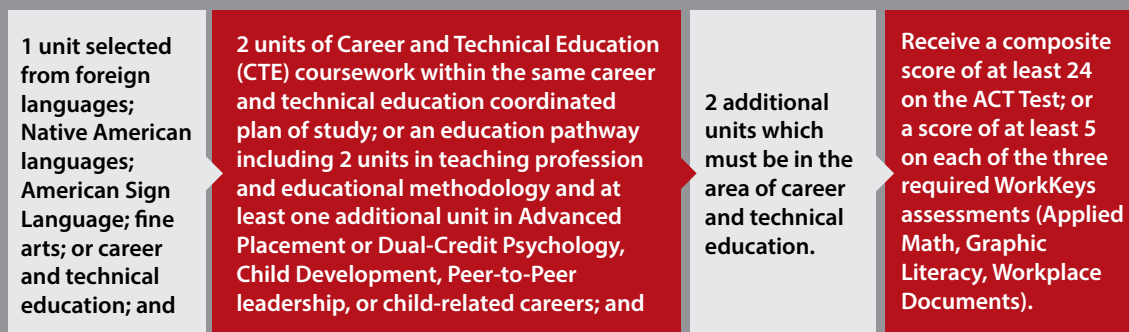
North Dakota seniors must apply by **June 4, 2021**. Students who are awarded a scholarship may defer acceptance of the scholarship.

Students will need to plan their high school coursework carefully to meet all eligibility requirements within the four years of high school. For a complete listing of eligibility requirements for both scholarship programs, or for an application, visit [www.nd.gov/dpi/parentscommunity/students/academic-and-cte-scholarship](http://www.nd.gov/dpi/parentscommunity/students/academic-and-cte-scholarship) or call 701-328-2244. Students are also encouraged to visit with their school counselor regarding the Academic and CTE Scholarships.

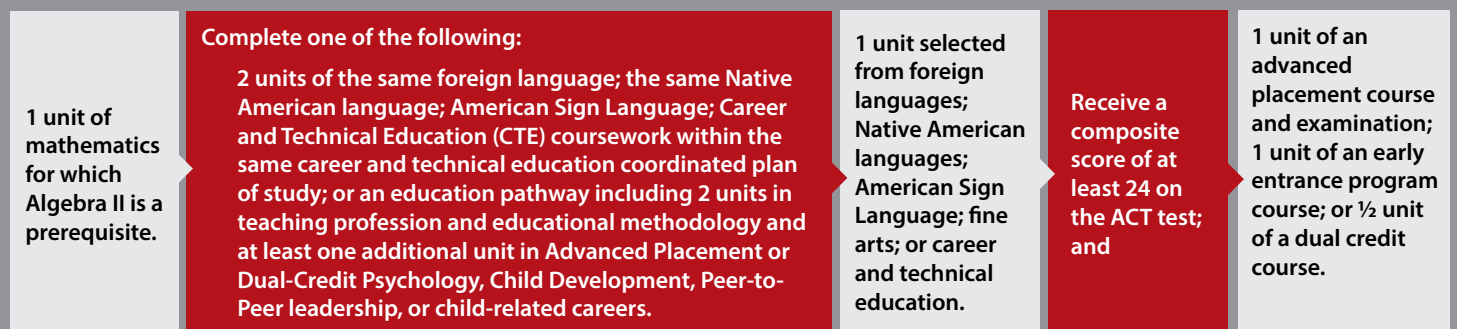
### COMMON REQUIREMENTS FOR BOTH SCHOLARSHIPS



### CAREER AND TECHNICAL EDUCATION SCHOLARSHIP REQUIREMENTS



### ACADEMIC SCHOLARSHIP REQUIREMENTS



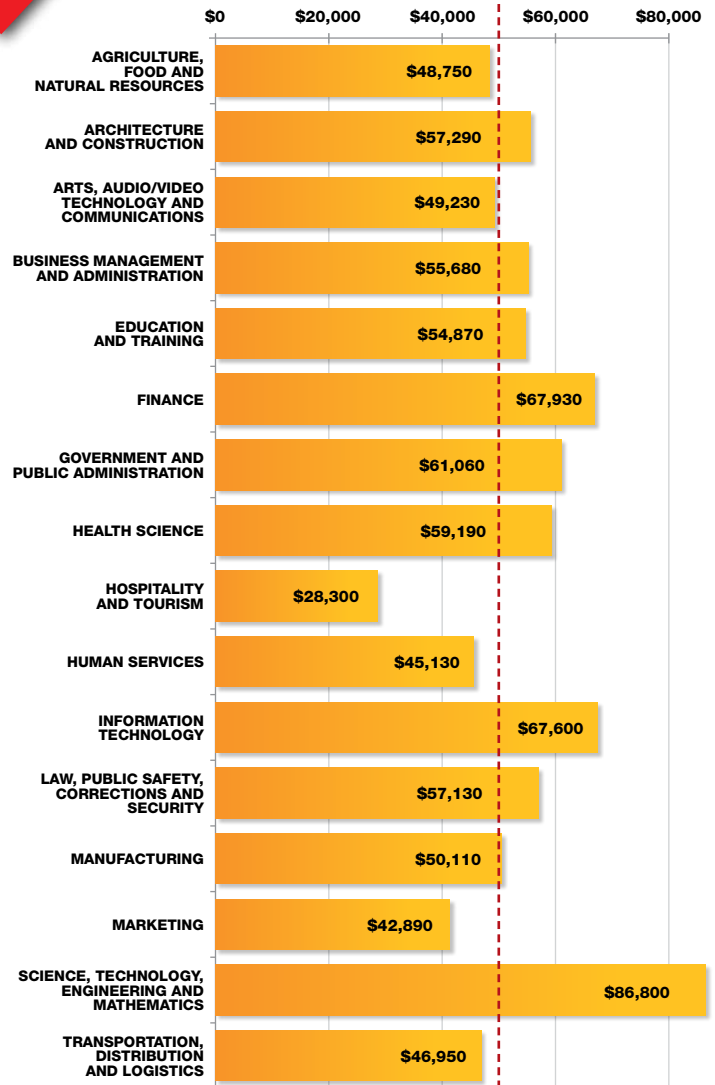
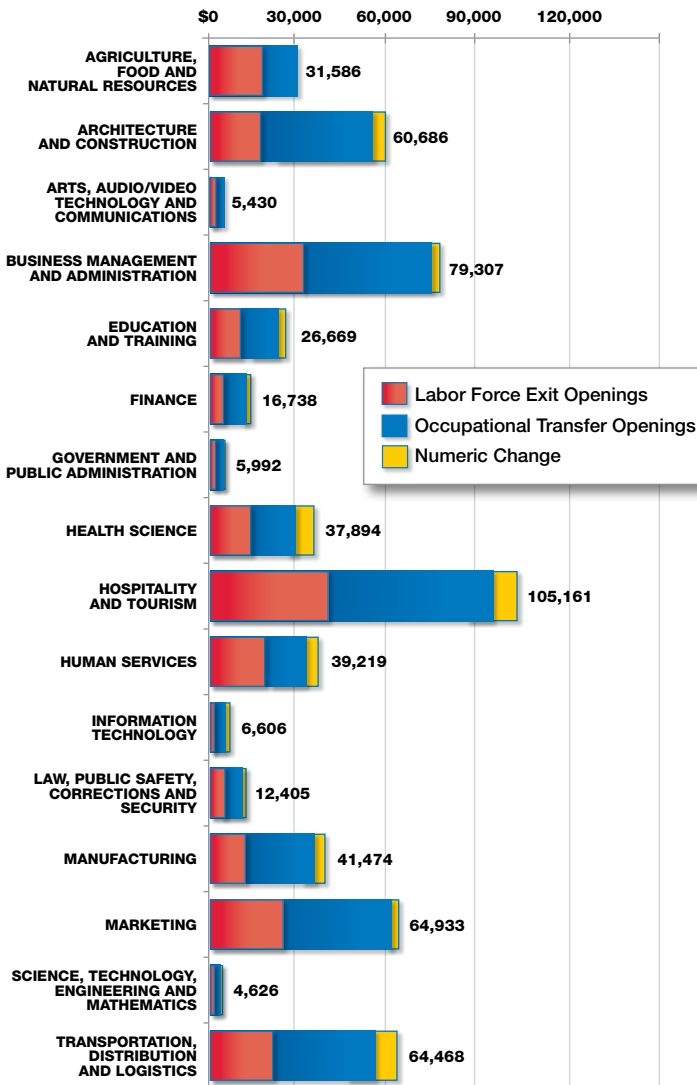
Visit [www.cte.nd.gov/coordinated-plans-study](http://www.cte.nd.gov/coordinated-plans-study) for more information.



## EMPLOYMENT PROJECTIONS 2016-2026 TOTAL OPENINGS

## AVERAGE 2019 WAGES

ND AVG  
\$50,430



**Bismarck-Mandan**  
1601 E Century Ave  
701-328-5000

**Fargo**  
1350 32nd St S  
701-239-7300

**Minot**  
3416 N Broadway  
701-857-7500

**Devils Lake**  
301 College Dr S  
701-662-9300

**Grand Forks**  
1501 28th Ave S  
701-795-3700

**Wahpeton**  
524 2nd Ave N  
701-671-1550

**Dickinson**  
66 Osborn Dr  
701-227-3100

**Jamestown**  
1307 12th Ave NE Ste 3  
701-253-6200

**Williston**  
422 1st Ave W  
701-774-7900

Central Office – 701-328-2825  
Statewide TTY Relay ND – 800-366-6888

A few of our career-oriented products specific to North Dakota's labor market are available at [www.ndlmi.com](http://www.ndlmi.com). They cover nearly everything you ever wanted to know about career opportunities in North Dakota and may include employment projections, wages, core tasks, work skills, knowledge, and typical education/training requirements.



[jobsnd.com](http://jobsnd.com)

# CAREER CLUSTERS INTEREST SURVEY



Directions:  Check the items in each box that best describe you. You may make as many or as few checks as you choose. Add up the number of checkmarks in each row and place the total in the box at the end of the row. Look to see which three have the highest numbers. Find the corresponding Career Clusters at the end of the survey to see which clusters you may want to explore.

	Activities that describe what I like to do:	Personal qualities that describe me:	School subjects that I like:	Total number <input checked="" type="checkbox"/> checked
1	<input type="checkbox"/> Learn how things grow and stay alive. <input type="checkbox"/> Make the best use of the earth's natural resources. <input type="checkbox"/> Hunt and/or fish. <input type="checkbox"/> Protect the environment. <input type="checkbox"/> Be outdoors in all kinds of weather. <input type="checkbox"/> Plan, budget, and keep records. <input type="checkbox"/> Operate machines and keep them in good repair.	<input type="checkbox"/> Self-reliant (able to do it yourself) <input type="checkbox"/> Nature lover <input type="checkbox"/> Physically active <input type="checkbox"/> Planner <input type="checkbox"/> Creative problem solver	<input type="checkbox"/> Math <input type="checkbox"/> Life Sciences <input type="checkbox"/> Earth Sciences <input type="checkbox"/> Chemistry <input type="checkbox"/> Agriculture	Total
2	<input type="checkbox"/> Read and follow instructions and/or blueprints. <input type="checkbox"/> Picture in my mind what a finished product looks like. <input type="checkbox"/> Work with my hands. <input type="checkbox"/> Perform work that requires precise results. <input type="checkbox"/> Solve technical problems. <input type="checkbox"/> Visit and learn from beautiful, historic, or interesting buildings. <input type="checkbox"/> Follow logical, step-by-step procedures.	<input type="checkbox"/> Curious <input type="checkbox"/> Good at following directions <input type="checkbox"/> Pay attention to detail <input type="checkbox"/> Good at visualizing possibilities <input type="checkbox"/> Patient and persistent	<input type="checkbox"/> Math <input type="checkbox"/> Drafting <input type="checkbox"/> Physical Sciences <input type="checkbox"/> Construction Trades <input type="checkbox"/> Electrical Trades <input type="checkbox"/> Heat, Air Conditioning and Refrigeration	Total
3	<input type="checkbox"/> Use my imagination to communicate new information to others. <input type="checkbox"/> Perform in front of others. <input type="checkbox"/> Read and write. <input type="checkbox"/> Play a musical instrument. <input type="checkbox"/> Perform creative, artistic activities. <input type="checkbox"/> Use video and recording technology. <input type="checkbox"/> Design brochures and posters.	<input type="checkbox"/> Creative and imaginative <input type="checkbox"/> Good communicator/good vocabulary <input type="checkbox"/> Curious about new technology <input type="checkbox"/> Relate well to feelings and thoughts of others <input type="checkbox"/> Determined/tenacious	<input type="checkbox"/> Art/Graphic Design <input type="checkbox"/> Music <input type="checkbox"/> Speech and Drama <input type="checkbox"/> Journalism/Literature <input type="checkbox"/> Audiovisual Technologies	Total
4	<input type="checkbox"/> Perform routine, organized activities but can be flexible. <input type="checkbox"/> Work with numbers and detailed information. <input type="checkbox"/> Be the leader in a group. <input type="checkbox"/> Make business contact with people. <input type="checkbox"/> Work with computer programs. <input type="checkbox"/> Create reports and communicate ideas. <input type="checkbox"/> Plan my work and follow instructions without close supervision.	<input type="checkbox"/> Organized <input type="checkbox"/> Practical and logical <input type="checkbox"/> Patient <input type="checkbox"/> Tactful <input type="checkbox"/> Responsible	<input type="checkbox"/> Business Technology Applications <input type="checkbox"/> Accounting <input type="checkbox"/> Math <input type="checkbox"/> English/Language Arts <input type="checkbox"/> Economics	Total
5	<input type="checkbox"/> Communicate with different types of people. <input type="checkbox"/> Help others with their homework or to learn new things. <input type="checkbox"/> Go to school. <input type="checkbox"/> Direct and plan activities for others. <input type="checkbox"/> Handle several responsibilities at once. <input type="checkbox"/> Acquire new information. <input type="checkbox"/> Help people overcome their challenges.	<input type="checkbox"/> Friendly <input type="checkbox"/> Decision maker <input type="checkbox"/> Helpful <input type="checkbox"/> Innovative/Inquisitive <input type="checkbox"/> Good listener	<input type="checkbox"/> English/Language Arts <input type="checkbox"/> Social Studies <input type="checkbox"/> Math <input type="checkbox"/> Science <input type="checkbox"/> Psychology	Total
6	<input type="checkbox"/> Work with numbers. <input type="checkbox"/> Work to meet a deadline. <input type="checkbox"/> Make predictions based on existing facts. <input type="checkbox"/> Have a clear set of rules to follow. <input type="checkbox"/> Analyze financial information and interpret it to others. <input type="checkbox"/> Handle money with accuracy and reliability. <input type="checkbox"/> Take pride in the way I dress and look.	<input type="checkbox"/> Trustworthy <input type="checkbox"/> Orderly <input type="checkbox"/> Self-confident <input type="checkbox"/> Logical <input type="checkbox"/> Methodical or efficient	<input type="checkbox"/> Accounting <input type="checkbox"/> Math <input type="checkbox"/> Economics <input type="checkbox"/> Banking/Financial Services <input type="checkbox"/> Business Law	Total
7	<input type="checkbox"/> Be involved in politics. <input type="checkbox"/> Negotiate, defend, and debate ideas and topics. <input type="checkbox"/> Plan activities and work cooperatively with others. <input type="checkbox"/> Work with details. <input type="checkbox"/> Perform a variety of duties that may change often. <input type="checkbox"/> Analyze information and interpret it to others. <input type="checkbox"/> Travel and see things that are new to me.	<input type="checkbox"/> Good communicator <input type="checkbox"/> Competitive <input type="checkbox"/> Service minded <input type="checkbox"/> Well organized <input type="checkbox"/> Problem solver	<input type="checkbox"/> Government <input type="checkbox"/> English/Language Arts <input type="checkbox"/> Social Studies <input type="checkbox"/> Math <input type="checkbox"/> Foreign Language	Total
8	<input type="checkbox"/> Work under pressure. <input type="checkbox"/> Help sick people and animals. <input type="checkbox"/> Make decisions based on logic and information. <input type="checkbox"/> Participate in health and science classes. <input type="checkbox"/> Respond quickly and calmly in emergencies. <input type="checkbox"/> Work as a member of a team. <input type="checkbox"/> Follow guidelines precisely and meet strict standards of accuracy.	<input type="checkbox"/> Compassionate and caring <input type="checkbox"/> Good at following directions <input type="checkbox"/> Conscientious and careful <input type="checkbox"/> Patient <input type="checkbox"/> Good listener	<input type="checkbox"/> Biological Sciences <input type="checkbox"/> Chemistry <input type="checkbox"/> Math <input type="checkbox"/> Health Sciences <input type="checkbox"/> English/Language Arts	Total

**Source:** Adapted from the Guidance Division Survey, Oklahoma Department of Career and Technology Education (2005)

**Note:** This survey does not make any claims of statistical reliability and has not been normed. It is intended for use as a guidance tool to generate discussion regarding careers and is valid for that purpose.

**Disclaimer:** Your interests may change over time. These survey results are intended to assist you with informal career exploration. Consider more formal assessments and other resources or services to help you plan your career.



	Activities that describe what I like to do:	Personal qualities that describe me:	School subjects that I like:	Total number checked
9	<input type="checkbox"/> Investigate new places and activities. <input type="checkbox"/> Work with all ages and types of people. <input type="checkbox"/> Organize activities in which other people enjoy themselves. <input type="checkbox"/> Have a flexible schedule. <input type="checkbox"/> Help people make up their minds. <input type="checkbox"/> Communicate easily, tactfully, and courteously. <input type="checkbox"/> Learn about other cultures.	<input type="checkbox"/> Tactful <input type="checkbox"/> Self-motivated <input type="checkbox"/> Works well with others <input type="checkbox"/> Outgoing <input type="checkbox"/> Slow to anger	<input type="checkbox"/> English/Language Arts/Speech <input type="checkbox"/> Foreign Language <input type="checkbox"/> Social Sciences <input type="checkbox"/> Marketing <input type="checkbox"/> Food Services	Total
10	<input type="checkbox"/> Care about people, their needs, and their problems. <input type="checkbox"/> Volunteer my services for the good of the community. <input type="checkbox"/> Listen to other people's viewpoints. <input type="checkbox"/> Help people be at their best. <input type="checkbox"/> Work with people from preschool age to old age. <input type="checkbox"/> Think of new ways to do things. <input type="checkbox"/> Make friends with different kinds of people.	<input type="checkbox"/> Good communicator/good listener <input type="checkbox"/> Caring <input type="checkbox"/> Non-materialistic <input type="checkbox"/> Uses intuition (instinct) and logic <input type="checkbox"/> Non-judgmental	<input type="checkbox"/> English/Language Arts <input type="checkbox"/> Psychology/Sociology <input type="checkbox"/> Family and Consumer Sciences <input type="checkbox"/> Finance <input type="checkbox"/> Foreign Language	Total
11	<input type="checkbox"/> Work with computers. <input type="checkbox"/> Reason clearly and logically to solve complex problems. <input type="checkbox"/> Use machines, techniques, and processes. <input type="checkbox"/> Read technical materials and diagrams and solve technical problems. <input type="checkbox"/> Adapt to change. <input type="checkbox"/> Play video games and figure out how they work. <input type="checkbox"/> Concentrate for long periods without being distracted.	<input type="checkbox"/> Logical/analytical thinker <input type="checkbox"/> See details in the big picture <input type="checkbox"/> Persistent <input type="checkbox"/> Good concentration skills <input type="checkbox"/> Precise and accurate	<input type="checkbox"/> Math <input type="checkbox"/> Science <input type="checkbox"/> Computer Technology <input type="checkbox"/> Communications <input type="checkbox"/> Graphic Design	Total
12	<input type="checkbox"/> Work under pressure or in the face of danger. <input type="checkbox"/> Make decisions based on my own observations. <input type="checkbox"/> Interact with other people. <input type="checkbox"/> Be in positions of authority. <input type="checkbox"/> Respect rules and regulations. <input type="checkbox"/> Debate and win arguments. <input type="checkbox"/> Observe and analyze people's behavior.	<input type="checkbox"/> Adventurous <input type="checkbox"/> Dependable <input type="checkbox"/> Community-minded <input type="checkbox"/> Decisive <input type="checkbox"/> Optimistic	<input type="checkbox"/> English/Language Arts <input type="checkbox"/> Psychology/Sociology <input type="checkbox"/> Social Studies <input type="checkbox"/> Law Enforcement <input type="checkbox"/> First Aid/First Responder	Total
13	<input type="checkbox"/> Work with hands and learn that way. <input type="checkbox"/> Put things together. <input type="checkbox"/> Do routine, organized and accurate work. <input type="checkbox"/> Perform activities that produce real, concrete results. <input type="checkbox"/> Apply math to work out solutions. <input type="checkbox"/> Use hand and power tools and operate equipment machinery. <input type="checkbox"/> Visualize objects in three dimensions from flat drawings.	<input type="checkbox"/> Practical <input type="checkbox"/> Observant <input type="checkbox"/> Physically active <input type="checkbox"/> Step-by-step thinker <input type="checkbox"/> Coordinated	<input type="checkbox"/> Math-Geometry <input type="checkbox"/> Chemistry <input type="checkbox"/> Trade and Industry Courses <input type="checkbox"/> Physics <input type="checkbox"/> English/Language Arts	Total
14	<input type="checkbox"/> Shop and go to the mall. <input type="checkbox"/> Be in charge. <input type="checkbox"/> Make displays and promote ideas. <input type="checkbox"/> Give presentations and enjoy public speaking. <input type="checkbox"/> Persuade people to buy products or to participate in activities. <input type="checkbox"/> Communicate my ideas to other people. <input type="checkbox"/> Take advantage of opportunities to make extra money.	<input type="checkbox"/> Enthusiastic <input type="checkbox"/> Competitive <input type="checkbox"/> Creative <input type="checkbox"/> Self-motivated <input type="checkbox"/> Persuasive	<input type="checkbox"/> English/Language Arts <input type="checkbox"/> Math <input type="checkbox"/> Business Education/Marketing <input type="checkbox"/> Economics <input type="checkbox"/> Computer Applications	Total
15	<input type="checkbox"/> Interpret formulas. <input type="checkbox"/> Find the answers to questions. <input type="checkbox"/> Work in a laboratory. <input type="checkbox"/> Figure out how things work and investigate new things. <input type="checkbox"/> Explore new technology. <input type="checkbox"/> Experiment to find the best way to do something. <input type="checkbox"/> Pay attention to details and be precise.	<input type="checkbox"/> Detail oriented <input type="checkbox"/> Inquisitive <input type="checkbox"/> Objective <input type="checkbox"/> Methodical <input type="checkbox"/> Mechanically inclined	<input type="checkbox"/> Drafting/Computer-Aided Drafting <input type="checkbox"/> Math <input type="checkbox"/> Science <input type="checkbox"/> Electronics/Computer Networking <input type="checkbox"/> Technology Education	Total
16	<input type="checkbox"/> Travel. <input type="checkbox"/> See well and have quick reflexes. <input type="checkbox"/> Solve mechanical problems. <input type="checkbox"/> Design efficient processes. <input type="checkbox"/> Anticipate needs and prepare to meet them. <input type="checkbox"/> Drive or ride. <input type="checkbox"/> Move things from one place to another.	<input type="checkbox"/> Realistic <input type="checkbox"/> Mechanical <input type="checkbox"/> Coordinated <input type="checkbox"/> Observant <input type="checkbox"/> Planner	<input type="checkbox"/> Math <input type="checkbox"/> Trade and Industry Courses <input type="checkbox"/> Physical Sciences <input type="checkbox"/> Economics <input type="checkbox"/> Foreign Language	Total

Indicate your top three Clusters of Interest based on the number of checks in the Survey:

1	Agriculture, Food & Natural Resources	P. 14	
2	Architecture & Construction	P. 17	
3	Arts, A/V Technology & Communications	P. 20	
4	Business Management & Administration	P. 22	
5	Education & Training	P. 24	
6	Finance	P. 27	
7	Government & Public Administration	P. 29	
8	Health Science	P. 31	
9	Hospitality & Tourism	P. 34	
10	Human Services	P. 36	
11	Information Technology	P. 38	
12	Law, Public Safety, Corrections & Security	P. 40	
13	Manufacturing	P. 42	
14	Marketing	P. 45	
15	Science, Technology, Engineering & Mathematics	P. 47	
16	Transportation, Distribution & Logistics	P. 50	

For more information see your career or school counselor, visit a career and technical center, an institution of higher education, or go to

**RUReady.ND.gov**  
EDUCATION & CAREER PLANNING

# HOW TO USE THE OCCUPATIONAL SECTION

Occupational Title/Description <b>1</b>	Holland Code <b>2</b> Related Occupations <b>3</b>	National <b>4</b>	<b>5</b> ND Outlook 2016-2026			ND Earnings Outlook <b>6</b>	Occupational Trait(s) <b>7</b>
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Agricultural Equipment Operators</b> Drive and control farm equipment to till soil and to plant, cultivate, and harvest crops. May perform tasks, such as crop baling or hay bucking.	Realistic Tractor Operator; Hay Baler; Combine Operator	66,600	706	762	Below Avg Growth	\$31,160 \$42,920	☀️
<b>Derrick Operators, Oil and Gas</b> Rig derrick equipment and operate pumps to circulate mud through drill hole.	Realistic Rotary Derrick Operator; Well Service Derrick Worker	12,200	606	1,000	Exceptional Growth	\$38,280 \$53,320	☀️

(Example)

**1 Occupational Title/Description** - Most commonly used title for the occupation and a description that provides a general idea of the tasks associated with this occupation.

- 2 Holland Type**  
**Artistic (Creator):** Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression, and the work can be done without following a clear set of rules.  
**Conventional (Organizer):** Conventional occupations frequently involve following set procedure and routines. These occupations can include working with data and details more than ideas. Usually there is a clear line of authority to follow.  
**Enterprising (Persuader):** Enterprising occupations frequently involve starting and carrying out projects. These occupations can involve leading people and making decisions. Sometimes they require risk taking and often deal with business.  
**Investigative (Thinker):** Investigative occupations frequently involve working with ideas and require an extensive amount of thinking. These occupations can involve searching for the facts and figuring out problems mentally.  
**Realistic (Do-er):** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals and real-world materials like wood, tools and machinery. Many of the occupations require working outside and do not involve a lot of paperwork or working closely with others.  
**Social (Helper):** Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.

**3 Related Occupations** - A listing of occupations that are similar in work performed on the job.

**4 National - Number Employed** indicates the number of persons employed in this occupation in the United States.

**5 ND Outlook 2016-2026**

**Number Employed** indicates the number of persons employed in this occupation in North Dakota.

**Total Openings** include growth and replacement openings.

**Long-Term Growth Outlook**

- Exceptional: 50% or more per year
- High Growth: 20.0-49.9% per year
- Average to Near Average Growth: 10-19.9% per year
- Below Average Growth: 0.1-9.9% per year
- Zero to Declining Growth: 0% or less per year

**6 ND Earnings Outlook**

**Annual Entry-Level Wages** - The average of the bottom 1/3 of overall wage distribution.

**Annual Average Wages** - Estimated total wages of an occupation divided by its employment.

The salaries shown reflect a 40-hour work week for many occupations. Be aware it is possible to earn a considerably higher salary in those occupations where overtime wages are paid.

**7 Occupational Trait(s)**

- 💰 High Wage - North Dakota average annual salary of at least \$60,164.
- ⚙️ High Skill - Occupation requires at least one year of post high school education or training.
- ☀️ Bright Outlook - Occupation has a very high number of annual openings and/or is a fast-growing occupation in North Dakota.
- 🇺🇸 Energy Occupations in North Dakota.
- 🇺🇸 Occupation exists in the military.

**Career Clusters** The occupational and related information in the Career Outlook is broken into sixteen Career Clusters, listed below. You are encouraged to use the Career Clusters Interest Survey on pages 10 and 11 or in RUReady.ND.gov to help identify the cluster or clusters most closely related to your personal preferences and interests.

Career Cluster	Page	Career Cluster	Page
Agriculture, Food & Natural Resources	P. 14	Information Technology	P. 38
Architecture & Construction	P. 17	Law, Public Safety, Corrections & Security	P. 40
Arts, A/V Technology & Communications	P. 20	Manufacturing	P. 42
Business Management & Administration	P. 22	Marketing	P. 45
Education & Training	P. 24	Science, Technology, Engineering & Mathematics	P. 47
Finance	P. 27	Transportation, Distribution & Logistics	P. 50
Government & Public Administration	P. 29		
Health Science	P. 31		
Hospitality & Tourism	P. 34		
Human Services	P. 36		

The occupation information in this section is taken from the 2016-2026 North Dakota Long-Term Employment Projections. This publication is a long-term look at future employment levels by industry and occupation updated every two years by Job Service North Dakota, working closely with the Bureau of Labor Statistics. Wages were updated using the 2019 Edition of the North Dakota Employment and Wages by Occupation, which is updated annually by Job Service North Dakota. When current figures are not included in these publications, every effort is made to obtain current and relevant data from those fields.



# Occupational Section Directory

Accountants and Auditors.....22	Education Administrators, Preschool and Daycare.....24	Interpreters and Translators.....20	Production, Planning, and Expediting Clerks.....42
Agricultural Equipment Operators.....14	Educational, Guidance, and Career Counselors.....24	Judges, Magistrate Judges, and Magistrates.....40	Property, Real Estate, and Community Association Managers.....22
Agricultural Inspectors.....14	Electrical and Electronic Engineering Technologists and Technicians.....47	Kindergarten Teachers, Except Special Education.....24	Public Relations Specialists.....23
Aircraft Mechanics and Service Technicians.....50	Electrical Engineers.....47	Landscaping and Groundskeeping Workers.....17	Public Safety Telecommunicators.....40
Ambulance Drivers and Attendants, Except Emergency Medical Technicians.....50	Electricians.....17	Lawyers.....40	Radiologic Technologists and Technicians.....31
Amusement and Recreation Attendants.....34	Elementary School Teachers, Except Special Education.....24	Library Technicians.....20	Real Estate Agents.....45
Architects, Except Landscape and Naval....18	Eligibility Interviewers, Government Programs.....29	Lifeguards, Ski Patrol and Other Recreational Protective Workers.....34	Receptionists and Information Clerks.....22
Architectural and Civil Drafters.....17	Emergency Management Directors.....29	Loan Interviewers and Clerks.....27	Recreation Workers.....34
Architectural and Engineering Managers.....18	Emergency Medical Technicians and Paramedics.....31	Loan Officers.....27	Rehabilitation Counselors.....33
Athletic Trainers.....31	Environmental Engineers.....14	Logisticians.....50	Residential Advisors.....36
Audio and Video Equipment Technicians.....20	Environmental Scientists and Specialists, Including Health.....47	Machinery Maintenance Workers.....42	Respiratory Therapists.....31
Automotive Service Technicians and Mechanics.....50	Exercise Trainers and Group Fitness Instructors.....24	Machinists.....42	Retail Sales Workers Supervisors.....45
Bakers.....34	Farm Equipment Mechanics and Service Technicians.....14	Machinists.....42	Retail Salespersons.....45
Billing and Posting Clerks.....22	Farmworkers and Laborers, Crop, Nursery, and Greenhouse.....14	Maintenance and Repair Workers, General.....17	Rotary Drill Operators, Oil and Gas.....14
Bookkeeping, Accounting, and Auditing Clerks.....22	Film and Video Editors.....20	Management Analysts.....23	Roustabouts, Oil and Gas.....14
Brokerage Clerks.....27	Financial Examiners.....29	Market Research Analysts and Marketing Specialists.....45	Sales Managers.....45
Budget Analysts.....22	Financial Managers.....27	Marketing Managers.....45	Secondary School Teachers, Except Special and Career/Technical Education.....25
Bus and Truck Mechanics/Diesel Engine Specialists.....50	Fire Fighting and Prevention Workers Supervisors.....40	Marriage and Family Therapists.....36	Securities and Financial Services Sales Agents.....27
Bus Drivers, Transit and Intercity.....50	Firefighters.....40	Massage Therapists.....36	Security Guards.....40
Career/Technical Education Teachers, Secondary School.....24	Fish and Game Wardens.....40	Mechanical Drafters.....47	Self-Enrichment Teachers.....24
Cargo and Freight Agents.....50	Food Preparation Workers.....34	Mechanical Engineers.....47	Service Unit Operators, Oil and Gas.....14
Carpenters.....17	Food Scientists and Technologists.....14	Mechanical Engineering Technicians.....47	Skincare Specialists.....36
Cashiers.....45	Food Service Managers.....34	Medical and Health Services Managers.....32	Social and Community Service Managers.....36
Chefs and Head Cooks.....34	Freight, Stock and Material Handlers.....50	Medical Secretaries and Administrative Assistants.....22	Social and Human Service Assistants.....36
Child, Family, and School Social Workers.....36	Fundraisers.....45	Meeting, Convention, and Event Planners.....34	Software Developers, and Software Quality Assurance.....38
Childcare Workers.....24	Gaming Surveillance Officers and Gaming Investigators.....40	Mental Health and Substance Abuse Social Workers.....36	Soil and Plant Scientists.....14
Civil Engineering Technologists and Technicians.....47	General and Operations Managers.....22	Merchandise Displayers and Window Trimmers.....45	Special Education Teachers, Kindergarten and Elementary School.....25
Civil Engineers.....18	Graphic Designers.....20	Millwrights.....17	Speech-Language Pathologists.....33
Cleaners of Vehicles and Equipment.....50	Hairdressers, Hairstylists, and Cosmetologists.....36	Mining and Geological Engineers.....47	Statisticians.....47
Clergy.....36	Hazardous Materials Removal Workers.....17	Morticians, Undertakers, and Funeral Arrangers.....36	Supervisors of Construction Trades Workers.....17
Clinical, Counseling, and School Psychologists.....36	Health Information Technologists and Medical Registrars.....31	Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic.....42	Supervisors of Office/Administrative Support Workers.....22
Commercial and Industrial Designers.....20	Health Specialties Teachers, Postsecondary.....24	Network and Computer Systems Administrators.....38	Supervisors of Production and Operating Workers.....42
Commercial Pilots.....50	Healthcare Social Workers.....32	Nurse Practitioners.....33	Surgical Technologists.....31
Community Health Workers.....36	Heating and Air Conditioning Mechanics.....17	Nurses, Registered.....31	Surveying and Mapping Technicians.....17
Computer Network Support Specialists.....38	Heavy and Tractor-Trailer Drivers.....50	Nursing Instructors and Teachers, Postsecondary.....24	Surveyors.....18
Computer User Support Specialists.....38	Helpers-Installation, Maintenance, and Repair Workers.....42	Occupational Therapists.....33	Tank Car, Truck, and Ship Loaders.....50
Conservation Scientists.....14	Highway Maintenance Workers.....17	Operations Research Analysts.....38	Tax Examiners and Collectors, and Revenue Agents.....29
Construction and Building Inspectors.....17	Home Health Aides.....31	Ophthalmic Medical Technicians.....31	Tax Preparers.....27
Construction Managers.....18	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop.....34	Optometrists.....33	Technical Writers.....20
Cooks, Restaurant.....34	Hotel, Motel, and Resort Desk Clerks.....34	Paralegals and Legal Assistants.....40	Telecommunications Equipment Installers and Repairers.....20
Cost Estimators.....18	Human Resources Specialists.....22	Parts Salespersons.....14	Telecommunications Line Installers and Repairers.....20
Crane and Tower Operators.....50	Industrial Engineering Technologists and Technicians.....47	Payroll and Timekeeping Clerks.....22	Title Examiners, Abstractors, and Searchers.....29
Credit Analysts.....27	Industrial Engineers.....47	Personal Financial Advisors.....27	Tool and Die Makers.....42
Credit Authorizers, Checkers, and Clerks....27	Industrial Machinery Mechanics.....42	Petroleum Engineers.....47	Training and Development Specialists.....23
Credit Counselors.....27	Industrial Production Managers.....43	Petroleum Pump System Operators, Refinery Operators, & Gaugers.....42	Transportation, Storage, and Distribution Managers.....50
Crushing, Grinding, and Polishing Machine Setters.....42	Industrial Truck and Tractor Operators.....50	Pharmacy Technicians.....31	Veterinarians.....14
Customer Service Representatives.....22	Information Security Analysts.....38	Physical Therapists.....33	Veterinary Technologists and Technicians.....14
Demonstrators and Product Promoters.....45	Inspectors, Testers, Sorters, Samplers, and Weighers.....42	Physician Assistants.....33	Waiters and Waitresses.....34
Dental Hygienists.....31	Instructional Coordinators.....24	Plumbers, Pipefitters and Steamfitters.....17	Web Developers.....38
Dentists.....31	Insurance Claims and Policy Processing Clerks.....27	Police and Sheriff's Patrol Officers.....40	Welders, Cutters, Solderers, and Brazers.....42
Derrick Operators, Oil and Gas.....14	Insurance Sales Agents.....27	Power Plant Operators.....42	Wind Turbine Service Technicians.....17
Diagnostic Medical Sonographers.....31	Interior Designers.....20	Preschool Teachers, Except Special Education.....24	Woodworking Machine Setters and Operators.....42
Dietetic Technicians.....31		Probation Officers and Correctional Treatment Specialists.....40	Writers and Authors.....20
Dietitians and Nutritionists.....31		Procurement Clerks.....22	
Directors, Religious Activities and Education.....36		Producers and Directors.....20	
Education Administrators, Kindergarten through Secondary.....24			



# AGRICULTURE, FOOD & NATURAL RESOURCES

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook		Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages	Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>								
<b>Agricultural Equipment Operators</b> Drive and control farm equipment to till soil and to plant, cultivate, and harvest crops. May perform tasks, such as crop baling or hay bucking.	Realistic Tractor Operator; Hay Baler; Combine Operator	66,600	706	762	Below Avg Growth	\$31,160 \$42,920		
<b>Derrick Operators, Oil and Gas</b> Rig derrick equipment and operate pumps to circulate mud through drill hole.	Realistic Rotary Derrick Operator; Well Service Derrick Worker	12,200	606	1,000	Exceptional Growth	\$38,280 \$53,320		
<b>Farm Equipment Mechanics and Service Technicians</b> Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.	Realistic Combine Mechanic; Irrigation Equipment Mechanic	45,400	1,035	1,197	Avg to Near Avg Growth	\$35,500 \$49,000		
<b>Farmworkers and Laborers, Crop, Nursery, and Greenhouse</b> Manually plant, cultivate, and harvest vegetables, fruits, and field crops. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides.	Realistic Greenhouse Transplanter	532,300	3,108	3,166	Below Avg Growth	\$22,080 \$31,750		
<b>Parts Salespersons</b> Sell spare and replacement parts and equipment in repair shop or parts store.	Enterprising Auto Parts Salesperson; Electronic Parts Salesperson	258,000	1,673	1,810	Below Avg Growth	\$27,610 \$41,290		
<b>Rotary Drill Operators, Oil and Gas</b> Set up or operate a variety of drills to remove underground oil and gas, or remove core samples for testing during oil and gas exploration.	Realistic Oil Well Cable Tool Operator	19,300	847	1,148	Exceptional Growth	\$41,630 \$60,140		
<b>Roustabouts, Oil and Gas</b> Assemble or repair oil field equipment using hand and power tools. Perform other tasks as needed.	Realistic Oil Field Roustabout; Oil Rig Roughneck	58,300	2,640	4,210	Exceptional Growth	\$43,780 \$52,600		
<b>Service Unit Operators, Oil and Gas</b> Operate equipment to increase oil flow from producing wells or to remove stuck pipe, casing, tools, or other obstructions from drilling wells. May also perform similar services in mining exploration operations.	Realistic Well Servicing Rig Operator	52,900	743	1,148	Exceptional Growth	\$39,330 \$57,990		
<b>Veterinary Technologists and Technicians</b> Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals.	Realistic Veterinary Laboratory Technician; Veterinary Surgery Technologist; Veterinary X-ray Operator	109,400	197	255	High Growth	\$26,790 \$34,090		
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>								
<b>Agricultural Inspectors</b> Inspect agricultural commodities, processing equipment, and facilities, and fish and logging operations, to ensure compliance with regulations and laws governing health, quality, and safety.	Realistic Grain Sampler; Milk Tester	17,700	198	225	Avg to Near Avg Growth	\$31,910 \$41,440		
<b>Conservation Scientists</b> Manage, improve, and protect natural resources to maximize their use without damaging the environment. May instruct in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water.	Investigative Range Ecologist; Soil Conservationist	23,800	291	304	Below Avg Growth	\$44,590 \$65,820		
<b>Environmental Engineers</b> Research, design, plan, or perform engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines.	Investigative Pollution Control Engineer; Soil Engineer; Water Treatment Engineer	55,400	162	183	Avg to Near Avg Growth	\$55,390 \$79,200		
<b>Food Scientists and Technologists</b> Use chemistry, microbiology, engineering, and other sciences to study the principles underlying the processing and deterioration of foods. Apply food science knowledge to determine best ways to process, package, preserve, store, and distribute food.	Investigative Dairy Bacteriologist; Food Safety Scientist	14,900	43	44	Below Avg Growth	\$45,790 \$68,310		
<b>Soil and Plant Scientists</b> Conduct research in production, yield, and management of crops and agricultural plants or trees, shrubs, and nursery stock. May classify and map soils and investigate effects of alternative practices on soil and crop productivity.	Investigative Arboreal Scientist; Horticulturist; Plant Physiologist	18,000	228	254	Avg to Near Avg Growth	\$49,490 \$78,080		
<b>Veterinarians</b> Diagnose, treat, or research diseases and injuries of animals. Includes veterinarians who conduct research and development, inspect livestock, or care for pets and companion animals.	Investigative Veterinary Medicine Scientist	84,500	250	315	High Growth	\$69,450 \$94,680		

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

# AGRICULTURE, FOOD & NATURAL RESOURCES

## North Dakota Agriculture, Food & Natural Resources Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Agribusiness Systems</b>	Ag Business Management (NDSCS) Agricultural Sales and Service (DSU) Agriculture transfer (BSC, DCB, DSU, NDSCS, WSC) Adult Farm Management (LRSC) Farm Management Education (BSC) Farm/Ranch Management (BSC, DSU, NDSCS) Precision Agriculture (LRSC, NDSCS)	Agribusiness (NDSU) Agricultural and Biosystems Engineering (NDSU) Agricultural Economics (NDSU) Agricultural Education (NDSU) Agricultural Studies (DSU) Agricultural Systems Management (NDSU) General Agriculture (NDSU) Precision Agriculture (NDSU)	Agribusiness and Applied Economics (NDSU)
<b>Animal Systems</b>	Animal Science (NDSCS) Equine Studies/Horse Production (DSU, NHSC) Pre-Veterinary Medicine transfer (BSC, DCB) Ranch Management (NDSCS) Wildlife and Fisheries Technology (DCB, NDSCS)	Animal Science (NDSU)	Agricultural and Biosystems Engineering (NDSU)
<b>Environmental Service Systems</b>	Environmental Science/Technology (DCB, NHSC, SBC, UTTC) Water & Wastewater Technology (BSC)	Equine Science (NDSU)	Agricultural Education (NDSU)
<b>Food Products &amp; Processing Systems</b>	Sustainable Ag and Food Systems (UTTC)	Fisheries and Wildlife Biology/Science UM, UND, VCSU)	Extension Education (NDSU)
<b>Natural Resources Systems</b>	Ag Management and Technology (DCB) Natural Resources Management (CCCC, DCB, TMCC) Recreation Management (DCB)	Vet Technology (NDSU)	International Agribusiness (NDSU)
<b>Plant Systems</b>	Agriculture Industry and Technology-Agronomy (BSC) Agronomy (NDSCS) Aquaponics (DCB) Floral Design and Greenhouse Technology (DCB) Specialty Crop Production (DCB) Urban Forest Management (DCB)		
<b>Power, Structure, &amp; Technical Systems</b>	Caterpillar Dealer Service Technician (NDSCS) Diesel Technology: General Diesel, Case IH, Komatsu (NDSCS) Energy Services & Renewable Technician (BSC) John Deere Tech (NDSCS) Nuclear Power Technology (BSC) Petroleum Production Technology (BSC, WSC) Power Plant Technology (BSC) Process Plant/Power Plant Technology (BSC, TMCC) Wind Energy Technology (LRSC)		

## North Dakota Postsecondary Institutions Offering Agriculture, Food & Natural Resources Related Programs

<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>SBC</b>	Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>CCCC</b>	Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>TMCC</b>	Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>LRSC</b>	Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>VCSU</b>	Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>WSC</b>	Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>
<b>NHSC</b>	Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>			



# 2020 APPRENTICESHIP

## DILLON SUGG

**D**illon Sugg was not sure of his future career plans when he graduated from Killdeer High School. He started working as a painter for residential construction, and then moved into professional painting.

As an apprentice, Dillon was affiliated with the Finishing Trades Institute of the Upper Midwest (FTIUM). The mission of FTIUM is to develop professional tradespeople, with advanced skills and certifications. The apprenticeship was three years in length and required 6,000 hours of on-the-job training and 400 hours of classroom training.

Dillon is currently employed by Swanson and Youngdale, a commercial painting and drywall company based in Minnesota and North Dakota. The apprenticeship was a requirement of employment and has allowed him to advance to journeyman industrial painter.

Work tasks for Dillon include brushing and rolling of coatings with a 9-inch or 4-inch mini roller. He needs to be able to spray on coatings with different types of industrial paint pumps and provide maintenance to the pumps as needed.

He uses coal slag, garnet, glass beads, and other abrasives when blasting the interiors and exteriors of tanks, plant equipment, pipes and structural steel. In addition to the paint pumps, he uses channel locks, wrenches, wire crimpers and a variety of other tools.

Dillon typically works at coal or natural gas power plants. He may be laid off for a month or two each year, but he also has the opportunity to work a lot of overtime during busy times. He works in the Beulah and Bismarck areas.

He plans to continue his professional painting education by earning new certifications and working on re-certifications to keep his training up to date. He is appreciative of all the knowledge he has learned through his training. "I highly enjoy what I am doing now, and plan to work with industrial coatings until I retire."



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# ARCHITECTURE & CONSTRUCTION



Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry- Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Architectural and Civil Drafters</b> Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works.	Artistic Building Drafter; Civil Computer-Aided Design Technician	101,200	320	377	Avg to Near Avg Growth	\$42,670 \$56,460	 
<b>Carpenters</b> Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; and also wood stairways, window and door frames, and hardwood floors.	Realistic Building Carpenter; Wood Stair Builder; Wood Floor Layer	1,006,500	3,081	3,265	Below Avg Growth	\$32,450 \$43,780	 
<b>Construction and Building Inspectors</b> Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations.	Realistic Electrical Inspector; Elevator Inspector; Highway Inspector	117,300	247	307	High Growth	\$38,550 \$61,720	 
<b>Electricians</b> Install, maintain and repair electrical wiring, equipment and fixtures. Ensure that work is in accordance with relevant codes.	Realistic Solar Photovoltaic Electrician	715,400	3,827	4,111	Below Avg Growth	\$47,910 \$64,620	   
<b>Hazardous Materials Removal Workers</b> Identify, remove, pack, transport, or dispose of hazardous materials, including asbestos, lead-based paint, waste oil, fuel, transmission fluid, radioactive materials, or contaminated soil. Specialized training and certification is generally required.	Realistic Asbestos Abatement Worker; Decontamination Worker; Irradiated Fuel Handler	45,900	125	171	High Growth	\$33,430 \$51,610	
<b>Heating and Air Conditioning Mechanics</b> Install or repair heating, central air conditioning or refrigeration systems, including oil burners, hot-air furnace and heating stoves.	Realistic Plumbers, Sheet Metal Workers	367,900	999	1,125	Avg to Near Avg Growth	\$37,000 \$56,120	  
<b>Highway Maintenance Workers</b> Maintain highways, municipal and rural roads, airport runways, and rights-of-way. Duties include patching broken or eroded pavement, repairing guard rails, highway markers, and snow fences. May also mow along roads or plow snow from roadways.	Realistic Road Patcher; Road Sign Installer	155,300	1,258	1,363	Below Avg Growth	\$37,560 \$48,250	
<b>Landscaping and Groundskeeping Workers</b> Landscape or maintain grounds of property using hand or power tools or equipment. Workers perform a variety of tasks including sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, and sprinkler installation.	Realistic Greenskeeper; Hedge Trimmer	1,205,200	2,827	3,251	Avg to Near Avg Growth	\$25,750 \$35,200	
<b>Maintenance and Repair Workers, General</b> Keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; carpentry; repairing or installing equipment; and repairing buildings, floors, or stairs.	Realistic Building Maintenance Mechanic	1,488,000	4,049	4,634	Avg to Near Avg Growth	\$28,630 \$39,990	
<b>Millwrights</b> Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.	Realistic Machine Assembler; Machinery Dismantler; Maintenance Millwright	44,300	164	182	Avg to Near Avg Growth	\$42,790 \$52,750	
<b>Plumbers, Pipefitters and Steamfitters</b> Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinklerfitters.	Realistic Fire Sprinkler Installer; Sprinkler Fitter	500,300	1,740	2,040	Avg to Near Avg Growth	\$39,330 \$54,580	 
<b>Supervisors of Construction Trades Workers</b> Directly supervise and coordinate activities of construction or extraction workers.	Enterprising Quarry Boss; Rig Supervisor	662,600	3,693	4,377	Avg to Near Avg Growth	\$52,820 \$77,860	 
<b>Surveying and Mapping Technicians</b> Perform surveying and mapping duties to obtain data used for construction, mapmaking, boundary location, and mining. May calculate mapmaking information and create maps from surveying notes, aerial photography, satellite data, or other maps.	Realistic Field Map Technician; GIS Mapping Technician	56,800	201	246	High Growth	\$41,530 \$54,780	  
<b>Wind Turbine Service Technicians</b> Inspect, diagnose, adjust, or repair wind turbines. Perform maintenance on wind turbine equipment including resolving electrical, mechanical, and hydraulic malfunctions.	Realistic Wind Energy Technician	6,600	194	388	Exceptional Growth	\$49,050 \$75,280	  

 Energy Occupation

 Bright Outlook

 High Skill

 High Wage

 Military

# ARCHITECTURE & CONSTRUCTION

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016 -2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry- Level Wages Annual Average Wages	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Architects, Except Landscape and Naval</b> Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.	Artistic Architectural Designer; Structural Architect	133,900	301	339	Avg to Near Avg Growth	\$46,170 \$72,990	
<b>Architectural and Engineering Managers</b> Plan, direct, or coordinate activities in such fields as architecture and engineering or research and development in these fields.	Enterprising Engineering Design Manager; Mechanical Engineering Director	192,500	392	456	High Growth	\$92,180 \$131,030	
<b>Civil Engineers</b> Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, irrigation projects, pipelines, and water and sewage systems.	Realistic Bridge Engineer; Highway Engineer	326,800	1,215	1,470	High Growth	\$60,390 \$86,480	
<b>Construction Managers</b> Plan, organize, direct, and coordinate personnel activities concerned with alteration, maintenance, and repair of structures, facilities, and systems such as houses, office buildings, bridges, roads, and similar structures.	Enterprising Construction Superintendent; General Contractor	471,800	1,099	1,219	Avg to Near Avg Growth	\$55,630 \$106,090	
<b>Cost Estimators</b> Prepare cost estimates for product manufacturing, construction projects or services to aid management in bidding or determining price of product or service.	Conventional Job Cost Estimator; Production Cost Estimator	217,400	607	672	Avg to Near Avg Growth	\$47,980 \$69,730	
<b>Surveyors</b> Make exact measurements and determine property boundaries. Provide data relevant to shape, contour, gravitation, location, elevation, or dimension of land or land features.	Realistic Land Surveyor; Mineral Surveyor	49,200	368	460	High Growth	\$50,710 \$75,390	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

## North Dakota Architecture & Construction Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Construction</b>	Building Construction Technology (BJCC, NDSCS, TMCC) Building Trades (SBC) Carpentry (BSC, BJCC, CCCC) Concrete Technology (TMCC) Construction Management/Technology (NDSCS) Electric Power Technology (BSC) Electrical Technology (NDSCS, SBC, TMCC) Heating, Ventilation & Air Conditioning (BSC, NDSCS, TMCC) Lineworker-Electrical (BSC) Plumbing (NDSCS, TMCC)	Construction Engineering (NDSU) Construction Management (NDSU, UM)	Construction Management (NDSU)
<b>Design/Pre-Construction</b>	Architectural Drafting and Estimating Technology (NDSCS) CDL/Heavy Equipment (CCCC, SBC, TMCC, UTTC) Land Surveying and Civil Engineering Technology (NDSCS) Pre-Engineering transfer (CCCC, NHSC)	Architecture (NDSU) Civil Engineering (NDSU, UM, UND) Construction Engineering (NDSU) Landscape Architecture (NDSU)	Architecture (NDSU) Civil Engineering (NDSU)
<b>Maintenance/Operations</b>	Electrical Transmission Systems Technology (BSC) Mechanical Systems (NDSCS) Mechanical Maintenance Technology (BSC)		

## North Dakota Postsecondary Institutions Offering Architecture & Construction Related Programs

<b>BSC</b> Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>SBC</b> Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>BJCC</b> Burdick Job Corps Center	<a href="http://quentinnburdick.jobcorps.gov">http://quentinnburdick.jobcorps.gov</a>	<b>TMCC</b> Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>CCCC</b> Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>UM</b> University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>NDSCS</b> ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>UTTC</b> United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>NDSU</b> ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>UND</b> University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NHSC</b> Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>		



# ETHAN MICKELSON

## Arts, A/V Technology & Communications



North Dakota State University



**F**amily, Career and Community Leaders of America (FCCLA) has been instrumental in developing my curiosity and professionalism while fostering a love for networking. During high school I received a scholarship through FCCLA and Kikkoman Corp. to live in Tokyo, Japan, for the summer. The cultural exchange was a springboard to further international travel and has been one of my most cherished memories.

I lived with a host family on the outskirts of the city and traveled by train to the epicenter of Tokyo every day for school. It's hard to put into words how much that developed my sense of independence while also challenging me to make connections across language and custom barriers.

I spent the next summer in Kirov, Russia. This time it was with the National Security Language Initiative (NSLI) for Youth. It was another life-changing experience that pushed me intellectually and gave me unprecedented perspective on how diverse and magical our world can be.

After graduating from Rolla High School, I went to North Dakota State University, first majoring in political science and eventually changing my major to public relations.

Leading into college, I felt like I had everything figured out. My college career and subsequent professional pursuits were all planned out. Once I admitted I was unsure about my career path, it freed me to explore and experiment.

Two experiences stand out at NDSU:

I took an intro to printmaking class on a whim and ended up falling in love with the process. Until then, I questioned my creativity, but our professor, Kent Kapplinger, and fellow students gave me the push I needed to take risks.

As part of my capstone project, I took a class on nonprofit campaigns with Dr. Justin Walden that unwittingly prepared me for the job I have now. I didn't know how complex a communications role can be in this field, but the skills I learned then have all applied today.

I've been with The Arts Partnership for over six months now. My role includes print and digital content creation, highlighting the work of our partners including individual artists, arts nonprofits and educational institutions. I've published over 30 articles in the Fargo Forum and countless blogs and video projects. We work to lead the arts in the Fargo-Moorhead-West Fargo Metro through advocacy, granting funds and outreach.

In addition to writing, I also handle the overarching strategic planning for all aspects of our internal and external communications. My work is often the first contact people have with our organization. I have the challenge of planning website designs, fundraising campaigns and managing a growing list of contacts who we keep in touch with over social media and in a newsletter called "Connecting the Dots." The ability to successfully collaborate with a team can't be stressed enough as an essential skill. As a young person, I've learned to seek out differing opinions and dig deeper into how people perceive the work I put forward.





# ARTS, A/V TECHNOLOGY & COMMUNICATIONS

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Audio and Video Equipment Technicians</b> Set up and operate audio and video equipment including microphones, sound speakers, video screens, projectors, video monitors, recording equipment, connecting wires and cables, sound and mixing boards, and related electronic equipment.	Realistic Multimedia Production Assistant; Video Control Operator	93,200	174	227	High Growth	\$32,990 \$42,440	
<b>Interpreters and Translators</b> Interpret oral or sign language, or translate written text from one language into another.	Artistic American Sign Language Interpreter; Court Interpreter; Diplomatic Interpreter	76,100	125	150	High Growth	\$27,930 \$35,220	
<b>Library Technicians</b> Assist librarians by helping readers in the use of library catalogs, databases, and indexes to locate books and other materials. Compile records; sort and shelve books or other media; remove or repair damaged books or other media.	Conventional Library Acquisitions Technician; Library Circulation Technician	94,700	162	175	Below Avg Growth	\$23,990 \$33,250	
<b>Telecommunications Equipment Installers and Repairers</b> Service or repair telephone, cable television, Internet, and other communications equipment on customers' property. May install communications equipment or communications wiring in buildings.	Realistic Fiber Optic Installer; Private Branch Exchange (PBX) Installer and Repairer	232,900	670	697	Below Avg Growth	\$43,880 \$61,860	
<b>Telecommunications Line Installers and Repairers</b> Install and repair telecommunications cable, including fiber optics.	Realistic Cable Television Installer; FIOS Line Installer	122,700	302	302	Zero to Declining Growth	\$44,460 \$67,760	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Commercial and Industrial Designers</b> Develop and design manufactured products, such as cars, home appliances, and children's toys. Combine artistic talent with research on product use, marketing, and materials to create the most functional and appealing product design.	Artistic Automobile Designer; Package Designer	43,900	37	43	Avg to Near Avg Growth	\$32,180 \$51,360	
<b>Film and Video Editors</b> Edit moving images on film, video, or other media. May edit or synchronize soundtracks with images.	Artistic Cue Selector; Film Editor; Television News Video Editor	39,800	28	36	High Growth	\$32,870 \$59,880	
<b>Graphic Designers</b> Design or create graphics to meet a client's specific commercial or promotional needs, such as packaging, displays or logos.	Artistic Catalogue Illustrator	290,100	674	701	Below Avg Growth	\$31,410 \$44,240	
<b>Interior Designers</b> Plan, design, and furnish interiors of residential, commercial, or industrial buildings. Formulate design which is practical, aesthetic, and conducive to intended purposes.	Artistic Home Lighting Advisor; Kitchen Designer	75,400	201	221	Avg to Near Avg Growth	\$29,920 \$47,000	
<b>Producers and Directors</b> Produce or direct stage, television, radio, video, or motion picture productions for entertainment, information, or instruction. Responsible for decisions such as script, choice of actors or guests, set design and choreography.	Enterprising Casting Director; Independent Film Maker	152,400	243	263	Below Avg Growth	\$33,250 \$47,740	
<b>Technical Writers</b> Write technical materials, such as equipment manuals, appendices, or operating and maintenance instructions. May assist in layout work.	Artistic Documentation Writer; Medical Writer; Specifications Writer	55,700	72	86	Avg to Near Avg Growth	\$43,100 \$71,530	
<b>Writers and Authors</b> Writers and authors develop written content for advertisements, books, magazines, movie and television scripts, songs, and online publications.	Enterprising Advertising Copy Writer; Playwright	123,200	363	382	Below Avg Growth	\$36,630 \$53,350	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

# ARTS, A/V TECHNOLOGY & COMMUNICATIONS

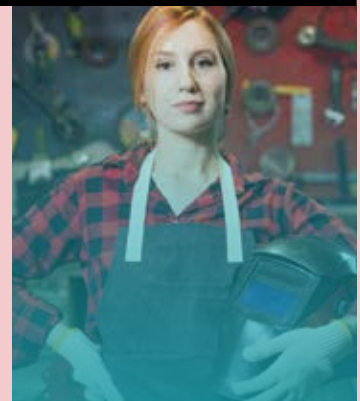
## North Dakota Arts, A/V Technology & Communications Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Audio and Video Technology and Film</b>	Digital Audio Production (BSC)	Multimedia Studies (MiSU)	Library/Information Technology (VCSU)
<b>Journalism and Broadcasting</b>	English transfer (BSC, DCB) Mass Communications (BSC) Speech Communication transfer (BSC)	Broadcasting and Professional Communication (MiSU) Communication (DSU, MaSU, UJ, UM, UND, VCSU) English (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) English Education (DSU, MaSU, MiSU, NDSU, UJ, UM, VCSU) Journalism (NDSU)	Communication (NDSU, UND) English (NDSU, UND)
<b>Performing Arts</b>	Music transfer (BSC, NDSCS) Theatre Arts transfer (BSC)	Music (DSU, MiSU, NDSU, UJ, UM, UND, VCSU) Music Education (DSU, MiSU, UJ, UM, UND, VCSU) Music Performance (UM, UND) Musical Theatre (UND) Theatre Arts (DSU, NDSU, UJ, UND)	Music (NDSU, UM, UND)
<b>Printing Technology</b>			
<b>Telecommunications</b>	Electronics Technology (BSC) Electronics/Telecommunications Technology (BSC) Web Design (DCB, NDSCS, RC, TMCC) Web Developer/Webmaster (DCB, DSU, NDSCS) Web Page Development and Design (BSC)	Communication (DSU, MaSU, UJ, UM, UND, VCSU)	Communication (NDSU, UND)
<b>Visual Arts</b>	Art Transfer (BSC, DCB) Fine Art (CCCC) Graphic Design (UTTC) Graphic Design-Animation & Motion Graphics (RC) Graphic Design-Web & Interactive Design (RC) Graphic Design & Communications (BSC) Photography (DCB)	Apparel, Retail Merchandising, and Design (NDSU) Art (DSU, MiSU, NDSU, UJ, VCSU) Art Education (DSU, MiSU, NDSU, VCSU) Art Entrepreneurship (DSU) Arts Administration (MiSU) Fine Arts (MiSU, UJ) Graphic Design (UND) Graphic Design-Animation & Motion Graphic (RC) Graphic Design-Web & Interactive Design (RC) Graphic Design for E-Commerce (UJ) Interior Design (NDSU) Visual Arts (UND)	Visual Arts (UND)

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

<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>RC</b>	Rasmussen College	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>
<b>CCCC</b>	Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>TMCC</b>	Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>UJ</b>	University of Jamestown	<a href="http://www.uj.edu">www.uj.edu</a>
<b>MaSU</b>	Mayville State University	<a href="http://www.mayvillestate.edu">www.mayvillestate.edu</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>MiSU</b>	Minot State University	<a href="http://www.minotstate.edu">www.minotstate.edu</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>VCSU</b>	Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>WSC</b>	Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>

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**REAL-WORLD SKILLS**





# BUSINESS MANAGEMENT & ADMINISTRATION

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016 -2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate’s Degree</b>							
<b>Billing and Posting Clerks</b> Compile, compute, and record billing, accounting, statistical, and other numerical data for billing purposes. Prepare billing invoices for services rendered or for delivery or shipment of goods.	Conventional Invoice Control Clerk; Patient Account Representative; Statement Processor	486,300	933	1,085	Avg to Near Avg Growth	\$34,670 \$44,410	
<b>Bookkeeping, Accounting, and Auditing Clerks</b> Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records.	Conventional Accounts Receivable Clerk; Bookkeeper; Mortgage Accounting Clerk	1,707,700	6,744	6,983	Below Avg Growth	\$25,720 \$38,560	
<b>Customer Service Representatives</b> Interact with customers to provide information in response to inquiries about products and services and to handle and resolve complaints.	Enterprising Customer Complaint Clerk; Warranty Clerk	2,972,600	6,498	7,069	Below Avg Growth	\$27,450 \$38,310	
<b>Medical Secretaries and Administrative Assistants</b> Perform secretarial duties using specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties may include scheduling appointments, billing patients, and compiling and recording medical charts.	Conventional Dental Secretary; Psychiatric Secretary	601,700	873	1,069	High Growth	\$28,780 \$37,160	
<b>Payroll and Timekeeping Clerks</b> Compile and record employee time and payroll data. May compute employees’ time worked, production, and commission. May compute and post wages and deductions, or prepare paychecks.	Conventional Time and Attendance Clerk	150,400	655	679	Below Avg Growth	\$35,630 \$50,030	
<b>Procurement Clerks</b> Compile information and records to draw up purchase orders for procurement of materials and services.	Conventional Purchasing Clerk	70,800	355	368	Below Avg Growth	\$36,230 \$43,330	
<b>Property, Real Estate, and Community Association Managers</b> Plan, direct, or coordinate the selling, buying, leasing, or governance activities of commercial, industrial, or residential real estate properties.	Enterprising Apartment Manager; Building Rental Manager; Leasing Property Manager	363,000	694	814	Avg to Near Avg Growth	\$31,190 \$50,850	
<b>Receptionists and Information Clerks</b> Answer inquiries and provide information to the general public, customers, and visitors regarding activities conducted at establishment and location of departments, offices, and employees within the organization.	Conventional Appointment Clerk; Front Desk Receptionist	1,101,500	1,899	2,079	Below Avg Growth	\$22,680 \$30,090	
<b>Supervisors of Office/Administrative Support Workers</b> Directly supervise and coordinate the activities of clerical and administrative support workers.	Enterprising Clerical Supervisor; Payroll Supervisor	1,557,500	3,214	3,464	Below Avg Growth	\$38,310 \$56,040	
<b>Postsecondary Programs – Bachelor’s Degree or Higher</b>							
<b>Accountants and Auditors</b> Examine, analyze, and interpret accounting records to prepare financial statements, give advice, or audit and evaluate statements prepared by others.	Conventional Certified Public Accountant; Internal Auditor	1,424,000	4,257	4,955	Avg to Near Avg Growth	\$39,940 \$64,260	  
<b>Budget Analysts</b> Examine budget estimates for completeness, accuracy, and conformance with procedures and regulations. Analyze budgeting and accounting reports.	Conventional Budget Examiner; Cost Analyst	56,900	122	134	Below Avg Growth	\$55,770 \$69,150	  
<b>General and Operations Managers</b> Plan, direct, or coordinate the operations of public or private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources.	Enterprising General Superintendent; Television Station Manager	2,376,400	6,909	8,048	Avg to Near Avg Growth	\$50,010 \$102,850	  
<b>Human Resources Specialists</b> Perform activities in the human resource area. Includes employment specialists who screen, recruit, interview, and place workers.	Enterprising Personnel Recruiter; Staffing Coordinator	625,700	1,325	1,539	Avg to Near Avg Growth	\$44,250 \$62,420	  

Energy Occupation











Bright Outlook

High Skill

High Wage

Military

# BUSINESS MANAGEMENT & ADMINISTRATION

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook		Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages	Annual Average Wages	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>								
<b>Management Analysts</b> Conduct organizational studies and evaluations, design systems and procedures to assist management in operating more efficiently and effectively.	Investigative Business Management Analyst; Business Process Consultant	876,300	626	719	Avg to Near Avg Growth	\$49,670 \$78,110	   	
<b>Public Relations Specialists</b> Engage in promoting or creating an intended public image for individuals, groups, or organizations. May write or select material for release to various communications media.	Enterprising Press Secretary; Publicity Writer	270,000	650	731	Avg to Near Avg Growth	\$41,170 \$67,860	   	
<b>Training and Development Specialists</b> Design and conduct training and development programs to improve individual and organizational performance. May analyze training needs.	Social Computer Training Specialist; Workforce Development Specialist	306,400	660	781	Avg to Near Avg Growth	\$40,880 \$60,030	 	

## North Dakota Business Management & Administration Related Postsecondary Programs

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

## North Dakota Postsecondary Institutions Offering Business Management & Administration Related Programs

<b>BSC</b> Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>RC</b> Rasmussen College - Fargo	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>
<b>BJCC</b> Burdick Job Corps Center	<a href="http://quentinnburdick.jobcorps.gov">http://quentinnburdick.jobcorps.gov</a>	<b>SBC</b> Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>CCCC</b> Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>TBC</b> Trinity Bible College	<a href="http://www.trinitybiblecollege.edu">www.trinitybiblecollege.edu</a>
<b>DCB</b> Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>TMCC</b> Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>DSU</b> Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>UTTC</b> United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>LRSC</b> Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UJ</b> University of Jamestown	<a href="http://www.uj.edu">www.uj.edu</a>
<b>MaSU</b> Mayville State University	<a href="http://www.mayvillestate.edu">www.mayvillestate.edu</a>	<b>UM</b> University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>MiSU</b> Minot State University	<a href="http://www.minotstate.edu">www.minotstate.edu</a>	<b>UND</b> University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NDSCS</b> ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>VCSU</b> Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NDSU</b> ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>WSC</b> Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>
<b>NHSC</b> Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>		



# EDUCATION & TRAINING

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook		Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages		
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>								
<b>Childcare Workers</b> Attend to children at schools, businesses, private households, and childcare institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play.	Social Au Pair; Daycare Provider; Nanny	116,000	4,754	5,222	Below Avg Growth	\$20,510 \$25,380		
<b>Exercise Trainers and Group Fitness Instructors</b> Instruct or coach groups or individuals in exercise activities. Demonstrate techniques and form, observe participants, and explain to them corrective measures necessary to improve their skills.	Social Personal Trainer; Yoga Instructor	356,900	1,046	1,147	Below Avg Growth	\$20,710 \$33,240	☀️	
<b>Preschool Teachers, Except Special Education</b> Instruct preschool-aged children in activities designed to promote social, physical, and intellectual growth needed for primary school in preschool, day care center, or other child development facility.	Social Head Start Teacher; Nursery School Teacher; Pre-Kindergarten Teacher	523,600	993	1,173	Avg to Near Avg Growth	\$21,940 \$28,350	☀️ 🧠	
<b>Self-Enrichment Teachers</b> Teach or instruct courses other than those that normally lead to an occupational objective or degree. Courses may include self-improvement, non-vocational, and non-academic subjects.	Social Citizenship Teacher; Horseback Riding Instructor	369,500	742	939	High Growth	\$30,050 \$42,470	☀️	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>								
<b>Career/Technical Education Teachers, Secondary School</b> Teach occupational, career and technical, or vocational subjects at the secondary school level in public or private schools.	Social Auto Repair Teacher; Vocational Education Teacher	76,600	435	478	Below Avg Growth	\$42,000 \$58,660	🧠	
<b>Education Administrators, Kindergarten through Secondary</b> Plan, direct, or coordinate the academic, administrative, or auxiliary activities of public or private elementary or secondary level schools.	Enterprising Curriculum Administrator	275,400	522	577	Avg to Near Avg Growth	\$72,300 \$101,020	☀️ 🧠 💰	
<b>Education Administrators, Preschool and Daycare</b> Plan, direct, or coordinate the academic and nonacademic activities of preschool and childcare centers or programs.	Social Childcare Center Administrator; Head Start Director; Preschool Director	66,700	174	209	High Growth	\$32,320 \$46,510	☀️ 🧠	
<b>Educational, Guidance, and Career Counselors</b> Counsel individuals and provide group educational and vocational guidance services.	Social Career Counselor; Student Development Advisor	324,500	772	860	Avg to Near Avg Growth	\$44,550 \$59,740	☀️ 🧠	
<b>Elementary School Teachers, Except Special Education</b> Teach students basic academic, social, and other formative skills in public or private schools at the elementary level.	Social Elementary Band Director; 4th Grade Math Teacher	1,434,400	3,975	4,391	Avg to Near Avg Growth	\$41,720 \$55,630	☀️ 🧠	
<b>Health Specialties Teachers, Postsecondary</b> Teach courses in health specialties, in fields such as dentistry, laboratory technology, medicine, pharmacy, public health, therapy, and veterinary medicine.	Social Nutrition Professor; Pharmacology Professor; Public Health Professor	254,800	334	392	Avg to Near Avg Growth	\$62,180 \$92,530	☀️ 🧠 💰	
<b>Instructional Coordinators</b> Develop instructional material, coordinate educational content, and incorporate current technology in specialized fields that provide guidelines to educators and instructors.	Social Curriculum and Assessment Director; Special Education Curriculum Specialist	181,600	272	298	Below Avg Growth	\$46,880 \$64,660	🧠 💰	
<b>Kindergarten Teachers, Except Special Education</b> Teach elemental natural and social science, personal hygiene, music, art, and literature to kindergarten students. Promote physical, mental, and social development.	Social Bilingual Kindergarten Teacher	134,500	485	536	Avg to Near Avg Growth	\$42,110 \$55,290	☀️ 🧠	
<b>Nursing Instructors and Teachers, Postsecondary</b> Demonstrate and teach patient care in classroom and clinical units to nursing students. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.	Social Clinical Nursing Professor; Registered Nursing Professor	69,000	181	216	Avg to Near Avg Growth	\$45,930 \$72,180	🧠 💰	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military



# EDUCATION & TRAINING

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Secondary School Teachers, Except Special and Career/Technical Education</b> Teach students in one or more subjects, such as English, mathematics, or social studies at the secondary level in public or private schools. May be designated according to subject matter specialty.	Social  High School English Teacher; High School French Teacher; High School History Teacher	1,072,500	2,646	2,926	Avg to Near Avg Growth	\$41,240 \$56,250	
<b>Special Education Teachers, Kindergarten and Elementary School</b> Teach elementary school subjects to educationally and physically handicapped students. Includes teachers who specialize and work with audibly and visually handicapped students and those who teach basic academic and life processes skills.	Social  Severe Emotional Disorders Teacher; Special Education Preschool Teacher	184,300	642	708	Avg to Near Avg Growth	\$44,100 \$60,660	

North Dakota Education & Training Related Postsecondary Programs			
Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Administration &amp; Administration Support</b>			Educational Leadership (NDSU, UND) Elementary Administration (UM) Secondary Administration (UM)
<b>Professional Support Services</b>	American Sign Language and Interpreting Studies (LRSC) Early Child Development Associate (DCB, NHSC) Paraprofessional Education (DCB) Speech Language Pathology Paraprofessional (LRSC, WSC)	Communication Sciences & Disorders (MiSU, UM, UND) Communication (DSU) Interpreting & Sign Language Studies (MiSU)	Communication Sciences and Disorders (MiSU, UND) Counseling (NDSU, UJ, UM, UND) Counseling Psychology (UND) Counseling with K-12 School Emphasis (NDSU, UM, UND) Library and Information Technologies (VCSU)
<b>Teaching/ Training</b>	Anishinaabe Language (TMCC) Business Education transfer (BSC, DCB) Dakota Studies (CCCC) Early Childhood Education (BSC, CCCC, DCB, LRSC, MaSU, NDSCS, NHSC, RC, SBC) Education transfer (NDSCS, SBC) Elementary Education transfer (BSC, DCB, NDSCS, UTTC) Foreign Language transfer (BSC) Health, Physical Education and Recreation transfer (CCCC, NDSCS, UTTC) Lakhotiyapi/Dakhotiyapi I/II (SBC) Middle School Math Certificate (NHSC) Middle School Science Certificate (NHSC) Native American Studies (SBC) Physical Education transfer (BSC, DCB) Secondary Education transfer (BSC, DCB) Special Education transfer (DCB) Teacher Education transfer (SBC)	Agriculture Education (NDSU) Art Education (DSU, MiSU, NDSU, VCSU) Biology Education (DSU, MaSU, MiSU, NDSU, UJ, UM, VCSU) Business Education (DSU, MiSU, UM, VCSU) Career and Technical Education (VCSU) Chemistry Education (DSU, MaSU, MiSU, NDSU, VCSU) Composite/Comprehensive Science Education (DSU, NDSU) Early Childhood Education (MaSU, MiSU, RC, SBC, UM, UND) Earth Science Education (MiSU, NDSU) Elementary Education (DSU, MaSU, MiSU, NHSC, SBC, TBC, TMCC, UTTC, UJ, UM, UND, VCSU) English Education (DSU, MaSU, MiSU, NDSU, UJ, UM, VCSU) Exceptional Learners (UM) Family & Consumer Sciences Education (NDSU) Foreign Language Education (MiSU) French Education (NDSU) Health Education (MaSU, NDSU, VCSU) History Education (DSU, MaSU, MiSU, NDSU, UJ, UM, VCSU) Math Education (DSU, MaSU, MiSU, NDSU, UJ, UM, VCSU) Middle Level Education (UND) Music Education (DSU, MiSU, UJ, UM, UND, VCSU) Native American Studies (NHSC, SBC) Physical Educ. (DSU, MaSU, MiSU, NDSU, TBC, UJ, UM, VCSU) Physics Education (NDSU) Science Education (SBC, TMCC, UND) Social Science Education (DSU, MaSU, MiSU, UM, UND, VCSU) Spanish Education (NDSU) Special Education (MaSU, MiSU, UM) Teacher Education (UJ) Technology Education (DSU, VCSU)	Agriculture Education (NDSU) Curriculum and Instruction (NDSU, SBC, UJ, UM, UND) Early Childhood Education (UND) Education (MiSU, NDSU, UM, VCSU) Educational Foundations and Research (UND) Education Leadership (NDSU, UND) Education Studies (UND) Elementary Education (UND, VCSU) English Education (NDSU, VCSU) English Language Learner (ELL) Education (VCSU) Extension Education (NDSU) Family & Consumer Sciences Education (NDSU) Higher Education (UND) History Education (NDSU) Instructional Design and Technology (UND) Mathematics Education (NDSU, UND) Music Education (MiSU, NDSU, UND) Reading Education (UM, UND) Science Education (NDSU) Social Science Education (NDSU) Special Education (MiSU, UM, UND) Teaching (DSU, MaSU, VCSU) Teaching and Learning (UND) Teaching Technology (VCSU) Technology Education (VCSU)

North Dakota Postsecondary Institutions Offering Education & Training Related Programs			
<b>BSC</b>	Bismarck State College	www.bismarckstate.edu	<b>RC</b> Rasmussen College www.rasmussen.edu
<b>CCCC</b>	Cankdeska Cikana Community College	www.littlehoop.edu	<b>SBC</b> Sitting Bull College www.sittingbull.edu
<b>DCB</b>	Dakota College at Bottineau	www.dakotacollege.edu	<b>TBC</b> Trinity Bible College www.trinitybiblecollege.edu
<b>DSU</b>	Dickinson State University	www.dickinsonstate.edu	<b>TMCC</b> Turtle Mountain Community College www.tm.edu
<b>LRSC</b>	Lake Region State College	www.lrsc.edu	<b>UTTC</b> United Tribes Technical College www.uttc.edu
<b>MaSU</b>	Mayville State University	www.mayvillestate.edu	<b>UJ</b> University of Jamestown www.uj.edu
<b>MiSU</b>	Minot State University	www.minotstateu.edu	<b>UM</b> University of Mary www.umary.edu
<b>NDSCS</b>	ND State College of Science	www.ndscs.edu	<b>UND</b> University of North Dakota www.und.edu
<b>NDSU</b>	ND State University	www.ndsu.edu	<b>VCSU</b> Valley City State University www.vcsu.edu
<b>NHSC</b>	Nueta Hidatsa Sahnish College	http://nhsc.edu	<b>WSC</b> Williston State College www.willistonstate.edu



# HUNTER TORGESON

## Finance

Mayville State University



**H**unter Torgeson started his banking career while attending Mayville-Portland CG High School. During his senior year, he participated in the Office Work Experience program at First and Farmers Bank which allowed him to work as a teller and general office employee. He continued working at the bank while in college and earned college credit using portions of his job in Operations and Internal Auditing.

After high school, Hunter wasn't sure what he wanted to do with his future. There were several advantages to attending Mayville State University including smaller class sizes, keeping college loans to a minimum, and keeping his part-time job at the bank. He earned a degree in Business Administration with specializations in banking and real estate.

Since starting at First and Farmers Bank nine years ago, there have been a lot of changes. Hunter started as a Customer Service Representative. After some time, he was able to expand his role and work behind the scenes in the operations department. That change involved more computer-based work rather than customer-based.

The bank was recently purchased by First State Bank of Buxton. This change has allowed Hunter to take on new responsibilities. He will continue his work with auditing, opening accounts and helping customers. He is also training to become the Bank Secrecy Act (BSA) Officer and Consumer Lender. BSA is mainly intended to stop financial crime abuse such as money laundering or terrorist funding. As Consumer Lender, he will be able to form relationships with customers and help them find solutions to their banking needs.

FBLA experiences helped Hunter in many ways. He learned how to properly dress for the work

environment, and he had the opportunity to connect with people and form bonds that are helpful in his career. While attending state and national conferences he was exposed to new ideas because business professionals took time out of their day to teach high school students. "We were able to see how they were using their skills in business."

Employability skills are very important in Hunter's career. "As a bank employee, customers are trusting you to make sure their money is safe and sound." Communication, problem-solving and teamwork go hand-in-hand. You need to be able to communicate with customers and co-workers. Problem solving is easier with good communication. Staying calm, being understanding and knowledgeable about a situation is key. Teamwork incorporates all of these traits. There are times when you will be the leader and sometimes you will be in a supporting role. Learning these different and valuable skills while in FBLA gave me an edge before I went to college.



# FINANCE



Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Brokerage Clerks</b> Perform duties related to the purchase, sale or holding of securities. Duties include purchases or sales, computing transfer taxes, accepting and delivering securities, tracking price fluctuations, and keeping daily records of transactions.	Conventional Commodities Clerk; Dividend Clerk	56,100	90	107	Avg to Near Avg Growth	\$41,880 \$56,280	
<b>Credit Authorizers, Checkers, and Clerks</b> Authorize credit charges against customers' accounts. Investigate history and credit standing of individuals or business establishments applying for credit.	Conventional Charge Authorizer; Commercial Credit Reviewer; Credit Rating Checker	30,300	246	264	Below Avg Growth	\$28,930 \$43,000	
<b>Insurance Claims and Policy Processing Clerks</b> Process new insurance policies, modifications to existing policies, and claims forms. Update existing policies and company records to reflect changes requested by policyholders and insurance company representatives.	Conventional Insurance Policy Issue Clerk; Underwriting Clerk	308,800	409	490	Avg to Near Avg Growth	\$31,390 \$42,430	☀️
<b>Insurance Sales Agents</b> Sell life, property, casualty, health, automotive, or other types of insurance. May refer clients to independent brokers, work as an independent broker, or be employed by an insurance company.	Enterprising Life Insurance Salesperson; Pension Agent	475,900	1,574	1,809	Avg to Near Avg Growth	\$33,390 \$63,940	☀️ 💰
<b>Loan Interviewers and Clerks</b> Interview loan applicants; investigate applicants' backgrounds and verify references; and forward findings, reports, and documents to appraisal department.	Conventional Loan Processor; Mortgage Loan Closer	226,300	666	822	High Growth	\$34,540 \$45,560	☀️
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Credit Analysts</b> Analyze credit data and financial statements of individuals or firms to determine the degree of risk involved in extending credit or lending money. Prepare reports with credit information for use in decision making.	Conventional Credit Assessment Analyst; Credit Risk Analyst	75,800	186	223	Avg to Near Avg Growth	\$47,050 \$71,240	🧠 💰
<b>Credit Counselors</b> Advise and educate individuals or organizations on acquiring and managing debt. May help develop debt management plans, advise on credit issues, or provide budget, mortgage, and bankruptcy counseling.	Enterprising Debt Management Counselor; Financial Assistance Advisor	40,100	62	75	High Growth	\$35,470 \$44,750	🧠
<b>Financial Managers</b> Plan, direct, or coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.	Conventional Comptroller; Financial Director	653,600	1,220	1,558	High Growth	\$80,870 \$133,980	☀️ 🧠 🇺🇸
<b>Loan Officers</b> Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and payment methods.	Conventional Commercial Lender; Loan Reviewer; Real Estate Loan Officer	316,200	1,245	1,492	Avg to Near Avg Growth	\$47,640 \$79,790	🧠 💰
<b>Personal Financial Advisors</b> Advise clients on financial plans using knowledge of tax and investment strategies, securities, insurance, pension plans, and real estate. Duties include assessing clients' assets and financial objectives.	Enterprising Estate Planner; Individual Pension Advisor; Personal Investment Advisor	271,700	600	760	High Growth	\$42,930 \$85,670	☀️ 🧠 💰
<b>Securities and Financial Services Sales Agents</b> Buy and sell stocks and bonds based on customers' orders. Give advice and furnish client with information regarding possible purchases, market conditions, and prospects.	Enterprising Investment Banker; Securities Trader	442,400	540	643	Avg to Near Avg Growth	\$37,020 \$100,060	☀️ 🧠 💰
<b>Tax Preparers</b> Prepare tax returns for individuals or small businesses.	Conventional Tax Advisor; Licensed Tax Consultant	86,600	152	172	Avg to Near Avg Growth	\$35,140 \$56,490	🧠

Energy Occupation

Bright Outlook

High Skill

High Wage

Military



# FINANCE

## North Dakota Finance Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Accounting</b>	Accounting (DCB, DSU, RC, WSC) Accounting transfer (BSC) Business Administration (CCCC, UTTC) Accounting Technician (DCB, DSU, TMCC)	Accounting (DSU, MiSU, NDSU, RC, UJ, UM, UND) Business Administration (DSU, MaSU, NDSU, SBC, TBC, UTTC, UJ, UM, VCSU) Managerial Finance and Accounting (UND)	Accountancy (NDSU, UND) Business Administration (NDSU)
<b>Banking Services</b>	Economics transfer (BSC, DCB)	Banking and Financial Economics (UND) Financial Services and Banking (UM) Economics (NDSU, UND)	Applied Economics (UND)
<b>Business Finance</b>	Business Administration transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, TBC, UTTC) Business Finance (DCB, NDSCS) Business Management (MaSU, NDSCS, RC, WSC)	Business Administration (DSU, MaSU, NDSU, SBC, TBC, UTTC, UJ, UM, VCSU) Business Management (RC) Energy Economics and Finance (MiSU) Finance (MiSU, NDSU, RC)	Business Administration (NDSU)
<b>Insurance</b>	Insurance (BSC) Marketing (LRSC, RC) Marketing and Management transfer (DCB)	Marketing (MiSU, NDSU, RC, UM, UND) Marketing and Communications (TBC)	
<b>Securities &amp; Investments</b>		Financial Planning and Wealth Management (UJ) Investments (UND)	

## North Dakota Postsecondary Institutions Offering Finance Related Programs

<b>BSC</b>	Bismarck State College	www.bismarckstate.edu	<b>NDSU</b>	ND State University	www.ndsu.edu
<b>CCCC</b>	Cankdeska Cikana Community College	www.littlehoop.edu	<b>RC</b>	Rasmussen College	www.rasmussen.edu
<b>DCB</b>	Dakota College at Bottineau	www.dakotacollege.edu	<b>TMCC</b>	Turtle Mountain Community College	www.tm.edu
<b>DSU</b>	Dickinson State University	www.dickinsonstate.edu	<b>UJ</b>	University of Jamestown	www.uj.edu
<b>LRSC</b>	Lake Region State College	www.lrsc.edu	<b>UM</b>	University of Mary	www.umary.edu
<b>MaSU</b>	Mayville State University	www.mayvillestate.edu	<b>UND</b>	University of North Dakota	www.und.edu
<b>MiSU</b>	Minot State University	www.minotstateu.edu	<b>VCSU</b>	Valley City State University	www.vcsu.edu
<b>NDSCS</b>	ND State College of Science	www.ndscs.edu	<b>WSC</b>	Williston State College	www.willistonstate.edu

## Energy and Natural Resources

**North Dakota** has significant resources that fuel our state in many ways.

Biofuel, Coal, Geothermal, Hydropower, Natural Gas, Recovered Energy, Solar and Wind make North Dakota an energy powerhouse. As many as 75,000 jobs in North Dakota can be directly or indirectly attributed to the energy industry.

In 2019, the North Dakota legislature designated the Energy & Environmental Research Center (EERC) at the University of North Dakota as the state's energy research center.

The EERC will focus on emerging topics critical to the state's energy industry and environmental challenges such as flaring reduction, pipeline safety, efficient lignite use, and increasing oil recovery while decreasing environmental impacts.



**Information can be found here:**

Look for the **E** in the Occupational Section, pages 12-51 for energy occupations in North Dakota.

Energy industry jobs can also be found at [jobsnd.com](http://jobsnd.com).

# GOVERNMENT & PUBLIC ADMINISTRATION



Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Eligibility Interviewers, Government Programs</b> Determine eligibility of persons applying to receive assistance from government programs and agency resources, such as welfare, unemployment benefits, social security, and public housing.	Social	145,200	399	452	Avg to Near Avg Growth	\$40,620	☀️
	Unemployment Benefits Claims Taker					\$47,190	
<b>Title Examiners, Abstractors, and Searchers</b> Search real estate records, examine titles, or summarize pertinent legal or insurance documents or details for a variety of purposes. May compile lists of mortgages, contracts, and other instruments by searching public and private records.	Conventional	62,600	479	562	Avg to Near Avg Growth	\$30,340	☀️
	Escrow Officer; Lien Searcher; Title Officer					\$52,370	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Emergency Management Directors</b> Plan and direct disaster response or crisis management activities, provide disaster preparedness training, and prepare emergency plans and procedures.	Social	9,900	84	91	Below Avg Growth	\$46,000	🇺🇸 ⚙️ 💰
	Disaster Response Director					\$68,400	
<b>Financial Examiners</b> Enforce or ensure compliance with laws and regulations governing financial and securities institutions and financial and real estate transactions. May examine, verify, or authenticate records.	Enterprising	60,900	161	176	Below Avg Growth	\$49,100	🇺🇸 ⚙️ 💰
	Bank Examiner					\$77,360	
<b>Tax Examiners and Collectors, and Revenue Agents</b> Determine tax liability or collect taxes from individuals or business firms according to prescribed laws and regulations.	Conventional	58,200	89	90	Below Avg Growth	\$39,830	🇺🇸 ⚙️ 💰
	Internal Revenue Service Agent					\$63,850	

## North Dakota Government & Public Administration Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Foreign Service</b>	American Sign Language and Interpreting Studies (LRSC) Foreign Language transfer (BSC)	Chinese Studies (UND) Foreign Language (MiSU) French (NDSU, UJ, UND) German (UJ, UND) International Studies (UND) Modern Languages (NDSU) Norwegian (UND) Spanish (DSU, NDSU, UJ, UM, UND)	
<b>Governance</b>	Dakota Studies (CCCC) History transfer (BSC, DCB) Native American Studies (SBC) Political Science transfer (BSC)	American Indian Studies (UND) History (DSU, MiSU, NDSU, UJ, UM, UND, VCSU) Native American Studies (NHSC, SBC) Political Science (DSU, NDSU, UJ, UND) Politics (UM) Public Affairs (UND) Public History (NDSU)	History (NDSU, UND) Public Administration (UM, UND) Public Health (NDSU, UND)
<b>National Security</b>	Cybersecurity and Computer Networks (BSC) Military Science (BSC)	Cybersecurity and Information Technology (BSC) Military Science/ROTC (NDSU, UND) Unmanned Aircraft System Operations (UND)	Unmanned Aerial Systems Engineering (UND)
<b>Planning</b>	Economics transfer (BSC, DCB)	Behavioral Statistics (NDSU) Economics (NDSU, UND) Energy Economics and Finance (MiSU)	Community Development (NDSU) Transportation and Urban Systems (NDSU)
<b>Public Management &amp; Administration</b>	Cybersecurity and Information Technology (BSC) Emergency Management transfer (NDSUS) Land Management (DCB)	Cybersecurity (RC) Cybersecurity and Information Technology (BSC) Emergency Management (NDSU) Public Health Education (UND) Strategic Communication (NDSU)	Emergency Management (NDSU)
<b>Regulation</b>		Public History (NDSU)	
<b>Revenue &amp; Taxation</b>	Accounting Technology (DCB, DSU, TMCC) Accounting transfer (BSC, DCB, RC, TMCC)	Accounting (DSU, MiSU, NDSU, RC, UJ, UM, UND)	Accountancy (NDSU)

## North Dakota Postsecondary Institutions Offering Government & Public Administration Related Programs

<b>BSC</b> Bismarck State College	www.bismarckstate.edu	<b>RC</b> Rasmussen College	www.rasmussen.edu
<b>CCCC</b> Cankdeska Cikana Community College	www.littlehoop.edu	<b>SBC</b> Sitting Bull College	www.sittingbull.edu
<b>DCB</b> Dakota College at Bottineau	www.dakotacollege.edu	<b>TMCC</b> Turtle Mountain Community College	www.tm.edu
<b>DSU</b> Dickinson State University	www.dickinsonstate.edu	<b>UJ</b> University of Jamestown	www.uj.edu
<b>LRSC</b> Lake Region State College	www.lrsc.edu	<b>UM</b> University of Mary	www.umary.edu
<b>MiSU</b> Minot State University	www.minotstate.edu	<b>UND</b> University of North Dakota	www.und.edu
<b>NDSU</b> ND State University	www.ndsu.edu	<b>VCSU</b> Valley City State University	www.vcsu.edu
<b>NHSC</b> Nueta Hidatsa Sahnish College	http://nhsc.edu	<b>WSC</b> Williston State College	www.willistonstate.edu
<b>NDSUS</b> ND State College of Science	www.ndscs.edu		



# KELSEY KUYLEN

## Health Science

North Dakota State College of Science  
Dickinson State University  
Creighton University



**K**elsey Kuylen was trying to decide between a career in nursing and dental hygiene while attending Dickinson High School and sought out opportunities to experience both. She was employed as a Certified Nurse Assistant (CNA) at a nursing home and had a job-shadow experience with both a dental assistant and dental hygienist. She was able to interact with staff and patients, ask endless questions and observe the daily flow of the office and how procedures were done. Dealing with patients while providing assistance was similar in each setting.

She enrolled at North Dakota State College of Science (NDSCS) in Wahpeton and began work on general courses related to nursing. Kelsey was accepted into the nursing program at Dickinson State University and received both an Associate Degree in Nursing (ADN) and a Bachelor of Science Degree in Nursing (BSN). Kelsey worked as a nurse in a variety of settings before enrolling in graduate school at Creighton University in Omaha, Nebraska. She graduated with a Master of Science in Nursing, Family Health Practitioner. She worked in acute care and primary care until 2019. Since then, she has been with the Dickinson Veterans Affairs Community-Based Outpatient Clinic (CBOC), providing health care and services to the heroes of our nation, our veterans.

Kelsey is glad she worked as a CNA leading up to college as it was the foundation for her career. Looking back, she would have liked opportunities to job shadow with multiple businesses or facilities providing nursing care in every position from the floor nurse to management nursing.

A large segment of nursing education in college is based on clinical participation. Clinicals are on-the-job learning environments where you work hands-on, under the supervision of school or medical faculty and practice the

skills being taught in the classroom. The clinical experience also includes simulations with mannequins with the expectation to perform necessary medical procedures and tasks without the risk of practicing on an actual patient.

In graduate school, Kelsey was able to choose her clinical preceptors. She was able to hone her skills under the supervision of someone she was comfortable with and practicing in areas that met her goals. "It was humbling how many people in the community allowed me to be in the room and participate in their medical appointments as a student. It was imperative to my growth as a practitioner to have the opportunity to be involved in these real-life medical scenarios."

Technology Student Association (TSA) was important because it introduced Kelsey to a lot of technological advancements that are essential in the medical profession. As a state officer, she was able to develop her public speaking and cooperative skills which helped her development as a leader.

"As a medical provider, it is of the utmost importance to be able to communicate effectively with patients and their families in order to provide a high level of care. I rely heavily on problem-solving skills to diagnose patients and determine the best path for the improvement of their health."





# HEALTH SCIENCE



Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Dental Hygienists</b> Clean teeth, examine patients for signs of oral diseases such as gingivitis, and provide other preventative dental care. They also educate patients on ways to improve and maintain good oral health.	Social Oral Hygienist, Dental Assistant	219,800	696	809	Avg to Near Avg Growth	\$60,510 \$72,550	
<b>Diagnostic Medical Sonographers</b> Produce ultrasonic recordings of internal organs for use by physicians.	Investigative Ultrasound Technologist	72,900	121	156	High Growth	\$58,260 \$70,760	
<b>Dietetic Technicians</b> Assist in the provision of food service and nutritional programs, under the supervision of a dietitian. May plan and produce meals based on established guidelines, teach principles of food and nutrition, or counsel individuals.	Social Dietary Technician; Registered Diet Technician	34,800	410	454	Avg to Near Avg Growth	\$27,360 \$31,990	
<b>Emergency Medical Technicians and Paramedics</b> Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.	Social Flight Paramedic	262,100	1,063	1,249	Avg to Near Avg Growth	\$21,630 \$35,150	
<b>Health Information Technologists and Medical Registrars</b> Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system.	Conventional Health Information Coder; Medical Records Specialist	215,500	898	1,089	High Growth	\$30,680 \$52,290	
<b>Home Health Aides</b> Provide routine individualized healthcare at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patient.	Social Home Health Attendant; Home Hospice Aide	831,800	1,478	1,799	High Growth	\$26,280 \$34,100	
<b>Nurses, Registered</b> Assess patient health problems and needs, develop and implement nursing care plans and maintain medical records. Administer nursing care to ill, injured, or disabled patients.	Social Coronary Care Unit Nurse; Psychiatric Nurse	3,059,800	8,844	10,592	Avg to Near Avg Growth	\$54,320 \$66,290	
<b>Ophthalmic Medical Technicians</b> Assist ophthalmologists by performing ophthalmic clinical functions. May administer eye exams, administer eye medications, and instruct the patient in care and use of corrective lenses.	Conventional Ocular Care Technologist	53,800	185	216	Avg to Near Avg Growth	\$33,140 \$40,000	
<b>Pharmacy Technicians</b> Assist licensed pharmacists dispense prescription medication to customers or health professionals.	Conventional Pharmacist; Pharmacy Assistant	420,400	732	870	Avg to Near Avg Growth	\$32,810 \$39,770	
<b>Radiologic Technologists and Technicians</b> Take X-rays and CAT scans or administer non-radioactive materials into patient's blood stream for diagnostic purposes. May also operate computed tomography or magnetic resonance.	Realistic Computed Tomography (CT) Scanner Operator; X-ray Technician	210,500	599	689	Avg to Near Avg Growth	\$42,160 \$55,400	
<b>Respiratory Therapists</b> Assess, treat, and care for patients with breathing disorders. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.	Social Inhalation Therapist; Oxygen Therapist; Registered Respiratory Therapist	134,000	299	398	High Growth	\$48,900 \$59,050	
<b>Surgical Technologists</b> Assist in operations, under supervision of surgeons, registered nurses or other surgical personnel.	Realistic Operating Room (OR) Tech; Surgical Scrub Technologist	112,100	300	352	Avg to Near Avg Growth	\$36,900 \$47,110	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Athletic Trainers</b> Evaluate and advise individuals to assist recovery from or avoid athletic-related injuries or illnesses, or maintain peak physical fitness. May provide first aid or emergency care.	Social Fitness Trainer	31,100	54	64	Avg to Near Avg Growth	\$37,010 \$46,110	
<b>Dentists</b> Diagnose and treat problems with a patient's teeth, gums, and related parts of the mouth. They provide advice and instruction on taking care of teeth and gums and on diet choices that affect oral health.	Investigative Maxillofacial Surgeon, Dental Hygienist	136,900	245	285	Avg to Near Avg Growth	\$127,920 \$225,770	
<b>Dietitians and Nutritionists</b> Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease.	Investigative Clinical Dietitian, Public Health Nutritionist	70,900	283	317	Avg to Near Avg Growth	\$43,250 \$58,840	

Energy Occupation






Bright Outlook

High Skill

High Wage

Military

# HEALTH SCIENCE

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016 -2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry- Level Wages Annual Average Wages	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Healthcare Social Workers</b> Provide individuals, families, and groups with the psychosocial support needed to cope with chronic, acute, or terminal illnesses, including advising family care givers, providing patient education and counseling, and making referrals for other services.	Social  Hospice Social Worker; Oncology Social Worker; Public Health Social Worker	180,500	362	415	Avg to Near Avg Growth	\$41,530 \$53,070	 
<b>Medical and Health Services Managers</b> Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.	Enterprising  Clinic Director; Hospital Administrator; Medical Records Administrator; Mental Health Program Manager	406,100	903	1,096	High Growth	\$75,210 \$124,470	  



Energy Occupation



Bright Outlook



High Skill



High Wage



Military

## North Dakota Health Science Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Biotechnology Research &amp; Development</b>	Biotechnology transfer (NDSCS)	Bioinformatics (MiSU) Biotechnology (NDSU)	Bioethics (UM) Biomedical Sciences (UND) Genomics and Bioinformatics (NDSU)
<b>Diagnostic Services</b>	Clinical Laboratory Science transfer (NDSCS) EMT-Paramedic Technician (BSC, DCB, NDSCS) Medical Assistant (DCB, RC) Medical Laboratory Science/Technician (BSC, RC, TMCC) Phlebotomy Technician (BSC, TMCC) Speech Language Pathology Assistant (LRSC, WSC)	Communication Sciences & Disorders (MiSU, UM, UND) Medical Lab Science (MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) Radiologic Science/Technology (MiSU, NDSU, UM)	Medical Lab Science (UND)
<b>Health Informatics</b>	Community Health (SBC) Health Information Technician/Management (DCB, NDSCS, RC) Medical Administrative Asst. (BSC, DCB, RC) Medical Coding/Billing (DCB, NDSCS, RC)	Forensic Science (UND) Health Science (MaSU) Health Information Management (RC) Forensic Science (UND) Human Nutrition (UND)	Health Care Administration (RC, UM) Public Health (NDSU, UND)
<b>Support Services</b>	Caregiver Services (DCB) Health/Fitness Personal Trainer Technician (LRSC, TMCC) Patient Access Specialist (TMCC) Pharmacy Technician (NDSCS, RC) Physical Therapist Assistant (RC) Radiologic Technology (RC)	Biomechanics (UM) Fitness and Wellness (MaSU) Exercise Science (DSU, NDSU, TBC, UJ, UM) Exercise Science and Sport Management (VCSU) Kinesiology (UND) Sport Management (MaSU, NDSU, UM)	Clinical Exercise Physiology (UM) Kinesiology (UM, UND) Kinesiology & Public Health Education (UND)
<b>Therapeutic Services</b>	Dental Assisting or Dental Hygiene (NDSCS) Health/Medical Assistant (BJCC, DCB) Massage Therapy (JSHD, TSPA, WSC) Nursing (BSC, CCCC, DCB, LRSC, NDSCS, SBC, WSC) Occupational Therapy Assistant (NDSCS) Practical Nursing (BSC, DCB, DSU, LRSC, NDSCS, SBC, WSC) Pre-Professional transfer (BSC, DCB, NDSCS, WSC) Surgical Technology (BSC, RC)	Addiction Studies (MiSU) Athletic Training (UND) Corporate Fitness and Wellness Mgmt. (MiSU) Dietetics (NDSU, UND) Nursing (DSU, MaSU, MiSU, NDSU, RC, UJ, UM, UND) Pharmacy (NDSU) Pre-Professional programs (MaSU, MiSU, NDSU, UJ, UM, UND) Rehabilitation and Human Services (UND) Respiratory Care/Therapy (NDSU, UM)	Athletic Training (UM) Dietetics (NDSU, UND) Family Nurse Practitioner (UND) Health, Nutrition and Exercise Science (NDSU) Medicine (UND) Nursing (RC, UM, UND) Occupational Therapy (UND) Pharmaceutical Sciences (NDSU) Physical Therapy (UJ, UND) Physician Assistant Studies (UND) Respiratory Therapy (UM)

## North Dakota Postsecondary Institutions Offering Human Services Related Programs

<b>BSC</b> Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>NDSU</b> ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>
<b>BJCC</b> Burdick Job Corps Center	<a href="http://quentinnburdick.jobcorps.gov">http://quentinnburdick.jobcorps.gov</a>	<b>RC</b> Rasmussen College	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>
<b>CCCC</b> Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>SBC</b> Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>DCB</b> Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>TBC</b> Trinity Bible College	<a href="http://www.trinitybiblecollege.edu">www.trinitybiblecollege.edu</a>
<b>DSU</b> Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>TMCC</b> Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>JSHD</b> Josef's School of Hair Design	<a href="http://josefsschoolofhairdesign.com">josefsschoolofhairdesign.com</a>	<b>UTTC</b> United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>LRSC</b> Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UJ</b> University of Jamestown	<a href="http://www.uj.edu">www.uj.edu</a>
<b>MaSU</b> Mayville State University	<a href="http://www.mayvillestate.edu">www.mayvillestate.edu</a>	<b>UM</b> University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>MiSU</b> Minot State University	<a href="http://www.minotstate.edu">www.minotstate.edu</a>	<b>UND</b> University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NDSCS</b> ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>VCSU</b> Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
		<b>WSC</b> Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>

# HEALTH SCIENCE

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – Bachelor’s Degree or Higher</b>							
<b>Nurse Practitioners</b> Diagnose and treat acute, episodic, or chronic illness. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x-rays. May prescribe medication.	Social  Cardiology Nurse Practitioner; Family Practice Nurse Practitioner; Gerontological Nurse Practitioner	189,100	444	604	High Growth	\$87,110 \$110,950	
<b>Occupational Therapists</b> Assess, plan, organize and participate in rehabilitative programs that help restore vocational, homemaking and daily living skills, as well as general independence, to disabled persons.	Social  Physical Therapists	133,000	483	594	High Growth	\$50,450 \$70,350	
<b>Optometrists</b> Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment.	Investigative  Ophthalmologist, Optician	42,100	194	223	High Growth	\$105,030 \$174,290	
<b>Physical Therapists</b> Assess, plan, organize and participate in rehabilitative programs that improve mobility, relieve pain, increase strength and decrease or prevent deformity of patients suffering from disease or injury.	Social  Geriatric Physical Therapist; Physiotherapist	247,700	658	826	High Growth	\$68,760 \$81,630	
<b>Physician Assistants</b> Provide healthcare services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment and counsel patients.	Social  Physician Assistant; Nurse Practitioner	118,800	252	336	High Growth	\$90,020 \$112,240	
<b>Rehabilitation Counselors</b> Counsel individuals to maximize the independence and employability of persons coping with personal, social, and vocational difficulties that result from birth defects, illness, disease, accidents, or the stress of daily life.	Social  Veterans Rehabilitation Counselor	119,700	258	299	Avg to Near Avg Growth	\$35,210 \$47,060	
<b>Speech-Language Pathologists</b> Assess and treat persons with speech, language, voice, and fluency disorders. May select alternative communication systems and teach their use. May perform research related to speech and language problems.	Social  Public School Speech Therapist; Speech Clinician	153,700	551	638	Avg to Near Avg Growth	\$50,050 \$67,070	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

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# HOSPITALITY & TOURISM

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Amusement and Recreation Attendants</b> Perform variety of attending duties at amusement or recreation facility. May schedule use of recreation facilities, maintain and provide equipment to participants of sporting events or recreational pursuits.	Enterprising Arcade Attendant; Golf Caddy; Ski Lift Operator	338,600	949	1,046	Avg to Near Avg Growth	\$17,260 \$24,400	
<b>Bakers</b> Mix and bake ingredients to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods.	Realistic Bagel Maker; Pastry Finisher	191,900	632	697	Avg to Near Avg Growth	\$24,660 \$32,690	
<b>Chefs and Head Cooks</b> Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.	Enterprising Executive Chef; Pastry Chef; Sous Chef	139,000	362	420	Avg to Near Avg Growth	\$42,810 \$50,800	
<b>Cooks, Restaurant</b> Prepare, season, and cook dishes such as soups, meats, vegetables, or desserts in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.	Realistic Banquet Cook; Line Cook; Saucier	1,362,300	2,667	3,212	High Growth	\$21,710 \$28,690	
<b>Food Preparation Workers</b> Perform a variety of food preparation duties other than cooking, such as preparing cold foods and shellfish, slicing meat, and brewing coffee or tea.	Realistic Fruit and Vegetable Parer; Salad Maker; Sandwich Maker	842,100	2,409	2,660	Avg to Near Avg Growth	\$21,870 \$26,380	
<b>Food Service Managers</b> Plan, direct, or coordinate activities of an organization or department that serves food and beverages.	Enterprising Banquet Director; Food Service Director	356,400	694	803	Avg to Near Avg Growth	\$41,590 \$55,040	
<b>Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop</b> Welcome patrons, seat them at table or in lounge, and help ensure quality of facilities and service.	Enterprising Dining Room Host, Maitre D'	425,600	894	1,037	Avg to Near Avg Growth	\$18,120 \$22,780	
<b>Hotel, Motel, and Resort Desk Clerks</b> Accommodate hotel, motel, and resort patrons by assigning rooms to guests, transmitting and receiving messages, keeping records of guests' accounts, making reservations, and collecting payments from departing guests.	Conventional Hotel Front Desk Clerk; Hotel Registration Clerk	265,400	1,771	1,957	Avg to Near Avg Growth	\$22,410 \$26,820	
<b>Lifeguards, Ski Patrol and Other Recreational Protective Workers</b> Monitor recreational areas, such as pools, beaches, or ski slopes to provide assistance and protection to participants.	Realistic Beach Lifeguard; Outdoor Emergency Care Technician	151,800	641	710	Avg to Near Avg Growth	\$19,090 \$24,940	
<b>Maids and Housekeeping Cleaners</b> Perform any combination of light cleaning duties to maintain private households or commercial establishments, such as hotels and hospitals, in a clean and orderly manner.	Realistic Chambermaid; House Cleaner; Housekeeping Staff	1,494,400	5,409	5,805	Below Avg Growth	\$21,590 \$26,480	
<b>Recreation Workers</b> Organize and promote activities, such as arts and crafts, sports, games, music, dramatics, social recreation, camping, and hobbies, taking into account the needs and interests of individuals or groups.	Social Activities Aide; Camp Counselor; Playground Worker	408,300	985	1,081	Below Avg Growth	\$24,650 \$32,730	
<b>Waiters and Waitresses</b> Take orders and serve food and beverages to patrons at tables in dining establishment.	Social Flight Attendants, Hosts and Hostesses	2,634,600	7,262	8,410	Avg to Near Avg Growth	\$17,600 \$23,990	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Meeting, Convention, and Event Planners</b> Coordinate activities of staff, convention personnel, or clients to make arrangements for group meetings, events, or conventions.	Enterprising Conference Planner; Wedding Planner	134,100	217	259	Avg to Near Avg Growth	\$25,740 \$43,860	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

# HOSPITALITY & TOURISM

## North Dakota Hospitality and Tourism Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Lodging</b>	Advertising & Marketing (DCB) Management (BSC, NDSCS) Management Entrepreneurship (BSC) Marketing/Management (DCB, LRSC, RC)	Hospitality & Tourism Management (NDSU)	
<b>Recreation, Amusements &amp; Attractions</b>	Advertising & Marketing (DCB) Management (BSC) Entrepreneurship (NHSC) Marketing/Management (DCB, LRSC, RC) Recreation Management (DCB, WSC) Theatre Arts transfer (BSC)	Apparel, Retail Merchandising and Design (NDSU) Sports Management (MaSU, NDSU) Sports & Leisure Management (UM) Theatre Arts (DSU, NDSU, UND)	Merchandising (NDSU)
<b>Restaurant &amp; Food/ Beverage Services</b>	Chef Training and Management Technology (NDSCS) Culinary Arts/ Food Service (BJCC, NDSCS, UTTC) Entrepreneurship (NHSC) Restaurant Management (NDSCS)	Dietetics (NDSU, UND) Hospitality & Tourism Management (NDSU)	Dietetics (NDSU) Food Safety (NDSU) Nutrition (UND)
<b>Travel &amp; Tourism</b>	Advertising & Marketing (DCB) Entrepreneurship (NHSC) Management (BSC) Management Entrepreneurship (BSC) Marketing/Management (DCB, LRSC, RC) Marketing, Sales and Hospitality Services (NDSCS) Reception Services (DCB)	Chinese Studies (UND) Foreign Language (MiSU) French (NDSU, UJ, UND) German (UJ, UND) Intercultural Studies (TBC) International Studies (UND) Interpreting Sign Language Studies (MiSU) Marketing (MiSU, NDSU, RC, UM) Modern Languages (NDSU) Native American Studies (NHSC) Norwegian (UND) Spanish (NDSU, UJ, UM, UND) Strategic Communication (NDSU)	Human Resources Management (RC)

## North Dakota Postsecondary Institutions Offering Hospitality & Tourism Related Programs

<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>
<b>BJCC</b>	Burdick Job Corps Center	<a href="http://quentinnburdick.jobcorps.gov">http://quentinnburdick.jobcorps.gov</a>	<b>NHSC</b>	Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>RC</b>	Rasmussen College	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>TBC</b>	Trinity Bible College	<a href="http://www.trinitybiblecollege.edu">www.trinitybiblecollege.edu</a>
<b>LRSC</b>	Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>MaSU</b>	Mayville State University	<a href="http://www.mayvillestate.edu">www.mayvillestate.edu</a>	<b>UJ</b>	University of Jamestown	<a href="http://www.uj.edu">www.uj.edu</a>
<b>MiSU</b>	Minot State University	<a href="http://www.minotstateu.edu">www.minotstateu.edu</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>



### TECHNICAL SKILLS

### WORKPLACE SKILLS

### PERSONAL SKILLS

## IMPACT OF CTSOs

- Integrity
- Work Ethic
- Professionalism
- Adaptability

- Flexibility
- Responsibility
- Communication
- Decision Making

- Teamwork
- Leadership
- Resilience
- Goal Setting

**Career and Technical Student Organizations (CTSOs) enhance Academic Skills, Workplace Skills, and Technical Skills.**



# HUMAN SERVICES

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Community Health Workers</b> Assist individuals and communities to adopt healthy behaviors. Conduct outreach for medical personnel or health organizations to implement programs in the community that promote, maintain, and improve individual and community health.	Social Lay Health Advocate; Peer Health Promoter	61,700	153	194	High Growth	\$34,260 \$53,890	
<b>Hairdressers, Hairstylists, and Cosmetologists</b> Provide beauty services, such as shampooing, cutting, coloring, and styling hair, and massaging and treating scalp. May apply makeup, dress wigs, perform hair removal, and provide nail and skin care services.	Artistic Beautician; Wig Stylist	683,800	1,990	2,164	Below Avg Growth	\$17,950 \$31,260	
<b>Massage Therapists</b> Perform therapeutic massages of soft tissues and joints. May assist in the assessment of range of motion and muscle strength, or propose client therapy plans.	Social Deep Tissue Massage Therapist; Swedish Masseuse	159,800	340	408	High Growth	\$22,630 \$39,640	
<b>Morticians, Undertakers, and Funeral Arrangers</b> Perform various tasks to arrange funeral services, such as coordinating transportation of body to mortuary, interviewing family or other authorized person to arrange details, and providing transportation for mourners.	Social Certified Mortician; Funeral Arranger	29,600	114	114	Zero to Declining Growth	\$39,320 \$59,410	
<b>Residential Advisors</b> Coordinate activities in residential facilities in secondary and college dormitories, group homes, or similar establishments. May assist residents with problem solving or refer them to counseling resources.	Social Dormitory Counselor; House Parent; Residence Life Coordinator	115,800	1,038	1,166	Avg to Near Avg Growth	\$25,880 \$35,660	
<b>Skincare Specialists</b> Provide skincare treatments to face and body to enhance an individual's appearance. Includes electrologists and laser hair removal specialists.	Enterprising Facialist; Medical Esthetician	71,800	118	131	Avg to Near Avg Growth	\$23,370 \$34,440	
<b>Social and Human Service Assistants</b> Assist clients in identifying and obtaining available benefits, social and community services. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problem.	Conventional Case Work Aide; Family Service Assistant; Human Services Worker	413,700	1,531	1,882	High Growth	\$31,940 \$44,220	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Child, Family, and School Social Workers</b> Provide assistance to improve the social and psychological functioning of children and their families. May assist parents, arrange adoptions, and find foster homes. May also address concerns such as teenage pregnancy, misbehavior, and truancy.	Social Certified Social Worker; Child Abuse Worker; Foster Care worker	339,800	745	904	High Growth	\$41,860 \$57,590	
<b>Clergy</b> Conduct religious worship and perform other spiritual functions associated with beliefs and practices of religious faith or denomination.	Social Imam; Priest; Rabbi	234,000	1,277	1,382	Below Avg Growth	\$38,760 \$52,130	
<b>Clinical, Counseling, and School Psychologists</b> Diagnose and treat mental disorders; learning disabilities; and cognitive, behavioral, and emotional problems, using individual, child, family, and group therapies.	Investigative Child Psychologist; School Psychologist	162,000	293	338	Avg to Near Avg Growth	\$50,240 \$92,370	
<b>Directors, Religious Activities and Education</b> Plan, direct, or coordinate programs designed to promote the religious education or activities of a denominational group. May provide counseling and guidance relative to marital, health, financial, and religious problems.	Enterprising Religious Education Director; Youth Ministry Director	159,000	326	351	Below Avg Growth	\$38,000 \$64,880	
<b>Marriage and Family Therapists</b> Diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems.	Social Child and Family Counselor; Marriage Counselor	55,300	137	187	High Growth	\$39,300 \$46,650	
<b>Mental Health and Substance Abuse Social Workers</b> Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs.	Social Community Mental Health Social Worker; Drug Abuse Social Worker; Psychiatric Social Worker	125,200	309	364	Avg to Near Avg Growth	\$38,380 \$50,340	
<b>Social and Community Service Managers</b> Plan, direct, or coordinate the activities of a social service program or community outreach organization. Oversee the program or organization's budget and policies regarding participant involvement, program requirements, and benefits.	Enterprising Child Welfare Director; Family Service Center Director; Youth Program Director	168,800	630	743	Avg to Near Avg Growth	\$48,500 \$72,270	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military



# HUMAN SERVICES

## North Dakota Human Services Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Consumer Services</b>	Business transfer (NDSCS) Business Administration transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TBC, TMCC, UTTC) Business Management (MaSU, RC)	Business Administration (DSU, MaSU, NDSU, SBC, TBC, UTTC, UJ, UM, VCSU) Management (MiSU, NDSU)	Business Administration (NDSU)
<b>Counseling &amp; Mental Health Services</b>	Psychology transfer (BSC, DCB, NDSCS)	Addiction Studies (MiSU) Applied Psychology (MaSU) Psychology (DSU, MiSU, NDSU, UJ, UM, UND, VCSU)	Clinical Counseling (UJ) Counseling (NDSU, UM, UND) Counseling Psychology (UND) Forensic Psychology (UND) Clinical Psychology (UND)
<b>Early Childhood Development &amp; Services</b>	Child Development Associate (DCB) Early Childhood (LRSC, NHSC, MaSU) Early Childhood Education transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, RC)	Early Childhood (MaSU, MiSU) Early Childhood Education (MaSU, MiSU, RC, SBC, UM, UND) Human Development & Family Science (NDSU)	Early Childhood Education (UND) Human Development & Family Science (NDSU)
<b>Family &amp; Community Services</b>	Biblical Studies (TBC) Caregiver Services (DCB) Community Health Worker (SBC) Human Services/Eligibility Worker (BSC, SBC) Human Services and Social Services (UTTC) Human Services transfer (DCB, RC) Religion transfer (BSC) Social Work transfer (BSC, CCCC, NDSCS, NHSC)	Biblical Studies (TBC) Catholic Studies (UM) Human Development & Family Science (NDSU) Human Resources and Organizational Leadership (RC) Human Resource Management (UND) Human Services (MiSU, RC, VCSU) Pastoral Ministry (TBC) Rehabilitation and Human Services (UND) Religious/Theology/Biblical Studies (UJ, UM, TBC) Social Work (MiSU, SBC, UM, UND) Worship/Youth/Children's Ministry (TBC)	Global Theology (TBC) Human Development & Family Science (NDSU) Human Resources Management (RC) Missionary Leadership (TBC) Public Health (NDSU, UND) Rural Ministries (TBC) Social Work (UND)
<b>Personal Care Services</b>	Barbering (MBC, SCC) Cosmetology (JSHD, THA, TSPA) Esthetician/Skin Care (JSHD, THA, TSPA) Fitness Trainer Technician (LRSC) Massage Therapy (JSHD, TSPA, WSC) Nail Technology (JSHD, THA, TSPA)	Athletic/Fitness Training (UM, UND) Coaching and Sport Studies (UM) Corporate Fitness and Wellness Management (MiSU) Exercise Science (DSU, NDSU, TBC, UJ, UM) Fitness and Wellness (MaSU) Sport Management (MaSU, NDSU)	Advanced Athletic Training (NDSU) Clinical Exercise Physiology (UM) Exercise Science and Nutrition (NDSU)

## North Dakota Postsecondary Institutions Offering Human Services Related Programs

<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>RC</b>	Rasmussen College	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>
<b>CCCC</b>	Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>SBC</b>	Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>THA</b>	The Hair Academy	<a href="http://www.thehairacademynd.com">www.thehairacademynd.com</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>TSPA</b>	The Salon Professional Academy	<a href="http://www.tspafargo.com">www.tspafargo.com</a>
<b>JSHD</b>	Josef's School of Hair Design	<a href="http://josefsschoolofhairdesign.com">josefsschoolofhairdesign.com</a>	<b>TBC</b>	Trinity Bible College	<a href="http://www.trinitybiblecollege.edu">www.trinitybiblecollege.edu</a>
<b>LRSC</b>	Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>TMCC</b>	Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>MaSU</b>	Mayville State University	<a href="http://www.mayvillestate.edu">www.mayvillestate.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>MISU</b>	Minot State University	<a href="http://www.minotstateu.edu">www.minotstateu.edu</a>	<b>UJ</b>	University of Jamestown	<a href="http://www.uj.edu">www.uj.edu</a>
<b>MBC</b>	Moler Barber College	<a href="http://molerbarberfargo.com/">http://molerbarberfargo.com/</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>VCSU</b>	Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NHSC</b>	Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>	<b>WSC</b>	Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>



# INFORMATION TECHNOLOGY

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Computer Network Support Specialists</b> Analyze, test, troubleshoot, and evaluate existing network systems, such as local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system.	Realistic Network Diagnostic Support Technician; Network Support Technician	191,300	489	565	Avg to Near Avg Growth	\$47,390 \$66,930	
<b>Computer User Support Specialists</b> Provide technical assistance to computer users. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.	Realistic Desktop Support Specialist; End-User Support Specialist; Help Desk Technician	671,800	1,493	1,732	Avg to Near Avg Growth	\$30,590 \$47,870	
<b>Web Developers</b> Design, create, and modify web sites. Analyze user needs to implement content, graphics, performance, and capacity. Convert written, graphic, audio, and video components to compatible Web formats by using software.	Conventional Internet Developer; Intranet Developer; Web Designer	160,500	242	288	Avg to Near Avg Growth	\$36,180 \$56,230	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Information Security Analysts</b> Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure.	Conventional Computer Security Specialist; Internet Security Specialist	112,300	213	301	High Growth	\$56,930 \$87,090	
<b>Network and Computer Systems Administrators</b> Computer networks are critical parts of almost every organization. Network and computer systems administrators are responsible for the day-to-day operation of these networks.	Investigative Network Security Administrator; Wide Area Network Administrator	383,900	696	809	Avg to Near Avg Growth	\$51,490 \$74,750	
<b>Operations Research Analysts</b> Formulate and apply mathematical modeling to develop and interpret information that assists management with decision making, policy formulation, or other managerial functions.	Investigative Operations Analyst; Procedure Analyst; Process Analyst	109,700	128	175	High Growth	\$50,430 \$75,060	
<b>Software Developers, and Software Quality Assurance</b> Some develop the applications that allow people to do specific tasks on a computer or other device. Others develop the underlying systems that run the devices or control networks.	Investigative Computer Applications Engineer; Software Applications Engineer	944,200	1,251	1,661	High Growth	\$54,110 \$82,930	

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

## North Dakota Information Technology Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
<b>Information Support &amp; Services</b>	Office Technology (CCCC) Computer Science (NHSC) Computer Support Specialist (TMCC) Computer Information Technology (UTTC) Computerized Office Management (DCB) Data Analytics Technician (BSC) Geographic Information Systems Technician (BSC) Information Processing Specialist (BSC) Information Systems Administrator (NDSCS) Information Technology (DCB, LRSC, NDSCS, RC, SBC, WSC) IT Forensics & Security (NDSCS) Management Information Systems transfer (NDSCS) Office Technology (CCCC)	Applied Business Information Technology (MiSU) Computer Technology Management (DSU) Data Analytics (RC) Data Science (RC, UND) Information Analytics (DSU) Information Technology Management (RC, UJ, UM) Technology Education (DSU, VCSU)	Data Science (RC, UND) Information Systems (MiSU) Library/Information Technology (VCSU)
<b>Network Systems</b>	Cybersecurity (TMCC) Cybersecurity & Computer Networks (BSC) Information and Communications Technology (NDSCS) Network Systems Administration (RC, TMCC)	Computer Information Systems (UM, VCSU) Computer Technology Management (DSU) Cyber Security (RC, UND) Cyber Security and Information Technology (BSC) Information Systems (UND) Information Technology Management (RC, UJ, UM) Management Information Systems (MiSU, NDSU, UJ)	Electrical and Computer Engineering (NDSU) Cyber Security (UND)
<b>Programming &amp; Software Development</b>	Computer Programming (DSU) Computer Science transfer (BSC, NDSCS, NHSC) Software Application Development (RC)	Computer Engineering (NDSU) Computer Science (DSU, MiSU, NDSU, RC, UJ, UM, UND) Software Engineering (VCSU)	Computer Science (NDSU, UND) Data Science (RC, UND) Software Engineering (NDSU)
<b>Web &amp; Digital Communications</b>	Web Design (DCB, NDSCS, RC, TMCC) Web Developer/Webmaster (DCB, DSU, NDSCS) Web Page Development and Design (BSC)		

# INFORMATION TECHNOLOGY

## North Dakota Postsecondary Institutions Offering Information Technology Related Programs

<b>BSC</b>	Bismarck State College	www.bismarckstate.edu	<b>NHSC</b>	Nueta Hidatsa Sahnish College	http://nhsc.edu
<b>CCCC</b>	Cankdeska Cikana Community College	www.littlehoop.edu	<b>RC</b>	Rasmussen College	www.rasmussen.edu
<b>DCB</b>	Dakota College at Bottineau	www.dakotacollege.edu	<b>SBC</b>	Sitting Bull College	www.sittingbull.edu
<b>DSU</b>	Dickinson State University	www.dickinsonstate.edu	<b>TMCC</b>	Turtle Mountain Community College	www.tm.edu
<b>LRSC</b>	Lake Region State College	www.lrsc.edu	<b>UJ</b>	University of Jamestown	www.uj.edu
<b>MaSU</b>	Mayville State University	www.mayvillestate.edu	<b>UM</b>	University of Mary	www.umary.edu
<b>MISU</b>	Minot State University	www.minotstateu.edu	<b>UND</b>	University of North Dakota	www.und.edu
<b>NDSCS</b>	ND State College of Science	www.ndscs.edu	<b>VCSU</b>	Valley City State University	www.vcsu.edu
<b>NDSU</b>	ND State University	www.ndsu.edu	<b>WSC</b>	Williston State College	www.willistonstate.edu



## AVIATION/Unmanned Aerial Systems (UAS)

High school students in North Dakota have options for enrolling in aviation programs. Five programs are offered in a traditional face-to-face setting (Bismarck Career Academy, Magic City Campus (Minot), Red River High School (Grand Forks), Cass County Career and Technical Education Center (West Fargo), and Williston High School), and two are offered online (Central Region Area Career & Technical Center and ND Center for Distance Education). Instructors teach Aviation I and Aviation II which cover the fundamentals of flight, flight operations, aviation weather, performance, and navigation.



Advanced Aviation courses prepare students to pass the Federal Aviation Administration (FAA) private pilot verbal exam. As programs continue to grow, an expansion of course offerings may include Unmanned Aircraft Systems (UAS) curriculum.

There are several postsecondary sites in North Dakota that incorporate UAS instruction into academic programming. Multiple industries, including Agriculture, Energy, Real Estate and Transportation, incorporate UAS into their business models.



North Dakota is a leader in UAS development. The Northern Plains UAS Test Site is an FAA-designated test site. It partners with the FAA, National Aeronautics and Space Administration (NASA), private industry and others on leading edge research and testing that will help integrate UAS into the national airspace system.



# LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook		Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages	Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>								
<b>Fire Fighting and Prevention Workers Supervisors</b> Directly supervise and coordinate activities of workers engaged in fire fighting and fire prevention and control.	Enterprising Fire Lieutenant; Supervising Fire Marshal	68,000	151	172	Avg to Near Avg Growth	\$49,240 \$72,820		
<b>Firefighters</b> Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.	Realistic Engine Pump Operator; Forest Firefighter; Smoke Jumper	332,400	444	502	Avg to Near Avg Growth	\$29,920 \$46,080		
<b>Gaming Surveillance Officers and Gaming Investigators</b> Act as oversight and security agent for management and customers. Observe casino or casino hotel operation for irregular activities such as cheating or theft by either employees or patrons.	Realistic Casino Investigator; Casino Surveillance Officer	10,500	86	88	Below Avg Growth	\$26,320 \$38,000		
<b>Paralegals and Legal Assistants</b> Assist lawyers by investigating facts, preparing legal documents, or researching legal precedent. Conduct research to support a legal proceeding, to formulate a defense, or to initiate legal action.	Conventional Legal Aide	325,700	449	521	Avg to Near Avg Growth	\$29,010 \$46,660		
<b>Police and Sheriff's Patrol Officers</b> Perform the following duties to protect life and property by enforcing local, tribal, State, or Federal laws and ordinances: patrol a specific area; direct traffic; investigate accidents; apprehend suspects, or serve legal processes of courts.	Realistic Border Patrol Officer; Motorcycle Police; Park Police; State Trooper	687,100	1,591	1,798	Avg to Near Avg Growth	\$46,250 \$58,770		
<b>Public Safety Telecommunicators</b> Operate radio, telephone, or computer equipment at emergency response centers. Relay information to law enforcement and emergency response personnel.	Conventional Emergency Operator; 911 Operator; Dispatcher	98,300	170	191	Avg to Near Avg Growth	\$40,460 \$48,240		
<b>Security Guards</b> Guard, patrol, or monitor premises to prevent theft, violence, or infractions of rules. May operate x-ray and metal detector equipment.	Realistic Bank Guard; Bodyguard	1,143,800	1,535	1,674	Below Avg Growth	\$23,520 \$35,690		
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>								
<b>Fish and Game Wardens</b> Patrol assigned area to prevent fish and game law violations. Investigate reports of damage to crops or property by wildlife. Compile biological data.	Realistic Conservation Enforcement Officer; Wildlife Officer	6,400	101	107	Below Avg Growth	\$35,090 \$56,850		
<b>Judges, Magistrate Judges, and Magistrates</b> Arbitrate, advise, adjudicate, or administer justice in a court of law. May sentence defendant in criminal cases according to government statutes or sentencing guidelines. May determine liability of defendant in civil cases.	Enterprising Circuit Court Judge; Justice; Tribal Judge	29,800	90	97	Below Avg Growth	\$101,870 \$135,240		
<b>Lawyers</b> Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, or manage or advise clients on legal transactions.	Enterprising Attorney; Corporate Counsel; Public Defender	823,900	2,076	2,241	Below Avg Growth	\$63,070 \$107,290		
<b>Probation Officers and Correctional Treatment Specialists</b> Assist in rehabilitation of law offenders in custody, on probation or parole. Make recommendations for actions involving the rehabilitation plan and treatment of offender.	Social Juvenile Probation Officer; Parole Agent; Parole Officer	91,600	179	194	Below Avg Growth	\$47,050 \$60,500		

## North Dakota Law, Public Safety, Corrections & Security Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Correction Services</b>	Criminal Justice Transfer (BSC, NDSOS, SBC, UTTC) Criminal Justice (BSC, DSU, RC)	Criminal Justice (DSU, MISU, NDSU, RC, UTTC, UJ, UM, UND)	Criminal Justice (NDSU, UND)
<b>Emergency &amp; Fire Management Services</b>	Emergency Medical Services-EMS (NDSOS) Emergency Medical Technician-EMT (NDSOS) Paramedic Technology (BSC, DCB, NDSOS)	Emergency Management (NDSU)	Emergency Management (NDSU)
<b>Law Enforcement Services</b>	Criminal Justice Transfer (BSC, NDSOS, SBC, UTTC) Criminal Justice (BSC, RC) Law Enforcement (LRSC, RC) Peace Officer (LRSC)	Criminal Justice (DSU, MISU, NDSU, RC, UTTC, UJ, UM, UND) Cybersecurity (UND) Forensic Science (UND)	Criminal Justice (NDSU, UND) Cybersecurity (UND)
<b>Legal Services</b>	Administrative Assistant/ Legal (BSC) Law Transfer (NDSOS) Paralegal/Lay Advocate (NDSOS, RC, SBC) Political Science transfer (BSC)	Political Science (DSU, NDSU, UJ, UND) Law (UND)	Law (UND)
<b>Security &amp; Protective Services</b>	Military Science (BSC)	Military Science-ROTC (NDSU, UND)	



# KERRI GORTMAKER

Law, Public Safety, Corrections & Security

North Dakota State College of Science

Lake Region State College

Mayville State University

University of Mary



**K**erri Gortmaker is a life-long learner. She first enrolled at the North Dakota State College of Science (NDSCS) in Wahpeton following graduation from Adams-Edmore High School. After earning a degree in business, she wanted to run her own business and enjoyed massage therapy, so she enrolled in a massage therapy school in Fargo. Her certificate in police officer training was completed in 2011 at Lake Region State College. In 2018, she started the online Business Administration degree program at Mayville State, graduating in 2019. In January 2020, she began working on a Master's degree in Business Administration with an emphasis in Human Resources through the University of Mary.

4-H and Farmers Union Camps provided the beginning of leadership skill development while in high school and she had her first opportunity to be involved in DECA while attending college. She firmly believes that DECA helped her learn critical thinking, problem-solving, networking and interviewing skills. As a result of networking, Kerri has built many relationships that have brought her to where she is today.

Kerri is employed by Burlington Northern Santa Fe (BNSF) Railway as a Senior Special Agent, serving as the railroad's police officer in North Dakota and Northwestern Minnesota. Her typical day involves working with different law enforcement agencies throughout the state while also

taking calls or reports of criminal activity related to railroad property. She handles anything criminal related to the railroad while also creating relationships with area law enforcement and business.

In her current role, Kerri must be able to work independently every day. "I have to be responsible for my work, know what needs to be done and handle it." She often collaborates with other departments or groups to either complete a job or find answers on what is needed. Time management is also essential as she can be pulled in many directions throughout the day.

Kerri also teaches a course she created for all ND law enforcement academies. An extended version of the training is also taught to area law enforcement agencies. She credits her instructors and DECA opportunities in helping her to have confidence in the preparation and presentation of information.

Kerri attended the National Police Memorial Service in Washington, D.C., to honor her fallen friend and co-worker, Jason Moszer, and other fallen officers in 2016. She helped set up and run the event and gained many new friendships from around the country. That event led to the Fraternal Order of Police (FOP) Leadership Matters conference in Nashville, Tennessee. These events and everyday collaboration help Kerri continue to learn and to develop strong relationships with local law enforcement officers, both of which are imperative for her job as a railroad police officer.

## North Dakota Postsecondary Institutions Offering Law, Public Safety, Corrections & Security Related Programs

<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>SBC</b>	Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>TMCC</b>	Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>LRSC</b>	Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>MISU</b>	Minot State University	<a href="http://www.minotstateu.edu">www.minotstateu.edu</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>VCSU</b>	Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>WSC</b>	Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>
<b>RC</b>	Rasmussen College	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>			



# MANUFACTURING

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate’s Degree</b>							
<b>Crushing, Grinding, and Polishing Machine Setters</b> Set up, operate, or tend machines to crush, grind, or polish materials, such as coal, glass, grain, stone, food, or rubber.	Realistic Beveling and Edging Machine Operator; Industrial Coffee Grinder; Marble and Granite Polisher; Pulverizer Operator	32,600	201	204	Below Avg Growth	\$38,860 \$46,390	
<b>Helpers-Installation, Maintenance, and Repair Workers</b> Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties such as furnishing tools, materials, and supplies to other workers.	Realistic Automobile Body Repairer Helper; Locksmith Helper; Motorboat Mechanic Helper	107,200	494	626	High Growth	\$25,560 \$33,870	☀️
<b>Industrial Machinery Mechanics</b> Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.	Realistic Foundry Equipment Mechanic; Hydroelectric Machinery Mechanic	381,500	1,157	1,413	High Growth	\$47,260 \$66,310	☀️ 💰
<b>Inspectors, Testers, Sorters, Samplers, and Weighers</b> Inspect, test, sort, sample, or weigh non-agricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications.	Conventional Parts Quality Inspector; Petroleum Sampler	574,000	1,237	1,458	Avg to Near Avg Growth	\$35,540 \$52,370	☀️
<b>Machinery Maintenance Workers</b> Lubricate machinery, change parts, or perform other routine machinery maintenance.	Realistic Crane Oiler	81,100	911	1,124	High Growth	\$36,430 \$52,810	☀️
<b>Machinists</b> Set up and operate a variety of machine tools to produce precision parts and instruments. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments.	Realistic Automotive Machinist; Gear Machinist; Production Machinist	395,200	693	778	Avg to Near Avg Growth	\$40,280 \$52,840	☀️ 🇺🇸
<b>Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic</b> Set up, operate, or tend more than one type of cutting or forming machine tool or robot.	Realistic Multi-Operation Forming Machine Setter	135,900	380	460	High Growth	\$28,130 \$35,420	☀️
<b>Power Plant Operators</b> Control, operate, or maintain machinery to generate electric power. Includes auxiliary equipment operators.	Realistic Hydroelectric Plant Operator	34,900	350	378	Below Avg Growth	\$72,410 \$86,870	⚡️ 🇺🇸 💰
<b>Production, Planning, and Expediting Clerks</b> Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule.	Conventional Expeditor; Material Control Clerk; Production Scheduler	358,700	943	1,063	Avg to Near Avg Growth	\$38,200 \$54,660	☀️
<b>Supervisors of Production and Operating Workers</b> Directly supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators.	Enterprising Assembly Line Supervisor; Machinist Supervisor	639,700	1,757	2,034	Avg to Near Avg Growth	\$42,370 \$66,910	☀️ 💰
<b>Tool and Die Makers</b> Analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, gauges, and machinists’ hand tools.	Realistic Jig Bore Tool Maker; Metal Die Finisher; Metal Gauge Maker	74,300	24	27	Avg to Near Avg Growth	\$44,490 \$56,820	
<b>Welders, Cutters, Solderers, and Brazers</b> Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.	Realistic Arc Welder; Cutting Torch Operator	424,700	2,217	2,624	Avg to Near Avg Growth	\$38,910 \$54,480	☀️ ⚡️
<b>Woodworking Machine Setters and Operators</b> Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines. May operate CNC equipment.	Realistic Wood Dowel Machine Operator; Wood Lathe Operator; Wood Planer	80,500	85	108	High Growth	\$24,840 \$32,610	
<b>Postsecondary Programs – Bachelor’s Degree or Higher</b>							
<b>Industrial Production Managers</b> Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.	Enterprising Manufacturing Director; Production Control Manager	186,500	458	527	Avg to Near Avg Growth	\$66,510 \$103,740	☀️ ⚡️ 💰

⚡️ Energy Occupation

☀️ Bright Outlook

⚡️ High Skill

💰 High Wage

🇺🇸 Military

# MANUFACTURING

## North Dakota Manufacturing Related Postsecondary Programs

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

## North Dakota Postsecondary Institutions Offering Manufacturing Related Programs

<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>
<b>BJCC</b>	Burdick Job Corps Center	<a href="http://quentinnburdick.jobcorps.gov">http://quentinnburdick.jobcorps.gov</a>	<b>NHSC</b>	Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>
<b>CCCC</b>	Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>SBC</b>	Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>TMCC</b>	Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>LRSC</b>	Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>LW</b>	Lynnes Welding – Bismarck & Fargo	<a href="http://learntoweld.com">http://learntoweld.com</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>MiSU</b>	Minot State University	<a href="http://www.minotstate.edu">www.minotstate.edu</a>	<b>VCSU</b>	Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>WSC</b>	Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>





# JACOB WILMER

## Manufacturing

North Dakota State College of Science



Jacob Wilmer and his Dad would often work on welding projects during high school. His Dad was a significant influence on his career choice. His Mom and siblings also offered a lot of support for a welding career.

After graduating from North Border High School at Pembina, he worked for a year and then enrolled in the welding program at the North Dakota State College of Science (NDSCS). When asked if he would do anything differently while in high school, Jacob indicated he would have gone to the North Valley Career and Technical Center in Grafton to take welding classes.

While at college, Jacob learned technical welding skills, the proper application of those skills and the steps needed to refine his welding. He also credits his time at NDSCS with improving his communication skills.

SkillsUSA provided Jacob a different level of preparation for his future career. He entered the team welding competition and placed first at the state level. The team then advanced to the national level of competition. That same year, Jacob had an internship with North American Coal Company and was offered a seasonal position with the company at the Freedom Mine. A typical day for Jacob is mostly running equipment, but there are times when he is in the welding shop.

Jacob is “giving back” to SkillsUSA by serving as Co-Chair for the SkillsUSA Welding Fabrication

Competition. In that role, he has helped secure materials for the contest, designed or modified project blueprints, secured judges and scored student projects.

Involvement in SkillsUSA has helped Jacob understand the importance of teamwork and the need for good communication in the workplace. “Communication has been the most important skill in my experience and really ties into most of the day-to-day operations. When I am running equipment, I need to communicate with those around me to keep a safe work environment and work efficiently.”





# MARKETING



Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook		Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages	Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>								
<b>Cashiers</b> Receive and disburse money in establishments other than financial institutions. May use electronic scanners, cash registers, or related equipment. May process credit or debit card transactions and validate checks.	Conventional Cash Register Operator; Toll Collector	3,648,500	10,167	10,290	Below Avg Growth	\$20,940 \$25,340		
<b>Demonstrators and Product Promoters</b> Demonstrate merchandise and answer questions for the purpose of creating public interest in buying the product. May sell demonstrated merchandise.	Enterprising Home Demonstrator	87,400	95	106	Avg to Near Avg Growth	\$28,030 \$36,020		
<b>Merchandise Displayers and Window Trimmers</b> Plan and erect commercial displays, such as those in windows and interiors of retail stores and at trade exhibitions.	Artistic Display Artist	168,400	277	305	Avg to Near Avg Growth	\$25,250 \$32,980		
<b>Real Estate Agents</b> Perform duties, such as study property listings, interview prospective clients, accompany clients to property site, discuss conditions of sale, and draw up real estate contracts.	Enterprising Apartment Rental Agent	369,200	787	843	Below Avg Growth	\$37,110 \$62,570		
<b>Retail Sales Workers Supervisors</b> Supervise and coordinate activities of retail sales workers in an establishment or department. Duties include management functions, such as purchasing, budgeting, accounting, and personnel work.	Enterprising Cashier Supervisor; Delicatessen Department Manager	1,548,300	4,240	4,556	Below Avg Growth	\$31,890 \$46,350		
<b>Retail Salespersons</b> Sell merchandise, such as furniture, motor vehicles, appliances, or apparel to consumers.	Enterprising Car Salesperson	4,510,900	13,458	14,252	Below Avg Growth	\$21,210 \$33,520		
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>								
<b>Fundraisers</b> Organize activities to raise funds or otherwise solicit and gather monetary donations or other gifts for an organization. May design and produce promotional materials.	Enterprising Campaign Fundraiser; Donor Relations Officer	95,400	149	175	Avg to Near Avg Growth	\$40,220 \$61,730		
<b>Market Research Analysts and Marketing Specialists</b> Research market conditions or gather information to determine potential sales of a product or service. May gather information on competitors, prices, sales, and methods of marketing and distribution.	Investigative Research Specialist; Marketing Consultant	681,900	785	1,008	High Growth	\$35,200 \$54,410		
<b>Marketing Managers</b> Plan, direct, or coordinate marketing policies and programs. Develop pricing strategies with the goal of maximizing the firm's profits or share of the market while ensuring the firm's customers are satisfied.	Enterprising Internet Marketing Manager; Marketing Director	259,200	319	367	Avg to Near Avg Growth	\$79,550 \$124,780		
<b>Sales Managers</b> Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements.	Enterprising District Sales Manager; Export Manager	405,700	724	811	Avg to Near Avg Growth	\$71,070 \$126,560		

Energy Occupation

Bright Outlook

High Skill

High Wage

Military

## North Dakota Marketing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
<b>Marketing Communications</b>	Advertising and Marketing (DCB) Information & Communications Technology (NDSCS) Mass Communication (BSC)	Communication (UM, UND) Management Communication (NDSU)	Communication (UND)
<b>Marketing Management</b>	Advertising & Marketing (DCB) Business Management (MaSU, NDSCS, RC, WSC) Management (BSC) Management Entrepreneurship (BSC) Marketing (DSU, LRSC, RC) Marketing/Supervision (LRSC, NDSCS) Marketing and Management transfer (DCB)	Business Management (RC) Hospitality & Tourism Management (NDSU) International Entrepreneurship (TBC) Management (MiSU, NDSU) Marketing (MiSU, NDSU, RC, UM, UND) Sport Management (MaSU, NDSU, UM) Supply Chain and Logistics Management (RC)	Management (MiSU) Sport Management (MiSU) Supply Chain Management (NDSU)
<b>Marketing Research</b>		International Entrepreneurship (TBC)	
<b>Merchandising</b>		Apparel, Retail Merchandising, & Design (NDSU) Operations and Supply Chain Management (UND)	Merchandising (NDSU)
<b>Professional Selling</b>	Entrepreneurship (NHSC, NDSCS, TMCC) Marketing, Sales and Hospitality Services (NDSCS) Sales (NDSCS, VCSU)	Entrepreneurship (MiSU, UND)	

# MARKETING

## North Dakota Postsecondary Institutions Offering Marketing Related Programs

<b>BSC</b>	Bismarck State College	www.bismarckstate.edu	<b>NHSC</b>	Nueta Hidatsa Sahnish College	http://nhsc.edu
<b>CCCC</b>	Cankdeska Cikana Community College	www.littlehoop.edu	<b>RC</b>	Rasmussen College	www.rasmussen.edu
<b>DCB</b>	Dakota College at Bottineau	www.dakotacollege.edu	<b>UTTC</b>	United Tribes Technical College	www.uttc.edu
<b>DSU</b>	Dickinson State University	www.dickinsonstate.edu	<b>UM</b>	University of Mary	www.umary.edu
<b>LRSC</b>	Lake Region State College	www.lrsc.edu	<b>UND</b>	University of North Dakota	www.und.edu
<b>MISU</b>	Minot State University	www.minotstateu.edu	<b>VCSU</b>	Valley City State University	www.vcsu.edu
<b>NDSCS</b>	ND State College of Science	www.ndscs.edu	<b>WSC</b>	Williston State College	www.willistonstate.edu
<b>NDSU</b>	ND State University	www.ndsu.edu			



## Are You Ready to be an ENTREPRENEUR?

An **entrepreneur** is an individual who creates a new business, bearing most of the risks and enjoying most of the rewards. They are often seen as being innovative with new ideas, goods or services.

Becoming a successful entrepreneur requires planning, creativity and hard work. The checklist below may help you determine which skills you currently have and identify those skills needing further development. If you don't have these traits now, you can work on them at a later date to improve your chances of being a successful entrepreneur.

### North Dakota Entrepreneur Centers

These centers have dedicated staff to support and mentor entrepreneurs:

**Center for Technology & Business (Bismarck)**  
www.ctbnd.com

**Jamestown Regional Entrepreneur Center**  
www.jrecenter.com

**ND Department of Veterans Affairs**  
www.nd.gov/veterans/benefits/entrepreneurship

**NDSU Research & Technology Park (Fargo)**  
www.ndsuresearchpark.com


**UND Center for Innovation (Grand Forks)**  
www.innovators.net

- **Self-Starter:**  
Motivated to work regardless of mood?
- **Risk Taker:**  
Willing to take risks?
- **Team Player:**  
Enjoy working with other people?
- **Commitment to Tasks:**  
Persistent in seeing work tasks completed?
- **Work Under Pressure:**  
Able to operate under stress for extended periods of time?
- **Great Pitch:**  
Confident in your ability to communicate ideas?
- **Acquire Resources:**  
Comfortable asking for money and other resources?
- **Have Time:**  
Is time available to grow your business?
- **Supportive Family:**  
Support from your family and friends?

*Adapted from Achievia Consultancy, 2019*

# SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS



Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook		Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry-Level Wages	Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>								
<b>Civil Engineering Technologists and Technicians</b> Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.	Realistic Geotechnical Engineering Technician; Highway Engineering Technician	73,800	496	600	High Growth	\$43,970 \$58,170	 	
<b>Electrical and Electronic Engineering Technologists and Technicians</b> Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, calibrate, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use.	Realistic Electrical Design Technician; Lighting Engineering Technician; Semiconductor Development Technician	130,500	332	382	Avg to Near Avg Growth	\$51,610 \$65,150	  	
<b>Industrial Engineering Technologists and Technicians</b> Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries.	Investigative Motion Study Technician; Production Control Technologist; Time Study Technician	68,300	227	266	Avg to Near Avg Growth	\$38,440 \$55,870		
<b>Mechanical Drafters</b> Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.	Realistic Aeronautical Drafter; Automotive Design Drafter	58,000	139	166	Avg to Near Avg Growth	\$41,150 \$61,260	 	
<b>Mechanical Engineering Technicians</b> Apply theory and principles of mechanical engineering to modify, develop, test, or calibrate machinery and equipment under direction of engineering staff or physical scientists.	Realistic Gyroscope Engineering Technician; Heat Transfer Technician; Optomechanical Technician	42,600	115	142	High Growth	\$38,470 \$67,560	  	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>								
<b>Electrical Engineers</b> Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.	Investigative Electrical Systems Engineer; Power Distribution Engineer	191,900	559	690	High Growth	\$65,070 \$97,640	  	
<b>Environmental Scientists and Specialists, Including Health</b> Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population.	Investigative Hazardous Substances Scientist; Health Environmentalist; Water Pollution Scientist	85,000	298	347	Avg to Near Avg Growth	\$52,080 \$66,040	 	
<b>Industrial Engineers</b> Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.	Investigative Efficiency Engineer; Manufacturing Engineer	284,600	432	532	High Growth	\$56,820 \$83,780	   	
<b>Mechanical Engineer</b> Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.	Realistic Combustion Engineer; Engine Designer; Tool and Die Engineer	312,900	591	755	High Growth	\$51,450 \$78,280	  	
<b>Mining and Geological Engineers</b> Conduct sub-surface surveys to identify the characteristics of potential land or mining development sites. May specify the ground support systems, processes and equipment for safe, economical, and environmentally sound extraction.	Investigative Geophysical Engineer; Mineral Engineer; Seismic Engineer	5,900	71	89	High Growth	\$58,690 \$82,800	  	
<b>Petroleum Engineers</b> Devise methods to improve oil and gas extraction and production and determine the need for new or modified tool designs. Oversee drilling and offer technical advice.	Investigative Natural Gas Engineer; Oil Drilling Engineer; Oil Exploration Engineer	33,500	107	147	High Growth	\$72,350 \$125,930	  	
<b>Statisticians</b> Develop or apply mathematical or statistical theory and methods to collect, organize, interpret, and summarize numerical data in fields such as bio-statistics, agricultural statistics, business statistics, or economic statistics.	Conventional Biostatistician; Statistical Analyst; Time Study Statistician	44,400	74	93	High Growth	\$49,180 \$73,640	 	

 Energy Occupation

 Bright Outlook

 High Skill

 High Wage

 Military

# SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

North Dakota STEM Related Postsecondary Programs			
Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
<b>Engineering &amp; Technology</b>	Architectural Drafting & Estimating Technology (NDSCS) Engineering Technology (BSC, DSU) Engineering transfer (BSC, CCCC, NDSCS, NHSC, SBC, UTTC) Land Surveying and Civil Engineering (NDSCS) Nuclear Power Technology (BSC) Petroleum Production Technology (BSC) Robotics, Automation & Mechatronics Technology (NDSCS) Simulation Technology (LRSC) Technical Studies (BSC, NDSCS)	Agricultural and Biosystems Engineering (NDSU) Chemical Engineering (UND) Civil Engineering (NDSU, UND) Computer Engineering (NDSU) Construction Engineering (NDSU) Electrical Engineering (NDSU, UND) Engineering Science (UM) Geological Engineering (UND) Industrial Engineering and Management (NDSU) Manufacturing Engineering (NDSU) Mechanical Engineering (NDSU, UJ, UND) Petroleum Engineering (UND)	Agricultural and Biosystems Engineering (NDSU) Biomedical Engineering (UND) Chemical Engineering (UND) Civil Engineering (NDSU, UND) Electrical Engineering (UND) Electrical/Computer Engineering (NDSU) Energy Systems Engineering (UND) Environmental Engineering (NDSU, UND) Geological Engineering (UND) Industrial Engineering & Management (NDSU) Manufacturing Engineering (NDSU) Mechanical Engineering (NDSU, UND) Petroleum Engineering (UND) Software Engineering (NDSU)
<b>Science &amp; Mathematics</b>	Biology transfer (BSC, DCB, DSU) Biotechnology transfer (NDSCS) Chemistry transfer (BSC, DCB, DSU, NDSCS) Environmental Science Transfer (NHSC, SBC, UTTC) Environmental Tech - Lab & Field Technician (DCB) Environmental Tech - Natural Resource Mgmt. (DCB) Geology (DSU) Mathematics transfer (BSC, DCB, NDSCS, NHSC) Natural Resource Management (TMCC) Natural Science transfer (NDSCS) Pharmacy transfer (DCB) Physical Science transfer (DSU, NDSCS) Physics transfer (BSC) Science transfer (NHSC)	Atmospheric Sciences (UND) Biochemistry and Molecular Biology (NDSU, UJ) Biology/Biological Science (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) Biotechnology (NDSU) Chemistry (DSU, MaSU, MiSU, NDSU, UM, UND, VCSU) Computer Science (DSU, MiSU, NDSU, RC, UM, UND) Data Science (UND) Earth Science (UND) Environmental Science (DSU, NHSC, SBC, UTTC, UND, VCSU) Forensic Science (UND) Geology (MiSU, NDSU, UND) Horticulture (NDSU) Mathematics (DSU, MaSU, MiSU, NDSU, UJ, UM, UND) Medicinal Plant Chemistry (MiSU) Microbiology (NDSU) Molecular and Integrative Biology (UND) Natural Resources Management (NDSU) Physics (NDSU, UND) Statistics (NDSU)	Aerospace Sciences (UND) Atmospheric Sciences (UND) Biochemistry (NDSU) Biological Sciences (NDSU, UND) Biomedical Engineering (NDSU) Chemistry (NDSU, UND) Computer Science (NDSU, UND) Data Science (UND) Earth System Science and Policy (UND) Entomology (NDSU) Environmental/Conservation Science (NDSU, SBC) Geology (UND) Horticulture (NDSU) Materials and Nanotechnology (NDSU) Mathematics (NDSU, UND) Microbiology (NDSU) Physics (NDSU, UND) Plant Pathology (NDSU) Plant Sciences (NDSU) Scientific Computing (UND) Statistics (NDSU)

North Dakota Postsecondary Institutions Offering STEM Related Programs					
<b>BSC</b>	Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>NHSC</b>	Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>
<b>CCCC</b>	Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>SBC</b>	Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>DCB</b>	Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>TMCC</b>	Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>DSU</b>	Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>UTTC</b>	United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>LRSC</b>	Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UJ</b>	University of Jamestown	<a href="http://www.uj.edu">www.uj.edu</a>
<b>MaSU</b>	Mayville State University	<a href="http://www.mayvillestate.edu">www.mayvillestate.edu</a>	<b>UM</b>	University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>MiSU</b>	Minot State University	<a href="http://www.minotstate.edu">www.minotstate.edu</a>	<b>UND</b>	University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>NDSCS</b>	ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>	<b>VCSU</b>	Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>NDSU</b>	ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>	<b>WSC</b>	Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>



# MIKE BAHM

## Transportation, Distribution & Logistics



Bismarck State College

Mike Bahm enjoyed Agriculture Education and Auto Mechanics classes while attending Mandan High School because he was able to gain a basic understanding of machine, vehicle, and equipment mechanics. Those classes helped him decide on the type of career he wanted. He applied to Bismarck State College to earn an Associate of Applied Science (AAS) degree in Agriculture Industry and Technology.

“My involvement in FFA allowed me to be my own person and create an identity. I learned to be a leader and focus on the skills needed for my current role as a supervisor. I love guiding the work of our department, and don’t believe it would have been possible without my experiences in FFA.”

Throughout his last two years of high school and during college, Mike worked for Titan Machinery in Mandan. He learned about the operations of a commercial shop and the business side of the equipment industry. The skills he observed helps him direct operations in his current role as Fleet Supervisor for MDU Resources Group, Inc. He makes purchasing decisions and works with sales, service, and parts departments at dealer networks.

Mike’s current workday is fast paced and busy. He helps provide service for internal customers and fleet managers, oversees purchases and an equipment budget, and has a staff of nine people who look to him for direction and guidance. He can be at his desk doing paperwork, answering emails, and taking phone calls one minute, and soon be across town inspecting a new piece of equipment before delivery, helping make repair decisions on a vehicle, or working with a dealer to design and order a new dump or bucket truck.

According to Mike, soft skills help define a great employee. “We can hire a person with the right skills and turn them into a great employee. Ownership is a word we use a lot and is so important because it means you will take responsibility for



your area, solve problems on your own, and serve those that depend on your expertise. Technical skills are important for trades, so work hard and show your boss that you’re deserving of the recognition, promotion, and rewards you desire.”

Mike’s job takes him to many different places in the United States. One of his most memorable experiences was a trip to Long Beach, California. While there, they were able to eat dinner on the USS Iowa battleship. That class of ships was built to help with the WWII efforts, during which his Grandpa Bahm served in the Navy as a SeaBee. He enjoys the history and stories of that great generation of people who helped shape our country and the freedoms we enjoy today. Mike never misses an opportunity to thank and respect our veterans!





# TRANSPORTATION, DISTRIBUTION & LOGISTICS

Occupational Title/Description	Holland Code Related Occupations	National	ND Outlook 2016-2026			ND Earnings Outlook	Occupational Trait(s)
		Number Employed	Number Employed	Total Openings	Long-Term Growth Outlook	Annual Entry- Level Wages Annual Average Wages	
<b>Postsecondary Programs – High School Diploma, Certificate, or Associate's Degree</b>							
<b>Aircraft Mechanics and Service Technicians</b> Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Includes helicopter and aircraft engine specialists.	Realistic Aircraft Engine Specialist; Flight Test Mechanic	136,900	241	281	Avg to Near Avg Growth	\$39,700 \$53,730	
<b>Ambulance Drivers and Attendants, Except EMTs</b> Drive ambulance or assist ambulance driver in transporting sick, injured, or convalescent persons. Assist in lifting patients.	Realistic Emergency Medical Services (EMS) Driver	15,600	398	467	Avg to Near Avg Growth	\$18,170 \$29,210	
<b>Automotive Service Technicians and Mechanics</b> Diagnose, adjust, repair, or overhaul automotive vehicles. Test vehicle components and systems, using equipment such as infrared engine analyzers, compression gauges and computerized diagnostic devices.	Realistic Transmission Specialist; Brake Technician; Hybrid Car Mechanic	770,100	2,415	2,598	Below Avg Growth	\$31,950 \$47,530	
<b>Bus and Truck Mechanics/Diesel Engine Specialists</b> Diagnose, adjust, repair, or overhaul buses and trucks, or maintain and repair any type of diesel engines. Includes mechanics working primarily with automobile or marine diesel engines.	Realistic Biodiesel Engine Specialist; Tractor Trailer Mechanic	285,300	1,806	2,270	High Growth	\$42,100 \$56,040	
<b>Bus Drivers, Transit and Intercity</b> Transport students or special clients, such as the elderly or persons with disabilities. Ensure adherence to safety rules. May assist passengers in boarding or exiting.	Realistic School Bus Operator; Special Education Bus Driver	183,800	161	202	Avg to Near Avg Growth	\$25,060 \$35,620	
<b>Cargo and Freight Agents</b> Expedite and route movement of incoming and outgoing cargo and freight shipments in airline, train, and trucking terminals, and shipping docks. Take orders from customers and arrange pickup of freight and cargo for delivery.	Conventional Cargo Router; Freight Shipping Agent	95,500	109	129	Avg to Near Avg Growth	\$30,470 \$40,980	
<b>Cleaners of Vehicles and Equipment</b> Wash or otherwise clean vehicles, machinery, and other equipment. Use such materials as water, cleaning agents, brushes, cloths, and hoses.	Realistic Aircraft Cleaner; Auto Detailer; Car Wash Attendant	408,500	1,269	1,506	Avg to Near Avg Growth	\$23,830 \$31,670	
<b>Commercial Pilots</b> Pilot and navigate the flight of fixed-winged aircraft on non-scheduled air carrier routes, or helicopters. Requires Commercial Pilot certificate. Includes charter pilots with similar certification, and air ambulance and air tour pilots.	Realistic Aerial Crop Duster; Flight Instructor (Commercial Pilots); Helicopter Pilot	40,700	275	305	Avg to Near Avg Growth	\$65,430 \$96,110	
<b>Crane and Tower Operators</b> Operate mechanical boom and cable or tower and cable equipment to lift and move materials, machines, or products in many directions.	Realistic Boom Crane Operator; Cherry Picker Operator; Coal Tower Operator	46,800	231	276	Avg to Near Avg Growth	\$52,250 \$66,810	
<b>Freight, Stock and Material Handlers</b> Manually move freight, stock, or other materials or perform other general labor. Includes all manual laborers not elsewhere classified.	Realistic Cargo Handler	2,953,800	8,143	9,466	Avg to Near Avg Growth	\$25,600 \$35,500	
<b>Heavy and Tractor-Trailer Drivers</b> Drive a tractor-trailer combination or a truck with a capacity of at least 26,000 pounds Gross Vehicle Weight (GVW). May be required to unload truck. Requires commercial drivers' license.	Realistic Auto Carrier Driver; Cement Truck Driver; Moving Van Driver	1,958,800	12,388	15,772	High Growth	\$41,460 \$53,990	
<b>Industrial Truck and Tractor Operators</b> Operate industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, construction site, or similar location.	Realistic Forklift Operator	615,000	1,333	1,531	Avg to Near Avg Growth	\$33,410 \$41,910	
<b>Tank Car, Truck, and Ship Loaders</b> Load and unload chemicals and bulk solids, such as coal, sand, and grain into or from tank cars, trucks, or ships using material moving equipment.	Realistic Barge Loader; Rail Car Loader; Ship Unloader	9,100	183	216	Avg to Near Avg Growth	\$35,240 \$50,680	
<b>Transportation, Storage, and Distribution Managers</b> Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers.	Enterprising Distribution Center Manager; Traffic Safety Administrator; Warehouse Manager	131,300	399	464	Avg to Near Avg Growth	\$61,530 \$97,510	
<b>Postsecondary Programs – Bachelor's Degree or Higher</b>							
<b>Logisticians</b> Analyze and coordinate the logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.	Enterprising Logistics Analyst; Logistics Planner	174,900	319	365	Avg to Near Avg Growth	\$49,100 \$66,580	

# TRANSPORTATION, DISTRIBUTION & LOGISTICS

## North Dakota Transportation, Distribution & Logistics Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
<b>Facility &amp; Mobile Equipment Maintenance</b>	Auto Body Repair and Refinishing Technology (NDSCS) Auto Collision Technology (BSC) Auto Technology (BSC, BJCC, LRSC, NDSCS, UTTC) Case IH Technology (NDSCS) Caterpillar Dealer Service Technician (NDSCS) Electronics Technology (BSC) Electronics/Telecommunications Technology (BSC) General Diesel Technology (NDSCS) Geographic Information Systems Technology (BSC) John Deere Technology (NDSCS) Komatsu Technology (NDSCS) Power Sports Technology (NDSCS) Transportation Technology (WSC) Unmanned Aircraft Systems (NDSCS)		
<b>Health, Safety &amp; Environmental Management</b>		Environmental Design (NDSU) Environmental Health (DSU)	
<b>Logistics Planning &amp; Management Services</b>	Information Processing Specialist (BSC) Information and Communications Technology (NDSCS) Information Technology (DCB, LRSC, WSC) Management Information Systems transfer (NDSCS)	Business Process Integration Management (VCSU) Information Technology Management (UM) Management Information Systems (MiSU, NDSU) Operations/Supply Chain & Logistics Mgmt. (RC, UND)	Project Management (UM) Public Administration (UM) Transportation and Urban Systems (NDSU)
<b>Sales &amp; Service</b>	Business Management (NDSCS, RC, WSC) Marketing & Management transfer (DCB)	Airport Management (UND) Marketing (MiSU, NDSU, RC, UM, UND)	
<b>Transportation Operations</b>	Airline Transport Pilot (FFS) Commercial Pilot (EATC, FFS, GFKFS) Commercial Vehicle Operations (TMCC) CDL/Heavy Equipment (CCCC, SBC, TMCC, UTTC) Instrumental/Multi-Engine Rating (EATC, FFS, GFKFS) Private Pilot/Drone Training (EATC, FFS, GFKFS) Recreational/Sport Pilot (EATC)	Air Traffic Management (UND) Aviation Management (UND) Aviation Studies (UND) Commercial Aviation (UND) Unmanned Aircraft System Operations (UND)	Aerospace Sciences (UND) Aviation (UND) Unmanned Aircraft Systems Engineering (UND)
<b>Transportation Systems/ Infrastructure Planning, Management &amp; Regulation</b>		Airport Management (UND)	Public Administration (UND) Transportation and Urban Systems (NDSU)
<b>Warehousing &amp; Distribution Center Operations</b>	Business Management (NDSCS) Management (BSC)	Business Process Integration Management (VCSU)	

## North Dakota Postsecondary Institutions Offering Transportation, Distribution & Logistics Related Programs

<b>BSC</b> Bismarck State College	<a href="http://www.bismarckstate.edu">www.bismarckstate.edu</a>	<b>NDSCS</b> ND State College of Science	<a href="http://www.ndscs.edu">www.ndscs.edu</a>
<b>BJCC</b> Burdick Job Corps Center	<a href="http://quentinnburdick.jobcorps.gov">http://quentinnburdick.jobcorps.gov</a>	<b>NDSU</b> ND State University	<a href="http://www.ndsu.edu">www.ndsu.edu</a>
<b>CCCC</b> Cankdeska Cikana Community College	<a href="http://www.littlehoop.edu">www.littlehoop.edu</a>	<b>NHSC</b> Nueta Hidatsa Sahnish College	<a href="http://nhsc.edu">http://nhsc.edu</a>
<b>DCB</b> Dakota College at Bottineau	<a href="http://www.dakotacollege.edu">www.dakotacollege.edu</a>	<b>RC</b> Rasmussen College	<a href="http://www.rasmussen.edu">www.rasmussen.edu</a>
<b>DSU</b> Dickinson State University	<a href="http://www.dickinsonstate.edu">www.dickinsonstate.edu</a>	<b>SBC</b> Sitting Bull College	<a href="http://www.sittingbull.edu">www.sittingbull.edu</a>
<b>EATC</b> Executive Air Taxi Corporation	<a href="http://www.executive-air.com">www.executive-air.com</a>	<b>TMCC</b> Turtle Mountain Community College	<a href="http://www.tm.edu">www.tm.edu</a>
<b>FFS</b> Fargo Flight School	<a href="http://www.fargojet.com/school">www.fargojet.com/school</a>	<b>UTTC</b> United Tribes Technical College	<a href="http://www.uttc.edu">www.uttc.edu</a>
<b>GFKFS</b> GFK Flight Support	<a href="http://www.flygfk.com">www.flygfk.com</a>	<b>UM</b> University of Mary	<a href="http://www.umary.edu">www.umary.edu</a>
<b>LRSC</b> Lake Region State College	<a href="http://www.lrsc.edu">www.lrsc.edu</a>	<b>UND</b> University of North Dakota	<a href="http://www.und.edu">www.und.edu</a>
<b>MAC</b> Minot Aero Center	<a href="http://minotaerocenter.com">http://minotaerocenter.com</a>	<b>VCSU</b> Valley City State University	<a href="http://www.vcsu.edu">www.vcsu.edu</a>
<b>MiSU</b> Minot State University	<a href="http://www.minotstate.edu">www.minotstate.edu</a>	<b>WSC</b> Williston State College	<a href="http://www.willistonstate.edu">www.willistonstate.edu</a>



# WHY Choose a **NDUS** School?



## At North Dakota colleges and universities, it's all about YOU!

With five colleges and six universities, the North Dakota University System (NDUS) offers the education that's right for you. From single courses to dozens of certificates, one-year technical programs and professional degrees in law, medicine and pharmacy – the NDUS will help prepare you for your career goals.

### How do I know which school is the right fit for me? Get started here:

- ▶ Find the best fit for your educational needs and interests at <https://insights.nd.gov/College/InstitutionSearch>.
- ▶ See the campus! Schedule a visit and talk with other students to learn what they think.
- ▶ Compare your financial aid options at each institution to make sure you're making the most of your educational investment.



### NDUS institutions offer:

- ▶ **Quality Programs:** From accounting to anatomy, engineering to English, web design to welding – the NDUS offers more than 700 programs.
- ▶ **Regionally Competitive Cost:** Tuition and fees are competitively priced when compared to regional and national counterparts. Plus, it won't break the bank to go home for a weekend.
- ▶ **Development Opportunities:** The faculty and staff at the NDUS want you to be successful, both personally and professionally. They're committed to challenging and encouraging you to meet your potential.
- ▶ **Extensive Online Options:** We know that many students still prefer face-to-face opportunities to learn, surrounded by their peers in a classroom. But, the convenience and occasional necessity of online education enable the NDUS to offer most of its programs with some portion available through distant delivery methods.
- ▶ **Broad Perspective Beyond the Books:** You will find extensive intramural teams and extracurricular organizations throughout the 11 colleges and universities. No matter your interest, you'll find a great experience.
- ▶ **Life in a Global Community:** Join a diverse community with students from many countries and backgrounds. Opportunities to network and create partnerships will take you beyond your college development.





# CHECKLIST for Admission to a College or University

**Consider** more than one campus at <https://insights.nd.gov/College/InstitutionSearch>.

**Look** through course catalogues and schedule campus visits.

**Take** the ACT – go to [www.actstudent.org](http://www.actstudent.org).

**Remember** to apply by application deadlines for admission and the FAFSA.

**Weigh** your options, including financial aid packages, and select a college or university.

ACCESS. INNOVATION. EXCELLENCE.



## NORTH DAKOTA UNIVERSITY SYSTEM DISTANCE EDUCATION COURSES

- Access to higher education is EASIER THAN EVER with the North Dakota University System (NDUS).
- Online and interactive video network opportunities give you freedom to choose courses from several campuses while completing just one application.
- NDUS schools also offer numerous individual online courses for students who prefer a mix of on-campus and online courses.



### 2-YEAR COLLEGE ADMISSION REQUIREMENTS

**A high school graduate** may be admitted to any two-year campus. Each campus may have requirements that are in addition to the general admission requirements.

**GED tests** may be used to satisfy the high school graduation requirement.

**For technical programs**, high school graduation is recommended. Applicants 17 years of age or older may be admitted if program standards are met.

### 4-YEAR COLLEGE ADMISSION REQUIREMENTS

**4 units of English**

**3 units of mathematics**  
(Algebra I and above)

**3 units of lab science**  
(including at least two in biology, chemistry, physics or physical science)

**3 units of social studies**  
(not including consumer education, cooperative marketing, orientation to social science, or marriage/family)

**Additional courses may be required before you can be admitted to some programs.**

Students who do not meet the admission requirements for a 4-year university are welcome to attend one of the five 2-year colleges. Upon satisfactory completion of 24 credits, the student will be eligible to transfer to a 4-year university.

# Dual Credit

# COURSES



North Dakota University System colleges and universities, in partnership with area high schools, offer several CTE and general education courses for dual credit. Many schools award dual credit for the college class in lieu of their high school class equivalent.

## Advantages of Dual Credit Courses:

- You can complete a college class or two by successfully completing dual credit courses in high school.
- Students and parents can save by not having to pay full tuition for dual credit courses.
- Students can ease into college classes in a comfortable, familiar environment with smaller class sizes.
- The letter grade received in the course is the same and is posted on both high school and college transcripts.
- Successful completion of a dual credit class may fulfill one of the requirements of the North Dakota Academic Scholarship.

## Your School Doesn't Offer the Classes You Want?

NDCDE can supplement and enhance what your home school provides to you. If your need goes beyond supplementation, NDCDE is able to provide a full curriculum of courses allowing you to earn an NDCDE issued high school diploma.

Regardless of the school you attend, ND provides a way for you to take classes that may not be offered by your school, or are offered, but impossible to work into your schedule.

### To assure the courses fulfill your needs, the courses:

- ◆ are self-paced (you complete lessons at your own speed),
- ◆ may be enrolled in anytime (all twelve months of the year),
- ◆ include all core courses, dozens of electives, a growing number of career and technical courses, credit recovery and advanced college placement (AP) courses,
- ◆ provide diagnostics and adaptive lessons appropriate for your strengths and weaknesses, and
- ◆ have teachers assigned to you who are ready to help you one-on-one via phone, Skype, text, email, virtual classroom, Facebook, Twitter, or whatever means works for you, and in a growing number of courses, are blended with hands-on projects.



## The North Dakota Center for Distance Education (NDCDE)

offers over 300 online and blended courses for students in grades 4-12.

### CONTACT US AT:

North Dakota Center for  
Distance Education  
701-298-4830 • [www.NDCDE.org](http://www.NDCDE.org)



# QUENTIN N. BURDICK JOB CORPS CENTER

## Job Training and Career Placement



**Job Corps** is the nation's oldest and most successful job training program for young adults, ages 16 through 24. Operating year-round, Job Corps provides the chance to finish high school, learn a trade and even start college. Job Corps is a structured, residential program that focuses on learning life skills and employability, in addition to education and training.

### ACADEMIC TRAINING

- Basic literacy and math skills are important in any job; therefore, Job Corps will provide assessment testing after arrival to determine if you need some additional skills support in areas such as reading and math.
- Students can obtain their GED or high school diploma; Burdick offers several options to achieve academic credentials.

In addition to high school and career technical training, Burdick Job Corps provides the following:

- Career Success Standards (employability) Training
- A living allowance with free room and board
- Basic medical and dental care
- Drivers Education
- Work Experience (known as work-based learning)

Job Corps is a structured job training program that just might be the best option for YOU; and Job Corps is **FREE** to those who qualify! Contact your local Admissions Counselor by calling **1-701-857-9600**.

To learn more about Job Corps, check out our website at <https://quentinnburdick.jobcorps.gov> or find us on Facebook.

### CAREER & TECHNICAL TRAINING

- Office Administration
- Culinary Arts/Food Service
- Nursing Assistant/Home Health Aide (NA/HHA)
- Carpentry
- Building Construction Technology
- Light Engine Repair
- Welding
- Advanced Training (college) at Dakota College at Bottineau or Minot State University
- Advanced Medical Program through Dakota College at Bottineau

Following completion of one of the above trades, graduates from Burdick may also be eligible for one of Job Corps' advanced training program in locations such as Minneapolis, Minnesota; Kansas City, Missouri, or San Francisco, California. Advanced training opportunities are available for almost every trade. After graduation from the Quentin N. Burdick Job Corps Center, Career Transitions Services (job placement assistance) is available for students for up to a year.



## AMERICORPS

*Are you ready  
to make a difference?*

When you join AmeriCorps, your energy, ideas, and talents will be used to help others. You will learn teamwork, leadership, responsibility, and other essential skills through the AmeriCorps real-life education and work experience. AmeriCorps Programs provide service in one or more focus areas that include disaster services, economic opportunity, education, environmental stewardship, healthy futures, and veterans and military families.

AmeriCorps State Programs are open to U.S. citizens, nationals, or lawful permanent resident aliens ages 17 and older. Members may serve full-time or part-time over a period not to exceed to 12 months.

After completing your term of service, you will receive a Segal AmeriCorps Education Award to help pay for college, graduate school, vocational training, or to repay student loans.

For more information, visit  
[www.americorpsnd.com](http://www.americorpsnd.com)



## FAFSA is the first step to getting money for college

To get money for college your first step is to apply for the FAFSA (Free Application for Federal Student Aid), and the application can be completed as early as October 1 of your senior year.

You can list up to 10 schools on your FAFSA and will receive an offer detailing a financial aid package from each college that you've applied to and been accepted. Grants are often on a first-come, first-served basis and may require the FAFSA to be completed, so applying early is helpful.

## Cut college costs!

- Take dual credit and advanced placement classes in high school.
- Start applying for scholarships in the fall of your senior year. North Dakota Dollars for Scholars has many scholarships for undergraduate and graduate students in college. Visit [northdakota.dollarsforscholars.org](http://northdakota.dollarsforscholars.org) and create your online profile today. If your profile is in the system, you will be notified when the application period opens.
- In addition to comparing college tuition rates, consider where the college is located and look at all your living, meal and transportation options. Be mindful of your expenses to make the best choice for yourself financially.
- Rent books rather than purchasing them.
- Invest time researching majors you are interested in and the types of jobs you would enjoy. When students spend a couple of years in college trying to decide on a major, they are often adding years to the cost of their education to complete the required classes.
- If you need a private student loan in addition to federal loans, compare BND's student loan interest rates with other options. BND offers fixed or variable interest rate options that do not vary based on your credit rating or income.



All your college resources in one spot!  
BND's College Handbook

[collegehandbook.bnd.nd.gov](http://collegehandbook.bnd.nd.gov)



# Student loans are not free money

Some people find themselves regretting the amount of student loans they need to repay. If you are a single person who lives in North Dakota and the first job you get out of college pays you \$40,000 per year, your take home pay will actually be about \$32,000 or \$2,666 per month.

With the \$2,666 per month figure, this table outlines your budget assuming you take out \$30,000 in student loans. If you don't feel like this is enough money to accommodate the lifestyle you would like when you graduate college, seriously consider the amount of money you take out in student loans. Decreasing the amount you take out in student loans will free up more funds for you to spend on other things.

Item	Expense amount	Percentage of monthly take-home pay*
Other savings and investments	\$266	10%
Student loan payment (Assuming \$30,000 in loans at 3.76%)	\$300	11%
Housing (Rent, mortgage, condo maintenance fee, furniture, household items)	\$800	30%
Utilities (Phone, electricity, gas)	\$266	10%
Other Debt	\$80	3%
Food (Groceries, eating out)	\$400	15%
Transportation (Car payments, insurance, gas, maintenance)	\$266	10%
Personal expenses (Entertainment, clothing, vacations, personal care, pet care, gifts, car insurance)	\$288	11%
<b>Total expenses</b>	<b>\$2,666</b>	<b>100%</b>

\*<https://www.quicken.com/home-budget-cost-living-reality-check>



ACHIEVE MORE.

 VISIT [BND.ND.GOV](http://BND.ND.GOV)



LOYALTY DUTY RESPECT SELFLESS SERVICE



## HIGH TECH, HIGHER CALLING

THE ARMY NATIONAL GUARD IS LOOKING FOR PEOPLE WHO CAN IMAGINE THE FUTURE AND ENGINEER IT – THE NEXT GENERATION OF SOLDIERS WHO EXCEL IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH (STEM). WE’LL TRAIN YOU FOR HIGH-TECH JOBS THAT BUILD ON YOUR APTITUDE. PLUS, WE OFFER MONEY FOR COLLEGE IN EXCHANGE FOR YOUR PART-TIME SERVICE. EXPLORE CAREERS AND GET GREAT BENEFITS THAT WILL PUT YOU ON A PATH TO SUCCESS.

## TRAIN FOR AN IN-DEMAND CAREER!



- ENLISTMENT BONUSES!
- UP TO 100% TUITION ASSISTANCE
- STUDENT LOAN REPAYMENT PROGRAM
- EARN COLLEGE CREDITS FOR BASIC TRAINING & AIT
- MONTGOMERY GI BILL & GI BILL KICKER
- RETIREMENT BENEFITS FOR PART-TIME SERVICE
- 401(K)-TYPE SAVINGS PLAN
- LOW-COST HEALTH, LIFE & DENTAL INSURANCE
- SERVE YOUR COMMUNITY, STATE & COUNTRY

*BENEFITS SUBJECT TO CHANGE*

[NDARMYGUARD.com](http://NDARMYGUARD.com)





HONOR INTEGRITY PERSONAL COURAGE




**PARTNERS IN EDUCATION**


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- FARGO • 701-451-6030
- GRAND FORKS • 701-795-3848
- JAMESTOWN • 701-320-0649
- MINOT • 701-857-7650
- VALLEY CITY • 701-845-6762
- WAHPETON • 701-899-2264
- WILLISTON • 701-770-3072



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**Get Started at [NDARMYGUARD.COM](http://NDARMYGUARD.COM)**



## NORTH DAKOTA VOCATIONAL REHABILITATION

**Transition** is the term for the “bridge” between school and adult life for students. Transition planning is the process of preparing for life after high school. Vocational Rehabilitation (VR) can help you make informed choices during your transition and assist you with future career plans.

Typically, students apply for VR two years before exiting high school, or in rare cases earlier. If you are eligible, VR will help you determine an appropriate employment goal. You and your counselor will work together to develop an Individualized Plan for Employment (IPE), which identifies what you need to achieve your goal. VR may be able to help you transition from high school to work, or, from high school to college in preparation for work by providing:

**Pre-Employment Transition Services (Pre-ETS)** are also provided to students with disabilities. VR and schools work together to provide Pre-ETS services to students who may be potentially eligible for VR.

- Potentially eligible students are not required to apply for and be determined eligible for VR service.
- Potentially eligible means:
  - Not younger than age 14 and in 9th grade, and not older than age 21; and in secondary, postsecondary, and other recognized education programs.
  - Eligible for and receiving special education or related services; a student with a disability for purposes of section 504; or other students with disabilities including but not limited to physical, sensory, intellectual, mental health, and communication.

### **Pre-ETS include:**

- Job exploration counseling
- Work-based learning opportunities
- Counseling on post-secondary educational opportunities
- Workplace readiness training
- Instruction in self-advocacy

**For more information about Vocational Rehabilitation, please visit:**  
[www.nd.gov/dhs/dvr/about/regional-contact.html](http://www.nd.gov/dhs/dvr/about/regional-contact.html)

- **Professional Vocational Rehabilitation Counseling & Guidance** – evaluations of strengths and how your disability may affect your ability to work, a comprehensive assessment of rehabilitation needs, planning and implementing strategies to overcome barriers, and helping you adjust to and live with a disability.
- **Employment** – identification of an employment goal that is consistent with your strengths, resources, abilities, capabilities, priorities, concerns, interests, and informed choice.
- **Accommodations** – if needed, adaptive aids, assistive technology, accessibility, college accommodations, and work site evaluations to assist you in achieving your employment goal.
- **Training** – tailored to meet your individual rehabilitation needs and attain your employment goal. This may include on-the-job training, internships, job mentoring, job coaching and/or academic training including college expenses if there is a financial need.
- **Job Placement** – develop resume writing skills and interview strategies, job referral, placement, and follow-up services.





## Adult Education

Adult Education provides free classes and programs that help adults over the age of 16 obtain basic educational skills needed to be productive workers, family members, and citizens.

Each Adult Learning Center provides instruction for



- reading/language arts, math, science, social studies, keyboarding, and computer literacy;
- English Language Learners (ELL) for New Americans and citizenship preparation;



- the GED exam; and
- college and career readiness.



### *GED... get it now!*

The US Census data estimates 1 in 10 individuals in North Dakota are without a high school diploma. Individuals who receive a GED will earn approximately \$10,000 (nationally) more annually than those who do not. This, in turn, improves an individual's economic status, spending patterns, and tax contributions. North Dakota needs every able body in the workforce – a GED can provide you the skills to make a difference and launch a new career. Earn your GED now and reap the rewards. Please visit <https://ged.com> for more information on the GED.



Visit [www.nd.gov/dpi/education-programs/adult-education-ged](http://www.nd.gov/dpi/education-programs/adult-education-ged) for more information on Adult Education in ND.

### ADULT LEARNING CENTERS

#### BISMARCK

Bismarck Public Schools  
701-323-4530

#### DICKINSON

Dickinson Public Schools  
701-456-0008

#### GRAND FORKS

Grand Forks Public Schools  
701-795-2785

#### VALLEY CITY

Sheyenne Valley Area CTC  
701-845-0256

#### DEVILS LAKE

Lake Region State College  
701-662-1568

#### FARGO

Fargo Public Schools  
701-446-2806

#### MINOT

Minot Public Schools  
701-857-4488

#### WILLISTON

Williston State College  
701-572-5886



## Finding Your First Job as a Teen...

### Early Experiences:

Babysitting, mowing lawns, shoveling snow, and taking care of pets can be part of your work experience and history.

### Flexible Scheduling:

Look for a job that will allow flexible scheduling. You will need to balance school with working.

**Volunteer:** Even if you don't get a paycheck, volunteering will add to your experiences and potential references for future paid positions.

**Keep Trying:** Job Searching isn't easy. Keep trying and you will find a job.

**Consider a Resume:** Having a resume to give to prospective employers can help you stand out from other applicants.

### HELPFUL SOURCES OF INFORMATION:

**RUReady.ND.gov** • [www.ruready.nd.gov](http://www.ruready.nd.gov)  
**Job Service ND** • [www.jobsnd.com](http://www.jobsnd.com)

**Career Builder** • [www.careerbuilder.com](http://www.careerbuilder.com)  
**Career OneStop** • [www.careeronestop.org](http://www.careeronestop.org)

**Indeed** • [www.indeed.com](http://www.indeed.com)  
**Monster** • [www.monster.com](http://www.monster.com)

## BUDGETING FOR BEGINNERS

### Spend less than you earn. Sounds simple, right?

Regardless of your experience managing money, it is important to develop a clear idea of how much you earn and how much you spend.

A budget can help you meet basic needs every month such as food, shelter, electricity, insurance, etc. Careful budgeting may also help you pay for the extras such as gym membership, cable TV, and Internet service.

Creating a budget eliminates stress by helping you spend responsibly to achieve your financial goals.

### TO CREATE A BUDGET:

**List your expenses.** First include fixed expenses (payments that are the same each month) like rent, car payment, student loan, etc. Next, consider flexible expenses that vary each month such as spending money, food, and clothing.

**Do the math.** After you have set up income and expenses, figure out where your money is going.

**Stick with your budget.** Monitor and adjust as needed to achieve your goals.

### GENERAL BREAKDOWN OF BUDGET COSTS LOOKS LIKE THIS:

- 25-30 percent to housing
- 15-18 percent to transportation costs
- 16 percent to food

The rest of the money will go to discretionary spending and saving.

Most financial experts also suggest you have an "emergency fund" in case of a financial hardship. Set aside an amount each paycheck that you are comfortable with.

Look for a budgeting tool that works for you – from online banking tools, phone apps, or software. This will help you get into the habit of budgeting.

Source: [www.quicken.com/budgeting-beginners](http://www.quicken.com/budgeting-beginners)

# North Dakota Postsecondary Programs and 2020-21 Estimated On-Campus Budgets for Resident Dependent Students

	School	City	Website	Phone Number	Tuition & Fees	Books & Supplies	Room & Board	Total
NDUS 2-Yr.	Bismarck State College	Bismarck	bismarckstate.edu	701-224-5400	\$5,694	\$1,000	\$6,284	\$12,978
	Dakota College at Bottineau	Bottineau	dakotacollege.edu	701-228-5469	\$5,046	\$1,100	\$7,060	\$13,206
	Lake Region State College	Devils Lake	lrsc.edu	701-662-1600	\$4,844	\$1,000	\$6,750	\$12,594
	North Dakota State College of Science	Wahpeton	ndscs.edu	701-671-2207	\$5,306	\$1,000	\$6,373	\$12,679
	*Williston State College	Williston	willistonstate.edu	701-774-4248	\$5,591	\$1,100	\$7,798	\$14,489

NDUS 4-Yr.	Dickinson State University	Dickinson	dickinsonstate.edu	701-483-2565	\$9,118	\$1,200	\$7,486	\$17,804
	Mayville State University	Mayville	mayvillestate.edu	800-437-4104	\$7,381	\$1,000	\$8,015	\$16,396
	Minot State University	Minot	minotstateu.edu	701-858-3000	\$7,896	\$1,100	\$7,202	\$16,198
	North Dakota State University	Fargo	ndsu.edu	701-231-6200	\$10,032	\$800	\$9,078	\$19,910
	University of North Dakota	Grand Forks	und.edu	701-777-1234	\$10,276	\$800	\$9,976	\$21,052
	Valley City State University	Valley City	vcsu.edu	701-845-7541	\$7,942	\$1,100	\$6,845	\$15,887

Private	Burdick Job Corps Center	Minot	quentinburdick.jobcorps.gov	701-857-9600	See page 55 for more information.			
	Lynnes Welding Training, Inc.	Fargo	learntoweld.com	701-751-4256	\$13,390	\$510	\$3,963**	\$17,863
	Lynnes Welding Training, Inc.	Bismarck	learntoweld.com	701-373-0658	\$16,390	\$510	\$5,052**	\$21,952
	Rasmussen College	Fargo	rasmussen.edu	800-817-0009	Contact Rasmussen College for more information.			
	Trinity Bible College & Graduate School	Ellendale	trinitybiblecollege.edu	800-523-1603	\$17,340	\$1,000	\$6,294	\$24,634
	University of Jamestown	Jamestown	uj.edu	701-252-3467	\$22,718	\$1,300	\$8,160	\$32,178
	University of Mary	Bismarck	umary.edu	701-355-8030	\$20,154	\$1,000	\$7,840	\$28,994

Tribal	Cankdeska Cikana Community College	Fort Totten	littlehoop.edu	701-766-4415	\$3,300	\$1,400	\$5,750	\$10,450
	Nueta Hidatsa Sahnish College	New Town	nhsc.edu	701-627-4738	\$3,600	\$1,200	\$10,440	\$15,240
	Sitting Bull College	Fort Yates	sittingbull.edu	701-854-8000	\$4,010	\$1,200	\$3,834	\$9,044
	Turtle Mountain Community College	Belcourt	tm.edu	701-477-7862	\$2,050	\$400	\$3,664	\$6,114
	*United Tribes Technical College	Bismarck	uttc.edu	701-255-3285	\$4,482	\$1,400	\$5,100	\$10,982

Cosmetology/Barber	Josef's School of Hair, Skin & Body	Fargo	jsold.com	701-235-9910	\$17,000	\$1,800	\$8,000**	\$26,800
	*Moler Barber College	Fargo	molerbarberfargo.com	701-232-6773	\$8,145	\$855	\$5,335**	\$14,335
	Skill Cutz Barber School	Fargo	Skillcutzcollege.com	701-532-1892	Contact Skill Cutz for more information.			
	The Hair Academy	Bismarck	thehairacademynd.com	701-255-3547	\$11,720	\$1,599	\$12,650**	\$25,969
	*The Salon Professional Academy	Fargo	tspafargo.com	701-478-1772	\$17,490	\$2,735	\$10,517**	\$30,742

**Note:** Totals do not include personal, recreational, or miscellaneous costs which average approximately \$3,500.

Costs may be different for specialized programs. Contact the college/program for more information about all costs and what is included.

\*Costs are for the 2019-20 school year. Contact the college/program for updated information.

\*\*Estimate for off-campus housing. College/program does not have dorm facilities.



# CTE LEADERSHIP OPPORTUNITIES



**DECA** prepares emerging leaders and entrepreneurs for careers in marketing, finance, hospitality and management in high schools and colleges around the globe.



**FFA** makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.



**FBIA-PBL** inspires and prepares students to become community-minded business leaders in a global society through relevant career preparation and leadership experiences.



**SkillsUSA's** mission is to empower its members to become world-class workers, leaders and responsible American citizens.



**FCCLA** promotes personal growth and leadership development through Family and Consumer Sciences education.



**TSA** fosters personal growth, leadership, and opportunities in Science, Technology, Engineering, and Mathematics (STEM).



## Career and Technical Student Organizations (CTSOs)

CTSOs put your skills to the test and help you learn, grow, and compete.

### JOIN A STUDENT ORGANIZATION TO:

**DEVELOP** leadership skills that will prepare you for college and career

**PARTICIPATE** in community service opportunities

**TEST** your skills at state and national competitions

**LEARN** more about careers

North Dakota  
Department of  
Career and  
Technical Education  
State Capitol – 15th Floor  
600 E Boulevard Ave  
Bismarck ND 58505  
[cte@nd.gov](mailto:cte@nd.gov)  
[www.cte.nd.gov](http://www.cte.nd.gov)

