



# NORTH DAKOTA CAREERS BY EDUCATION

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# ASSOCIATE'S DEGREE

An Associate's degree generally requires **two years** of college.

The education listed for these jobs reflect minimal national requirements and may vary in specific locations.

North Dakota Careers	2008 Typical ND Wage	2006-2016 Total ND Growth	2006-2016 Total ND Replacements	Examples of Tasks Performed	Education/ Training
<b>1</b> <b>Dental Hygienists</b>	\$55,396	132	52	Clean teeth, examine gums, develop x-ray film, & watch for signs of decay or gum disease.	AD
<b>2</b> <b>Registered Nurses</b>	\$51,253	1,384	1,492	Monitor all aspects of patient care, modify treatment, & consult with healthcare team.	AD
<b>3</b> <b>Funeral Directors</b>	\$63,261	1	54	Arrange funeral details, prepare remains for burial, & offer counsel to family & friends.	AD
<b>4</b> <b>Electrical and Electronic Engineering Technicians</b>	\$50,005	35	49	Test electronic units, analyze results, evaluate performance & determine adjustment needs.	AD
<b>5</b> <b>Radiologic Technologists and Technicians</b>	\$41,877	61	74	Operate x-ray equipment, process radiographs, & review & evaluate x-ray images.	AD
<b>6</b> <b>Respiratory Therapists</b>	\$40,937	55	87	Set up & operate devices such as mechanical ventilators for specified treatment.	AD
<b>7</b> <b>Civil Engineering Technicians</b>	\$40,620	52	64	Calculate dimensions, profile & component specifications, & material quantities.	AD
<b>8</b> <b>Industrial Engineering Technicians</b>	\$41,592	45	49	Recommend revision to methods of operation or other changes to increase production.	AD
<b>9</b> <b>Radiation Therapists</b>	\$65,765	10	15	Administer prescribed doses of radiation to patients, using radiation therapy equipment.	AD
<b>10</b> <b>Computer Support Specialists</b>	\$32,269	213	126	Answer user inquiries regarding computer software or hardware to resolve problems.	AD
<b>11</b> <b>Mechanical Engineering Technicians</b>	\$44,393	30	23	Inspect lines & figures for clarity & return erroneous drawings to designer for correction.	AD
<b>12</b> <b>Diagnostic Medical Sonographers</b>	\$59,814	14	11	Determine images to include, looking for differences between healthy & pathological areas.	AD
<b>13</b> <b>Medical and Clinical Laboratory Technicians</b>	\$33,115	64	117	Perform medical research, including chemical analysis, to further control & cure disease.	AD
<b>14</b> <b>Agricultural and Food Science Technicians</b>	\$34,859	60	49	Conduct standardized tests on food & beverages to ensure compliance with regulations.	AD
<b>15</b> <b>Medical Equipment Repairers</b>	\$40,069	25	54	Inspect & test malfunctioning medical & related equipment.	AD
<b>16</b> <b>Medical Records and Health Info. Technicians</b>	\$26,446	104	91	Protect the security of medical records to ensure that confidentiality is maintained.	AD
<b>17</b> <b>Biological Technicians</b>	\$28,020	90	74	Participate in the research & development of medicinal & pharmaceutical preparations.	AD
<b>18</b> <b>Forest and Conservation Technicians</b>	\$34,331	3	55	Train & lead forest & conservation workers in seasonal activities.	AD
<b>19</b> <b>Nuclear Medicine Technologists</b>	\$55,237	5	6	Calculate, measure & record radiation dosage or radiopharmaceuticals received & used.	AD
<b>20</b> <b>Paralegals and Legal Assistants</b>	\$39,594	30	21	Prepare legal documents, including briefs, pleadings, appeals, wills, & contracts.	AD
<b>21</b> <b>Fish and Game Wardens</b>	\$54,692	1	9	Patrol-assigned areas to enforce game, fish, or boating laws & manage wildlife programs.	AD
<b>22</b> <b>Cardiovascular Technologists and Technicians</b>	\$35,504	22	21	Monitor patients' blood pressure & heart rate during diagnostic & therapeutic procedures.	AD
<b>23</b> <b>Environmental Engineering Technicians</b>	\$43,780	8	11	Perform environmental quality work, conduct surveys & produce assessment reports.	AD
<b>24</b> <b>Veterinary Technologists and Technicians</b>	\$27,207	37	18	Administer anesthesia to animals, perform lab tests, & administer first aid.	AD
<b>25</b> <b>Interior Designers</b>	\$29,680	30	20	Advise client on design, estimate material costs, & present design to client for approval.	AD

## KEY

ST [Short-term, on-the-job training]

AD [Associate's degree]

BD+ [Bachelor's or higher degree, plus work experience]

Overtime and bonuses are not reflected in the typical wage.

MT [Moderate-term, on-the-job training]

BD [Bachelor's degree]

LT [Long-term, on-the-job training]

MD [Master's degree]

North Dakota Careers in red have also been identified as North Dakota **HOTJOBS**.

WE [Work experience in a related occupation]

DD [Doctoral degree]

VT [Postsecondary vocational training]

PD [First professional degree]

# VOCATIONAL TRAINING

Vocational training requires from **two weeks to one year** in a college or a post graduate training center and usually carries a certificate. The job requirements listed here are the minimal national requirements for the job.

North Dakota Careers	2008 Typical ND Wage	2006-2016 Total ND Growth	2006-2016 Total ND Replacements	Examples of Tasks Performed	Education/ Training
<b>1</b> <b>Mobile Heavy Equipment Mechanics, Except Engines</b>	\$41,615	55	139	Test mechanical products & equipment to ensure proper performance & compliance.	VT
<b>2</b> <b>Bus &amp; Truck Mechanics &amp; Diesel Engine Specialists</b>	\$36,206	110	259	Perform routine maintenance such as lubricating equipment & machinery.	VT
<b>3</b> <b>Real Estate Sales Agents</b>	\$44,502	39	124	Promote sales of properties & present purchase offers to sellers for consideration.	VT
<b>4</b> <b>Licensed Practical and Licensed Vocational Nurses</b>	\$33,876	97	664	Observe patients, chart & report changes in patients' conditions.	VT
<b>5</b> <b>Automotive Service Technicians and Mechanics</b>	\$32,091	134	512	Examine vehicles, compile estimates of repair costs, & secure approval to perform repairs.	VT
<b>6</b> <b>Commercial Pilots</b>	\$56,085	13	70	Pilot airplanes, check aircraft, & determine flight plans using navigation systems.	VT
<b>7</b> <b>Aircraft Mechanics and Service Technicians</b>	\$43,996	58	77	Read & interpret manuals to determine feasibility & method of repairing components.	VT
<b>8</b> <b>Electrical &amp; Electronics Repairers, Substation</b>	\$65,749	0	42	Construct, test, maintain, & repair substation relay & control systems.	VT
<b>9</b> <b>Mechanical Drafters</b>	\$38,939	36	59	Develop detailed design drawings & specifications for mechanical equipment.	VT
<b>10</b> <b>Farm Equipment Mechanics</b>	\$30,723	15	166	Maintain, repair & overhaul farm machinery, & test & replace electrical components.	VT
<b>11</b> <b>Architectural and Civil Drafters</b>	\$35,937	38	59	Produce drawings using computer-aided drafting systems (CAD) or other devices.	VT
<b>12</b> <b>Electrical &amp; Electronics Repairers, Comm'l Equip.</b>	\$48,017	12	28	Perform scheduled preventive maintenance tasks, to detect & prevent problems.	VT
<b>13</b> <b>Nursing Aides, Orderlies, and Attendants</b>	\$22,657	445	856	Observe patients' conditions, reposition bedridden patients, & administer medications.	VT
<b>14</b> <b>Medical Transcriptionists</b>	\$28,303	60	100	Transcribe dictation for a variety of medical reports.	VT
<b>15</b> <b>Surgical Technologists</b>	\$35,757	43	28	Provide technical assistance to surgeons, surgical nurses & anesthesiologists.	VT
<b>16</b> <b>Travel Agents</b>	\$23,756	52	157	Determine mode of transportation, travel dates, & financial considerations for customers.	VT
<b>17</b> <b>Hairdressers, Hairstylists, and Cosmetologists</b>	\$22,562	179	478	Determine & recommend beauty treatment, suggest hair styles, & cut hair.	VT
<b>18</b> <b>Court Reporters</b>	\$52,405	5	11	Take notes in shorthand & provide transcripts of proceedings.	VT
<b>19</b> <b>Emergency Medical Technicians and Paramedics</b>	\$28,348	60	56	Administer first-aid treatment & life-support care to persons in a pre-hospital setting.	VT
<b>20</b> <b>Legal Secretaries</b>	\$27,790	22	114	Prepare & process legal documents & papers.	VT
<b>21</b> <b>Preschool Teachers, Except Special Education</b>	\$23,581	109	78	Provide a variety of materials & resources for children to explore, manipulate & use.	VT
<b>22</b> <b>Appraisers and Assessors of Real Estate</b>	\$36,142	10	31	Prepare written reports that estimate property values.	VT
<b>23</b> <b>Computer, Automated Teller &amp; Office Mach. Repairer</b>	\$35,078	0	54	Converse with customers in order to determine details of equipment problems.	VT
<b>24</b> <b>Medical Secretaries</b>	\$25,015	21	129	Schedule & confirm patient diagnostic appointments, surgeries & medical consultations.	VT
<b>25</b> <b>Electrical and Electronics Drafters</b>	\$36,223	13	26	Use computer-aided drafting equipment, conventional drafting stations & drafting tools.	VT

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# WORK EXPERIENCE

These jobs require **1-60 months** of on-the-job training or work experience in a related field.  
The educational background for each job may vary with the place of employment and the individual.

North Dakota Careers	2008 Typical ND Wage	2006-2016 Total ND Growth	2006-2016 Total ND Replacements	Examples of Tasks Performed	Education/ Training
<b>1 Sales Rep., Wholesale &amp; Mfg, Except Tech. Products</b>	\$42,627	546	1,061	Answer customers' questions about products, prices & credit terms.	MT
<b>2 First-Line Super./Mgr, Mechanics &amp; Repair Workers</b>	\$52,737	110	342	Determine schedules, sequences & assignments for work activities.	WE
<b>3 First-Line Super./Mgr, Construction Trades Workers</b>	\$48,045	233	263	Examine & inspect work progress, equipment & construction sites.	WE
<b>4 First-Line Super./Mgr, Production &amp; Operating Wkrs</b>	\$45,706	223	321	Direct & coordinate activities of employees engaged in production or processing of goods.	WE
<b>5 Electricians</b>	\$43,976	301	361	Assemble, install, test & maintain electrical or electronic wiring & equipment.	LT
<b>6 Sales Rep., Wholesale &amp; Mfg, Tech. Products</b>	\$55,447	113	165	Contact new & existing customers to discuss specific products & services.	MT
<b>7 First-Line Super./Mgr, Office Admin. Support Wkrs</b>	\$39,392	181	616	Resolve customer complaints & answer questions regarding policies.	WE
<b>8 Truck Drivers, Heavy and Tractor-Trailer</b>	\$34,474	954	1,066	Maneuver & drive trucks, & follow safety procedures when transporting goods.	MT
<b>9 Service Unit Operators, Oil, Gas, and Mining</b>	\$42,528	242	182	Operate controls that raise derricks & level rigs, & analyze unserviceable wells.	MT
<b>10 Operating Engineers &amp; Other Const. Equip. Oprs.</b>	\$37,730	193	556	Operate different types of large power equipment at construction or excavation sites.	MT
<b>11 Derrick Operators, Oil and Gas</b>	\$47,707	144	101	Inspect derricks or order their inspection in order to maintain proper working conditions.	MT
<b>12 Plumbers, Pipefitters, and Steamfitters</b>	\$42,856	155	190	Cut, thread & hammer pipe to specifications, using various tools.	LT
<b>13 Postal Service Mail Carriers</b>	\$45,518	0	279	Obtain signed receipts for registered, certified, & insured mail, sort, & deliver mail.	ST
<b>14 Electrical Power-Line Installers and Repairers</b>	\$55,943	6	194	Adhere to safety practices & procedures, such as checking equipment regularly.	LT
<b>15 Compliance Officers, Except Ag., Const., Health</b>	\$51,078	25	182	Issue licenses to individuals meeting standards.	LT
<b>16 Rotary Drill Operators, Oil and Gas</b>	\$46,988	139	97	Direct & train rig crews, observe pressure gauges, & maintain & adjust machinery.	MT
<b>17 Police and Sheriff's Patrol Officers</b>	\$41,360	42	265	Provide for public safety by enforcing laws & responding to emergencies.	LT
<b>18 Cost Estimators</b>	\$43,078	135	133	Analyze blueprints & other documents to prepare time, cost, materials, & labor estimates.	WE
<b>19 Executive Secretaries &amp; Administrative Assistants</b>	\$32,806	199	722	Manage & maintain executives' schedules, prepare agendas & record minutes in meetings.	MT
<b>20 First-Line Super./Mgr, Transportation Workers</b>	\$47,003	77	138	Plan equipment allocations, & interpret transportation & tariff regulations.	WE
<b>21 Purchasing Agents, Except Wholesale, Retail &amp; Farm</b>	\$47,626	65	137	Purchase the highest quality merchandise at the lowest possible price, in correct amounts.	WE
<b>22 First-Line Super./Mgr, Non-Retail Sales Workers</b>	\$47,157	71	128	Listen to & resolve customer complaints, monitor sales performance, & inventory stock.	WE
<b>23 Welders, Cutters, Solderers, and Brazers</b>	\$33,075	286	482	Weld & solder components, dismantle metal assemblies, & analyze blueprints.	LT
<b>24 Carpenters</b>	\$31,283	421	484	Measure & mark cutting lines on materials, shape or cut materials, & study blueprints.	LT
<b>25 Industrial Machinery Mechanics</b>	\$43,798	52	162	Disassemble machinery & equipment to remove parts & make repairs.	LT

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# BACHELOR'S DEGREE AND BEYOND

The jobs on this page usually require **four or more years** of college.

The degree listed is considered as a minimal starting point, and for many of the jobs, extra education is beneficial.

North Dakota Careers	2008 Typical ND Wage	2006-2016 Total ND Growth	2006-2016 Total ND Replacements	Examples of Tasks Performed	Education/ Training
<b>1 Chief Executives</b>	\$128,598	118	187	Direct an organization to fund operations, maximize investments, & increase efficiency.	BD+
<b>2 General and Operations Managers</b>	\$77,134	480	720	Oversee activities directly related to making products or providing services.	BD+
<b>3 Financial Managers</b>	\$74,474	144	182	Process loans, prepare financial statements, & coordinate financial planning.	BD+
<b>4 Pharmacists</b>	\$85,171	72	138	Review prescriptions for accuracy, ascertain ingredients, & evaluate their suitability.	PD
<b>5 Computer and Information Systems Managers</b>	\$77,280	140	97	Manage backup, security & user help systems.	BD+
<b>6 Sales Managers</b>	\$68,351	121	127	Monitor customer preferences, determine price schedules, & resolve complaints.	BD+
<b>7 Engineering Managers</b>	\$88,785	71	72	Coordinate projects & direct the integration of technical activities.	BD+
<b>8 Electrical Engineers</b>	\$78,005	77	78	Confer with engineers & customers to discuss existing or potential engineering projects.	BD
<b>9 Computer Software Engineers, Systems Software</b>	\$68,111	173	38	Modify existing software, adapt it to new hardware & upgrade interfaces.	BD
<b>10 Mechanical Engineers</b>	\$64,655	132	123	Read & interpret blueprints, technical drawings, schematics & computer-generated reports.	BD
<b>11 Industrial Engineers</b>	\$65,997	127	89	Analyze statistical data & establish quality & reliability objectives of finished product.	BD
<b>12 Lawyers</b>	\$72,530	43	102	Advise clients, prosecute or defend lawsuits, or legal rights & obligations.	PD
<b>13 Medical and Health Services Managers</b>	\$63,772	80	126	Direct, supervise & evaluate work activities of medical, technical & service personnel.	BD+
<b>14 Physician Assistants</b>	\$70,669	92	47	Examine patients to obtain information about their physical condition.	BD
<b>15 Agricultural Sciences Teachers, Postsecondary</b>	\$80,341	50	58	Prepare course materials such as syllabi, assignments, & handouts on agricultural topics.	DD
<b>16 Marketing Managers</b>	\$71,595	69	66	Develop pricing strategies, balance firm objectives & customer satisfaction.	BD+
<b>17 Optometrists</b>	\$84,051	22	84	Examine eyes to determine visual acuity & to diagnose diseases & abnormalities.	PD
<b>18 Civil Engineers</b>	\$60,554	123	90	Analyze reports, maps, blueprints & other topographical or geologic data to plan projects.	BD
<b>19 Construction Managers</b>	\$62,729	71	103	Confer with contractors & others to discuss & resolve construction matters.	BD
<b>20 Education Administrators, Elementary &amp; Secondary</b>	\$66,223	19	124	Review, modify or approve new programs, & submit program proposals to school board.	BD+
<b>21 Physical Therapists</b>	\$62,827	88	61	Prepare & carry out individually designed programs of physical treatment for patients.	MD
<b>22 Computer Software Engineers, Applications</b>	\$55,703	280	72	Confer with systems analysts, engineers & programmers to design software systems.	BD
<b>23 Electronics Engineers, Except Computer</b>	\$77,339	36	40	Design electronic components, software, products or systems for various applications.	BD
<b>24 Business Teachers, Postsecondary</b>	\$58,366	86	76	Prepare & deliver lectures to undergraduate/graduate students on various business topics.	MD
<b>25 Financial Analysts</b>	\$66,735	58	38	Recommend investments & investment timing to companies, investment staff, or the public.	BD

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## CAREERS BY EDUCATION

A publication prepared by:  
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**Methodology:** These careers were selected based on the projected growth and replacement openings published in the North Dakota Employment Projections 2006-2016 publication and wage information from the Wages for North Dakota Jobs 2008 ed., both produced by Job Service North Dakota. The skills and tasks are based on the O\*NET 12 data. The Education/Training is from the Bureau of Labor and Statistics data and may differ by region or employer. Overtime and bonuses are not reflected in the typical wage.

**Ranking Criteria:** Each career was ranked based on typical wage (weighted 50%) and the total of openings due to growth plus openings due to replacement (sum weighted 50%).

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