CAREER & TECHNICAL EDUCATION

Workforce Trends & Careers of Tomorrow

RealTime Talent
Erin Olson, Director of Strategic Research
October 2021

The contents of this publication were made possible through the Strengthening Career and Technical Education for the 21st Century Act (Perkins V) federal grant from the United States Department of Education administered through Minnesota State Colleges and Universities.
Who’s in the Virtual “Room”

In the chat field, please share your name, your role, and the organization that you represent.
CAREER & TECHNICAL EDUCATION BEYOND 2020

Workforce Trends & Careers of Tomorrow

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Overview

- Community Profile
- Workforce Forecast
- Mid-Term Occupational Impacts
- Career Field Insights

Access the full report here:
http://www.realtimetalent.org
## Educational Attainment, Age 25-64

<table>
<thead>
<tr>
<th>Region</th>
<th>No High School Diploma</th>
<th>High School Graduate or GED</th>
<th>Some College, No Degree</th>
<th>Associate’s Degree</th>
<th>Bachelor’s Degree</th>
<th>Postgraduate Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owatonna</td>
<td>6.5%</td>
<td>29.7%</td>
<td>21.3%</td>
<td>14.2%</td>
<td>20.0%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Faribault-Northfield</td>
<td>8.4%</td>
<td>29.5%</td>
<td>20.3%</td>
<td>14.1%</td>
<td>18.5%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Mankato</td>
<td>4.7%</td>
<td>23.1%</td>
<td>21.3%</td>
<td>15.0%</td>
<td>24.6%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Southwest</td>
<td>7.3%</td>
<td>29.2%</td>
<td>23.1%</td>
<td>15.6%</td>
<td>18.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>6.1%</td>
<td>21.7%</td>
<td>21.0%</td>
<td>12.9%</td>
<td>25.6%</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2020Q4 with preliminary estimates updated to 2021Q1.
Annual average wages per worker data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2020Q4 with preliminary estimates updated to 2021Q1.
Community Profile

One-Year % Change in GDP, Southwest Minnesota

- Gross Regional Product (GRP) contracted -2.7%
- Manufacturing contributes most to GRP
Workforce of Today & Tomorrow

Forecast

5-Year Forecast Comparison in Southwest Minnesota

Source: JobsEQ8, Data as of 2021Q1
When you think about the current economic situation in your community, which of the following career fields do you feel has the most challenging or pressing workforce needs to be addressed right now? (select up to two)

1. Agriculture, Food, and Natural Resources
2. Arts, Communications, and Information Systems
3. Business, Management, and Administration
4. Engineering, Manufacturing, and Technology
5. Health Science Technology
6. Human Services
Polling Question

When you think about your local school, district, or consortium’s programming, how well do you feel current program offerings address your community’s most challenging or pressing workforce needs right now?

1. To a Great Extent
2. Somewhat
3. Very Little
4. Not at all
5. I do not know
Workforce of Today & Tomorrow

Forecast

Industry Sectors for Southwest Minnesota as of 2021Q1

Source: JobsEQ® Data as of 2021Q1

Southwest Minnesota
Mid-Term Occupational Impacts

High Contact-Intensity Occupations

Diverging Mid-Term Impacts (greatest losses)
• Bartenders (-27.9%)
• Waiters and Waitresses (-27.8%)
• Medical Transcriptionists (-24.1%)
• Supervisors of Gambling Services Workers (-21.1%)

Growth Among High Contact-Intensity Occupations
• None

Average unemployment rate of 6.2% across all high contact-intensity roles.
COVID-19 has accelerated talent surplus anticipated in lower-wage, lower-education positions, particularly:
1) high contact-intensity occupations and
2) positions that cannot be done remotely.
Emerging Career Paths

Top Emerging Occupations in Southwest Minnesota, March 1 – August 31, 2021
Compared to the same dates in 2020 (high-growth occupations by order of volume of postings)
1. Light Truck or Delivery Services Drivers (+276%)
2. Supervisors of Retail Sales Workers (+51%)
3. Nursing Assistants (+64%)
4. Licensed Practical and Licensed Vocational Nurses (+158%)
5. Combined Food Preparation and Serving Workers (+65%)

Top Sustaining Occupations in Southwest Minnesota September 2020 – 2021
1. Heavy and Tractor-Trailer Truck Drivers (+46%)
2. Registered Nurses (+32%)
3. Stock Clerks and Order Fillers (+52%)
4. Laborers and Freight, Stock, and Material Movers (+113%)
5. Stock Clerks and Order Fillers (+84%)

Emerging Career Paths

Change in Volume of Remote Work Opportunities

1. Customer Service Representatives (+202%)
2. Insurance Sales Agents (+191%)
3. Registered Nurses (+218%)
4. Telemarketers (+4,225%)
5. Computer Occupations, All Other (+97%)

Shifting Opportunities

Baseline Worst-Case Scenario 10-Year Forecasts by Career Cluster, Southwest Minnesota 2021Q1

10 Year Forecast Growth Rate
Total Employment, Latest Available Data

Agriculture, Food & Natural Resources: -8.0%
Architecture & Construction: -1.3%
Arts, A/V Technology & Communications: -11.9%
Business, Management & Administration: -8.6%
Education & Training: -2.0%
Finance: -4.0%
Government & Public Administration: -1.0%
Health Science: 4.0%
Hospitality & Tourism: 1.3%
Human Services: 11.3%
Information Technology: -1.6%
Law, Public Safety, Corrections & Security: -2.4%
Manufacturing: -7.7%
Marketing, Sales & Service: -7.6%
Science, Technology, Engineering & Mathematics: -2.0%
Transportation, Distribution & Logistics: -4.2%
Career Field Analysis

**Origin Occupations**
- **Low wage** (<$42,000/year)
- **Low skill** (no credential)
- **Low demand** (over 5% unemployment, low growth, low replacement demand, and/or low job postings)

**Gateway Occupations**
- **Mid-wage** ($42,000 – regional average)
- **Low-middle skills** (HS diploma, some OJT)
- **Sufficient demand** (3-5% unemployment and/or high volumes of current opportunities)

**Target Occupations**
- **High wage** (above regional average)
- **High-skill** (require some credential)
- **High-demand** (2/4 indicators: under 3% unempl, higher than average 5-year growth, total 5-year demand >50% of current empl, high job posting volume)
  *Often also high occupation gap and award gap*
Career Field Analysis

Occupation Characteristics for Consideration

• High-Wage: Paying above the area mean wage
• High-Skill: Requiring some form of credential
• High-Demand: 2/4 of the following requirements met:
  • Low unemployment
  • High volume of job postings in the past 3 months
  • Forecasted growth outpaces average regional forecasted growth
  • Forecasted total demand equal to or greater than 50% of total current employment
• Occupation Gaps
• Award Gaps
Baseline Worst-Case Scenario 3-Year Forecast for Health Science Technology Careers, Southwest Minnesota 2021Q1

Historical vs. Forecasted Employment Trends:
- 3 Yrs Ago: 29,859
- Current: 28,616
Health Science Technology

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Health Science Technology, Southwest Minnesota 2021Q1

- Registered Nurses ($75,900) -52
- Licensed Practical and Licensed Vocational Nurses ($47,500) -17
- Medical and Health Services Managers ($94,000) -16
- Nursing Assistants ($32,900) -12
- Nurse Practitioners ($123,600) -12
- Medical Assistants ($39,700) -10
- Medical Secretaries and Administrative Assistants ($40,200) -6
- Speech-Language Pathologists ($69,500) -5
- Physicians, All Other, and Ophthalmologists, Except Pediatric ($252,900) -5
- Physical Therapists ($86,200) -5

Certification Gaps
- Medical Technologist (Medical Technologists)
- Medical Laboratory Technician (MLT)
- Patient Care Technician (PCT)
- Medication Aide Certification (MACE)
- Registered Dental Assistant (RDA)
- The American Registry of Radiologic Technologists (ARRT) Certification
- Medical Assistant Certification (MA)
- Nationally Certified Medical Assistant (NCMA)
- Registered Respiratory Therapist (RRT)
- Family Nurse Practitioner (FNP-BC)

Chmura Economics JobsEQ, 2021Q1 dataset.
Origin Occupations

**Likely**
- Nursing Assistants (HS, HD, OG)
- Home Health Aides (HD, AG)
- Medical Secretaries (HD, OG, AG)
- Medical Assistants (HS, HD, OG, AG)
- Pharmacy Technicians (OG, AG)

**Aligned**
- Personal Care Aides
- Childcare Workers
- Secretaries
- Customer Service Reps
- Cooks

Gateway Occupations

- Licensed Practical Nurses (HS, HD, OG, AG)
- Dental Assistants (HS, HD, OG, AG)
- Medical Dosimetrists (HS, OG, AG)
- Occupational Therapy Assistants (HS, HD, OG, AG)
- Recreational Therapists (HS, HD, OG)

Target Occupations (all HW, HD, HS)
- Registered Nurses (OG)
- Medical and Health Services Managers (OG, AG)
- Nurse Practitioners (OG, AG)
- Speech-Language Pathologists (OG)
- Occupational Therapists (OG, AG)
# Top Ten Target Occupations in Health Science Technology, Southwest Minnesota 2021Q1

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>2021Q1 Empl</th>
<th>Mean Ann Wages</th>
<th>High-Wage</th>
<th>High-Skill</th>
<th>High-Demand</th>
<th>OG</th>
<th>AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-1141</td>
<td>Registered Nurses</td>
<td>6,040</td>
<td>$75,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>11-9111</td>
<td>Medical and Health Services Managers</td>
<td>768</td>
<td>$94,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-1171</td>
<td>Nurse Practitioners</td>
<td>348</td>
<td>$123,600</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-1127</td>
<td>Speech-Language Pathologists</td>
<td>296</td>
<td>$69,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-1122</td>
<td>Occupational Therapists</td>
<td>288</td>
<td>$75,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-1131</td>
<td>Veterinarians</td>
<td>269</td>
<td>$104,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-1071</td>
<td>Physician Assistants</td>
<td>206</td>
<td>$125,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-1126</td>
<td>Respiratory Therapists</td>
<td>202</td>
<td>$68,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>31-2021</td>
<td>Physical Therapist Assistants</td>
<td>172</td>
<td>$54,600</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>29-2032</td>
<td>Diagnostic Medical Sonographers</td>
<td>114</td>
<td>$83,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2021Q1 dataset.
Baseline Worst-Case Scenario 3-Year Forecast for Human Services Careers, Southwest Minnesota 2021Q1

Chmura Economics JobsEQ, 2021Q1 dataset.
Human Services

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Human Services, Southwest Minnesota 2021Q1

- Substance Abuse, Behavioral Disorder, and Mental Health Counselors ($54,700)
- Police and Sheriff's Patrol Officers ($61,700)
- Firefighters ($34,800)
- Child, Family, and School Social Workers ($52,200)
- Court, Municipal, and License Clerks ($46,700)
- Health Specialties Teachers, Postsecondary ($115,800)
- Social and Community Service Managers ($73,300)
- Secondary School Teachers, Except Special and Career/Technical Education ($58,100)
- First Line Supervisors of Personal Service and Entertainment and Recreation Workers, Except Gambling Services ($43,500)
- Exercise Trainers and Group Fitness Instructors ($34,100)
- Middle School Teachers, Except Special and Career/Technical Education ($58,300)
- Security Guards ($37,900)
- Residential Advisors ($39,500)
- Kindergarten Teachers, Except Special Education ($58,200)
- Legal Secretaries and Administrative Assistants ($47,500)
- Elementary School Teachers, Except Special Education ($55,400)
- Childcare Workers ($26,800)
- Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers ($25,300)
- School Bus Monitors and Protective Service Workers, All Other ($31,500)

Certification Gaps

- Emergency Medical Technician (EMT)
- Child Development Associate (CDA)
- AFAA Personal Fitness Trainer
- Secret Clearance
- First Responder Certification
- Advanced Cardiac Life Support Certification (ACLS)
- ServSafe Food Protection Manager Certification
- Emergency Medical Technician - Paramedic (EMT-P)
- Certified Protection Professional (CPP)
- Neonatal Resuscitation Program (NRP)
### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care Aides (HD, AG)</td>
<td>Home Health Aides</td>
</tr>
<tr>
<td>Teaching Assistants (HS, HD)</td>
<td>Medical Assistants</td>
</tr>
<tr>
<td>Childcare Workers (HD, AG)</td>
<td>Waiters and Waitresses</td>
</tr>
<tr>
<td>Social and Human Service Assistants (HD, AG)</td>
<td>Cashiers</td>
</tr>
<tr>
<td>Preschool Teachers (HS, HD, OG)</td>
<td>Cooks</td>
</tr>
</tbody>
</table>

### Gateway Occupations

- Court, Municipal, and License Clerks (OG)
- Clergy (HS, HD, OG)
- Supervisors of Personal Service and Recreation Workers (HD, OG)
- Tutors and Teachers and Instructors (HS, HD)
- Paralegals and Legal Assistants (HS)

### Target Occupations

(all HW, HD, HS, OG, AG)
- Substance Abuse, Behavioral Disorder, and Mental Health Officers
- Child, Family, and School Social Workers
- Educational, Guidance, & Career Counselors
- Social & Community Service Managers
- Healthcare Social Workers
## Human Services

### Top Ten Target Occupations in Human Services, Southwest Minnesota 2021Q1

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>2021Q1 Employs</th>
<th>Mean Ann Wages^2</th>
<th>High-Wage</th>
<th>High-Skill</th>
<th>High-Demand</th>
<th>OG</th>
<th>AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-1018</td>
<td>Substance Abuse, Behavioral Disorder, and Mental Health Counselors</td>
<td>834</td>
<td>$54,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>21-1021</td>
<td>Child, Family, and School Social Workers</td>
<td>728</td>
<td>$52,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>21-1012</td>
<td>Educational, Guidance, and Career Counselors and Advisors</td>
<td>514</td>
<td>$55,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>11-9151</td>
<td>Social and Community Service Managers</td>
<td>448</td>
<td>$73,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>21-1022</td>
<td>Healthcare Social Workers</td>
<td>402</td>
<td>$58,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>21-2021</td>
<td>Directors, Religious Activities and Education</td>
<td>359</td>
<td>$56,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>25-9031</td>
<td>Instructional Coordinators</td>
<td>345</td>
<td>$74,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>25-1071</td>
<td>Health Specialties Teachers, Postsecondary</td>
<td>308</td>
<td>$115,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>21-1023</td>
<td>Mental Health and Substance Abuse Social Workers</td>
<td>301</td>
<td>$63,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
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<tr>
<td>19-3031</td>
<td>Clinical, Counseling, and School Psychologists</td>
<td>289</td>
<td>$80,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
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</tbody>
</table>

Chmura Economics JobsEQ, 2021Q1 dataset.
Baseline Worst-Case Scenario 3-Year Forecast for Arts, Communications, and Information Systems Careers, Southwest Minnesota 2021Q1

Chmura Economics JobsEQ, 2021Q1 dataset.
## Arts, Communications, & Information Systems

**Southwest MN, 2021Q1**

### Target Occupations
- Software Developers (OG)
- Writers & Authors
- Computer Network Architects
- Producers & Directors (OG)
- Information Security Analysts (OG)

### Gateway Occupations
- Telecommunications Equipment Installers & Repairers (HS, AG)
- Telecommunications Line Installers & Repairers (HD)
- Prepress Technicians & Workers (HS, AG)
- News Analysts, Reporters, & Journalists (HS)
- Audio & Video Technicians (HS, HD, OG, AG)

### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Designers (HS, AG)</td>
<td>Library Technicians</td>
</tr>
<tr>
<td>Print Binding &amp; Finishing Workers (HS, HD)</td>
<td>Recreation Attendants</td>
</tr>
<tr>
<td>Broadcast Announcers &amp; Radio Disc Jockeys (HS, HD)</td>
<td>Hosts and Hostesses</td>
</tr>
<tr>
<td>Floral Designers</td>
<td>Customer Service Reps</td>
</tr>
<tr>
<td>Music Directors &amp; Composers (HS, HD, OG)</td>
<td>Photo Process Machine Ops</td>
</tr>
</tbody>
</table>
### Top Target Occupations in Arts, Communications, and Information Systems, Southwest Minnesota 2021Q1

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>2021Q1 Empl</th>
<th>Mean Ann Wages(^2)</th>
<th>High-Wage</th>
<th>High-Skill</th>
<th>High-Demand</th>
<th>OG</th>
<th>AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-1256</td>
<td>Software Developers and Software Quality Assurance Analysts and Testers</td>
<td>1,291</td>
<td>$88,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>27-3043</td>
<td>Writers and Authors</td>
<td>156</td>
<td>$55,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-1241</td>
<td>Computer Network Architects</td>
<td>146</td>
<td>$111,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27-2012</td>
<td>Producers and Directors</td>
<td>126</td>
<td>$62,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>15-1212</td>
<td>Information Security Analysts</td>
<td>123</td>
<td>$91,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
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<tr>
<td>27-1011</td>
<td>Art Directors</td>
<td>102</td>
<td>$95,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27-1021</td>
<td>Commercial and Industrial Designers</td>
<td>86</td>
<td>$69,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2021Q1 dataset.
Baseline Worst-Case Scenario 3-Year Forecast for Business, Management, and Administration Careers, Southwest Minnesota 2021Q1

Historical vs. Forecast}

3 Yrs Ago
129,489

Current
116,479

Southwest Minnesota

Chmura Economics JobsEQ, 2021Q1 dataset.
Business, Management, & Administration

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Business, Management, and Administration, Southwest Minnesota 2021Q1

- General and Operations Managers ($91,600)
- Financial Managers ($112,900)
- Project Management Specialists and Business Operations Specialists, All Other ($60,300)
- Cooks, Restaurant ($28,300)
- Accountants and Auditors ($70,000)
- Market Research Analysts and Marketing Specialists ($60,400)
- Management Analysts ($69,400)
- Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other ($98,900)
- Human Resources Specialists ($61,100)
- Insurance Sales Agents ($60,900)
- Amusement and Recreation Attendants ($26,100)
- Bartenders ($24,400)
- Secretaries and Administrative Assistants, Except Legal, Medical, and Executive ($40,200)
- Food Preparation Workers ($29,200)
- Office Clerks, General ($36,700)
- Customer Service Representatives ($37,100)
- Retail Salespersons ($31,300)
- Waiters and Waitresses ($25,700)
- Fast Food and Counter Workers ($24,600)
- Cashiers ($25,900)

Certification Gaps

- Commercial Driver's License (CDL)
- HAZMAT
- Class A Commercial Driver's License (CDL-A)
- Basic Life Support (BLS)
- Certified Management Accountant (CMA)
- Forklift Certified
- Certified Information Systems Auditor (CISA)
- Certified Professional Dog Trainer (CPDT)
- Series 63
- Notary Public

Chmura Economics JobsEQ, 2021Q1 dataset.
## Origin Occupations

**Likely**
- Cashiers
- Retail Salespersons (HD)
- Fast Food and Counter Workers (HD)
- Office Clerks, General (AG)
- Stockers and Order Fillers (HD)

**Aligned**
- Personal Care Aides
- Eligibility Interviewers
- Childcare Workers
- Library Technicians

## Gateway Occupations

- Supervisors of Retail Sales Workers (HD, AG)
- Real Estate Sales Agents (OG, AG)
- Loan Interviewers and Clerks (HD, AG)
- Supervisors of Housekeepers and Janitorial Workers (HD, OG)
- Insurance Claims and Policy Processing Clerks

## Target Occupations (all HW, HD, HS)

- General and Operations Managers (OG, AG)
- Project Management Specialists (OG, AG)
- Accountants and Auditors (OG)
- Financial Managers (OG)
- Market Research Analysts & Marketing Specialists (OG)
## Top Ten Target Occupations in Business, Management, and Administration, Southwest Minnesota 2021Q1

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>2021Q1 Emp</th>
<th>Mean Ann Wages</th>
<th>High-Wage</th>
<th>High-Skill</th>
<th>High-Demand</th>
<th>OG</th>
<th>AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-1021</td>
<td>General and Operations Managers</td>
<td>3,975</td>
<td>$91,600</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>13-1198</td>
<td>Project Management Specialists and Business Operations Specialists, All Other</td>
<td>2,065</td>
<td>$60,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>13-2011</td>
<td>Accountants and Auditors</td>
<td>2,037</td>
<td>$70,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>11-3031</td>
<td>Financial Managers</td>
<td>1,099</td>
<td>$112,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>13-1161</td>
<td>Market Research Analysts and Marketing Specialists</td>
<td>983</td>
<td>$60,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>13-1111</td>
<td>Management Analysts</td>
<td>891</td>
<td>$69,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>27-3031</td>
<td>Public Relations Specialists</td>
<td>392</td>
<td>$54,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
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</tr>
<tr>
<td>13-2052</td>
<td>Personal Financial Advisors</td>
<td>298</td>
<td>$112,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>13-1131</td>
<td>Fundraisers</td>
<td>184</td>
<td>$50,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>15-2031</td>
<td>Operations Research Analysts</td>
<td>119</td>
<td>$77,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
</tbody>
</table>
Baseline Worst-Case Scenario 3-Year Forecast for Engineering, Manufacturing, and Technology Careers, Southwest Minnesota 2021Q1

Historical - Forecast

3 Yrs Ago
95,854

Current
91,844

Chmura Economics JobsEQ, 2021Q1 dataset.
Chmura Economics JobsEQ, 2021Q1 dataset.

Engineering, Manufacturing, & Technology

Certification Gaps

- HAZMAT
- Certified Welder
- Certified Pesticide Applicator
- Light Commercial Refrigeration Certification (NATE Certified)
- The National Institute for Metalworking Skills (NIMS) Certification
- Certified Professional in Supply Management (CPSM)
- Class C Commercial Driver's License (CDL-C)
- Project Management Professional (PMP)
- Certified Maintenance & Reliability Professional (CMRP)
### Engineering, Manufacturing, & Technology

Southwest MN, 2021Q1

<table>
<thead>
<tr>
<th>Origin Occupations</th>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborers &amp; Freight, Stock Movers</td>
<td>Team Assemblers</td>
<td>Parking Lot Attendants</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>Slaughterers &amp; Meat Packers</td>
<td>Retail Sales Workers</td>
</tr>
<tr>
<td>Slaughterers &amp; Meat Packers</td>
<td>Packaging &amp; Filling Machine Operators &amp; Tenders</td>
<td>Stockers and Order Fillers</td>
</tr>
<tr>
<td>Packaging &amp; Filling Machine Operators &amp; Tenders</td>
<td>Passenger Vehicle Drivers (HD, AG)</td>
<td>Janitors and Cleaners</td>
</tr>
<tr>
<td>Passenger Vehicle Drivers (HD, AG)</td>
<td></td>
<td>Customer Service Reps</td>
</tr>
</tbody>
</table>

**Gateway Occupations**
- Heavy and Tractor-Trailer Truck Drivers (HS, HD, OG, AG)
- Maintenance and Repair Workers, General (HD, OG, AG)
- Construction Laborers
- Carpenters (OG)
- Industrial Truck and Tractor Operators

**Target Occupations** (all HW, HD, HS)
- Industrial Engineers (OG, AG)
- Construction Managers (OG)
- Mechanical Engineers (OG, AG)
- Cost Estimators (OG, AG)
- Tool and Die Makers (AG)
# Top Target Occupations in Engineering, Manufacturing, and Technology, Southwest Minnesota 2021Q1

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>2021Q1 Empl</th>
<th>Mean Ann Wages[^2]</th>
<th>High-Wage</th>
<th>High-Skill</th>
<th>High-Demand</th>
<th>OG</th>
<th>AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-2112</td>
<td>Industrial Engineers</td>
<td>994</td>
<td>$86,100</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>11-9021</td>
<td>Construction Managers</td>
<td>947</td>
<td>$92,600</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>17-2141</td>
<td>Mechanical Engineers</td>
<td>695</td>
<td>$80,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>13-1051</td>
<td>Cost Estimators</td>
<td>418</td>
<td>$63,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>51-4111</td>
<td>Tool and Die Makers</td>
<td>207</td>
<td>$55,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
<td></td>
</tr>
<tr>
<td>51-9162</td>
<td>Computer Numerically Controlled Tool Programmers</td>
<td>121</td>
<td>$58,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>17-3027</td>
<td>Mechanical Engineering Technologists and Technicians</td>
<td>117</td>
<td>$56,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>19-2041</td>
<td>Environmental Scientists and Specialists, Including Health</td>
<td>103</td>
<td>$70,100</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>27-1025</td>
<td>Interior Designers</td>
<td>92</td>
<td>$53,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>49-9081</td>
<td>Wind Turbine Service Technicians</td>
<td>85</td>
<td>$56,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
</tbody>
</table>

[^2]: Mean Annual Wages

Chmura Economics JobsEQ, 2021Q1 dataset.
Baseline Worst-Case Scenario 3-Year Forecast for Agriculture, Food, and Natural Resources Careers, Southwest Minnesota 2021Q1
Agriculture, Food, & Natural Resources

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Agriculture, Food, and Natural Resources, Southwest Minnesota 2021Q1

Chmura Economics JobsEQ, 2021Q1 dataset.

Certification Gaps

- Forklift Certified
- Certified Professional Dog Trainer (CPDT)
- Certified Pesticide Applicator
- Light Commercial Refrigeration Certification (NATE Certified)
- Registered Veterinary Technician (RVT)
- Laboratory Animal Technician (LAT)
- EPA Section 608 Certification (EPA 608)
- Assistant Laboratory Animal Technician (ALAT)
- Certified Arborist
- EPA Universal Certification
Agriculture, Food, & Natural Resources

Southwest MN, 2021Q1

**Gateway Occupations**
- Telecommunications Equipment Installers (HS, AG)
- Telecommunications Line Installers (HD)
- Food Science Technicians (HS)
- Animal Breeders (HD, AG)
- Tree Trimmers & Pruners (HD)

**Target Occupations** (all HW, HD, HS)
- Veterinarians (OG, AG)
- Environmental Scientists and Specialists (OG)
- Wind Turbine Service Technicians (OG, AG)
- Postsecondary Biological Science Teachers (OG)
- Soil & Plant Scientists (AG)

**Origin Occupations**

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmworkers, Farm, Ranch, &amp; Aquacultural</td>
<td>Compliance Officers</td>
</tr>
<tr>
<td>Animals</td>
<td>Laborers / Freight Movers</td>
</tr>
<tr>
<td>Meat, Poultry, &amp; Fish Cutters &amp; Trimmers</td>
<td>Stockers and Order Fillers</td>
</tr>
<tr>
<td>Landscaping &amp; Groundskeeping Workers</td>
<td>Cooks</td>
</tr>
<tr>
<td>(HD, AG)</td>
<td>Customer Service Reps</td>
</tr>
<tr>
<td>Farmworkers &amp; Laborers, Crop Nursery &amp;</td>
<td></td>
</tr>
<tr>
<td>Greenhouse</td>
<td></td>
</tr>
<tr>
<td>Food Batchmakers (AG)</td>
<td></td>
</tr>
</tbody>
</table>
# Agriculture, Food, & Natural Resources

## Top Target Occupations in Agriculture, Food, and Natural Resources, Southwest Minnesota 2021Q1

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>2021Q1 Employed</th>
<th>Mean Ann Wages $</th>
<th>High-Wage</th>
<th>High-Skill</th>
<th>High-Demand</th>
<th>OG</th>
<th>AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-1131</td>
<td>Veterinarians</td>
<td>269</td>
<td>$104,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>19-2041</td>
<td>Environmental Scientists and Specialists, Including Health</td>
<td>103</td>
<td>$70,100</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>49-9081</td>
<td>Wind Turbine Service Technicians</td>
<td>85</td>
<td>$56,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>25-1042</td>
<td>Biological Science Teachers, Postsecondary</td>
<td>82</td>
<td>$77,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>19-1013</td>
<td>Soil and Plant Scientists</td>
<td>48</td>
<td>$63,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td>AG</td>
</tr>
<tr>
<td>19-4042</td>
<td>Environmental Science and Protection Technicians, Including Health</td>
<td>35</td>
<td>$57,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-1041</td>
<td>Agricultural Sciences Teachers, Postsecondary</td>
<td>24</td>
<td>$90,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td>AG</td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2021Q1 dataset.
Summary and Discussion
Discussion Question 1

What piece of the data surprised, inspired, validated, or challenged you?
From your perspective, what are the most important considerations in these data for Career and Technical Education programs?
What is one barrier that you can help remove for BIPOC students?
Discussion Question 4

What additional information will you seek out next?
What changes or evaluations to your program will you prioritize next as a result of this data?
Thank you!

If you have questions about this report, please contact:
Erin Olson, Director of Strategic Research,
erin@realtimetalentmn.org
Appendix