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.
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Northeast Minnesota
Overview

Northeast Minnesota

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

Access the full report here: http://www.realtimetalent.org
Community Profile

Northeast Minnesota

Population Race, All Ages

- Grand Rapids: 92.8% White, 3.7% Hispanic/Latinx
- Brainerd: 92.2% White, 0.7% Hispanic/Latinx
- Duluth: 92.0% White, 1.9% Hispanic/Latinx
- Northeast: 92.2% White, 1.9% Hispanic/Latinx
- Minnesota: 82.8% White, 6.4% Hispanic/Latinx

Community Profile

Northeast Minnesota

Educational Attainment, Age 25-64

- Grand Rapids: 4.3% No High School Diploma, 27.6% High School Graduate or GED, 28.3% Some College, No Degree, 16.7% Bachelor's Degree, 16.3% Postgraduate Degree, 6.9%
- Brainerd: 6.0% No High School Diploma, 28.3% High School Graduate or GED, 26.3% Some College, No Degree, 15.5% Bachelor's Degree, 16.5% Postgraduate Degree, 7.4%
- Duluth: 4.6% No High School Diploma, 25.4% High School Graduate or GED, 25.7% Some College, No Degree, 15.8% Bachelor's Degree, 19.5% Postgraduate Degree, 9.0%
- Northeast: 4.9% No High School Diploma, 16.6% High School Graduate or GED, 16.2% Some College, No Degree, 15.7% Bachelor's Degree, 18.4% Postgraduate Degree, 8.3%
- Minnesota: 6.1% No High School Diploma, 21.7% High School Graduate or GED, 21.0% Some College, No Degree, 12.9% Bachelor's Degree, 25.6% Postgraduate Degree, 12.7%

Community Profile

Employment for Northeast Minnesota

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.
Community Profile

Average Annual Wages for Northeast Minnesota

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.

Source: JobsEQ®. Data as of 2021Q1. The shaded areas of the graph represent national recessions.
Community Profile

Northeast Minnesota

- Gross Regional Product (GRP) contracted -6.1%
- Health Care and Social Assistance contributes most to GRP
Workforce of Today & Tomorrow

Forecast

5-Year Forecast Comparison in Northeast Minnesota

Source: JobsEQ®, Data as of 2021Q1
Polling Question

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
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 Clusters for Northeast Minnesota as of 2021Q1

Average Wages ($1,000s)

Average Annual Employment Forecast Rate(%) 2021Q1-2031Q1

Source: JobEQB, Data as of 2021Q1
Mid-Term Occupational Impacts

*High Contact-Intensity Occupations*

Diverging Mid-Term Impacts (greatest losses)

- Waiters and Waitresses (-31.4%)
- Bartenders (-29.6%)
- Supervisors of Food Preparation Workers (-18.9%)
- Passenger Vehicle Drivers (-16.3%)

- No high contact-intensity occupations saw growth over the past year.

Average unemployment rate of **8.3%** 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 Northeast Minnesota, March 1-August 31, 2021 compared to the same dates in 2020 (high-growth occupations by order of volume of postings)
1. Registered Nurses (+102%)
2. Nursing Assistants (+143%)
3. Licensed Practical and Licensed Vocational Nurses (+139%)
4. Social and Human Services Assistant (+56%)
5. Supervisors of Retail Salesworkers (+45%)

Top Sustaining Occupations in Northeast Minnesota September 2020 - 2021
1. Customer Service Representatives (+10%)
2. Laborers and Freight, Stock, and Material Movers (+233%)
3. Light Truck or Delivery Services Drivers (+169%)
4. Software Developers, Applications (+134%)
5. Heavy and Tractor-Trailer Truck Drivers (+65%)
Emerging Career Paths

Trends in Remote Work Opportunities Advertised Online, Northeast Minnesota 2021Q1

1. Customer Service Representatives (+122%)
2. Insurance Sales Agents (+64%)
3. Medical and Health Services Managers (+24%)
4. Registered Nurses (+60%)
5. Computer Occupations, All Other (+141%)
6. Software Developers, Applications (275%)
7. Medical Secretaries (+291%)
8. Management Analysts (+70%)
9. Human Resources Specialists (+560%)
10. Computer User Support Specialists (+111%)

Chmura Economics JobsEQ, 2021Q1 dataset.
Baseline Worst-Case Scenario 10-Year Forecasts by Career Cluster, Northeast Minnesota 2021Q1

- Agriculture, Food & Natural Resources: -6.0%
- Architecture & Construction: -3.6%
- Arts, A/V Technology & Communications: -12.9%
- Business, Management & Administration: -10.7%
- Education & Training: -6.4%
- Finance: -2.3%
- Government & Public Administration: -3.9%
- Health Science: 0.1%
- Hospitality & Tourism: -3.0%
- Human Services: -2.4%
- Information Technology: -5.4%
- Law, Public Safety, Corrections & Security: -9.8%
- Manufacturing: -11.0%
- Marketing, Sales & Service: -4.9%
- Science, Technology, Engineering & Mathematics: -6.3%
- Transportation, Distribution & Logistics: 8.9%
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, Northeast Minnesota 2021Q1

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

Registered Nurses ($71,300) -41
Medical and Health Services Managers ($95,400) -13
Licensed Practical and Licensed Vocational Nurses ($46,100) -9
Nurse Practitioners ($116,900) -8
Nursing Assistants ($34,000) -7
Medical Assistants ($42,400) -6
Respiratory Therapists ($66,700) -4
Physician Assistants ($117,500) -3
Speech Language Pathologists ($70,400)
Medical Secretaries and Administrative Assistants ($40,400) -3

Certification Gaps
- Advanced Cardiac Life Support Certification (ACLS)
- Emergency Medical Technician (EMT)
- Certified Pharmacy Technician (CPT)
- Emergency Nursing Pediatric Course (ENPC)
- Trauma Nursing Core Course (TNCC)
- Medical Technologist (Medical Technologists)
- Medical Laboratory Technician (MLT)
- Registered Respiratory Therapist (RRT)
Health Science Technology
Northeast, 2021Q1

<table>
<thead>
<tr>
<th>Origin Occupations</th>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Assistants (HS, OG)</td>
<td></td>
<td>Childcare Workers</td>
</tr>
<tr>
<td>Home Health Aides (HD)</td>
<td></td>
<td>Customer Service Reps</td>
</tr>
<tr>
<td>Personal Care Aides (HD)</td>
<td></td>
<td>Cooks</td>
</tr>
<tr>
<td>Pharmacy Technicians (OG, AG)</td>
<td></td>
<td>Secretaries</td>
</tr>
<tr>
<td>Psychiatric Technicians (HS, OG, AG)</td>
<td></td>
<td>Cashiers</td>
</tr>
</tbody>
</table>

**Gateway Occupations**
- Licensed Practical Nurses (HS, OG)
- Medical Assistants (HS, OG, AG)
- Medical Dosimetrists (HS, OG)
- Dental Assistants (HS, HD, OG)
- Recreational Therapists (HS, AG)

**Target Occupations (all HW, HD, HS)**
- Registered Nurses (OG)
- Medical and Health Services Managers (OG)
- Nurse Practitioners (OG, AG)
- Speech-Language Pathologists (OG)
- Physician Assistants (OG, AG)
- Veterinarians (OG, AG)
<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>
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</thead>
<tbody>
<tr>
<td>29-1141</td>
<td>Registered Nurses</td>
<td>6,401</td>
<td>$71,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
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<tr>
<td>11-9111</td>
<td>Medical and Health Services Managers</td>
<td>669</td>
<td>$94,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
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<tr>
<td>29-1171</td>
<td>Nurse Practitioners</td>
<td>260</td>
<td>$116,900</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>202</td>
<td>$70,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>29-1071</td>
<td>Physician Assistants</td>
<td>151</td>
<td>$117,500</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>117</td>
<td>$89,000</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>109</td>
<td>$56,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>31-2011</td>
<td>Occupational Therapy Assistants</td>
<td>48</td>
<td>$53,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
<td></td>
</tr>
<tr>
<td>29-1129</td>
<td>Therapists, All Other</td>
<td>41</td>
<td>$56,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
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<tr>
<td>29-1181</td>
<td>Audiologists</td>
<td>17</td>
<td>$83,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
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</tbody>
</table>
Baseline Worst-Case Scenario 3-Year Forecast for Human Services Careers, Northeast Minnesota 2021Q1

- Historical
- Forecast

Chmura Economics JobsEQ, 2021Q1 dataset.
Human Services

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

- Substance Abuse, Behavioral Disorder, and Mental Health Counselors ($48,600)
- Police and Sheriff’s Patrol Officers ($65,100)
- Child, Family, and School Social Workers ($54,600)
- Secondary School Teachers, Except Special and Career/Technical Education ($60,200)
- Court, Municipal, and License Clerks ($47,100)
- Social and Community Service Managers ($66,100)
- Self-Enrichment Teachers ($44,200)
- Firefighters ($43,100)
- First Line Supervisors of Personal Service and Entertainment and Recreation Workers, Except Gambling Services ($43,600)
- Mental Health and Substance Abuse Social Workers ($60,000)
- Exercise Trainers and Group Fitness Instructors ($38,100)
- Legal Secretaries and Administrative Assistants ($50,500)
- Hairdressers, Hairstylists, and Cosmetologists ($30,600)
- Paralegals and Legal Assistants ($49,100)
- Laundry and Dry-Cleaning Workers ($29,600)
- Residential Advisors ($37,400)
- Security Guards ($36,100)
- Childcare Workers ($27,100)
- School Bus Monitors and Protective Service Workers, All Other ($34,800)
- Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers ($24,900)

Certification Gaps

- Child Development Associate (CDA)
- Basic Life Support (BLS)
- Secret Clearance
- Licensed Professional Counselor (LPC)
- Licensed Clinical Social Worker (LCSW)
- AFAA Personal Fitness Trainer
- Certified Alcohol and Drug Counselor (ADC)
- AED Essentials
- Advanced Cardiac Life Support Certification (ACLS)
- First Responder Certification

Chmura Economics JobsEQ, 2021Q1 dataset.
## Human Services

**Northeast, 2021Q1**

### Target Occupations (all HW, HD, HS)
- Social and Community Service Managers (OG)
- Healthcare Social Workers (OG, AG)
- Tutors and Teachers and Instructors, All Other Educational, Guidance, and Career Counselors (OG)
- Mental Health and Substance Abuse Social Workers (OG)

### Gateway Occupations
- Substance Abuse, Behavioral Disorder, and Mental Health Counselors (HS, HD, OG)
- Court, Municipal, and License Clerks (OG)
- Firefighters (HS, OG)
- Self-Enrichment Teachers (HD, OG, AG)
- Clergy (HS, HD, OG, AG)

### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care Aides (HD, AG)</td>
<td>Tellers</td>
</tr>
<tr>
<td>Home Health Aides (HD)</td>
<td>Retail Sales Workers</td>
</tr>
<tr>
<td>Teaching Assistants (HS, HD)</td>
<td>Waiters and Waitresses</td>
</tr>
<tr>
<td>Childcare Workers (HD, AG)</td>
<td>Cashiers</td>
</tr>
<tr>
<td>Social and Human Service Assistants (HD, AG)</td>
<td>Cooks</td>
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</tbody>
</table>
### Top Ten Target Occupations in Human Services, Northeast 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>
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</thead>
<tbody>
<tr>
<td>11-9151</td>
<td>Social and Community Service Managers</td>
<td>386</td>
<td>$66,100</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>21-1022</td>
<td>Healthcare Social Workers</td>
<td>348</td>
<td>$54,600</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
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<tr>
<td>25-3097</td>
<td>Tutors and Teachers and Instructors, All Other</td>
<td>324</td>
<td>$52,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
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<tr>
<td>21-1012</td>
<td>Educational, Guidance, and Career Counselors and Advisors</td>
<td>321</td>
<td>$57,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
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</tr>
<tr>
<td>21-1023</td>
<td>Mental Health and Substance Abuse Social Workers</td>
<td>314</td>
<td>$60,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>25-9031</td>
<td>Instructional Coordinators</td>
<td>233</td>
<td>$73,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
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<tr>
<td>25-1071</td>
<td>Health Specialties Teachers, Postsecondary</td>
<td>199</td>
<td>$100,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
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<td>OG</td>
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<tr>
<td>25-2012</td>
<td>Kindergarten Teachers, Except Special Education</td>
<td>180</td>
<td>$56,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
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<tr>
<td>25-4022</td>
<td>Librarians and Media Collections Specialists</td>
<td>177</td>
<td>$50,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
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<tr>
<td>21-2021</td>
<td>Directors, Religious Activities and Education</td>
<td>174</td>
<td>$55,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td>AG</td>
</tr>
</tbody>
</table>
Baseline Worst-Case Scenario 3-Year Forecast for Arts, Communications, and Information Systems Careers, Northeast Minnesota 2021Q1

3 Yrs Ago
5,737

Current
5,305

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

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Arts, Communications, And Information Systems, Northeast Minnesota 2021Q1

Software Developers and Software Quality Assurance Analysts and Testers ($88,500)
  Computer Systems Analysts ($86,500)
  Photographers ($46,200)
  Musicians and Singers ($57,200)
  Producers and Directors ($58,400)
  Database Administrators and Architects ($94,600)
  Network and Computer Systems Administrators ($73,600)
  Computer Occupations, All Other ($72,400)
  Computer Network Support Specialists ($62,300)
  Information Security Analysts ($88,700)
  Floral Designers ($31,600)
  Graphic Designers ($43,900)
  Editors ($49,100)
  News Analysts, Reporters, and Journalists ($50,200)
  Print Binding and Finishing Workers ($39,400)
  Printing Press Operators ($40,100)

Certification Gaps

- Project Management Professional (PMP)
- Cisco Certified Internetwork Expert (CCIE)
- Cisco Certified Network Associate (CCNA)
- Certified Information Systems Security Professional (CISSP)
- Certified Information Systems Auditor (CISA)
- Certified Ethical Hacker (CEH)
- Certified Information Security Manager (CISM)
- Certified Cloud Security Professional (CCSP)
- Certified Technology Specialist (CTS)
- Commercial Driver's License (CDL)
## Arts, Communications, & Information Systems

**Northeast, 2021Q1**

### Target Occupations
- (all HW, HD, HS)
  - Software Developers (OG)
  - Computer Programmers
  - Producers and Directors (OG)
  - Information Security Analysts (AG)
  - Art Directors (AG)

### Gateway Occupations
- Graphic Designers (HS)
- Photographers (OG, AG)
- Editors (HS)
- News Analysts, Reporters, and Journalists (HS)
- Music Directors and Composers (HS, HD)

### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing Press Operators</td>
<td>Library Technicians</td>
</tr>
<tr>
<td>Floral Designers</td>
<td>Recreation Attendants</td>
</tr>
<tr>
<td>Audio and Video Technicians (HS, HD, OG, AG)</td>
<td>Hosts and Hostesses</td>
</tr>
<tr>
<td>Broadcast Announcers &amp; Radio Disc Jockeys (HS)</td>
<td>Customer Service Reps</td>
</tr>
<tr>
<td>Broadcast Technicians (HS, HD, AG)</td>
<td>Machine Operators</td>
</tr>
</tbody>
</table>
## Top Ten Target Occupations in Arts, Communications, and Information Systems, Northeast 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>758</td>
<td>$88,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
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<tr>
<td>15-1251</td>
<td>Computer Programmers</td>
<td>111</td>
<td>$88,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
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<tr>
<td>27-2012</td>
<td>Producers and Directors</td>
<td>109</td>
<td>$58,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
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<tr>
<td>15-1212</td>
<td>Information Security Analysts</td>
<td>80</td>
<td>$88,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
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<tr>
<td>27-1011</td>
<td>Art Directors</td>
<td>77</td>
<td>$94,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
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<tr>
<td>27-1014</td>
<td>Special Effects Artists and Animators</td>
<td>46</td>
<td>$66,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
<td></td>
</tr>
<tr>
<td>27-1013</td>
<td>Fine Artists, Including Painters, Sculptors, and Illustrators</td>
<td>23</td>
<td>$55,400</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
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<tr>
<td>27-4031</td>
<td>Camera Operators, Television, Video, and Film</td>
<td>21</td>
<td>$51,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
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<tr>
<td>27-4032</td>
<td>Film and Video Editors</td>
<td>16</td>
<td>$66,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27-1022</td>
<td>Fashion Designers</td>
<td>15</td>
<td>$68,000</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, Northeast Minnesota 2021Q1

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

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

Certification Gaps

- Basic Life Support (BLS)
- Certified Public Accountant (CPA)
- HAZMAT
- Class A Commercial Driver's License (CDL-A)
- Project Management Professional (PMP)
- Senior Professional in Human Resources (SPHR)
- First Responder Certification
- Program Management Professional (PgMP)
- Six Sigma Green Belt Certification (SSGB)
- Certified Facility Manager (CFM)
### Business, Management, & Administration

**Northeast, 2021Q1**

#### Target Occupations
- (all HW, HD, HS)
  - General and Operations Managers (OG, AG)
  - Project Management Specialists (OG, AG)
  - Financial Managers (OG)
  - Market Research Analysts & Marketing Specialists (OG)
  - Public Relations Specialists (OG)

#### Gateway Occupations
- Supervisors of Retail Sales Workers- (AG)
- Food Service Managers (HD, OG, AG)
- Insurance Claims and Policy Processing Clerks
- Supervisors of Housekeeping and Janitorial Workers (HD, OG)
- Labor Relations Specialists (HS, AG)
- Postal Service Mail Sorters and Processing Machine Operators

#### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashiers</td>
<td>Library Technicians</td>
</tr>
<tr>
<td>Retail Salespersons (HD)</td>
<td>Eligibility Interviewers</td>
</tr>
<tr>
<td>Fast Food and Counter Workers (HD)</td>
<td>Childcare Workers</td>
</tr>
<tr>
<td>Office Clerks, General</td>
<td></td>
</tr>
<tr>
<td>Waiters and Waitresses (HD)</td>
<td></td>
</tr>
</tbody>
</table>
## Top Ten Target Occupations in Business, Management, and Administration, Northeast 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>11-1021</td>
<td>General and Operations Managers</td>
<td>2,217</td>
<td>$94,700</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>1,463</td>
<td>$61,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>11-3031</td>
<td>Financial Managers</td>
<td>599</td>
<td>$104,400</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>535</td>
<td>$73,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>27-3031</td>
<td>Public Relations Specialists</td>
<td>278</td>
<td>$66,200</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>13-2052</td>
<td>Personal Financial Advisors</td>
<td>155</td>
<td>$128,000</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>134</td>
<td>$63,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>15-2031</td>
<td>Operations Research Analysts</td>
<td>87</td>
<td>$62,800</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>11-2033</td>
<td>Fundraising Managers</td>
<td>62</td>
<td>$110,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>15-2011</td>
<td>Actuaries</td>
<td>17</td>
<td>$98,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Engineering, Manufacturing, & Technology

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Engineering, Manufacturing, and Technology, Northeast Minnesota 2021Q1

Certification Gaps

Class B Commercial Driver’s License (CDL-B)
HAZMAT
Certified Welder
Automobile Technician: Engine Repair (Test A1)
Certified Electronic Systems Technician (EST)
ASNT Central Certification Program Level II - Liquid Penetrant Testing (ACCP-PT)
## Engineering, Manufacturing, & Technology

**Northeast, 2021Q1**

### Origin Occupations

**Likely**
- Laborers and Freight, Stock Movers
- Landscaping and Groundskeeping Workers (HD)
- Passenger Vehicle Drivers (HD, AG)
- Team Assemblers
- Light Truck Drivers

**Aligned**
- Parking Lot Attendants
- Retail Sales Workers
- Stockers and Order Fillers
- Janitors and Cleaners
- Personal Services Managers

### Gateway Occupations

- Maintenance and Repair Workers, General (HD, OG, AG)
- Construction Laborers
- Automotive Service Technicians and Mechanics (HS, AG)
- Inspectors, Testers, Sorters, Samplers, and Weighers
- Highway Maintenance Workers (OG)
- Bus and Truck Mechanics and Diesel Engine Specialists (OG)

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

- Engineers, All Other (OG, AG)
- Environmental Scientists and Specialists (OG)
- Wind Turbine Service Technicians (OG)
- Medical Equipment Repairers (AG)
- Captains, Mates, and Pilots of Water Vessels (AG)
- CNC Tool Programmers
# Engineering, Manufacturing, & Technology

## Top Ten Target Occupations in Engineering, Manufacturing, and Technology, Northeast 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>17-2199</td>
<td>Engineers, All Other</td>
<td>133</td>
<td>$85,400</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>97</td>
<td>$72,000</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>56</td>
<td>$60,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>49-9062</td>
<td>Medical Equipment Repairers</td>
<td>50</td>
<td>$53,100</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td>AG</td>
</tr>
<tr>
<td>53-5021</td>
<td>Captains, Mates, and Pilots of Water Vessels</td>
<td>43</td>
<td>$92,600</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>40</td>
<td>$64,700</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
<td></td>
</tr>
<tr>
<td>17-3021</td>
<td>Aerospace Engineering and Operations Technologists and Technicians</td>
<td>39</td>
<td>$64,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
<td></td>
</tr>
<tr>
<td>15-2041</td>
<td>Statisticians</td>
<td>36</td>
<td>$78,600</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>19-2042</td>
<td>Geoscientists, Except Hydrologists and Geographers</td>
<td>35</td>
<td>$105,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>AG</td>
<td></td>
</tr>
</tbody>
</table>
Baseline Worst-Case Scenario 3-Year Forecast for Agriculture, Food, and Natural Resources Careers, Northeast Minnesota 2021Q1

3 Yrs Ago
10,270

Current
9,821

Historical
Forecast

2017Q2 2018Q2 2019Q2 2020Q2 2021Q2 2022Q2

10,000
9,600
9,200
Agriculture, Food, & Natural Resources

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

Certification Gaps

- Registered Veterinary Technician (RVT)
- Class B Commercial Driver’s License (CDL-B)
- Class A Commercial Driver’s License (CDL-A)
- Laboratory Animal Technician (LAT)
- Certified Professional Dog Trainer (CPDT)
- Forklift Certified
- HAZMAT
- EPA Section 608 Certification (EPA 608)
- Engineer in Training (EIT)
- ServSafe Food Protection Manager Certification
## Agriculture, Food, & Natural Resources

**Northeast, 2021Q1**

### Gateway Occupations
- Logging Equipment Operators (HD)
- Tree Trimmers and Pruners
- Forest and Conservation Technicians (HS)
- Biological Technicians (HS)
- Logging Workers, All Other (HD)
- Farm Equipment Mechanics and Service Technicians

### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscaping and Groundskeeping Workers (HD)</td>
<td>Compliance Officers</td>
</tr>
<tr>
<td>Refuse and Recyclable Material Collectors (AG)</td>
<td>Laborers and Freight Movers</td>
</tr>
<tr>
<td>Animal Caretakers (HD)</td>
<td>Stockers and Order Fillers</td>
</tr>
<tr>
<td>Veterinary Techs (HS, OG)</td>
<td>Cooks</td>
</tr>
<tr>
<td>Bakers (HD, AG)</td>
<td>Customer Service Reps</td>
</tr>
</tbody>
</table>

### Target Occupations
(all HW, HD, HS)
- Veterinarians (OG, AG)
- Environmental Scientists and Specialists (OG)
- Biological Science Teachers, Postsecondary (OG)
- Wind Turbine Service Technicians (OG)
- Captains, Mates, and Pilots of Water Vessels (AG)
- Geoscientists
## Top Ten Target Occupations in Agriculture, Food, and Natural Resources, Northeast 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>29-1131</td>
<td>Veterinarians</td>
<td>117</td>
<td>$89,000</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>97</td>
<td>$72,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>25-1042</td>
<td>Biological Science Teachers, Postsecondary</td>
<td>57</td>
<td>$60,600</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>56</td>
<td>$60,900</td>
<td>HW</td>
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<td>OG</td>
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<td>HS</td>
<td>HD</td>
<td></td>
<td>AG</td>
</tr>
<tr>
<td>19-2042</td>
<td>Geoscientists, Except Hydrologists and Geographers</td>
<td>35</td>
<td>$105,300</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-4042</td>
<td>Environmental Science and Protection Technicians, Including Health</td>
<td>29</td>
<td>$53,500</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-1012</td>
<td>Landscape Architects</td>
<td>27</td>
<td>$68,000</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td>AG</td>
</tr>
<tr>
<td>53-5031</td>
<td>Ship Engineers</td>
<td>20</td>
<td>$87,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-2011</td>
<td>Agricultural Inspectors</td>
<td>16</td>
<td>$57,900</td>
<td>HW</td>
<td>HS</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary and Discussion
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?
Discussion Question 3

What is one barrier that you can help remove for BIPOC students?
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