Workforce Trends & Careers of Tomorrow
For Career & Technical Education

RealTime Talent
Erin Olson, Director of Strategic Research
December 5th, 7th, and 14th 2022

The contents of this series 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.
Workforce Trends & Careers of Tomorrow
For Career & Technical Education

MSP Metro & Central Minnesota

RealTime Talent
Erin Olson, Director of Strategic Research
December 7, 2022

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

- Community Profile
- Workforce Forecast
- Talent Shortage
- Emerging Career Paths
- Career Cluster Overview
- Career Field Insights

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

MSP Metro
Minnesota

Population of Hispanic/Latinx

Population Race, All Ages

Suburban MSP
79.8% 7.2% 0.4% 6.4% 4.1% 5.3%
St. Paul
55.2% 15.5% 0.8% 19.1% 6.3% 9.2%
Minneapolis
62.9% 18.9% 14.5% 9.7% 6.0% 9.6%
MSP Metro
74.7% 0.6% 7.7% 4.6% 6.5%
Minnesota
81.6% 6.4% 4.9% 8.9% 5.5%

American Community Survey 2016-2020.
Community Profile

Central Minnesota

Population Race, All Ages

<table>
<thead>
<tr>
<th>Location</th>
<th>White</th>
<th>Black or African American</th>
<th>American Indian or Alaska Native</th>
<th>Asian</th>
<th>Native Hawaiian or Other Pacific Islander</th>
<th>Some Other Race</th>
<th>Two or More Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffalo</td>
<td>97.5%</td>
<td>0.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Elk River</td>
<td>89.6%</td>
<td>2.9%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>St. Cloud</td>
<td>87.1%</td>
<td>6.4%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Central</td>
<td>91.3%</td>
<td>3.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>81.6%</td>
<td>6.4%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Population of Hispanic/Latinx

- Buffalo: 1.5%
- Elk River: 4.3%
- St. Cloud: 3.3%
- Central: 2.9%
- Minnesota: 5.5%

American Community Survey 2016-2020.
Community Profile

Annual Percent Change in Employment

Source: JohnEQR. Data as of 2022Q1. The shaded areas of the graph represent national recessions.

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 2022Q1.
Community Profile

Regional Unemployment Rate

Unemployment rate data are from the Local Area Unemployment Statistics, provided by the Bureau of Labor Statistics and updated through September 2022.
Community Profile

Average Wage Changes from Prior Year

MSP Metro
Central
Community Profile

MSP Metro
Minnesota

Educational Attainment, Age 25-64

Suburban MSP
- No High School Diploma: 4.4%
- High School Graduate or GED: 17.7%
- Some College, No Degree: 19.3%
- Associate’s Degree: 12.0%
- Bachelor’s Degree: 31.4%
- Postgraduate Degree: 15.2%

St. Paul
- No High School Diploma: 12.2%
- High School Graduate or GED: 19.9%
- Some College, No Degree: 17.6%
- Associate’s Degree: 8.1%
- Bachelor’s Degree: 25.6%
- Postgraduate Degree: 16.5%

Minneapolis
- No High School Diploma: 9.2%
- High School Graduate or GED: 13.6%
- Some College, No Degree: 16.4%
- Associate’s Degree: 7.7%
- Bachelor’s Degree: 33.1%
- Postgraduate Degree: 20.1%

MSP Metro
- No High School Diploma: 6.0%
- High School Graduate or GED: 17.2%
- Some College, No Degree: 18.6%
- Associate’s Degree: 10.8%
- Bachelor’s Degree: 31.2%
- Postgraduate Degree: 16.2%

Minnesota
- No High School Diploma: 6.1%
- High School Graduate or GED: 21.4%
- Some College, No Degree: 20.6%
- Associate’s Degree: 12.9%
- Bachelor’s Degree: 26.1%
- Postgraduate Degree: 13.0%

American Community Survey 2016-2020.
Community Profile

Educational Attainment, Age 25-64

<table>
<thead>
<tr>
<th>Place</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>St. Cloud</td>
<td>6.2%</td>
<td>25.0%</td>
<td>23.8%</td>
<td>16.1%</td>
<td>20.4%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Elk River</td>
<td>6.2%</td>
<td>24.7%</td>
<td>26.0%</td>
<td>18.0%</td>
<td>19.3%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Buffalo</td>
<td>4.4%</td>
<td>25.6%</td>
<td>26.0%</td>
<td>11.7%</td>
<td>22.0%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Central</td>
<td>5.9%</td>
<td>28.2%</td>
<td>24.2%</td>
<td>15.4%</td>
<td>18.6%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>6.1%</td>
<td>21.4%</td>
<td>20.6%</td>
<td>12.9%</td>
<td>26.1%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

American Community Survey 2016-2020.
Community Profile

MSP Metro Minnesota

- Gross Regional Product (GRP) rose +9.2%
- Real Estate and Leasing contributes most to GRP
Community Profile

- Gross Regional Product (GRP) rose +11.5%
- Manufacturing and Healthcare contribute most to GRP
Workforce of Today & Tomorrow

Forecast

0.7% Average Annual Employment Growth Forecast
0.7% Average Annual Employment Growth Forecast
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
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 Clusters in the MSP Metro, 2022Q2

MSP Metro Minnesota
Workforce of Today & Tomorrow Forecast

Industry Clusters for Central Minnesota as of 2022Q2

Average Wages ($1,000s)

Average Annual Employment Forecast Rate(%) 2022Q2-2032Q2

Coal/Oil/Power
LQ: 1.14

Financial Svc.
LQ: 0.65

Metal & Product Mfg.
LQ: 1.79

Agricultural
LQ: 2.73

Food Mfg.
LQ: 1.79

Health
LQ: 1.11

Utilities
LQ: 0.66

Textile/Leather
LQ: 0.87

Consumer Svc.
LQ: 0.79

Source: JobsEQ® Data as of 2022Q2
Workforce of Today & Tomorrow

Forecast

**MSP Metro**

Unemployment rate: **2.4%**

**Central**

Unemployment rate: **2.8%**

*As of 2022Q2*
Talent Shortage

**Occupation Gaps**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Supply Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Developers ($113,700)</td>
<td>-177</td>
</tr>
<tr>
<td>Registered Nurses ($97,600)</td>
<td>-260</td>
</tr>
<tr>
<td>General and Operations Managers ($119,600)</td>
<td>-231</td>
</tr>
<tr>
<td>Cooks, Restaurant ($36,100)</td>
<td>-168</td>
</tr>
<tr>
<td>Maintenance and Repair Workers, General ($52,000)</td>
<td>-96</td>
</tr>
<tr>
<td>Research Analysts and Marketing Specialists ($84,600)</td>
<td>-96</td>
</tr>
<tr>
<td>Financial Managers ($149,700)</td>
<td>-96</td>
</tr>
<tr>
<td>Medical and Health Services Managers ($114,700)</td>
<td>-95</td>
</tr>
<tr>
<td>Management Analysts ($102,100)</td>
<td>-81</td>
</tr>
<tr>
<td>Nurse Practitioners ($127,000)</td>
<td>-79</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Supply Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurses ($81,900)</td>
<td>-36</td>
</tr>
<tr>
<td>General and Operations Managers ($92,700)</td>
<td>-35</td>
</tr>
<tr>
<td>Cooks, Restaurant ($31,400)</td>
<td>-32</td>
</tr>
<tr>
<td>Software Developers ($97,500)</td>
<td>-20</td>
</tr>
<tr>
<td>Elementary School Teachers, Except Special Education ($62,900)</td>
<td>-17</td>
</tr>
<tr>
<td>Heavy and Tractor-Trailer Truck Drivers ($52,300)</td>
<td>-16</td>
</tr>
<tr>
<td>Secondary School Teachers, Except Special and Career/Technical Education ($60,900)</td>
<td>-14</td>
</tr>
<tr>
<td>Medical and Health Services Managers ($100,000)</td>
<td>-14</td>
</tr>
<tr>
<td>Maintenance and Repair Workers, General ($45,800)</td>
<td>-12</td>
</tr>
<tr>
<td>Nurse Practitioners ($117,900)</td>
<td>-12</td>
</tr>
</tbody>
</table>

**New in 2022**

1) Software Developers now ranks as top occupation of shortage statewide, and in the MSP Metro.

2) Two new occupations of the top 10 roles in highest talent shortage are Origin and Gateway Careers that typically require an industry credential: Restaurant Cooks and Maintenance and Repair Workers.
Emerging Career Paths

Total Jobs Advertised Monthly in Minnesota, October 2021-2022

SOURCE: Gartner TalentNeuron Plan accessed 11/3/2022

Chmura Economics JobsEQ, 2022Q2 dataset.

666,152 unique job postings in the MSP Metro (+17%)

87,738 unique job postings in the Central region (+19%)
Emerging Career Paths

Total Remote Job Postings Advertised Monthly in the MSP Metro, October 2021-2022

SOURCE: Gartner TalentNeuron Plan accessed 11/10/2022

Total Remote Job Postings Advertised Monthly in Central Minnesota, October 2021-2022

SOURCE: Gartner TalentNeuron Plan accessed 11/3/2022
## Career Cluster Overview

### Cluster Forecasts by Region

<table>
<thead>
<tr>
<th>Career Cluster</th>
<th>Minnesota</th>
<th>MSP Metro</th>
<th>Northeast</th>
<th>Northwest</th>
<th>Central</th>
<th>Southwest</th>
<th>Southeast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science, Technology, Engineering &amp; Mathematics</td>
<td>6.2% (+)</td>
<td>6.5% (+)</td>
<td>-3.3%</td>
<td>3.0% (+)</td>
<td>6.8% (+)</td>
<td>2.1% (+)</td>
<td>2.9% (+)</td>
</tr>
<tr>
<td>Information Technology</td>
<td>11.6% (+)</td>
<td>11.0% (+)</td>
<td>0.3%</td>
<td>4.7% (+)</td>
<td>8.4% (+)</td>
<td>1.1% (+)</td>
<td>5.7% (+)</td>
</tr>
<tr>
<td>Finance</td>
<td>1.8% (+)</td>
<td>1.4%</td>
<td>-4.8%</td>
<td>-0.5% (+)</td>
<td>2.0%</td>
<td>-4.2%</td>
<td>0.8% (+)</td>
</tr>
<tr>
<td>Health Science</td>
<td>10.1% (+)</td>
<td>12.0% (+)</td>
<td>2.0%</td>
<td>6.9% (+)</td>
<td>10.3% (+)</td>
<td>4.3% (+)</td>
<td>10.5% (+)</td>
</tr>
<tr>
<td>Law, Public Safety, Corrections &amp; Security</td>
<td>5.4% (+)</td>
<td>6.1% (+)</td>
<td>-1.1%</td>
<td>3.5% (+)</td>
<td>6.4%</td>
<td>0.6% (+)</td>
<td>5.8% (+)</td>
</tr>
<tr>
<td>Government &amp; Public Administration</td>
<td>2.8% (+)</td>
<td>2.9% (+)</td>
<td>-3.2%</td>
<td>2.2% (+)</td>
<td>4.9% (+)</td>
<td>-0.4% (+)</td>
<td>2.5% (+)</td>
</tr>
<tr>
<td>Business, Management &amp; Administration</td>
<td>-0.3% (+)</td>
<td>0.1% (+)</td>
<td>-7.0%</td>
<td>-3.1% (+)</td>
<td>0.2%</td>
<td>-6.2% (+)</td>
<td>2.5% (+)</td>
</tr>
<tr>
<td>Architecture &amp; Construction</td>
<td>3.7% (+)</td>
<td>4.6% (+)</td>
<td>-2.8%</td>
<td>2.0% (+)</td>
<td>6.1%</td>
<td>-0.8% (+)</td>
<td>2.7% (+)</td>
</tr>
<tr>
<td>Arts, AV Technology &amp; Communications</td>
<td>3.9% (+)</td>
<td>4.9% (+)</td>
<td>-2.1% (+)</td>
<td>0.2% (+)</td>
<td>4.0%</td>
<td>-6.3% (+)</td>
<td>0.2% (+)</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td>10.3% (+)</td>
<td>12.9% (+)</td>
<td>3.5% (+)</td>
<td>7.0% (+)</td>
<td>10.0% (+)</td>
<td>3.2% (+)</td>
<td>7.1% (+)</td>
</tr>
<tr>
<td>Agriculture, Food &amp; Natural Resources</td>
<td>6.0% (+)</td>
<td>7.0% (+)</td>
<td>-3.0% (+)</td>
<td>-1.0% (+)</td>
<td>2.0%</td>
<td>-5.0% (+)</td>
<td>-1.0% (+)</td>
</tr>
<tr>
<td>Marketing, Sales &amp; Service</td>
<td>-0.6% (+)</td>
<td>0.8% (+)</td>
<td>-9.5%</td>
<td>-4.5% (+)</td>
<td>-1.0%</td>
<td>-7.5% (+)</td>
<td>-4.3% (+)</td>
</tr>
<tr>
<td>Transportation, Distribution &amp; Logistics</td>
<td>7.1% (+)</td>
<td>8.6% (+)</td>
<td>-1.4% (+)</td>
<td>2.9% (+)</td>
<td>7.7%</td>
<td>0.6% (+)</td>
<td>3.9% (+)</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-0.7% (+)</td>
<td>0.3% (+)</td>
<td>-6.5% (+)</td>
<td>-3.6% (+)</td>
<td>2.2%</td>
<td>-5.1% (+)</td>
<td>-2.9% (+)</td>
</tr>
<tr>
<td>Human Services</td>
<td>20.0% (+)</td>
<td>22.6% (+)</td>
<td>11.5% (+)</td>
<td>15.8% (+)</td>
<td>19.2% (+)</td>
<td>13.2% (+)</td>
<td>16.8% (+)</td>
</tr>
<tr>
<td>Hospitality &amp; Tourism</td>
<td>17.3% (+)</td>
<td>18.4% (+)</td>
<td>12.5% (+)</td>
<td>16.5% (+)</td>
<td>19.6% (+)</td>
<td>13.2% (+)</td>
<td>16.2% (+)</td>
</tr>
<tr>
<td><strong>Total - All Occupations</strong></td>
<td>6.0% (+)</td>
<td>7.0% (+)</td>
<td>0.0% (+)</td>
<td>3.0% (+)</td>
<td>7.0% (+)</td>
<td>0.0% (+)</td>
<td>5.0% (+)</td>
</tr>
</tbody>
</table>
## Occupations with No Unemployed Workforce and Employing over 75 Workers, MSP Metro Minnesota

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>Current</th>
<th>5-Year History</th>
<th>5-Year Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>33-1011</td>
<td>First-Line Supervisors of Police and Detectives</td>
<td>916</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>51-4111</td>
<td>Prepress Technicians and Workers</td>
<td>867</td>
<td>27</td>
<td>-2</td>
</tr>
<tr>
<td>29-1041</td>
<td>Optometrists</td>
<td>481</td>
<td>105</td>
<td>88</td>
</tr>
<tr>
<td>29-1211</td>
<td>Anesthesiologists</td>
<td>360</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>11-1031</td>
<td>Legislators</td>
<td>314</td>
<td>n/a</td>
<td>123</td>
</tr>
<tr>
<td>29-1223</td>
<td>Psychiatrists</td>
<td>283</td>
<td>46</td>
<td>58</td>
</tr>
<tr>
<td>29-1214</td>
<td>Emergency Medicine Physicians</td>
<td>267</td>
<td>136</td>
<td>44</td>
</tr>
<tr>
<td>53-4031</td>
<td>Railroad Conductors and Yardmasters</td>
<td>267</td>
<td>7</td>
<td>123</td>
</tr>
<tr>
<td>29-1218</td>
<td>Obstetricians and Gynecologists</td>
<td>256</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td>29-1242</td>
<td>Orthopedic Surgeons, Except Pediatric</td>
<td>237</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>29-1213</td>
<td>Dermatologists</td>
<td>233</td>
<td>6</td>
<td>38</td>
</tr>
<tr>
<td>29-1212</td>
<td>Cardiologists</td>
<td>228</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>53-4011</td>
<td>Locomotive Engineers</td>
<td>200</td>
<td>1</td>
<td>58</td>
</tr>
<tr>
<td>11-9131</td>
<td>Postmasters and Mail Supervisors</td>
<td>177</td>
<td>n/a</td>
<td>52</td>
</tr>
<tr>
<td>29-1241</td>
<td>Ophthalmologists, Except Pediatric</td>
<td>160</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>23-1012</td>
<td>Judicial Law Clerks</td>
<td>140</td>
<td>186</td>
<td>47</td>
</tr>
<tr>
<td>29-1222</td>
<td>Physicians, Pathologists</td>
<td>123</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>51-9095</td>
<td>Pharmacy Aides</td>
<td>120</td>
<td>11</td>
<td>64</td>
</tr>
<tr>
<td>29-1324</td>
<td>Radiologists</td>
<td>118</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>23-1021</td>
<td>Administrative Law Judges, Adjudicators, and Hearing Officers</td>
<td>109</td>
<td>n/a</td>
<td>25</td>
</tr>
<tr>
<td>29-1291</td>
<td>Acupuncturists</td>
<td>102</td>
<td>3</td>
<td>58</td>
</tr>
<tr>
<td>29-1217</td>
<td>Neurologists</td>
<td>96</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>51-9012</td>
<td>Power Distributors and Dispatchers</td>
<td>75</td>
<td>n/a</td>
<td>31</td>
</tr>
<tr>
<td>00-0000</td>
<td>Total - All Occupations</td>
<td>1,812,189</td>
<td>120,050</td>
<td>1,062,080</td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2022Q2 dataset.
# Zero Unemployment

## Occupations with No Unemployed Workforce and Employing over 75 Workers, Central Minnesota 2022Q2

<table>
<thead>
<tr>
<th>SOC</th>
<th>Occupation</th>
<th>Empl</th>
<th>Mean Ann Wages</th>
<th>I.O.</th>
<th>Unempl</th>
<th>Unempl Rate</th>
<th>30-Day Online Job Ads</th>
<th>Empl Change</th>
<th>Ann %</th>
<th>Total Demand</th>
<th>Exits</th>
<th>Transfers</th>
<th>Empl Growth</th>
<th>Ann % Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-2021</td>
<td>Directors, Religious Activities and Education</td>
<td>306</td>
<td>$56,500</td>
<td>1.08</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>-8</td>
<td>-0.5%</td>
<td>193</td>
<td>64</td>
<td>116</td>
<td>13</td>
<td>0.9%</td>
</tr>
<tr>
<td>29-1021</td>
<td>Dentists, General</td>
<td>194</td>
<td>$165,300</td>
<td>0.85</td>
<td>0</td>
<td>0.0%</td>
<td>11</td>
<td>11</td>
<td>1.2%</td>
<td>35</td>
<td>18</td>
<td>8</td>
<td>9</td>
<td>0.9%</td>
</tr>
<tr>
<td>33-1012</td>
<td>First-Line Supervisors of Police and Detectives</td>
<td>189</td>
<td>$94,800</td>
<td>0.88</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>4</td>
<td>0.4%</td>
<td>67</td>
<td>21</td>
<td>40</td>
<td>6</td>
<td>0.6%</td>
</tr>
<tr>
<td>29-1151</td>
<td>Veterinarians</td>
<td>188</td>
<td>$97,800</td>
<td>1.20</td>
<td>0</td>
<td>0.0%</td>
<td>13</td>
<td>32</td>
<td>3.8%</td>
<td>48</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>1.4%</td>
</tr>
<tr>
<td>29-1215</td>
<td>Family Medicine Physicians</td>
<td>175</td>
<td>$230,600</td>
<td>0.90</td>
<td>0</td>
<td>0.0%</td>
<td>20</td>
<td>-19</td>
<td>-2.0%</td>
<td>28</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>0.5%</td>
</tr>
<tr>
<td>29-1216</td>
<td>General Intern Medicine Physicians</td>
<td>146</td>
<td>$256,800</td>
<td>1.28</td>
<td>0</td>
<td>0.0%</td>
<td>10</td>
<td>-3</td>
<td>-0.3%</td>
<td>19</td>
<td>12</td>
<td>8</td>
<td>-1</td>
<td>-0.1%</td>
</tr>
<tr>
<td>21-1092</td>
<td>Probation Officers and Correctional Treatment Specialists</td>
<td>139</td>
<td>$69,500</td>
<td>0.91</td>
<td>0</td>
<td>0.0%</td>
<td>2</td>
<td>-3</td>
<td>-0.4%</td>
<td>61</td>
<td>16</td>
<td>43</td>
<td>3</td>
<td>0.5%</td>
</tr>
<tr>
<td>49-9043</td>
<td>Maintenance Workers, Machinary</td>
<td>136</td>
<td>$51,900</td>
<td>1.32</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>-3</td>
<td>-0.4%</td>
<td>70</td>
<td>24</td>
<td>39</td>
<td>7</td>
<td>1.1%</td>
</tr>
<tr>
<td>19-3034</td>
<td>School Psychologists</td>
<td>131</td>
<td>$74,700</td>
<td>1.26</td>
<td>0</td>
<td>0.0%</td>
<td>14</td>
<td>4</td>
<td>0.6%</td>
<td>49</td>
<td>18</td>
<td>26</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>33-3021</td>
<td>Detectives and Criminal Investigators</td>
<td>131</td>
<td>$77,400</td>
<td>0.72</td>
<td>0</td>
<td>0.0%</td>
<td>5</td>
<td>1</td>
<td>0.2%</td>
<td>50</td>
<td>17</td>
<td>31</td>
<td>5</td>
<td>0.4%</td>
</tr>
<tr>
<td>25-2051</td>
<td>Special Education Teachers, Preschool</td>
<td>125</td>
<td>$60,400</td>
<td>3.37</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>4</td>
<td>0.6%</td>
<td>55</td>
<td>22</td>
<td>26</td>
<td>7</td>
<td>1.0%</td>
</tr>
<tr>
<td>15-1242</td>
<td>Database Administrators</td>
<td>117</td>
<td>$85,800</td>
<td>0.62</td>
<td>0</td>
<td>0.0%</td>
<td>3</td>
<td>47</td>
<td>10.8%</td>
<td>46</td>
<td>14</td>
<td>29</td>
<td>3</td>
<td>0.5%</td>
</tr>
<tr>
<td>33-1021</td>
<td>First-Line Supervisors of Firefighting and Prevention Workers</td>
<td>108</td>
<td>$66,900</td>
<td>0.82</td>
<td>0</td>
<td>0.0%</td>
<td>6</td>
<td>1</td>
<td>1.2%</td>
<td>40</td>
<td>13</td>
<td>22</td>
<td>4</td>
<td>0.8%</td>
</tr>
<tr>
<td>00-0000</td>
<td>Total - All Occupations</td>
<td>272,256</td>
<td>$52,200</td>
<td>1.00</td>
<td>9,934</td>
<td>2.8%</td>
<td>14,106</td>
<td>-1,152</td>
<td>-0.1%</td>
<td>163,771</td>
<td>61,440</td>
<td>93,334</td>
<td>8,998</td>
<td>0.7%</td>
</tr>
</tbody>
</table>
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
## Gateway Occupations of Focus

### Regional Summary of Top High-Demand Industries and Gateway Occupations

<table>
<thead>
<tr>
<th></th>
<th>Overall Unemployment Rate 2022Q2</th>
<th>Overall Mean Wage</th>
<th>Gateway Occupation Unemployment Rate 2022Q2</th>
<th>Top 4-Digit Sub-Industries of High Local Concentration (LQ) and High Demand (replacement or growth)</th>
<th>Top Gateway Occupations with Occupation Gaps and/or Award Gaps in Order of Total Employment, including Unemployment Rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MSP Metro</strong></td>
<td>2.4%</td>
<td>$64,300</td>
<td>2.3%</td>
<td>• Medical Equipment &amp; Supplies Manufacturing (4.25)</td>
<td>• Customer Service Representatives (2.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Scheduled Air Transportation (2.37)</td>
<td>• Office Clerks, General (2.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Insurance Carriers (2.35)</td>
<td>• Secretaries &amp; Administrative Assistants (1.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Electrical Equipment Manufacturing (2.33)</td>
<td>• Heavy &amp; Tractor Trailer Truck Drivers (2.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Bookkeeping, Accounting, &amp; Auditing Clerks (1.8%)</td>
</tr>
<tr>
<td><strong>Central</strong></td>
<td>2.8%</td>
<td>$52,200</td>
<td>2.4%</td>
<td>• Household &amp; Institutional Furniture &amp; Kitchen Cabinet Manufacturing (5.01)</td>
<td>• Supervisors of Retail Sales Workers (1.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Machine Shops; Turned Product; &amp; Screw, Nut, &amp; Bolt Manufacturing (4.58)</td>
<td>• Maintenance &amp; Repair Workers, General (1.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Highway, Street, &amp; Bridge Construction (3.45)</td>
<td>• Light Truck Drivers (2.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Residential Intellectual &amp; Developmental Disability, Mental Health, &amp; Substance Abuse Facilities (3.02)</td>
<td>• Welders, Cutters, Solderers, &amp; Brazers (3.0%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Machinists (2.2%)</td>
</tr>
<tr>
<td><strong>Minnesota Statewide</strong></td>
<td>2.5%</td>
<td>$60,300</td>
<td>2.3%</td>
<td>• Hog and Pig Farming (6.05)</td>
<td>• Heavy Tractor-Trailer &amp; Truck Drivers (OG, AG; 2.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Metal Ore Mining (5.13)</td>
<td>• Bookkeeping, Accounting, &amp; Auditing Clerks (AG; 1.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Other Residential Care Facilities (3.28)</td>
<td>• Maintenance &amp; Repair Workers (OG; 1.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Farm Product Raw Material Merchant Wholesalers (3.18)</td>
<td>• Carpenters (OG; 3.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Light Truck Drivers (AG; 2.2%)</td>
</tr>
</tbody>
</table>
Polling Question – Choose A Field!

Which ONE career field would you like to learn more about in further detail today?

The top 3 selections by the group will be highlighted now through the end of today’s presentation.

(all fields are detailed in the full report)

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
## Health Science Technology

### Summary Statistics

#### MSP Metro

- **2022Q2 Employment:** 164,131 (9.1% of MSP employment)
- **Average Wage:** $79,900 (compared to $64,300 across all occupations)
- **Location Quotient:** 1.00

#### Central

- **2022Q2 Employment:** 25,166 (9.2% of Central employment)
- **Average Wage:** $73,300 (compared to $52,200 across all occupations)
- **Location Quotient:** 1.02

#### Employment Statistics

- **2022Q2 Unemployment:** 2,005 (1.3% rate)
- **30-Day Job Ads:** 14,567*
- **5-Year Ann Avg Employment Change:** 0.6%
- **Forecast 5-Year Ann Employment Change:** 1.1%
- **Total 5-Year Demand:** 75,366

- **2022Q2 Unemployment:** 456 (1.4% rate)
- **30-Day Job Ads:** 2,965*
- **5-Year Ann Avg Employment Change:** -1.4%
- **Forecast 5-Year Ann Employment Change:** 1.0%
- **Total 5-Year Demand:** 11,198

---

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
# Top Occupation & Award Gaps

## MSP Metro

### Top Occupation Gaps
- Registered Nurses
- Medical & Health Services Managers
- Nurse Practitioners
- Licensed Practical & Licensed Vocational Nurses
- Medical Assistants

### Top Award Gaps
- Medical Assistants
- Registered Nurses
- Licensed Practical & Licensed Vocational Nurses
- Medical & Health Services Managers

## Central

### Top Occupation Gaps
- Registered Nurses
- Medical & Health Services Managers
- Nurse Practitioners
- Licensed Practical & Licensed Vocational Nurses
- Speech-Language Pathologists

### Top Award Gaps
- Medical & Health Services Managers
- Nursing Assistants
- Nurse Practitioners
- Physical Therapists
- Pharmacists

---

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
# Health Science Technology

## MSP Metro

**Origin Occupations**

- **Likely**
  - Home Health Aides (HD, AG)
  - Nursing Assistants (HS, HD, OG)
  - Veterinary Technologists & Technicians (HS, HD, OG, AG)
  - Healthcare Support Workers, All Other (HD, AG)
  - Psychiatric Technicians (HS, HD, OG)

- **Aligned**
  - Customer Service Reps
  - Childcare Workers

**Target Occupations** (all HW, HD, HS)
- Registered Nurses (OG, AG)
- Medical & Health Services Managers (OG, AG)
- Dental Hygienists (OG)
- Nurse Practitioners (OG, AG)
- Physical Therapists (OG, AG)

**Gateway Occupations**

- Medical Secretaries & Administrative Assistants (HD, OG, AG)
- Licensed Practical Nurses (HS, HD, OG, AG)
- Medical Assistants (HS, HD, OG, AG)
- Pharmacy Technicians (HD, OG, AG)
- Dental Assistants (HS, HD, OG)
<table>
<thead>
<tr>
<th><strong>Origin Occupations</strong></th>
<th><strong>Likely</strong></th>
<th><strong>Aligned</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Assistants</td>
<td>(HS, HD, OG, AG)</td>
<td>Personal Care Aides</td>
</tr>
<tr>
<td>Home Health Aides</td>
<td>(HD)</td>
<td>Childcare Workers</td>
</tr>
<tr>
<td>Medical Secretaries</td>
<td>(HD, OG, AG)</td>
<td>Secretaries</td>
</tr>
<tr>
<td>Medical Assistants</td>
<td>(HS, HD, OG)</td>
<td>Cashiers</td>
</tr>
<tr>
<td>Pharmacy Technicians</td>
<td>(OG)</td>
<td>Cooks</td>
</tr>
</tbody>
</table>

**Target Occupations** (all HW, HD, HS, OG)
- Registered Nurses
- Medical & Health Services Managers (AG)
- Dental Hygienists (AG)
- Nurse Practitioners (AG)
- Speech-Language Pathologists

**Gateway Occupations** (all HS)
- Licensed Practical Nurses (HD, OG)
- Dental Assistants (HD, OG, AG)
- Medical Dosimetrists (OG)
- Occupational Therapy Assistants (HD, OG, AG)
- Recreational Therapists (AG)
## High Location Quotient

### MSP Metro

<table>
<thead>
<tr>
<th>Object</th>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
</table>
| **Avg. Wage**    | Region: $63,000  
Field: $79,900 | Region: $52,200  
Field: $73,300 |
| **Unemp. Rate**  | Region: 2.4%  
Field: 1.3% | Region: 2.8%  
Field: 1.4% |
| **Origin Occupations** | Home Health Aides  
Nursing Assistants  
Veterinary Technologists & Technicians  
Healthcare Support Workers, All Other  
Psychiatric Technicians | Nursing Assistants  
Home Health Aides  
Medical Secretaries  
Medical Assistants  
Pharmacy Technicians |
| **Gateway Occupations** | Medical Secretaries  
LPNs  
Medical Assistants  
Pharmacy Technicians  
Dental Assistants | LPNs  
Dental Assistants  
Medical Dosimetrists  
Occupational Therapy Assistants  
Recreational Therapists |
| **Target Occupations** | Registered Nurses  
Medical & Health Services Managers  
Dental Hygienists  
Nurse Practitioners  
Physical Therapists | Registered Nurses  
Medical & Health Services Managers  
Dental Hygienists  
Nurse Practitioners  
Speech-Language Pathologists |

### Central

- Genetic Counselors
- Chiropractors
- Nurse Anesthetists
- Pediatric Surgeons
- Dermatologists
## Human Services

### Summary Statistics

#### MSP Metro

- **2022Q2 Employment:** 289,455 (16.0% of MSP employment)
- **Average Wage:** $57,600 (compared to $64,300 across all occupations)
- **Location Quotient:** 1.03
- **2022Q2 Unemployment:** 5,572 (1.9% rate)
- **30-Day Job Ads:** 12,689*
- **5-Year Ann Avg Employment Change:** 0.8%
- **Forecast 5-Year Ann Employment Change:** 1.4%
- **Total 5-Year Demand:** 180,512

#### Central

- **2022Q2 Employment:** 42,448 (15.6% of Central employment)
- **Average Wage:** $49,700 (compared to $52,200 across all occupations)
- **Location Quotient:** 1.00
- **2022Q2 Unemployment:** 1,052 (2.1% rate)
- **30-Day Job Ads:** 1,497*
- **5-Year Ann Avg Employment Change:** 2.4%
- **Forecast 5-Year Ann Employment Change:** 1.2%
- **Total 5-Year Demand:** 25,034

*Indicates live postings during the month of October, compared to 182,561 across all occupations.
# Human Services

## Top Occupation & Award Gaps

### MSP Metro

**Top Occupation Gaps**
- Elementary School Teachers
- Middle School Teachers
- Hairdressers, Hairstylists, & Cosmetologists
- Lawyers
- Preschool Teachers

**Top Award Gaps**
- Teaching Assistants
- Hairdressers, Hairstylists, & Cosmetologists
- Childcare Workers
- Coaches & Scouts
- Substance, Behavioral, & Mental Counselors

### Central

**Top Occupation Gaps**
- Elementary School Teachers
- Secondary School Teachers
- Substance, Behavioral, & Mental Counselors
- Preschool Teachers
- Middle School Teachers

**Top Award Gaps**
- Childcare Workers
- Exercise Trainers & Group Fitness Instructors
- Coaches & Scouts
- Lawyers
- Substitute Teachers, Short-Term

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care Aides (HD, AG)</td>
<td>Retail Sales Workers</td>
</tr>
<tr>
<td>Teaching Assistants (HS, HD, AG)</td>
<td>Secretaries</td>
</tr>
<tr>
<td>Childcare Workers (HD, AG)</td>
<td>Cashiers</td>
</tr>
<tr>
<td>Security Guards (HD, AG)</td>
<td>Cooks</td>
</tr>
<tr>
<td>Preschool Teachers (HS, HD, OG, AG)</td>
<td>Customer Service Reps</td>
</tr>
</tbody>
</table>

### Gateway Occupations

- Social & Human Service Assistants (HD)
- Self-Enrichment Teachers (HD, OG, AG)
- Substance, Behavioral, & Mental Health Counselors (HS, HD, OG, AG)
- Child, Family, & School Social Workers (HS, HD, OG, AG)
- Paralegals & Legal Assistants (HS, HD, OG, AG)

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

- Elementary School Teachers
- Lawyers
- Secondary School Teachers
- Middle School Teachers
- Compliance Officers (AG)
# Human Services

**Central**

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

**Gateway Occupations** (all HD)
- Substance Abuse & Mental Health Counselors (HS, OG, AG)
- Court, Municipal, & License Clerks (OG)
- Clergy (HS, OG)
- Coaches and Scouts (HS, OG, AG)
- Rehabilitation Counselors (HS, OG, AG)

**Target Occupations** (all HW, HD, HS, OG)
- Child, Family, & School Social Workers (AG)
- Educational, Guidance, & Career Counselors (AG)
- Social & Community Service Managers (AG)
- Kindergarten Teachers
- Instructional Coordinators (AG)
### Human Services

#### High Location Quotient

**MSP Metro**
- Preschool Special Ed Teachers
- Postsecondary Area Ethnic & Cultural Studies Teachers
- Court, Municipal, & License Clerks
- Postsecondary Social Work Teachers
- Social Workers, All Other

**Central**
- Preschool Special Ed Teachers
- Court, Municipal, & License Clerks
- Secondary Special Ed Teachers
- Residential Advisors
- Teaching Assistants

#### MSP Metro

<table>
<thead>
<tr>
<th>Category</th>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Wage</td>
<td>Region: $64,300</td>
<td>Region: $52,200</td>
</tr>
<tr>
<td></td>
<td>Field: $57,600</td>
<td>Field: $49,700</td>
</tr>
<tr>
<td>Unemp. Rate</td>
<td>Region: 2.4%</td>
<td>Region: 2.8%</td>
</tr>
<tr>
<td></td>
<td>Field: 1.9%</td>
<td>Field: 2.1%</td>
</tr>
<tr>
<td>Origin Occupations</td>
<td>Personal Care Aides</td>
<td>Personal Care Aides</td>
</tr>
<tr>
<td></td>
<td>Teaching Assistants</td>
<td>Teaching Assistants</td>
</tr>
<tr>
<td></td>
<td>Childcare Workers</td>
<td>Childcare Workers</td>
</tr>
<tr>
<td></td>
<td>Security Guards</td>
<td>Social &amp; Human Service Assistants</td>
</tr>
<tr>
<td></td>
<td>Preschool Teachers</td>
<td></td>
</tr>
<tr>
<td>Gateway Occupations</td>
<td>Social &amp; Human Service Assistants</td>
<td>Substance Abuse &amp; Mental Health Counselors</td>
</tr>
<tr>
<td></td>
<td>Self-Enrichment Teachers</td>
<td>Court, Municipal, &amp; License Clerks</td>
</tr>
<tr>
<td></td>
<td>Substance Abuse &amp; Mental Health Counselors</td>
<td>Clergy</td>
</tr>
<tr>
<td></td>
<td>Child, Family, &amp; School Social Workers</td>
<td>Coaches &amp; Scouts</td>
</tr>
<tr>
<td></td>
<td>Paralegals &amp; Legal Assistants</td>
<td>Rehabilitation Counselors</td>
</tr>
<tr>
<td>Target Occupations</td>
<td>Elementary School Teachers</td>
<td>Child, Family, &amp; School Social Workers</td>
</tr>
<tr>
<td></td>
<td>Lawyers</td>
<td>Educational, Guidance, &amp; Career Counselors</td>
</tr>
<tr>
<td></td>
<td>Secondary School Teachers</td>
<td>Social &amp; Community Service Managers</td>
</tr>
<tr>
<td></td>
<td>Middle School Teachers</td>
<td>Kindergarten Teachers</td>
</tr>
<tr>
<td></td>
<td>Compliance Officers</td>
<td>Instructional Coordinators</td>
</tr>
</tbody>
</table>

---

Chmura Economics JobsEQ, 2022Q2 dataset.
## Arts, Communications, & Information Systems

### Summary Statistics

<table>
<thead>
<tr>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2022Q2 Employment</strong>: 110,861 (6.1% of MSP employment)</td>
<td><strong>2022Q2 Employment</strong>: 8,226 (3.0% of Central employment)</td>
</tr>
<tr>
<td><strong>Average Wage</strong>: $89,200 (compared to $64,300 across all occupations)</td>
<td><strong>Average Wage</strong>: $70,400 (compared to $52,200 across all occupations)</td>
</tr>
<tr>
<td><strong>Location Quotient</strong>: 1.28</td>
<td><strong>Location Quotient</strong>: 0.63</td>
</tr>
<tr>
<td><strong>2022Q2 Unemployment</strong>: 1,837 (1.7% rate)</td>
<td><strong>2022Q2 Unemployment</strong>: 227 (2.1% rate)</td>
</tr>
<tr>
<td><strong>30-Day Job Ads</strong>: 12,619*</td>
<td><strong>30-Day Job Ads</strong>: 508*</td>
</tr>
<tr>
<td><strong>5-Year Ann Avg Employment Change</strong>: 2.0%</td>
<td><strong>5-Year Ann Avg Employment Change</strong>: 1.0%</td>
</tr>
<tr>
<td><strong>Forecast 5-Year Ann Employment Change</strong>: 0.9%</td>
<td><strong>Forecast 5-Year Ann Employment Change</strong>: 0.6%</td>
</tr>
<tr>
<td><strong>Total 5-Year Demand</strong>: 50,389</td>
<td><strong>Total 5-Year Demand</strong>: 3,771</td>
</tr>
</tbody>
</table>

*Indicates live postings during the month of October, compared to 182,561 across all occupations.
## Arts, Communications, & Information Systems

### Top Occupation & Award Gaps

<table>
<thead>
<tr>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top Occupation Gaps</strong></td>
<td><strong>Top Occupation Gaps</strong></td>
</tr>
<tr>
<td>• Software Developers</td>
<td>• Software Developers</td>
</tr>
<tr>
<td>• Information Security Analysts</td>
<td>• Photographers</td>
</tr>
<tr>
<td>• Computer Systems Analysts</td>
<td>• Information Security Analysts</td>
</tr>
<tr>
<td>• Software Quality Assurance Analysts &amp; Testers</td>
<td>• Musicians &amp; Singers</td>
</tr>
<tr>
<td>• Computer Network Support Specialists</td>
<td>• Writers &amp; Authors</td>
</tr>
<tr>
<td><strong>Top Award Gaps</strong></td>
<td><strong>Top Award Gaps</strong></td>
</tr>
<tr>
<td>• Software Developers</td>
<td>• Computer Systems Analysts</td>
</tr>
<tr>
<td>• Computer Systems Analysts</td>
<td>• Computer User Support Specialists</td>
</tr>
<tr>
<td>• Computer User Support Specialists</td>
<td>• Music Directors &amp; Composers</td>
</tr>
<tr>
<td>• Musicians &amp; Singers</td>
<td>• Musicians &amp; Singers</td>
</tr>
<tr>
<td>• Computer Occupations, All Other</td>
<td>• Photographers</td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
Arts, Communications, & Information Systems

MSP Metro

**Target Occupations** (all HW, HD, HS, OG, AG)
- Software Developers
- Computer Systems Analysts
- Computer Network Support Specialists
- Computer Occupations, All Other
- Network & Computer Systems Administrators

**Gateway Occupations**
- Computer User Support Specialists (HS, HD, AG)
- Graphic Designers (HS, AG)
- Printing Press Operators (AG)
- Photographers (HD, OG, AG)
- Telecommunications Equipment Installers & Repairers (HS, HD, AG)

**Origin Occupations**

**Likely**
- Floral Designers
- Broadcast Announcers & Radio Disc Jockeys
- Costume Attendants (HD, AG)

**Aligned**
- Library Technicians (HS, HD, OG, AG)
- Hosts & Hostesses
- Customer Service Representatives
- Photo Process Machine Operators
**Arts, Communications, & Information Systems**

**Central**

<table>
<thead>
<tr>
<th><strong>Origin Occupations</strong></th>
<th><strong>Likely</strong></th>
<th><strong>Aligned</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing Press Operators (AG)</td>
<td></td>
<td>Library Technicians</td>
</tr>
<tr>
<td>Print Binding &amp; Finishing Workers</td>
<td></td>
<td>Recreation Attendants</td>
</tr>
<tr>
<td>Floral Designers</td>
<td></td>
<td>Hosts and Hostesses</td>
</tr>
<tr>
<td>Broadcast Announcers &amp; Radio Disc Jockeys (HS)</td>
<td></td>
<td>Customer Service Reps</td>
</tr>
<tr>
<td>Disc Jockeys, Except Radio (AG)</td>
<td></td>
<td>Photo Process Machine Ops</td>
</tr>
</tbody>
</table>

**Gateway Occupations**

- Graphic Designers (HS, AG)
- Photographers (HD, OG, AG)
- Telecommunications Line Installers (HD, OG)
- Prepress Technicians & Workers (HS, AG)
- News Analysts, Reporters, & Journalists (HS)

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

- Software Developers (OG)
- Computer Network Support Specialists (OG)
- Writers & Authors (OG)
- Telecommunications Equipment Installers (AG)
- Software Quality Assurance Analysts (OG)
# Arts, Communications, & Information Systems

## MSP Metro Central

### High Location Quotient

<table>
<thead>
<tr>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Avg. Wage</strong></td>
<td></td>
</tr>
<tr>
<td>Region: $64,300</td>
<td>Region: $52,200</td>
</tr>
<tr>
<td>Field: $69,200</td>
<td>Field: $70,400</td>
</tr>
<tr>
<td><strong>Unempl. Rate</strong></td>
<td></td>
</tr>
<tr>
<td>Region: 2.4%</td>
<td>Region: 2.8%</td>
</tr>
<tr>
<td>Field: 1.7%</td>
<td>Field: 2.1%</td>
</tr>
<tr>
<td><strong>Origin Occupations</strong></td>
<td></td>
</tr>
<tr>
<td>Floral Designers</td>
<td>Printing Press Operators</td>
</tr>
<tr>
<td>Broadcast Announcers &amp;</td>
<td>Print Binding &amp; Finishing</td>
</tr>
<tr>
<td>Radio Disc Jockeys</td>
<td>Workers</td>
</tr>
<tr>
<td>Costume Attendants</td>
<td>Floral Designers</td>
</tr>
<tr>
<td></td>
<td>Broadcast Announcers</td>
</tr>
<tr>
<td></td>
<td>Disc Jockeys</td>
</tr>
<tr>
<td><strong>Gateway Occupations</strong></td>
<td></td>
</tr>
<tr>
<td>Computer User Support</td>
<td>Graphic Designers</td>
</tr>
<tr>
<td>Specialists</td>
<td>Photographers</td>
</tr>
<tr>
<td>Graphic Designers</td>
<td>Telecommunications Line</td>
</tr>
<tr>
<td>Printing Press Operators</td>
<td>Installers</td>
</tr>
<tr>
<td>Photographers</td>
<td>Prepress Technicians</td>
</tr>
<tr>
<td>Telecommunications Equipment Installers</td>
<td>News Analysts, Reporters, &amp; Journalists</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Target Occupations</strong></td>
<td></td>
</tr>
<tr>
<td>Software Developers</td>
<td>Software Developers</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>Computer Network Support</td>
</tr>
<tr>
<td></td>
<td>Specialists</td>
</tr>
<tr>
<td>Computer Network Support</td>
<td>Writers &amp; Authors</td>
</tr>
<tr>
<td>Specialists</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>Computer Occupations, All</td>
<td>Equipment Installers</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Network &amp; Computer Systems</td>
<td></td>
</tr>
<tr>
<td>Administrators</td>
<td></td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2022Q2 dataset.
# Business, Management, & Admin

## Summary Statistics

### MSP Metro

- **2022Q2 Employment:** 812,613 (44.8% of MSP employment)
- **Average Wage:** $62,400 (compared to $64,300 across all occupations)
- **Location Quotient:** 1.02
- **2022Q2 Unemployment:** 21,419 (2.7% rate)
- **30-Day Job Ads:** 58,255*
- **5-Year Ann Avg Employment Change:** -1.0%
- **Forecast 5-Year Ann Employment Change:** 0.4%
- **Total 5-Year Demand:** 512,475

### Central

- **2022Q2 Employment:** 109,789 (40.3% of Central employment)
- **Average Wage:** $47,400 (compared to $52,200 across all occupations)
- **Location Quotient:** 0.91
- **2022Q2 Unemployment:** 4,734 (3.3% rate)
- **30-Day Job Ads:** 5,894*
- **5-Year Ann Avg Employment Change:** -0.4%
- **Forecast 5-Year Ann Employment Change:** 0.5%
- **Total 5-Year Demand:** 74,996

---

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
### Top Occupation Gaps

**MSP Metro**
- General & Operations Managers
- Restaurant Cooks
- Market Research Analysts & Specialists
- Financial Managers
- Management Analysts

**Central**
- General & Operations Managers
- Restaurant Cooks
- Financial Managers
- Market Research Analysts & Specialists
- Management Analysts

### Top Award Gaps

**MSP Metro**
- General & Operations Managers
- Management Analysts
- Business Operations Specialists, All Other
- Human Resources Specialists
- Accountants & Auditors

**Central**
- General & Operations Managers
- Human Resources Specialists
- Business Operations Specialists, All Other
- Project Management Specialists
- Management Analysts

*Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.*
Target Occupations (all HW, HD, HS, OG, AG)
- General & Operations Managers
- Accountants & Auditors
- Business Operations Specialists, All Other
- Management Analysts
- Market Research Analysts & Marketing Specialists

Gateway Occupations
- Customer Service Representatives (HD, AG)
- Office Clerks, General (HD, AG)
- Secretaries and Administrative Assistants (HD, AG)
- Bookkeeping, Accounting, and Auditing Clerks (HS, HD, AG)
- Supervisors of Retail Workers (HD)
- Supervisors of Food Preparation & Serving Workers (HD, OG, AG)

Origin Occupations

**Likely**
- Retail Salespersons (HD)
- Cashiers (HD)
- Fast Food & Counter Workers (HD)
- Janitors & Cleaners (HD)
- Stockers & Order Fillers (HD)

**Aligned**
- Library Technicians
- Eligibility Interviewers
- Childcare Workers
### Business, Management, & Administration

#### Central

<table>
<thead>
<tr>
<th><strong>Origin Occupations</strong></th>
<th><strong>Likely</strong></th>
<th><strong>Aligned</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashiers</td>
<td></td>
<td>Personal Care Aides</td>
</tr>
<tr>
<td>Retail Salespersons (HD)</td>
<td></td>
<td>Eligibility Interviewers</td>
</tr>
<tr>
<td>Fast Food &amp; Counter Workers (HD)</td>
<td></td>
<td>Childcare Workers</td>
</tr>
<tr>
<td>Office Clerks, General (HD, AG)</td>
<td></td>
<td>Library Technicians</td>
</tr>
<tr>
<td>Janitors &amp; Cleaners, Except Maids</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Target Occupations** (all HW, HD, HS, OG)
- General & Operations Managers (AG)
- Project Management Specialists (AG)
- Market Research Analysts & Marketing Specialists
- Human Resource Specialists (AG)
- Management Analysts (AG)

**Gateway Occupations**
- Supervisors of Retail Sales Workers (HD, AG)
- Bookkeeping, Accounting, & Auditing Clerks (HS, HD)
- Real Estate Sales Agents (OG)
- Supervisors of Housekeepers & Janitorial Workers (HD)
- Loan Interviewers & Clerks
### Business, Management, & Admin

<table>
<thead>
<tr>
<th>High Location Quotient</th>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
</table>
| **Avg. Wage**          | Region: $64,300  
                        | Field: $62,400   | Region: $52,200  
                        | Field: $47,400   |
| **Unemp. Rate**        | Region: 2.4%  
                        | Field: 2.7%      | Region: 2.8%  
                        | Field: 3.3%      |
| **Origin Occupations** | • Retail Salespersons  
                        | • Cashiers       | • Cashiers  
                        | • Retail Salespersons |
                        | • Fast Food & Counter Workers | • Fast Food & Counter Workers | • Fast Food & Counter Workers |
                        | • Janitors & Cleaners    | • Office Clerks, General | • Office Clerks, General |
                        | • Stockers & Order Fillers | • Janitors & Cleaners | • Janitors & Cleaners |
| **Gateway Occupations**| • Customer Service Representatives | • Supervisors of Retail Workers | • Supervisors of Retail Workers |
                        | • Office Clerks, General | • Bookkeeping, Accounting, & Auditing Clerks | • Bookkeeping, Accounting, & Auditing Clerks |
                        | • Secretaries & Administrative Assistants | • Real Estate Sales Agents | • Real Estate Sales Agents |
                        | • Bookkeeping Clerks | • Supervisors of Housekeeping & Janitorial Workers | • Supervisors of Housekeeping & Janitorial Workers |
                        | • Supervisors of Retail Workers | • Loan Interviewers & Clerks | • Loan Interviewers & Clerks |
| **Target Occupations** | • General & Operations Managers  
                        | • Accountants & Auditors  
                        | • Business Operations Specialists  
                        | • Management Analysts  
                        | • Market Research Analysts | • General & Operations Managers  
                        | • Project Mgmt Specialists  
                        | • Market Research Analysts  
                        | • Human Resource Specialists  
                        | • Management Analysts |
# Engineering, Manufacturing, & Technology

## Summary Statistics

### MSP Metro
- **2022Q2 Employment:** 417,324 (23.0% of MSP employment)
- **Average Wage:** $60,200 (compared to $64,300 across all occupations)
- **Location Quotient:** 0.94
- **2022Q2 Unemployment:** 10,787 (2.8% rate)
- **30-Day Job Ads:** 20,876*
- **5-Year Ann Avg Employment Change:** 0.1%
- **Forecast 5-Year Ann Employment Change:** 0.4%
- **Total 5-Year Demand:** 228,264

### Central
- **2022Q2 Employment:** 76,228 (28.0% of Central employment)
- **Average Wage:** $51,200 (compared to $52,200 across all occupations)
- **Location Quotient:** 1.14
- **2022Q2 Unemployment:** 3,225 (2.9% rate)
- **30-Day Job Ads:** 3,260*
- **5-Year Ann Avg Employment Change:** 0.4%
- **Forecast 5-Year Ann Employment Change:** 0.5%
- **Total 5-Year Demand:** 42,304

---

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
### Top Occupation & Award Gaps

#### MSP Metro

**Top Occupation Gaps**
- Maintenance & Repair Workers
- Heavy & Tractor Trailer Truck Drivers
- Industrial Machinery Mechanics
- Industrial Engineers
- Construction Managers

**Top Award Gaps**
- Welders, Cutters, Solderers, & Brazers
- Industrial Engineers
- Industrial Engineering Technicians
- Civil Engineers
- Automotive Service Technicians & Mechanics

#### Central

**Top Occupation Gaps**
- Heavy & Tractor Trailer Truck Drivers
- Maintenance & Repair Workers, General
- Industrial Machinery Mechanics
- Carpenters
- Construction Managers

**Top Award Gaps**
- Welders, Cutters, Solderers, & Brazers
- Automotive Service Technicians & Mechanics
- Cost Estimators
- Civil Engineers
- Heavy & Tractor Trailer Truck Drivers

---

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
### Engineering, Manufacturing, & Technology

**MSP Metro**

#### Target Occupations
(all HW, HD, HS)
- Industrial Engineers (OG, AG)
- Purchasing Agents, Except Wholesale, Retail (AG)
- Construction Managers (OG, AG)
- Mechanical Engineers (OG)
- Architectural & Engineering Managers (OG)

#### Gateway Occupations
- Heavy & Tractor Trailer Drivers (HS, HD, OG, AG)
- Maintenance & Repair Workers, General (HD, OG)
- Light Truck Drivers (HD, AG)
- Construction Laborers (HD)
- Carpenters (OG)

#### Origin Occupations

<table>
<thead>
<tr>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborers &amp; Freight, Stock Movers (HD)</td>
<td>Parking Lot Attendants</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>Retail Sales Workers</td>
</tr>
<tr>
<td>Landscaping &amp; Groundskeeping Workers (HD)</td>
<td>Stockers and Order Fillers</td>
</tr>
<tr>
<td>Packers &amp; Packagers, Hand</td>
<td>Janitors and Cleaners</td>
</tr>
<tr>
<td>Packaging &amp; Filling Machine Operators &amp; Tenders (OG)</td>
<td></td>
</tr>
</tbody>
</table>
### Engineering, Manufacturing, & Technology

**Central**

#### Origin Occupations
- Laborers & Freight, Stock Movers (HD)
- Team Assemblers
- Landscaping & Groundskeeping Workers (HD, AG)
- Bus Drivers, School (HD, AG)
- Packaging & Filler Machine Operators (OG)

#### Likely
- Parking Lot Attendants
- Retail Sales Workers
- Stockers and Order Fillers
- Janitors and Cleaners

#### Aligned
- Heavy & Tractor-Trailer Truck Drivers
- Construction Managers
- Industrial Engineers
- Heating, AC, & Refrigeration Mechanics
- Mechanical Engineers

#### Gateway Occupations
- Construction Laborers (HD)
- Maintenance & Repair Workers, General (HD, OG, AG)
- Light Truck Drivers (HD, AG)
- Automotive Service Technicians & Mechanics (HS, OG, AG)
- Welders, Cutters, Solderers, & Brazers (HD, OG, AG)

#### Target Occupations (all HW, HD, HS, OG, AG)
- Heavy & Tractor-Trailer Truck Drivers
- Construction Managers
- Industrial Engineers
- Heating, AC, & Refrigeration Mechanics
- Mechanical Engineers
# Engineering, Manufacturing, & Technology

## High Location Quotient

<table>
<thead>
<tr>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
</table>
| **Avg. Wage** | **Region:** $64,300  
**Field:** $60,200 | **Region:** $52,200  
**Field:** $51,200 |
| **Unemployment Rate** | **Region:** 2.4%  
**Field:** 2.8% | **Region:** 2.8%  
**Field:** 2.9% |

### Origin Occupations

- **MSP Metro**: Laborers & Stock Movers, Team Assemblers, Landscaping & Groundskeeping Workers, Packers & Packagers, Packaging & Filling Machine Operators
- **Central**: Laborers & Stock Movers, Team Assemblers, Landscaping & Groundskeeping Workers, School Bus Drivers, Packaging & Filling Machine Operators & Tenders

### Gateway Occupations

- **MSP Metro**: Heavy & Tractor Trailer Drivers, Maintenance & Repair Workers, General, Light Truck Drivers, Construction Laborers, Carpenters
- **Central**: Construction Laborers, Maintenance & Repair Workers, All Other, Light Truck Drivers, Automotive Service Techs, Welders, Cutters, Solderers, & Brazers

### Target Occupations

- **MSP Metro**: Industrial Engineers, Purchasing Agents, Construction Managers, Mechanical Engineers, Architectural & Engineering Managers
- **Central**: Heavy & Tractor Trailer Truck Drivers, Construction Managers, Industrial Engineers, HVAC Mechanics, Mechanical Engineers
## Agriculture, Food, & Natural Resources

### Summary Statistics

<table>
<thead>
<tr>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2022Q2 Employment:</strong> 68,191 (3.8% of MSP employment)</td>
<td><strong>2022Q2 Employment:</strong> 20,372 (7.5% of Central employment)</td>
</tr>
<tr>
<td><strong>Average Wage:</strong> $61,700 (compared to $64,300 across all occupations)</td>
<td><strong>Average Wage:</strong> $54,000 (compared to $52,200 across all occupations)</td>
</tr>
<tr>
<td><strong>Location Quotient:</strong> 0.71</td>
<td><strong>Location Quotient:</strong> 1.41</td>
</tr>
<tr>
<td><strong>2022Q2 Unemployment:</strong> 1,594 (2.4% rate)</td>
<td><strong>2022Q2 Unemployment:</strong> 556 (2.3% rate)</td>
</tr>
<tr>
<td><strong>30-Day Job Ads:</strong> 3,537*</td>
<td><strong>30-Day Job Ads:</strong> 457*</td>
</tr>
<tr>
<td><strong>5-Year Ann Avg Employment Change:</strong> 0.0%</td>
<td><strong>5-Year Ann Avg Employment Change:</strong> -0.6%</td>
</tr>
<tr>
<td><strong>Forecast 5-Year Ann Employment Change:</strong> 0.7%</td>
<td><strong>Forecast 5-Year Ann Employment Change:</strong> 0.2%</td>
</tr>
<tr>
<td><strong>Total 5-Year Demand:</strong> 41,749</td>
<td><strong>Total 5-Year Demand:</strong> 11,920</td>
</tr>
</tbody>
</table>

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
## Agriculture, Food, & Natural Resources

### Top Occupation & Award Gaps

#### MSP Metro

**Top Occupation Gaps**
- Aircraft Mechanics & Service Technicians
- Plumbers, Pipefitters, & Steamfitters
- Veterinary Technologists & Technicians
- HVAC Mechanics & Installers
- Farmers, Ranchers, & Agricultural Managers

**Top Award Gaps**
- Veterinary Technologists & Technicians
- Veterinary Assistants
- Environmental Scientists & Specialists
- Environmental Engineers
- Telecommunications Equipment Installers

#### Central

**Top Occupation Gaps**
- Farmers, Ranchers, & Agricultural Managers
- Plumbers, Pipefitters, & Steamfitters
- Supervisors of Landscaping & Groundskeepers
- Chefs & Head Cooks
- Veterinary Technologists & Technicians

**Top Award Gaps**
- Farmers, Ranchers, & Agricultural Managers
- Veterinarians
- Veterinary Technologists & Technicians
- Veterinary Assistants
- Food Scientists & Technologists

---

Chmura Economics JobsEQ, 2022Q2 dataset. *Indicates live postings during the month of October, compared to 182,561 across all occupations.
### Agriculture, Food, & Natural Resources

**MSP Metro**

<table>
<thead>
<tr>
<th>Origin Occupations</th>
<th>Likely</th>
<th>Aligned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landscaping &amp; Groundskeeping Workers (HD)</td>
<td>Compliance Officers</td>
</tr>
<tr>
<td></td>
<td>Animal Caretakers (HD, AG)</td>
<td>Laborers &amp; Freight Movers</td>
</tr>
<tr>
<td></td>
<td>Bakers (HD, AG)</td>
<td>Stockers &amp; Order Fillers</td>
</tr>
<tr>
<td></td>
<td>Farmworkers &amp; Laborers</td>
<td>Customer Service Reps</td>
</tr>
<tr>
<td></td>
<td>Veterinary Techs (HS, HD, OG, AG)</td>
<td>Cooks</td>
</tr>
</tbody>
</table>

**Gateway Occupations**
- Supervisors of Groundskeeping Workers (HD, OG)
- Telecommunications Equipment Installers & Repairers (HS, HD, AG)
- Chefs & Head Cooks (HD, OG, AG)
- Refuse and Recyclable Material Collectors (HD, AG)
- Chemical Technicians (HS, HD)

**Target Occupations** (all HW, HD, HS)
- Aircraft Mechanics & Service Technicians (OG, AG)
- Environmental Scientists & Specialists (OG, AG)
- Veterinarians (OG)
- Life, Physical, & Social Science Technicians (AG)
- Biological Science Teachers, Postsecondary (OG)
### Agriculture, Food, & Natural Resources

#### Central

**Origin Occupations**
- Landscaping & Groundskeeping Workers (HD, AG)
- Farmworkers, Farm, Ranch, & Aquacultural Animals
- Farmworkers & Crop Laborers
- Animal Caretakers (HD)
- Food Batchmakers

**Likely**
- Compliance Officers
- Laborers and Freight Movers
- Stockers and Order Fillers
- Cooks
- Customer Service Reps

**Aligned**
- HVAC Mechanics (OG, AG)
- Veterinarians (OG, AG)
- Telecomms Equipment Installers & Repairers (AG)
- Conservation Scientists
- Food Scientists & Technologists (AG)
- Wind Turbine Service Technicians (OG, AG)

**Gateway Occupations**
- Supervisors of Landscaping, Lawn Service (HD, OG, AG)
- Refuse & Recyclable Material Collectors (HD)
- Farm Equipment Mechanics & Service Technicians (HD, OG, AG)
- Chefs & Head Cooks (HD, OG, AG)
- Tree Trimmers & Pruners

**Target Occupations** (all HW, HD, HS)
- HVAC Mechanics (OG, AG)
- Veterinarians (OG, AG)
- Telecomms Equipment Installers & Repairers (AG)
- Conservation Scientists
- Food Scientists & Technologists (AG)
- Wind Turbine Service Technicians (OG, AG)
# Agriculture, Food, & Natural Resources

## MSP Metro Central

### High Location Quotient

<table>
<thead>
<tr>
<th>MSP Metro</th>
<th>Central</th>
</tr>
</thead>
</table>
| **Avg. Wage** | **Region:** $64,300  
              **Field:** $61,700 | **Region:** $52,200  
              **Field:** $64,000 |
| **Unemp. Rate** | **Region:** 2.4%  
                 **Field:** 2.4% | **Region:** 2.8%  
                 **Field:** 2.3% |

### Origin Occupations

- MSP Metro: Landscaping & Groundskeeping Workers, Animal Caretakers, Bakers, Farmworkers & Laborers, Crop, Nursery, & Greenhouse, Veterinary Technicians
- Central: Landscaping & Groundskeeping Workers, Farmworkers, Farm, Ranch, & Aquacultural Animals, Farmworkers & Laborers, Animal Caretakers, Food Batchmakers

### Gateway Occupations

- MSP Metro: Supervisors of Groundskeeping Workers, Telecommunications Equipment Installers, Chefs & Head Cooks, Refuse & Recyclable Material Collectors, Chemical Technicians
- Central: Supervisors of Landscaping & Lawn Service Workers, Refuse & Recyclable Material Collectors, Farm Equipment Mechanics, Chefs & Head Cooks, Tree Trimmers & Pruners

### Target Occupations

- MSP Metro: Aircraft Mechanics & Service Technicians, Environmental Scientists, Veterinarians, Life, Physical, & Social Science Technicians, Biological Science Teachers, Postsecondary
- Central: HVAC Mechanics, Veterinarians, Telecommunications Equipment Installers & Repairers, Conservation Scientists, Food Scientists

---

Chmura Economics JobsEQ, 2022Q2 dataset.
Summary and Discussion
Discussion Question 1

What piece of the data surprised, inspired, validated, or challenged you?
Discussion Question 2

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