STEM Employment Growth —
Projected Growth in
DFW STEM Employment,
2019 to 2029:
Mathematical Science Occupations
The Dallas-Fort Worth region is expected to create about 50 thousand STEM jobs between 2019 and 2029. This projected growth will add to an estimated 63 thousand STEM jobs gained in the preceding decade, from 2009 to 2019.

Mathematical science occupations, which include operations research analysts, data scientists, statisticians, actuaries, and mathematicians, constitute only a small portion (2%) of STEM jobs. However, they account for 4% of expected STEM jobs gain, or 2,000 new jobs between 2019 and 2029, in addition to 3,200 jobs added between 2009 and 2019. Around 0.20% of the DFW workforce will be employed in mathematical science occupations in 2029; in 2019, this number was 0.16% and in 2009, 0.10%.

Within the next decade, employment in mathematical science occupations is expected to grow 34% in DFW and 26% nationwide. In fact, DFW accounts for 4% of total U.S. mathematical science job growth. Furthermore, median earnings for operations research analysts and data scientists, the occupations with the greatest expected growth, are higher in DFW than the national average.

Mathematical science occupations will become more concentrated in DFW. By 2029, around 2.5% of all American jobs will be located in DFW. A higher percentage (3%) of all American mathematical science occupations jobs will be located in DFW – up from just over 2% in 2009.

The University of Texas at Dallas is preparing students to fill those expected positions. See slide 9 for more information about mathematical science occupations-related academic programs.

Sources: Emsi, 2021; U.S. Bureau of Labor Statistics Beyond the Numbers. Please note that 2029 numbers are projections and subject to change.
Projected Employment Growth by STEM Occupational Group

Dallas - Fort Worth

- Computer occupations: + 21% (+ 31,350)
- Engineers: + 10% (+ 4,307)
- Mathematical science occupations: + 34% (+ 1,981)
- Physical scientists: + 17% (+ 663)
- Life scientists: + 18% (+ 582)

## Projected Employment Growth by STEM Occupational Group

### Dallas - Fort Worth

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment</th>
<th>Employment Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
<td>2029</td>
</tr>
<tr>
<td>STEM occupations (excluding education)</td>
<td>303,824</td>
<td>353,144</td>
</tr>
<tr>
<td>Computer occupations</td>
<td>146,000</td>
<td>177,350</td>
</tr>
<tr>
<td>Engineers</td>
<td>41,439</td>
<td>45,746</td>
</tr>
<tr>
<td>Mathematical science occupations</td>
<td>5,877</td>
<td>7,858</td>
</tr>
<tr>
<td>Physical scientists</td>
<td>3,816</td>
<td>4,479</td>
</tr>
<tr>
<td>Life scientists</td>
<td>3,243</td>
<td>3,825</td>
</tr>
</tbody>
</table>

### United States

| Occupation                                      | Employment | Employment Change |
|                                                 | 2019       | 2029              | 2019-29 | 2019-29 |
| STEM occupations (excluding education)         | 10,838,600 | 11,887,929        | 10%     | 1,049,329 |
| Computer occupations                           | 4,394,409  | 5,038,034         | 15%     | 643,625  |
| Engineers                                       | 1,804,726  | 1,913,503         | 6%      | 108,776  |
| Mathematical science occupations                | 200,322    | 253,390           | 26%     | 53,068   |
| Physical scientists                             | 265,822    | 287,155           | 8%      | 21,333   |
| Life scientists                                 | 332,611    | 361,160           | 9%      | 28,549   |

Projected Employment Growth in Mathematical Science Occupations

Dallas - Fort Worth

- Operations Research Analysts: +30% (+1,231)
- Data Scientists and Mathematical Science Occupations, All Other: +41% (+321)
- Statisticians: +51% (+269)
- Actuaries: +34% (+152)
- Mathematicians: +21% (+8)

# Projected Employment Growth in Mathematical Science Occupations

## Dallas - Fort Worth

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Mathematical science occupations</strong></td>
<td>5,877</td>
<td>7,858</td>
<td>34%</td>
<td>1,981</td>
</tr>
<tr>
<td>Operations Research Analysts</td>
<td>4,080</td>
<td>5,311</td>
<td>30%</td>
<td>1,231</td>
</tr>
<tr>
<td>Data Scientists and Mathematical Science Occupations, All Other</td>
<td>786</td>
<td>1,107</td>
<td>41%</td>
<td>321</td>
</tr>
<tr>
<td>Statisticians</td>
<td>532</td>
<td>801</td>
<td>51%</td>
<td>269</td>
</tr>
<tr>
<td>Actuaries</td>
<td>443</td>
<td>596</td>
<td>34%</td>
<td>152</td>
</tr>
<tr>
<td>Mathematicians</td>
<td>36</td>
<td>44</td>
<td>21%</td>
<td>8</td>
</tr>
</tbody>
</table>

*Source: Emsi, 2021.*
## Projected Employment Growth in Mathematical Science Occupations

### United States

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mathematical science occupations</td>
<td>200,322</td>
<td>253,390</td>
<td>26%</td>
<td>53,068</td>
</tr>
<tr>
<td>Operations Research Analysts</td>
<td>98,968</td>
<td>124,223</td>
<td>26%</td>
<td>25,255</td>
</tr>
<tr>
<td>Data Scientists and Mathematical Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupations, All Other</td>
<td>40,023</td>
<td>53,872</td>
<td>35%</td>
<td>13,849</td>
</tr>
<tr>
<td>Statisticians</td>
<td>31,698</td>
<td>41,151</td>
<td>30%</td>
<td>9,453</td>
</tr>
<tr>
<td>Actuaries</td>
<td>26,382</td>
<td>30,720</td>
<td>16%</td>
<td>4,338</td>
</tr>
<tr>
<td>Mathematicians</td>
<td>3,251</td>
<td>3,425</td>
<td>5%</td>
<td>174</td>
</tr>
</tbody>
</table>

# Median Annual Earnings in Mathematical Science Occupations

<table>
<thead>
<tr>
<th>Occupation</th>
<th>DFW</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematical science occupations</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Operations Research Analysts</td>
<td>$87,082</td>
<td>$86,195</td>
</tr>
<tr>
<td>Data Scientists and Mathematical Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupations, All Other</td>
<td>$101,208</td>
<td>$98,238</td>
</tr>
<tr>
<td>Statisticians</td>
<td>$90,045</td>
<td>$92,269</td>
</tr>
<tr>
<td>Actuaries</td>
<td>$112,572</td>
<td>$111,030</td>
</tr>
<tr>
<td>Mathematicians</td>
<td>$67,054</td>
<td>$110,864</td>
</tr>
</tbody>
</table>

## UT Dallas Programs Preparing Students for Mathematical Science Occupations

<table>
<thead>
<tr>
<th>Program</th>
<th>Enrollment (Fall 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actuarial Science</strong></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>182</td>
</tr>
<tr>
<td>MS</td>
<td>21</td>
</tr>
<tr>
<td><strong>Business Analytics</strong></td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td>1,063</td>
</tr>
<tr>
<td><strong>Data Science</strong></td>
<td></td>
</tr>
<tr>
<td>BS/BS</td>
<td>89</td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td></td>
</tr>
<tr>
<td>BA/BS</td>
<td>274</td>
</tr>
<tr>
<td>MS</td>
<td>29</td>
</tr>
<tr>
<td>PhD</td>
<td>24</td>
</tr>
<tr>
<td><strong>Finance</strong></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>918</td>
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<tr>
<td>MS</td>
<td>259</td>
</tr>
<tr>
<td><strong>Financial Technology and Analytics</strong></td>
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</tr>
<tr>
<td>MS</td>
<td>-</td>
</tr>
<tr>
<td><strong>Geospatial Information Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>33</td>
</tr>
<tr>
<td>MS</td>
<td>19</td>
</tr>
<tr>
<td>PhD</td>
<td>18</td>
</tr>
<tr>
<td><strong>Master of Business Administration</strong></td>
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</tr>
<tr>
<td>MBA</td>
<td>1,040</td>
</tr>
<tr>
<td><strong>Management Science</strong></td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td>154</td>
</tr>
<tr>
<td>PhD</td>
<td>74</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
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<tr>
<td>BA/BS</td>
<td>254</td>
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<tr>
<td>MS</td>
<td>27</td>
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<tr>
<td>PhD</td>
<td>61</td>
</tr>
<tr>
<td><strong>Physics</strong></td>
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<tr>
<td>BA/BS</td>
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<td>MS</td>
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<tr>
<td>PhD</td>
<td>56</td>
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<tr>
<td><strong>Social Data Analytics and Research</strong></td>
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<tr>
<td>MS</td>
<td>17</td>
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<tr>
<td><strong>Statistics</strong></td>
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<tr>
<td>MS</td>
<td>40</td>
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<tr>
<td>PhD</td>
<td>35</td>
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<tr>
<td><strong>Supply Chain Management</strong></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>212</td>
</tr>
<tr>
<td>MS</td>
<td>288</td>
</tr>
<tr>
<td><strong>Mathematics Education</strong></td>
<td></td>
</tr>
<tr>
<td>MAT</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: The University of Texas at Dallas; explore more academic programs and career paths with the [UT Dallas Pipeline](http://www.utdallas.edu) tool.
Questions?
Please contact Rachel Brasier at Rachel.Brasier@UTDallas.edu
or visit us at https://economicengine.utdallas.edu/

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