A career in Science, Technology, Engineering, or Mathematics is exciting, challenging, and ever-changing. Learners who pursue this cluster will be involved in planning, managing, and providing scientific research and professional and technical services including laboratory and testing services, and research and development services.

### Pathway Descriptions

**Engineering and Technology** workers apply mathematics, science, and technology concepts to solve problems quantitatively in engineering projects involving design, development, or production in various technologies. Engineers and Technologists are involved with advancing technology and continually improve and update product designs and optimize the manufacturing process. They are also involved in improving or building new roads, bridges, water, and pollution control systems, and other public facilities.

**Science and Mathematics** workers apply essential mathematics and science content and skills in a real world context. Science and mathematics occupations include those in physical, environmental, and human endeavors. Career possibilities range from teachers of science and mathematics to lab technicians to NASA astronauts.

### Extended Learning

- SkillsUSA
- OPPD/NPPD PowerDrive
- Robotics Competition
- Mathematic Student Competitions
- Discover Engineering Day
- Science Club
- Science Fairs

Participate in the following Programs and Activities provided by the University of Nebraska:

- Engineers Week
- Academy of Excellence
- MESA (Mathematics, Engineering, Science Achievement) Program

Job shadow professionals
Participate in internships
Secure part-time employment
Volunteer in this career area

For additional Career Cluster Information visit: [www.nebraskacareerconnections.org](http://www.nebraskacareerconnections.org).
Students preparing for a career in the Science, Technology, Engineering, and Mathematics Career Cluster have a variety of postsecondary options. Education and training can be obtained through on-the-job training, technical colleges, two-year community colleges, four-year colleges/universities, and apprenticeship programs. They can enter programs leading to a certificate or a degree at the associate, baccalaureate, or advanced degree level. The table below shows examples of postsecondary Science, Technology, Engineering, and Mathematics programs of study organized by pathway.

<table>
<thead>
<tr>
<th>Science and Mathematics</th>
<th>High School Diploma</th>
<th>Certificate/License</th>
<th>Associate’s Degree</th>
<th>Bachelor’s Degree</th>
<th>Master’s/Doctoral Professional Degree</th>
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<tbody>
<tr>
<td>On-the-Job Training</td>
<td>Biology</td>
<td>Chemistry</td>
<td>Chemistry</td>
<td>Biochemistry</td>
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<td></td>
<td>Laboratory Science</td>
<td>Laboratory Technology</td>
<td>Economics</td>
<td>Biological Sciences</td>
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<td></td>
<td>Technology</td>
<td>Medical Laboratory Technology</td>
<td>Mathematics</td>
<td>Chemistry</td>
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<tr>
<td></td>
<td>Medical Laboratory Technology</td>
<td>Molecular Biology</td>
<td>Physics</td>
<td>Physics and Astronomy</td>
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<td>Statistics</td>
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<td>Industrial Technology</td>
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<td>Architectural Design Technology</td>
<td>Agricultural Engineering</td>
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<td>Civil Engineering Technology</td>
<td>Biological Systems Engineering</td>
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<td></td>
<td>Industrial Technology</td>
<td>Chemical Engineering</td>
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<td></td>
<td>Surveying and Computer Aided Drafting (CAD)</td>
<td>Construction Engineering</td>
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<td></td>
<td>Technology</td>
<td>Mechanical Engineering</td>
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For additional information on the Science, Technology, Engineering, and Mathematics Career Cluster please contact:

Tony Glenn  
Skilled and Technical Sciences  
Career Field Specialist  
Nebraska Department of Education  
301 Centennial Mall South  
Lincoln, NE 68509  
Phone: 402-471-4819  
Email: tony.glenn@nebraska.gov  
Web: www.education.ne.gov/STS