Tennessee STEM

- Percent of STEM Occupations in Total Jobs
  - Massachusetts: 15.9%
  - United States: 13.1%
  - Tennessee: 11.8%

- Regional Distribution of STEM jobs in Tennessee

- Biggest Problem Facing STEM Occupations in Tennessee: Skill Gap

Educational Attainment Required—STEM vs. Total Industry Occupations

<table>
<thead>
<tr>
<th>STEM Occupations (excludes ages 18-24)</th>
<th>Total Industry (excludes ages 18-24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorate or professional</td>
<td>Doctorate or professional</td>
</tr>
<tr>
<td>Master's degree</td>
<td>Master's degree</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>Bachelor's degree</td>
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<tr>
<td>Associate degree</td>
<td>Associate degree</td>
</tr>
<tr>
<td>Some college</td>
<td>Some college</td>
</tr>
<tr>
<td>High school</td>
<td>High school</td>
</tr>
<tr>
<td>Less than high school</td>
<td>Less than high school</td>
</tr>
</tbody>
</table>

Largest Occupational Skill Gaps in Tennessee
- Marine engineers, naval architects—35%
- Computer network architects—33%
- Miscellaneous social scientists, related workers—31%

Closing the Skill Gap in Tennessee and aligning STEM concentration with the U.S. level would create an economic impact of nearly $4.5 billion and an additional 16,000 new jobs.
Tennessee STEM Workforce Challenges
Lack of rigor, interest, ability, emphasis on STEM subjects, knowledge about programs

Responses from Community Stakeholders to BERC's 2015 STEM Survey

- Tennessee does not produce enough well-prepared workers. 88%
- Students are not graduating with proper skills for STEM jobs. 78%
- Tennessee workforce will not meet advanced technology demands. 73%

Government. Should fund STEM, promote it, provide incentives, and increase awareness, respondents say
Recommendations:
- Connecting educational institutions with workforce needs
- Aligning and coordinating STEM resources across the state

Business. Challenges leading to slow business growth, nonlocal workforce:
- Recruiting workforce. Low skill set, finances, location, awareness
- Job unfulfillment. Increased training cost, nonlocal recruiting, relocation

Workforce Supply-to-Demand Ratio: 0.59  Local Unmet Demand Gap: 41%

BERC STEM Exposure Index

Indicators Evaluated
- STEM jobs as a percent of total county jobs
- STEM jobs as a percent of Tennessee STEM jobs
- Average ACT math score
- Average ACT science score
- College-going rate (%)
- Patents per 1,000 employees (2004–2013)

County Name  STEM Index  Rank
Knox  0.942  1
Williamson  0.937  2
Hamilton  0.904  3
Shelby  0.886  4
Davidson  0.874  5

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