Engineering and Science Technologies Career Pathway

Start Pre-Engineering
As early as grade 7
(based on readiness)

Production Worker
Median Salary: $23,720
Job Growth (10 yr): 7.4%
Annual Openings: 503
Average Tuition (1 yr): $0 – $3,900/yr

Electrical Engineering Technician
Median Salary: $54,540
Job Growth (10 yr): -0.2%
Annual Openings: 78
Average Tuition (2 yrs): $3,900/yr

Electrical Engineer
Median Salary: $76,980
Job Growth (10 yr): 5.2%
Annual Openings: 158
Average Tuition (4 yrs): $9,600/yr

Workplace Visits
Job Shadow
Internship
Work

Supervised Experience
---
Work

Supervised Experience
Internship
---
Work

Internship
---
Work

Provided by middle schools, high schools, employers, Ohio Tech Centers, and colleges.

Preparing students for multiple options after high school:
 gainful employment and/or postsecondary study.

Data reflects 2014 Ohio labor statistics and public institutions of higher education for 2013-2014. For specific tuition costs, visit ohiohighered.org.
## Secondary Pathway: Engineering and Design

### An Example of Courses with Secondary and Postsecondary Credits

<table>
<thead>
<tr>
<th>Secondary</th>
<th>Year</th>
<th>Semester</th>
<th>course</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
<th>Arts</th>
<th>Engineering Principles</th>
<th>Electronic Circuits</th>
<th>Language</th>
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<tbody>
<tr>
<td></td>
<td>7</td>
<td></td>
<td>English I</td>
<td>Algebra I</td>
<td>Physical Science</td>
<td>Social Studies</td>
<td>Fine Arts</td>
<td>Pre-Engineering Technologies</td>
<td>DC &amp; AC Electronic Circuits</td>
<td>World Languages</td>
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<tr>
<td></td>
<td>9</td>
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<td>English II</td>
<td>Algebra II</td>
<td>Biology</td>
<td>World History</td>
<td>Health (0.5)</td>
<td>PE (0.5)</td>
<td>Analog-Based Electronic Circuits</td>
<td>Digital Electronics</td>
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<tr>
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<td>11</td>
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<td>English III</td>
<td>Geometry</td>
<td>Chemistry</td>
<td>U.S. History</td>
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<tr>
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<td>12</td>
<td></td>
<td>English IV</td>
<td>Trigonometry/Calculus</td>
<td>Physics</td>
<td>U.S. Government</td>
<td>Robotics</td>
<td>Engineering Capstone</td>
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</table>

<table>
<thead>
<tr>
<th>Postsecondary</th>
<th>Year</th>
<th>Semester</th>
<th>course</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
<th>Arts</th>
<th>Engineering Principles</th>
<th>Electronic Circuits</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1st Semester</td>
<td>English Composition I</td>
<td>Computer Applications</td>
<td>Digital Systems</td>
<td>DC Electronic Systems</td>
<td>PC Tech Essentials</td>
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<td></td>
<td>1</td>
<td>2nd Semester</td>
<td>College Algebra</td>
<td>AC Electronic Systems</td>
<td>Switching &amp; Amplifier Systems</td>
<td>AC Electronic Systems</td>
<td>Data Communications</td>
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<td>2</td>
<td>1st Semester</td>
<td>Physics I</td>
<td>Micro Economics</td>
<td>Data Acquisition Systems</td>
<td>Embedded Micro-controller Systems</td>
<td>Advanced Digital Systems</td>
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<tr>
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<td>2</td>
<td>2nd Semester</td>
<td>Physics II</td>
<td>Technical Writing</td>
<td>Small Group Communication</td>
<td>Capstone</td>
<td>Ethics</td>
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</table>

**High School Career-Technical Education Program Courses**

### High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

<table>
<thead>
<tr>
<th>Required Courses</th>
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</thead>
<tbody>
<tr>
<td>Recommended Electives</td>
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</tbody>
</table>

Visit education.ohio.gov/CareerConnections for reference information.
Course titles and sequences will vary between schools.