This Program of Study may serve as a graduation guide for the next four plus years, along with other career planning and educational materials. Courses listed in this model may include recommended coursework and should be individualized to students’ educational and career goals. Each graduation plan needs to meet minimum high school graduation requirements. Dual Enrollment courses can be high school academic and/or career technical education courses.

<table>
<thead>
<tr>
<th>COURSE/ GRADE</th>
<th>NINTH</th>
<th>TENTH</th>
<th>ELEVENTH</th>
<th>TWELFTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>9th grade Lit/ Composition</td>
<td>10th grade Lit/ Composition</td>
<td>American Lit/ Composition</td>
<td>World Lit/ Composition / British Lit</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td>Coordinate Algebra / Algebra I</td>
<td>Analytic Geometry / Geometry</td>
<td>Advanced Algebra / Algebra II</td>
<td>Pre-calculus</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Physical Science</td>
<td>Biology</td>
<td>Chemistry</td>
<td>Physics</td>
</tr>
<tr>
<td>SOCIAL STUDIES</td>
<td>World History</td>
<td>Psychology</td>
<td>US History</td>
<td>Government (½ unit) Economics (½ unit)</td>
</tr>
<tr>
<td>PATHWAY COMPLETER</td>
<td>Industry Fundamentals &amp; Occupational Safety</td>
<td>Introduction to Metals</td>
<td>Welding I</td>
<td>Another course in focus area, Work-Based Learning, or Youth Apprenticeship</td>
</tr>
</tbody>
</table>

**Secondary:**

**Required/Selective Electives**

<table>
<thead>
<tr>
<th><strong>Health &amp; Personal Fitness (can be taken in grades 9-12)</strong></th>
<th><strong>Introduction to Business Technology</strong></th>
<th><strong>Financial Literacy</strong></th>
<th><strong>Welding II</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern Language/Latin</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Students have many options to ENTER and EXIT from their academic studies into the workforce. When a student graduates from high school, they are eligible to choose one of many ENTRANCE POINT options: 1. Enroll in either a 2 or 4 year post-secondary program; 2. Enroll in an apprenticeship program or the military; or 3. Enter the workforce using technical skills learned in high school. When a student finishes a 2- or 4-year degree program, they may choose to EXIT and 1. Enroll in an apprenticeship program or the military; 2. Enroll in a professional university degree program; or 3. Enter the workforce using technical skills learned.

**Welding Career Pathway Completers - Industry Credentialing for High School Students**

Upon completion of sequenced courses in the Welding Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Welding pathway will be able to sit for the National Industry Credentialed assessment offered on-line from AWS, NCCER, Skills USA, and NOCTI. Once mastery is reached, students will receive recognition for completion and use this credential in conjunction with their job or continuing training. For specific assessment information, refer to: [http://bit.ly/ArchConstEOPA](http://bit.ly/ArchConstEOPA).
Welding Pathway Description

Construction is one of the nation’s largest industries with over 7 million wage and salary jobs and 1.9 million self-employed workers. Construction includes the building of new structures as well as additions and modifications to existing ones. The construction industry also includes maintenance, repair and improvements on these structures.

Welders and solderers use heat to permanently join pieces of metal. Because of its strength, welding is important to the manufacture of ships, automobiles, and aircraft. In addition, welders work in the construction industry, joining beams in buildings and other structures. Solderers use similar processes on electronic and other small equipment.

The outlook for welders and solderers varies by industry.

Workers are required to complete extensive on-the-job-training, apprenticeships, and/or technical college programs. Employment of welders, cutters, solderers, and brazers is expected to grow 15 percent from 2014 to 2024, about as fast as the average for all occupations. This employment growth reflects the need for welders in manufacturing because of the importance of welding as part of the manufacturing process. Welders can easily move from one industry to another because basic welding skills are the same across industries. Welders who work in the automotive manufacturing industry can find work in the oil and gas industry. Growth in the defense industry as well as the need to rebuild bridges, highways and aging building will contribute to employment growth.

Overall job prospects will vary by skill level. Job prospects should be good for welders trained in the latest technologies. Welding schools report that graduates have little difficulty finding work, but many welding employers report difficulty finding properly skilled welders. However, welders who do not have up-to-date training may face competition for jobs. For all welders, job prospects should be better for those willing to relocate.

### Sample In Demand Careers in Georgia

<table>
<thead>
<tr>
<th>Occupation Specialties</th>
<th>Level of Education Needed</th>
<th>Georgia Average Salary</th>
<th>Annual Average Openings in Georgia</th>
<th>2014 – 2024 Employment Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welders, Cutters &amp; Welder Fitters</td>
<td>Postsecondary Certificate</td>
<td>$36,175</td>
<td>371</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Sheet Metal Workers</td>
<td>Postsecondary Certificate</td>
<td>$43,460</td>
<td>142</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Structural Iron &amp; Steel Workers</td>
<td>High School Diploma</td>
<td>$38,523</td>
<td>33</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Boilermakers</td>
<td>High School</td>
<td>$58,177</td>
<td>11</td>
<td>High Skill, High Wage</td>
</tr>
</tbody>
</table>

Go to GAfutures at [www.gafutures.org](http://www.gafutures.org) for more information about your education and career planning, including valuable financial information (grants and scholarships including HOPE Program, grants and loans, FAFSA, and CSS forms).

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**Postsecondary Options:**
- 4-Year Universities/Colleges
- 2-Year Colleges
- Technical Colleges
- State Registered Apprenticeships
- Special Purpose Schools
- On-the-Job Training
- Military

**Earning Postsecondary Credits While in High School:**
- Dual Enrollment Program
- Earn postsecondary credit while in high school
- You can complete
  - Industry Credential
  - Technical Certificate of Credit (TCC)
  - Associates of Applied Science Degree
- Bachelor’s Degree
- Who can help?
  - Parents
  - School Counselor
  - Advisor

### Career-Related Education Activities
- Career Awareness
- Career Exploration
- Instructional Related
- Connecting
- Work-Based Learning
- Employability Skill Dev.
- Cooperative Education
- Internship
- Youth Apprenticeship
- Clinicals

### Postsecondary Transition
- University System of Georgia Institutions: Admissions Testing
  - ACT or SAT
  - For More Information:
    - Contact the institution of your choice OR
  - Technical College System of Georgia
    - Placement Exam
  - United States Military
    - ASVAB Assessment
  - Use BRIDGE Law platform to inform decisions on postsecondary opportunities
- Dual Enrollment
  - Earning high school course credits while taking college courses

### Related Pathway Occupations
- Welders, Cutters, & Welder Fitters
- Assemblers & Fabricators
- Boilermakers
- Layout Workers, Metal & Plastic
- Pipe Fitters & Steamfitters
- Reinforcing Iron & Rebar Workers
- Structural & Steel Workers

### Other Related Occupations
- Sheet Metal Workers
- Boilermakers
- Plumbers
- Electricians
- Machinists
- Carpenters
- Stone Masons
- Tool & Die Workers

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