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.

### SECONDARY:

<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>Industrial Mechanics</td>
<td>Fluid Power and Piping Systems</td>
<td>Electrical Motor Controls</td>
<td>Another course in focus area, Work-Based Learning, or Youth Apprenticeship</td>
</tr>
<tr>
<td></td>
<td>Industry Recognized Credential (Pathway Completer)</td>
<td>Visit the End of Pathway Assessment Page (see note below)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Required/Selective Electives

- **Health & Personal Fitness** (can be taken in grades 9-12)
- **Introduction to Digital Technology**
- **Embedded Computing**
- **AP Chemistry**
- **Modern Language/Latin**
  - 2 units required for admissions to Georgia University System Colleges/Universities
  - For a listing of Modern Language/Latin courses offered at your high school, please contact your advisor, counselor, or curriculum handbook.
- **Other Electives**
  - For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.

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### POSTSECONDARY:

<table>
<thead>
<tr>
<th>TCC</th>
<th>DIPLOMA OR AAS</th>
<th>BACHELOR OF SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF11 Industrial Fluid Power Technician Certificate</td>
<td>Completion of IF11 Industrial Fluid Power Technician TCC leads to IST4 Industrial Systems Technology diploma or IS13 Industrial Systems Technology degree.</td>
<td>The University System of Georgia offers students’ higher education options at 30 institutions throughout the state, providing a wide range of academic programming including certificates and associate, baccalaureate, masters, doctoral and professional degrees. <a href="https://apps.ds.usg.edu/ords/f?p=118:1:0">Visit for more options</a></td>
</tr>
</tbody>
</table>

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**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.

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**Industrial Maintenance Career Pathway Completers - Industry Credentialing for High School Students**

Upon completion of sequenced courses in the Industrial Maintenance Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Industrial Maintenance pathway will be able to sit for the National Industry Credentialed assessment offered on-line from NCCER and NIMS. 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).
Industrial Maintenance Pathway Description

Industrial machinery mechanics and maintenance workers maintain and repair factory equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment. Millwrights install, dismantle, repair, reassemble, and move machinery in factories, power plants, and construction sites.

Workers in this occupation must follow safety precautions and use protective equipment, such as hardhats, safety glasses, and hearing protectors. Most work full time. However, they may be on call and work night or weekend shifts. Overtime is common.

Industrial machinery mechanics and maintenance workers and millwrights typically need a high school diploma. However, industrial machinery mechanics need a year or more of training after high school, whereas maintenance workers typically receive on-the-job training that lasts up to a year. Most millwrights go through a 4-year apprenticeship.

Employment of industrial machinery mechanics and maintenance workers and millwrights is projected to grow 17 percent from 2014 to 2024, faster than the average for all occupations. The need to keep increasingly sophisticated machinery functioning and efficient will drive demand for these workers. Job prospects for qualified applicants should be very good.

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>Industrial Machinery Mechanics</td>
<td>Postsecondary Certificate</td>
<td>$45,688</td>
<td>424</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Maintenance Workers, Machinery</td>
<td>Diploma, some postsecondary</td>
<td>$41,166</td>
<td>66</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Millwrights</td>
<td>Diploma, some postsecondary</td>
<td>$48,030</td>
<td>65</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Mechanical Engineering Technician</td>
<td>Bachelor’s Degree</td>
<td>$57,064</td>
<td>184</td>
<td>In Demand, High Wage</td>
</tr>
</tbody>
</table>

Go to GAfutures at 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).

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

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

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
- Millwright
- Machinery Maintenance Workers
- Industrial Machinery Mechanic
- Industrial Mechanic
- Maintenance Mechanic
- Maintenance Technician
- Master Mechanic
- Mechanic

Other Related Occupations
- Electric Motor, Power Tool, and Related Repairers
- Automotive Master Mechanics
- Mobile Heavy Equipment Mechanics, except Engines
- Maintenance Workers, Machinery
- Maintenance and Repair Workers

*ONET Online