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.

### PROGRAM OF STUDY: Plumbing

#### 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>Government</td>
<td>World History</td>
<td>US History</td>
<td>Economics</td>
</tr>
<tr>
<td>PATHWAY COMPLETER</td>
<td>Industry Fundamentals &amp; Occupational Safety</td>
<td>Introduction to Construction</td>
<td>Plumbing I</td>
<td>Another course in focus area, Work-Based Learning, or Youth Apprenticeship</td>
</tr>
</tbody>
</table>

**Industry Recognized Credential (Pathway Completer):**

- Health & Personal Fitness (can be taken in grades 9-12)
- Modern Language/Latin
  - 2 units required for admissions to Georgia University System Colleges/Universities
- Introduction to Business Technology
- Financial Literacy
- Plumbing II

**Required/Selective Electives**

- Technical College System of Georgia
- Placement Exam
- United States Military
- ASVAB Assessment
- Use BRIDGE Law platform to inform decisions on postsecondary opportunities
- Dual Enrollment

**Postsecondary Transition**

- University System of Georgia Institutions: Admissions Testing
- ACT or SAT
- For More Information contact the institution of your choice

**Other Electives**

For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.

### Plumbing Career Pathway Completers - Industry Credentialing for High School Students

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. Plumbers, pipefitters, and steamfitters install and repair pipes that carry steam, water, air, or other liquids or gases to and in businesses, homes, and factories. They work in factories, homes, businesses, and wherever else there are pipes or septic systems. Workers must often lift heavy materials, climb ladders, and work in tight spaces. Some plumbers travel to a variety of work sites every day. Most plumbers, pipefitters, and steamfitters learn on the job through an apprenticeship. Some start out by attending a technical school. Most states and localities require plumbers to have a license. Employment of plumbers, pipefitters, and steamfitters is expected to grow 26 percent from 2014 to 2024, faster than the average for all occupations. Stricter water efficiency standards and new building and power plant construction are projected to spur demand for workers. There are different levels usually depending on training and experience. For example, a master plumber on construction jobs may be involved with developing blueprints that show where all the pipes and fixtures will go. Their input helps ensure that a structure’s plumbing meets building codes, stays within budget, and works well with the location of other features, such as electric wires.

### Plumbing Pathway Description

- **Ninth Grade:** Plumbing II
- **Tenth Grade:** Introduction to Business Technology
- **Eleventh Grade:** World History
- **Twelfth Grade:** Financial Literacy

**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>2018 – 2028 Employment Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Plumbers</td>
<td>Postsecondary Certificate</td>
<td>$45,626</td>
<td>1570</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Pipe Fitters and Steamfitters</td>
<td>Postsecondary Certificate</td>
<td>$45,626</td>
<td>1570</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>First Line Supervisors of Construction Trades/ Extraction Workers</td>
<td>Postsecondary Certificate</td>
<td>$61,203</td>
<td>1942</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Construction Managers</td>
<td>Bachelor's Degree</td>
<td>$99,756</td>
<td>136</td>
<td>In Demand, High Skill</td>
</tr>
</tbody>
</table>

**Related Pathway Occupations:**

- Plumbers
- Plumbing Craft Laborers
- Construction Inspectors
- Pipefitters & Steamfitters
- Cost Estimators
- Construction Foremen

**Other Related Occupations:**

- Construction Engineers
- Project Inspectors
- Project Managers

[O*NET Online](http://bit.ly/ArchConstEOP)
### Program of Study: Plumbing

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.

### POSTSECONDARY:

<table>
<thead>
<tr>
<th>TCC</th>
<th>Diploma or AAS</th>
<th>Bachelor of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP11 Residential/Commercial Plumbing Technician TCC</td>
<td>PL12 Plumbing Diploma</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:::">https://apps.ds.usg.edu/ords/f?p=118:1:0:::</a></td>
</tr>
<tr>
<td>PLBG 1000 Introduction to Plumbing</td>
<td>RP11 TCC plus</td>
<td>USG Staying on Course <a href="https://www.usg.edu/student_affairs/assets/student_affairs/documents/Staying_on_Course.pdf">https://www.usg.edu/student_affairs/assets/student_affairs/documents/Staying_on_Course.pdf</a></td>
</tr>
<tr>
<td>PLBG 1160 Plumbing Drawings</td>
<td>ENGL 1010 Fundamentals of English I</td>
<td></td>
</tr>
<tr>
<td>PLBG 1210 Pipes, Valves, and Fittings</td>
<td>MATH 1012 Foundations of Mathematics</td>
<td></td>
</tr>
<tr>
<td>PLBG 1220 Drainage Systems</td>
<td>EMPL1000 Interpersonal Relations and Professional Development</td>
<td></td>
</tr>
<tr>
<td>PLBG 1240 Water Supply Systems</td>
<td>PLBG 1310 Special Plumbing Systems</td>
<td></td>
</tr>
<tr>
<td>PLBG 1260 Plumbing Fixtures and Appliances</td>
<td>PLBG 1320 Plumbing Service</td>
<td></td>
</tr>
<tr>
<td>PLBG 1280 Gas Piping, Venting, and Appliances</td>
<td>PLBG 1330 Plumbing Codes</td>
<td></td>
</tr>
<tr>
<td>6 Credits of Occupational Electives</td>
<td>COMP 1000 Introduction to Computer Literacy</td>
<td></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).

### Career Enhancement Opportunities

- 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