

# Program of Study: WELDING & JOINING TECHNOLOGY

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 Program courses can be high school academic and/or career technical education dual credit courses.

Course/Grade	Secondary				Entrance or Exit Point	Postsecondary			
	Ninth	Tenth	Eleventh	Twelfth		Credential	Diploma	Bachelor of Science	
<b>English</b>	9 <sup>th</sup> grade Lit/Composition	10 <sup>th</sup> grade Lit/Composition*	American Lit/Composition*	World Lit/Composition*	Entrance or Exit Point	Entrance or Exit Point	Entrance or Exit Point	The University System of Georgia offers students' higher education options at 26 institutions throughout the state, providing a wide range of academic programming including certificates and associate, baccalaureate, masters, doctoral and professional degrees. <a href="https://www.usg.edu/academic_programs/">https://www.usg.edu/academic_programs/</a>	
<b>Mathematics</b>	Coordinate Algebra	Analytic Geometry	Advanced Algebra/ Algebra II	Pre-calculus					
<b>Science</b>	Physical Science*	Biology*	Chemistry*	Physics*					
<b>Social Studies</b>	Psychology*	World History*	US History*	Government (½ unit)* Economics (½ unit)*					
<b>Pathway Completer*</b>				Work-Based Learning, Youth Apprenticeship, or Capstone Project					
<b>Industry Recognized Credential (Pathway Completer)</b>	<a href="#">Visit the End of Pathway Assessment Page</a> (see note below)								
<b>Required and/or Selective Electives</b>		Fine Arts course	AP Computer Science Principles	AP Computer Science					
	<b>World Languages*</b> <i>2 units required for admissions to Georgia University System Colleges/Universities</i> For a listing of World Languages courses offered at your high school or technical college*, please contact your advisor, counselor, college coordinator or curriculum handbook.		<b>Other Electives*</b> For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.						
<p><b>Dual Enrollment Opportunity Available</b></p> <p><b>Basic Shielded Metal Arc Welder (FS31) TCC</b> WELD 1000 Intro Welding Technology WELD 1010 Oxyfuel &amp; Plasma Cutting WELD 1040 Flat Shielded Metal Arc Weld</p> <p><b>Gas Metal Arc Welder (GM31) TCC</b> WELD 1000 Intro Welding Technology WELD 1010 Oxyfuel &amp; Plasma Cutting WELD 1040 Flat Shielded Metal Arc Weld WELD 1090 Gas Metal Arc Welding</p> <p><b>Gas Tungsten Arc Welder (GTA1) TCC</b> WELD 1000 Intro Welding Technology WELD 1010 Oxyfuel &amp; Plasma Cutting WELD 1110 Gas Tungsten Arc Welding</p>									
<p><b>Welding &amp; Joining Technology Diploma 54 Total Hours</b></p> <p>Basic Skills – Total of 8 Hours: ENGL 1010 Fundamentals of English I (3) MATH 1012 Foundations of Mathematics (3) EMPL 1000 Interpersonal Relations (2)</p> <p>Program-Specific Core – Total of 40 Hours: WELD 1000 Intro to Welding Technology (4) WELD 1010 Oxyfuel Cutting (4) WELD 1030 Blueprint Reading for WELD (4) WELD 1040 Flat Shielded Metal Arc Weld (4) WELD 1050 Horizontal Shielded Metal Arc Weld (4) WELD 1060 Vertical Shielded Metal Arc Weld (4) WELD 1070 Overhead Shielded Metal Arc Weld (4) WELD 1090 Gas Metal Arc Welding (4) WELD 1110 Gas Tungsten Arc Welding (4) WELD 1120 Preparation/Ind Qualification (4)</p> <p>Occupational Electives – Choose six (6) Hours: COMP 1000 Introduction to Computers (3) WELD 1095 Adv Gas Metal Arc Welding (3) WELD 1150 Adv Gas Tungsten Arc Welding (3) WELD 1151 Fabrication Process (3) WELD 1152 Pipe Welding (4) WELD 1153 Flux Cored Arc Welding (4) WELD 1156 Ornamental Iron Works (4) WELD 1330 Metal Welding/Cutting Tech (2) WELD 1500 Welding &amp; Joining Internship (3)</p>									

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

\*Courses that can possibly be taken under the Dual Enrollment Program

## Welding & Joining Technology Career Pathway Completers/Dual Enrollment - Industry Credentialing for High School Students

Upon completion of sequenced courses in the Welding & Joining Technology Career Pathway or Dual Enrollment Opportunities courses, students are eligible to complete Industry-Recognized student credential for fulfillment of End of Pathway Assessment. Once the student earns a credential, the student 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/GAInfoTech>.

### Sample High Demand Careers in Georgia

The sample Welding careers listed below can be viewed at: <a href="https://www.bls.gov/oes/home.htm">https://www.bls.gov/oes/home.htm</a>	US Average Annual Salary	Georgia Average Salary	2018 – 2028 Employment Outlook
51-4121. Welders, Cutters, Solderers, & Brazers	\$48,290	\$42,900	1.73% Annual Growth
51-4122 Welding, Soldering, & Brazing Machine Setters, Operators, and Tenders	\$42,950	\$38,040	.64% Annual Growth

GDOL Labor Market Explorer

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

<b>Career Enhancement Opportunities</b>	<b>Career-Related Education Activities</b>	<b>Postsecondary Options:</b>	<b>Earning Postsecondary Credits While in High School</b>
	<input type="checkbox"/> Career Awareness <input type="checkbox"/> Career Exploration <input type="checkbox"/> Instructional Related <input type="checkbox"/> Work-Based Learning <ul style="list-style-type: none"> <li>• Employability Skill Dev.</li> <li>• Cooperative Education</li> <li>• Internship</li> <li>• Youth Apprenticeship</li> <li>• Clinicals</li> </ul>	<ul style="list-style-type: none"> <li>• 4-Year Universities/Colleges</li> <li>• 2-Year Colleges</li> <li>• Technical Colleges</li> <li>• State Registered Apprenticeships</li> <li>• Special Purpose Schools</li> <li>• On-the-Job Training</li> <li>• Military</li> </ul>	<p>A vital way to get ahead and realize you can pass college courses is by earning postsecondary credits as a high school student. Georgia offers a dual enrollment program. You need to talk with your parents, school counselor, or advisor about the proper courses to take each year in high school and dual credit.</p> <p>Students completing the course work in this Plan, will have earned/completed Dual Enrollment courses, Industry Credential, and Technical Certificate of Credit (TCC), Professional Diploma, and/or Associates of Applied Science Degree.</p>

#### Postsecondary Transition

- Students who will continue their education in a Program of Study at one of the Technical College System of Georgia institutions or enroll in Dual Enrollment should prepare to satisfy the college's placement requirements for admissions. Contact your local technical college for admissions information (<http://www.laniertech.edu>).
- Students who will continue their education in a Program of Study at one of the University System of Georgia institutions should prepare to take the ACT or SAT for admissions. Tests for admissions may vary from institution to institution. Contact the selected institution for specific testing information. Additional admissions information can be found at Staying On Course. ([Staying on Course.pdf](#))
- Students who will continue their education and training in the US Military should take the ASVAB assessment.
- Students should utilize electronic college and career databases to select the most appropriate postsecondary opportunities to match their selected career field, including registered apprenticeships.
- Georgia's dual-credit programs have been combined into one program entitled Dual Enrollment, in which high school students may earn their high school course credits while taking college courses.
- More information on Dual Enrollment can be found at [www.GAfutures.org](http://www.GAfutures.org).

Related Pathway Occupations	Other Related Occupations
<input type="checkbox"/> Welders, Cutters, & Welder Fitters <input type="checkbox"/> Assemblers & Fabricators <input type="checkbox"/> Boilermakers <input type="checkbox"/> Layout Workers, Metal & Plastic <input type="checkbox"/> Pipe Fitters & Steamfitters <input type="checkbox"/> Reinforcing Iron & Rebar Workers <input type="checkbox"/> Structural & Steel Workers <input type="checkbox"/> Tool & Die Workers	<input type="checkbox"/> Sheet Metal Workers <input type="checkbox"/> Boilermakers <input type="checkbox"/> Plumbers <input type="checkbox"/> Electricians <input type="checkbox"/> Machinists <input type="checkbox"/> Carpenters <input type="checkbox"/> Stone Masons  *ONET Online

#### Welding Pathway Description

The Welding & Joining Technology Diplomas & Certificates of Credit is a sequence of courses that prepares students for welding professions. Learning opportunities develop academic, occupational, and professional knowledge and skills required for job acquisition, retention, and advancement. The program emphasizes a combination of welding theory and practical application necessary for successful employment. Completion of this diploma or technical certificate of credit may permit students to pursue entry level opportunities in the welding field.

