

Student Plan of Study – Welding

Name _____ Date _____ School _____

Parent/Guardian Signature _____ Date _____ Advisor/Counselor Signature _____ Date _____

Current Area of Interest: **Architecture & Construction/Welding**- This PLAN OF STUDY should serve as a guide for the next four years. **Courses listed in this plan are only recommended coursework and should be individualized to meet each student's educational and career goals. All plans will meet minimum high school graduation requirements.** Applicants to the University System of Georgia and the Technical College System of Georgia institutions should be advised that meeting minimum requirements will not guarantee admission. Postsecondary institutions may set additional requirements.

Grade Level	I. English/Language Arts Total 4 credits	II. Math Total 4 credits	III. Science Total 4 credits	IV. Social Studies Total 3 credits	V. Health/Personal Fitness Total 1 credit	VII. Possible electives in additional pathways (students should check the local course description catalog for these and other electives) Total 4 credits
9	9 th Literature & Composition or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	1 CCGPS Cord Algebra 2 CCGPS Analytic Geom 3 CCGPS Accel Cord Alg/Analytic Geom 4 CCGPS Accel Analytic Geom B/Adv Algebra 1 credit * Credit Earned <input type="checkbox"/>	Biology or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	American Government/Civics or AP Government/ Politics US or Approved Dual Enrollment Course ½ credit Credit Earned <input type="checkbox"/>	Health ½ credit Credit Earned <input type="checkbox"/> Personal Fitness ½ credit Credit Earned <input type="checkbox"/> VI. CTAE Pathway Total 3 credits	Advanced Academic Pathways English/Language Arts, Math, Science, Social Studies An advanced academic pathway may be followed in any one of the content subjects listed above. Upon graduation, students earn an advanced academic pathway when they complete the required coursework to include at least one AP or one IB or one Dual Enrollment course. An advanced academic pathway should also include at least two credits in one world language. AP, Dual Enrollment and Georgia Virtual School courses may be available.
	10 th Literature & Composition or World Literature & Composition or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	1 CCGPS Analytic Geometry 2 CCGPS Adv Algebra 3 CCGPS Accel Analytic Geometry/Adv. Algebra 4 CCGPS Pre-Calculus 1 credit * Credit Earned <input type="checkbox"/>	Physical Science or Physics or AP Physics or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	World History or AP World History or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	46.54500 Industry Fundamentals & Occupational Safety or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	World Language Pathways **Two credits are required for admissions to University System Institutions. For a listing of world language courses offered at your high school, please check with your advisor, counselor, or local course description catalog. A world language pathway may be followed in any of the world language areas included in the state list of approved courses. Upon graduation, students earn a world language pathway when they complete three credits in one language. The third course may reflect an AP, IB or Dual Enrollment designation. Georgia Virtual School and ACCEL courses may be available.
11	American Literature/ Composition or AP English Language & Composition/American Lit or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	1 CCGPS Adv. Algebra 2 CCGPS Pre-Calculus 3 CCGPS Accel Pre-Cal 4 CCGPS Cal or AP Cal 1 credit * Credit Earned <input type="checkbox"/>	Chemistry or Environmental Science or Earth Systems or AP/IB or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	United States History or AP US History or IB History of the Americas or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	48.58100 Introduction to Metals or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	Fine Arts/Performing Arts Pathways Visual Arts, Dance, Music, Journalism, Theatre A fine arts pathway may be followed in any one of the five areas listed above. Upon graduation, students complete a fine arts/performing arts pathway when three courses have been successfully completed in any one of the five areas. A student should consult a counselor or advisor for related coursework. AP, Dual Enrollment and Georgia Virtual School courses may be available.
	At the end of the 11th grade, students planning to enter a University System of Georgia Institution or Technical College System of Georgia Institution should take the appropriate admissions test (SAT, ACT, Compass).					
12	Advanced Composition or British Literature or AP/IB English Literature & Composition or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	CCGPS Pre-Cal or Adv Math Decision Making or Math of Ind & Govern or AP Stats or IB Math or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	Any other of the previous courses or Ecology or Geology or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	Econ/Business/Free Enterprise or AP Macro Econ or AP Micro Econ or IB Econ or Approved Dual Enrollment Course ½ credit Credit Earned <input type="checkbox"/>	48.55100 Welding I or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	
Sample Elective Courses	Other English Elective Courses: Literary Types/Composition Journalism Oral/Written Communication Speech	Other Math Elective Courses: Calculus AP Calculus Math of Finance	Other Science Elective Courses: Ecology or Environmental Science or Chemistry or AP/IB Science	Other Social Studies Elective Courses: Current Issues or AP/IB Soc Studies or Psychology or Sociology	Other CTAE Elective Courses: Other CTAE electives are available to complete a related pathway	NOTE: Local systems may offer core courses in a different sequence; not all local systems offer every pathway. Students should explore all credit possibilities including Georgia's Virtual School Program , Dual Enrollment , Advanced Placement (AP), International Baccalaureate (IB) and Work-Based Learning (WBL) to reach their educational and career goals.

Architecture & Construction

SAMPLE Pathway OCCUPATIONS			
See * Georgia's HOT Careers to 2020 for more information on high-skilled, high-wage and high-demand occupations.			
Occupation Specialties	Entry Level of Education Needed	2012 Annual Wage	Annual Openings 2012-2020
Welders, Cutters, & Welder Fitters	High School	\$32,400	480
Structural Metal Fabricators	High School	\$32,500	110
Structural Iron & Steel Workers	High School	\$33,800	140

Source: Georgia Department of Labor/ONET

For more information about your education and career planning, including valuable financial aid information that includes grants and scholarships, see your school counselor.

*** Current Georgia Graduation Rule			
Coursework	Credits	Coursework	Credits
I. English/Language Arts	4	V. Health & Physical Education	1
II. Math	4	VI. **Career, Technical & Agricultural Education and/or ***World Languages, and/or Fine Arts	3
III. *Science	4	VII. Electives	4
IV. Social Studies	3	TOTAL	23

*Selected [4th Science](#) courses may be used to meet both the required science and required elective in a CTAE sequence of courses.

**Students must complete three credits to complete a CTAE pathway and take the end of pathway assessment.

***Students must complete two credits of the same world language for admission to Georgia Board of Regents colleges/universities.

**** Current graduation requirements should be met in all content areas.

NOTE: This plan represents minimum graduation requirements. Local systems may require additional coursework.

Postsecondary Transition:

- 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](http://www.usg.edu/student_affairs/documents/Staying_on_Course.pdf). (www.usg.edu/student_affairs/documents/Staying_on_Course.pdf)
- Students who will continue their education in a Program of Study at one of the Technical College System of Georgia institutions should prepare to take the COMPASS test for admissions.
- Students who will continue their education and training in the US Military should take the ASVAB assessment.
- Students should utilize electronic college and career data bases 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 Move on When Ready, in which high school students may earn their high school course credits while taking college courses.

Possible Student Pathway Credentialing Opportunities:

Students completing a pathway are eligible to take a Credentialing/End of Pathway Assessment (EOPA) upon successful completion of the three required courses in the pathway. For specific assessment information, refer to <http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/CTAE-Georgia-Assessments.aspx>.

*Related Pathway Occupations:	Other Related Architecture & Construction Occupations:
Welders, Cutters, & Welder Fitters	Sheet Metal Workers
Assemblers & Fabricators	Boilermakers
Boilermakers	Plumbers
Layout Workers, Metal & Plastic	Electricians
Pipe Fitters & Steamfitters	Machinists
Reinforcing Iron & Rebar Workers	Carpenters
Structural & Steel Workers	Stone Masons
Tool & Die Workers	

*ONET Online

Architecture & Construction/Welding

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 2010 to 2020, 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.