

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:				
COURSE/ GRADE	NINTH	TENTH	ELEVENTH	TWELFTH
ENGLISH	9 th grade Lit/ Composition	10 th grade Lit/ Composition	American Lit/ Composition	World Lit/ Composition / British Lit
MATHEMATICS	Coordinate Algebra / Algebra I	Analytic Geometry / Geometry	Advanced Algebra / Algebra II	Pre-calculus
SCIENCE	Physical Science	Biology	Chemistry	Physics
SOCIAL STUDIES	World History	Psychology	US History	Government (½ unit) Economics (½ unit)
PATHWAY COMPLETER	Foundations of Engineering and Technology	Engineering Concepts	Engineering Applications	Another course in focus area, Work-Based Learning, or Youth Apprenticeship
Industry Recognized Credential (Pathway Completer)		Visit the End of Pathway Assessment Page (see note below)		
Required/ Selective Electives	Health & Personal Fitness (can be taken in grades 9-12)	Financial Literacy	Engineering and Drafting by Design	Introduction to Business and Technology
	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.	

Postsecondary Transition <ul style="list-style-type: none"> University System of Georgia Institutions: Admissions Testing <ul style="list-style-type: none"> ACT or SAT For More Information: <ul style="list-style-type: none"> Contact the institution of your choice Technical College System of Georgia <ul style="list-style-type: none"> Placement Exam United States Military <ul style="list-style-type: none"> ASVAB Assessment Use BRIDGE Law platform to inform decisions on postsecondary opportunities Dual Enrollment Earning high school course credits while taking college courses 	Engineering and Technology Pathway Completers - Industry Credentialing for High School Students Upon completion of sequenced courses in the Engineering and Technology Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Early Childhood and Care Education pathway will be able to sit for the National Industry Credentialed assessment offered on-line from ADDA, CSWA, SkillsUSA, Autodesk-AutoCAD, 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: https://tinyurl.com/EngineerandTech
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Engineering and Technology Pathway Description

Professionals in the engineering and technology field continue to revolutionize the way we live. They design, produce, operate, and maintain a variety of equipment and services we use in our everyday lives. The rapidly changing engineering and technology field requires a broad educational background and a lifelong commitment to learning new and specialized information. Overall job opportunities in engineering and technology are expected to be good but will vary by specialty. Technology and technology related employment will continue to increase as technology changes and new technology is invented.

Engineers may work in design and development, testing, production, or maintenance. Almost all entry-level engineering jobs require at least a bachelor's degree, and most engineers specialize in a certain field. Those interested in an occupation in the engineering field should be creative, inquisitive, analytical and detail oriented. Engineering is considered a nontraditional field for women; therefore, it is important that female students investigate different engineering opportunities where salaries are higher than in many traditional occupations for females.

Sample In Demand Careers in Georgia				
Occupation Specialties	Level of Education Needed	Georgia Average Salary	Annual Average Openings in Georgia	2018 – 2028 Employment Outlook
Avionics Technicians	Associate degree	\$65,440	150	In Demand, High Skill
Industrial Engineering Technicians	Associate degree	\$61,920	130	In Demand
Electrical Engineers	Bachelor's Degree	\$98,430	350	In Demand, High Skill
Aerospace Engineers	Bachelor's Degree	\$111,200	210	In Demand
Related Pathway Occupations		Other Related Occupations		
<ul style="list-style-type: none"> All Engineers and Engineering Technologists 		<ul style="list-style-type: none"> Civil Drafters Cost Estimators Mapping Technicians Electrical & Electronics Drafters Electronic Technician Quality Control Systems Managers 		

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:

	TCC	DIPLOMA OR AAS	BACHELOR OF SCIENCE
Entrance/Exit Point	<p>EF11 Engineering Technology Fundamentals Certificate ENGT 1000 Introduction to Engineering and MATH 1111 College Algebra and Select One of the Following: ALET 1130 Energy Systems Applications or MATH 1113 Precalculus and Select 4 Credits from the Following: DFTG 1101 CAD Fundamentals or DFTG 1105 3D Mechanical Modeling or DFTG 2010 Engineering Graphics or PHYS 1111 Introductory Physics and PHYS 1111L Introductory Physics with Lab or ECET 1191 Computer Programming Fundamentals</p>	<p>Completion of EF11 Engineering Technology Fundamentals Certificate and ENGL 1101 Composition & Rhetoric or ENGL 1105 Workplace & Technical Communication and Social/Behavioral Science Elective and Humanities & Fine Arts Elective and MATH 1112 College Trigonometry or MATH 1113 Precalculus (certificate option) and each of the following: DFTG 1101 CAD Fundamentals (certificate option) CETC 1114 Intermediate Computer Aided Design DRFT 2050 Surveying I CETC 1113 Engineering Economics PHYS 1111 Introductory Physics w/PHYS 1111L Introductory Physics Lab (Certificate option) MEGT 2030 Statics MEGT 2080 Strength of Materials CETC 1115 Advanced Computer Aided Design CETC 1111 Fundamentals of Hydrology CETC 1112 Fundamentals of Soil Mechanics CETC 1117 Fundamentals of Road Design and Select an Area of Specialization: General Specialization: CETC 1118 Construction Materials CETC 1121 Hydraulics & Fluid Mechanics ENGT 2300 Capstone Project or Physics Cluster: PHYS 1112 Introductory Physics II and PHYS 1112L Introductory Physics II Lab and Surveying Cluster: CETC 1116 Surveying II and Chemistry Cluster: CHEM 1151 Survey of Inorganic Chemistry and CHEM 1151L Survey of Inorganic Chemistry Lab or CHEM 1211 Chemistry I and CHEM 1211L Chemistry Lab I or Surveying Specialization: CETC 1116 Surveying II CETC 1119 Surveying with Global Positioning Systems CETC 1120 Evidence and Procedures for Boundary Locations ENGT 2400 Evidence and Procedures for Boundary Locations Internships</p>	<p>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. https://apps.ds.usg.edu/or/ds/f?p=118:1:0</p>
Entrance/Exit Point			

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 Enhancement Opportunities	Career-Related Education Activities	Postsecondary Options:	Earning Postsecondary Credits While in High School
	<ul style="list-style-type: none"> Career Awareness Career Exploration Instructional Related Connecting <ul style="list-style-type: none"> Work-Based Learning Employability Skill Dev. Cooperative Education Internship Youth Apprenticeship Clinicals 	<ul style="list-style-type: none"> 4-Year Universities/Colleges 2-Year Colleges Technical Colleges State Registered Apprenticeships Special Purpose Schools On-the-Job Training Military 	<ul style="list-style-type: none"> Dual Enrollment Program Earn postsecondary credit while in high school You can complete <ul style="list-style-type: none"> Industry Credential Technical Certificate of Credit (TCC) Associates of Applied Science Degree Bachelor's Degree Who can help? <ul style="list-style-type: none"> Parents School Counselor Advisor