

# PROGRAM OF STUDY: Electrical



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:					POSTSECONDARY:		
COURSE/ GRADE	NINTH	TENTH	ELEVENTH	TWELFTH	TCC	DIPLOMA OR AAS	BACHELOR OF SCIENCE
ENGLISH	9 <sup>th</sup> grade Lit/ Composition	10 <sup>th</sup> grade Lit/ Composition	American Lit/ Composition	World Lit/ Composition / British Lit	<b>Entrance/Exit Point</b> <b>RW21 Residential Wiring Certificate</b>  <b>CW31 Commercial Wiring Certificate</b>	<b>Entrance/Exit Point</b> <b>ES12 Electrical Systems Technology Diploma</b>  <a href="#">Find the campus for the Diploma, Degree options</a>	<b>Entrance/Exit Point</b> 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>
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	<b>Industry Fundamentals &amp; Occupational Safety</b>	<b>Introduction to Construction</b>	<b>Electrical I</b>	Another course in focus area, Work-Based Learning, or Youth Apprenticeship			
<b>Industry Recognized Credential (Pathway Completer)</b>		<a href="#">Visit the End of Pathway Assessment Page</a> (see note below)					
<b>Required/ Selective Electives</b>	Health & Personal Fitness (can be taken in grades 9-12)	Introduction to Business Technology	Financial Literacy	Electrical II			
	<b>Modern Language/Latin</b> 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.		<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.				

**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.

**Electrical Career Pathway Completers - Industry Credentialing for High School Students**  
 Upon completion of sequenced courses in the Electrical Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Electrical pathway will be able to sit for the National Industry Credentialed assessment offered on-line from NCCER and SkillsUSA. 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>.

## Sample In Demand Careers in Georgia

Occupation Specialties	Level of Education Needed	Georgia Average Salary	Annual Average Openings in Georgia	2014 – 2024 Employment Outlook
Electricians	Postsecondary Certificate	\$47,365	2,205	In Demand, High Skill
Construction Managers	Bachelor's Degree	\$99,756	136	In Demand, High Skill
Electrician Helpers	High School Diploma	\$27,637	692	In Demand
Construction and Building Inspectors	Postsecondary Certificate	\$44,012	300	In Demand, High Skill

[Data link here.](#)

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).

<b>Career Enhancement Opportunities</b>	<b>Career-Related Education Activities</b> <ul style="list-style-type: none"> <li>Career Awareness</li> <li>Career Exploration</li> <li>Instructional Related</li> <li>Connecting                             <ul style="list-style-type: none"> <li>Work-Based Learning</li> <li>Employability Skill Dev.</li> <li>Cooperative Education</li> <li>Internship</li> <li>Youth Apprenticeship</li> <li>Clinicals</li> </ul> </li> </ul>	<b>Postsecondary Options:</b> <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>	<b>Earning Postsecondary Credits While in High School</b> <ul style="list-style-type: none"> <li>Dual Enrollment Program</li> <li>Earn postsecondary credit while in high school</li> <li>You can complete                             <ul style="list-style-type: none"> <li>Industry Credential</li> <li>Technical Certificate of Credit (TCC)</li> <li>Associates of Applied Science Degree</li> <li>Bachelor's Degree</li> </ul> </li> <li>Who can help?                             <ul style="list-style-type: none"> <li>Parents</li> <li>School Counselor</li> <li>Advisor</li> </ul> </li> </ul>
	<b>Postsecondary Transition</b> <ul style="list-style-type: none"> <li>University System of Georgia Institutions: Admissions Testing                             <ul style="list-style-type: none"> <li>ACT or SAT</li> <li>For More Information:                                     <ul style="list-style-type: none"> <li>Contact the institution of your choice OR</li> </ul> </li> </ul> </li> <li>Technical College System of Georgia                             <ul style="list-style-type: none"> <li>Placement Exam</li> </ul> </li> <li>United States Military                             <ul style="list-style-type: none"> <li>ASVAB Assessment</li> </ul> </li> <li>Use BRIDGE Law platform to inform decisions on postsecondary opportunities</li> <li>Dual Enrollment                             <ul style="list-style-type: none"> <li>Earning high school course credits while taking college courses</li> </ul> </li> </ul>		
<b>Related Pathway Occupations</b>		<b>Other Related Occupations</b>	
<ul style="list-style-type: none"> <li>Electricians</li> <li>Electronic Systems Technicians</li> <li>Electrical Craft Laborers</li> <li>Cost Estimators</li> <li>Construction Foremen</li> <li>Construction Inspectors</li> </ul>		<ul style="list-style-type: none"> <li>Construction Engineers</li> <li>Project Inspectors</li> <li>Project Managers</li> </ul> <p style="text-align: right;">*ONET Online</p>	

## Electrical Pathway Description

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.

Workers in the electrical pathway install and maintain electrical systems in homes, businesses, and factories. Electricians work indoors and out, in nearly every type of facility. Almost all electricians work full time, which may include evenings and weekends. Although the work is not as dangerous as some other construction occupations, common risks include electrical shocks and burns, cuts, and falls.

Although most electricians learn through a formal apprenticeship, some start out by attending a technical school. Most states require licensure. Employment of electricians is projected to grow 23 percent from 2014 to 2024, faster than the average for all occupations. Homes and businesses require more wiring than ever before, and electricians will be needed to install the necessary components.

Electricians typically do the following: read blueprints, install and maintain wiring and lighting systems, inspect electrical components, such as transformers and circuit breakers, identify electrical problems with a variety of testing devices, repair or replace wiring, equipment, or fixtures using hand tools and power tools, follow state and local building regulations based on the National Electric Code, direct and train workers to install, maintain, or repair electrical wiring or equipment.