# 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: | | | | |
|---|---|---|---|---|
| **COURSE/ GRADE** | **NINTH** | **TENTH** | **ELEVENTH** | **TWELFTH** |
| **ENGLISH** | 9th grade Lit/ Composition | 10th 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** | Government | World History | US History | Economics |
| **PATHWAY COMPLETER** | **Industry Fundamentals & Occupational Safety** | **Introduction to Construction** | **Electrical I** | 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) | Introduction to Business Technology | Financial Literacy | Electrical II |
| | **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**

- University System of Georgia Institutions: Admissions Testing
  - ACT or SAT
  - For More Information contact the institution of your choice
- Technical College System of Georgia
  - Placement Exam
- United States Military
  - ASVAB Assessment
- Use BRIDGE Law platform to inform decisions on postsecondary opportunities
- Dual Enrollment
- Earning high school course credits while taking college courses

**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.

## 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.**

## Sample In Demand Careers in Georgia

| Occupation Specialties | Level of Education Needed | Georgia Average Salary | Annual Average Openings in Georgia | 2018 – 2028 Employment Outlook |
|---|---|---|---|---|
| Electrician Helpers | High School Diploma | $27,637 | 692 | In Demand |
| Construction & Building Inspectors | Postsecondary Certificate | $44,012 | 300 | In Demand, High Skill |
| Electricians | Postsecondary Certificate | $47,365 | 2205 | In Demand, High Skill |
| Construction Managers | Bachelor's Degree | $99,756 | 136 | In Demand, High Skill |

**Related Pathway Occupations**

- Electricians
- Electronic Systems Technicians
- Electrical Craft Laborers
- Construction Inspectors
- Cost Estimators
- Construction Foremen

**Other Related Occupations**

- Construction Engineers
- Project Inspectors
- Project Managers

O*NET Online

# PROGRAM OF STUDY:

## Electrical

**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:

Entrance/Exit Point

### TCC

**RW21 Residential Wiring Technician TCC**
**IDFC 1007 Industrial Safety Procedures**
**ELTR 1060 Electrical Prints, Schematics, and Symbols**
**ELTR 1010 Direct Current Fundamentals**
**ELTR 1020 Alternating Current Fundamentals**
**ELTR 1205 Residential Wiring I**
**ELTR 1210 Residential Wiring II**

Entrance/Exit Point

### DIPLOMA OR AAS

**ES12 Electrical Systems Technology Diploma**
**RW21 TCC plus**
**ENGL 1010 Fundamentals Of English I**
**MATH 1012 Foundations of Mathematics**
**EMPL 1000 Interpersonal Relations and Professional Development**
**ELTR 1080 Commercial Wiring I**
**ELTR 1090 Commercial Wring II**
**ELTR 1180 Electrical Controls**
**7 Credits of Occupational Electives**

**EST3 Electrical Systems Technology Degree**
**ES12 Diploma plus**
**15 credits of General Education Core**
**7 Credits of Guided Electives**

Entrance/Exit Point

### BACHELOR OF SCIENCE

**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/ords/f?p=118:1:0:::::.**

**USG Staying on Course** **https://www.usg.edu/student_affairs/assets/student_affairs/documents/Staying_on_Course.pdf**

**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**

- 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

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