



SCIENCE, TECHNOLOGY, ENGINEERING  
AND MATHEMATICS CLUSTER

# ENGINEERING AND TECHNOLOGY PATHWAY

*Introduction to Engineering Design (IED) is a high school level course that is appropriate for 9th or 10th grade students who are interested in design and engineering. The major focus of the IED course is to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. IED gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB-learning challenges students to continually hone their interpersonal skills, creative abilities and understanding of the design process. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.*

**PATHWAY COURSES**

- Foundations of Engineering and Technology
- Engineering Concepts
- Engineering Applications

**RECOMMENDED COURSES**

- Algebra/Geometry
- Trigonometry/Physics

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**

**TECHNICAL COLLEGES**

- Electrical Utility Technology
- Engineering Technology
- Industrial Systems Technology
- Mechatronics Technology
- Military
- On-the-Job Training
- Special Purpose Schools
- State Registered Apprenticeships
- Wireless Engineering Technology

**COLLEGES/UNIVERSITIES**

- See [www.GAcollge411.org](http://www.GAcollge411.org) for additional information.

**CAREER AND TECHNICAL STUDENT ORGANIZATIONS**



**TOP CAREER CHOICES**

**Civil Engineer**

Bachelor Degree needed  
\$56,259 annual salary

**Electrical Engineer**

Bachelor Degree needed  
\$52,990 annual salary

**Industrial Engineer**

Bachelor Degree needed  
\$47,720 annual salary

**Materials Engineer**

Bachelor Degree needed  
\$51,420 annual salary

**Mechanical Engineer**

Bachelor Degree needed  
\$47,900 annual salary

**ADDITIONAL CAREER CHOICES**

- Civil Engineer
- Designer
- Drafter
- Machinist
- Manufacturing
- Mechanical Engineer
- Quality Control Inspector



Source: GADOE Plans of Study

<http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/Georgia-Career-Pathways-New-Rule.aspx>



**CAREER  
EXPLORATION  
& Pathway Discovery**  
CTAE Career Pathways / Fine Arts Pathways

- Alliance Academy for Innovation
- Denmark High School
- East Forsyth High School
- Forsyth Central High School
- Forsyth Virtual Academy
- Lambert High School
- North Forsyth High School
- South Forsyth High School
- West Forsyth High School