

Technology Education

Mr. Adam paadam@fcps.edu

Please click on the course offerings below to view class information

[Design and Technology](#)
[Electronics](#)
[Engineering](#)

[Research and Development](#)
[After School Activities](#)



Design and Technology

Mr. Adam - paadam@fcps.edu

DESIGN AND TECHNOLOGY (840300)

Grades: 9, 10, 11, 12 Credit: one

Design and Technology is designed as a foundation high school course in industrial technology. Students use core technology knowledge to solve open-ended problems and create systems. Laboratory activities engage students in the design process through projects that integrate math, science, and other core subjects. Working in groups, students build and control systems in the development of technology.



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Engineering

Mr. Adam - paadam@fcps.edu

ENGINEERING (849000)

Grades: 10, 11, 12 Credit: one

This course provides for orientation to the careers and challenges of engineering. Students are actively involved with high-tech devices, engineering graphics, and math/scientific principles through problem-solving experiences. Students integrate math, science, and technical writing with technology to solve engineering-based problems. Activities are provided in descriptive geometry, materials science, and technical systems. Focus areas in civil, mechanical, electrical, and aeronautical engineering are explored. Students communicate information through seminars, technical reports, and sharing of ideas.

Lab fee required

Fulfills part of Diploma Seal Requirements



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Research and Development

Mr. Adam paadam@fcps.edu

RESEARCH AND DEVELOPMENT ENGINEERING (849100)

Grades: 11, 12 Credit: one

Prerequisite: Engineering (849000)

This course emphasizes student knowledge and application of engineering problem-solving through research and development concepts. Students learn to work in collaborative engineering teams and solve group design projects. Students are challenged to solve problems using design, mathematics, computer simulations, scientific analysis, and oral and written skills. Engineering is studied with a focus on modeling, systems, optimization, technology-society interaction, design, and engineering ethics. Projects may be models, systems, or products that creatively solve an engineering problem.

Lab fee required

Fulfills part of Diploma Seal Requirements



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After School Activities

ACE MENTORING

Grades: 9-12

Prerequisite: Drafting course

Ace mentoring started at Woodson High School in 2004 as a program to foster interest in architecture, construction, and engineering. Mentors from local companies work with students to understand the relationships between knowledge and practical application and develop a project at the end of each school year. This group meets twice a month and usually meets for four hours from 4:30 pm to 8:30 pm. Scholarships are available to graduating seniors.

ROBOTICS CLUB

Grades: 9, 10, 11, 12

Prerequisite: Electronics and Engineering

Students join this club to learn more about robotics and understand its role in shaping a business, the economy, and society. Enrollment in Design and Technology, Electronics or Engineering is strongly suggested. Members work in groups on robotic kits and game theory to prepare for competition throughout the year.

TECHNOLOGY STUDENT ASSOCIATION

Grades: 9, 10, 11, 12

Prerequisite: Any Technology Course

Technology Student Association (TSA) is a government sponsored program that parallels all the technology courses. There are individual and group projects available for students to compete on regional, state and national level. Students learn a variety of interdisciplinary skills and run for leadership roles on various levels. All students in technology courses are strongly encouraged to actively participate in TSA.

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Electronics I, II

Mr. Farmer mefarmer@fcps.edu

Topics:

- **Survey of Basic Electronics**
- **Electronics Safety**
- **Electronics Theory (AC, DC, Digital)**
- **Electronics Application**
- **Troubleshooting**
- **Robotics**
- **TSA**

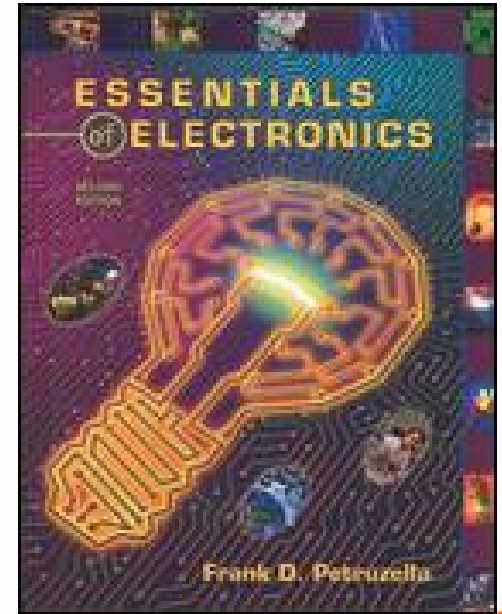


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Electronics - Materials

- Lectures
- Computer Modules
- Hands-on Modules
- In-class assignments, labs and projects



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