



## ENGINEERING MAGNET PROGRAM

Fairmont Prep Academy has tremendous student success in math and science. Consistently over the last few years, the College Board and the Siemens Corporation have recognized Fairmont Prep as being one of the top math, science, and technology schools in California. This success led to the creation of the Engineering Magnet Program, which is designed to prepare motivated students to succeed at highly-regarded engineering colleges and applied science programs.

In our Engineering Magnet Program, students gain rare insight into the field through guest speakers, internships, coursework, and field trips. We are guided by an Advisory Board that helps us provide our students the optimal engineering experience. Professionals from various fields of engineering and from institutions of higher education meet to contribute to the development of the engineering program. Members of the Board represent universities and corporations that are interested in helping build the best possible program for our future engineers.

### ENGINEERING MAGNET COURSES:

- Introduction to Engineering
- Engineering Physics A
- Engineering Physics B
- Engineering Physics C
- Engineering Internship
- Engineering Research/Project
- Computer Science
- AP Physics C (E and M)
- Multivariable Calculus
- Differential Equations 1 and 2
- Mathematical Structures 1 and 2



The courses are designed to supplement academic studies with a significant project-based component to foster students' interest and give them hands-on experience. A student may enter the program at the beginning of any school year and design a schedule based on his/her engineering interests, outside interests, and preparation to meet his/her future goals and ability.

## PROGRAM OVERVIEW

### CURRICULUM

- Electrical Engineering
- Mechanical Engineering
- Civil Engineering

### REAL-WORLD EXPERIENCE

- Internships
- Guest Speakers
- Field Trips

### COUNSELING

Dedicated College/Academic Counselor

### HANDS-ON LEARNING

- Enter engineering competitions sponsored by top engineering firms and universities.
- Design and construct a model rocket
- Build and program robots to perform varying tasks

*For More information Please Contact:*

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## QUICK FACTS ABOUT THE ENGINEERING MAGNET

- Take up to 10 university level courses not offered by other high schools
- Graduate with up to 22 transferable credits on a university transcript (the equivalent to 1-2 semesters of college)
- An Advisory Board made up of leading academic and corporate engineering professionals
- Access to and instruction in the latest educational technology and software
- Field trips to observe engineering in action. Past trips include the Kennedy Space Center, NASA's Jet Propulsion Lab, Disney Engineering Program, Growit3D rapid prototyping, and the engineering labs at CalTech, UCI, and CSUF
- Hands-on experience learning how to model, design, and build automated control systems, robots, solar cars, engines, thermodynamics and heat systems, model rockets, electronic devices, and models of buildings, bridges, dams, pipelines, transportation systems and facilities, infrastructures, etc.
- Professional guest speakers throughout the year from different fields of engineering and top university engineering programs
- Summer and year-long internships at Boeing and other local engineering firms
- A full-time counselor dedicated to the Engineering and Medical Magnet programs
- Unique experiences that make college applications stand out to top universities