

Coursework

- Fundamentals of Engineering: A project based course designed to provide an introduction to and preparation for studying engineering in college.
- Computers, Electronics and Control Systems: An introduction to modern digital electronics and control system programming.
- Capstone Course: In this course students will complete a year long project tying to together the concepts of the course. They will also have the opportunity to work individually with a professional on a real world project or problem.

Why Study Engineering? Engineering?

Our world faces a great many problems which require technical solutions. The kinds of problems which require "hands on" experience to solve.

In the words of Dr. Woodie Flowers of MIT, we need to shift "away from training, and toward education, and toward multidisciplinary activities that allow young people to have a self-image that includes rational self-esteem. If you're in that position, you can have rational passion, which I think is badly needed for the planet."



Dublin Engineering Academy



"The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

— Albert Einstein

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The Dublin Engineering Academy is...

.... an enriching three period program that is open to students from *all three Dublin high schools* through an application process. Participating students will travel to Coffman High School. Students will use a hands-on, applications based approach to learn the fundamentals of engineering. Students who complete the Academy may be eligible to take Engineering 1181 and 1182 at Ohio State the following year in a section with seats reserved for Dublin students.

Future Engineering Professionals

The Dublin Engineering Academy is an academic program in the Dublin City Schools. Students from all three Dublin high schools come together for a three period block class at Coffman High School. Students in the class take three engineering classes providing a solid introduction to principles in mechanical, electrical and computer engineering. They will develop skill in designing and testing solutions, computer programming, and communication.

The students use professional software, such as Eclipse, Inventor, MatLab and Multisim. They work independently and in small groups to solve engineering problems. We focus on developing good engineering practices, from initial brainstorming through design, building and testing.

Students maintain an engineering notebook and a portfolio of their work. There is also an emphasis on designing, building and programming autonomous and remotely controlled robotic devices. Each student will complete an

individual or group capstone project in some area of interest in engineering. There will be a pair of related, year long projects that tie together the concepts of the course and will require the students to design, develop, test and put into use a complicated device such as a remotely operated underwater vehicle. Students who complete the course can apply to study Engineering 1181 and 1182 at Ohio State through PSEO in a section with seats reserved for Dublin City Schools students. Students at Scioto and Jerome high schools will be able to leave Coffman in time to return for their 4th period class. The course work is compatible with AP Computer Science Principles.