

# **What is the Center for Engineering, Mathematics and Science? (CEMS)**

The Center for Engineering, Mathematics, and Science is a specialty program at Blaine High School. It offers students an opportunity to explore engineering and provides them a strong foundation in Math and Science. CEMS is part of the Northwest Suburban Integration School District and an option for students in eight school districts in the northwest metro area.

CEMS is a specialty program within Blaine High School for students who want an integrated and rigorous, in-depth mathematics, science and engineering program.

The program will help students develop the academic, communication, and interpersonal skills necessary to be life-long learners and provide them with opportunities to explore careers in mathematics, science, and engineering. In addition, CEMS will prepare students for accelerated academic programs and for advanced work at the post-secondary and technical levels.

Students from the following Districts may apply to be in CEMS:

- Anoka-Hennepin (#11)
- Brooklyn Center (#286)
- Buffalo-Hanover-Montrose (#877)
- Elk River (#728)
- Fridley (#14)
- Osseo (#279)
- Mounds View Public Schools
- Rockford (#883)

CEMS encourages students to enter as ninth graders and follow the CEMS four year plan. Under this plan students will complete four years of mathematics, science and engineering courses as well as the other district and state graduation requirements.

The program utilizes Project Lead the Way (PLTW) as the basis for the engineering courses. PLTW is a rigorous four-year program of honors-level engineering courses.

Blaine High School offers the following PLTW courses:

- Introduction to Engineering Design
- Principles of Engineering
- Aerospace Engineering
- Computer Integrated Manufacturing

- Digital Electronics
- Civil Engineering and Architecture
- Biotechnical Engineering

In addition, CEMS offers seniors who have been enrolled in the program throughout their high school experience to enroll in CEMS Research, a capstone class. In this class students, work in teams of three to five students to either improve an existing product or invent a new product. Each team secures community mentors to assist them with their product development.