Welcome to STEM

STEM is the fabric of modern engineering and science and key to the advancement of fields such as engineering, science, math, and technology.

Indispensable to modern society, the field is seeking passionate, out-of-the-box thinkers. If you like to be creative and utilize technology, Shasta's STEM pathway is for you.

Our "learn by doing" philosophy means that we provide you with a variety of practical, hands-on experiences. You will work with faculty members on individual and team-based projects. You can gain real life experience that will help you succeed in the next level of your education.

STEM education will help you realize your dream. Join us-we'll ignite your passion by utilizing the following:

- Computer Controlled Router
- Three Dimensional Printers
- Laser Engraver
- Milling Machines
- Computer Aided Design
- Programming and Coding

The top 15 highest-earning college degrees all have one thing in common - math skills. That's according to a recent survey from the National Association of Colleges and Employers, which tracks college graduates' job offers.

STEM COURSES

- Exploring Engineering
- CAD
- Robotics and Space Science
- A.P. Computer Science

Support Courses

- Calculus
- Physics
- English
- Chemistry

Top-Paid Majors for 2013

Major	Average Starting Salary
Petroleum Engineering	$96,200
Computer Engineering	$70,300
Chemical Engineering	$66,900
Computer Science	$64,100
Aerospace Engineering	$63,900
Mechanical Engineering	$63,900
Electrical Engineering	$62,500
Engineering Technology	$60,900
Management Information Systems	$60,300
Logistics	$59,500

Forbes Magazine 09/2013

Job Outlook

In the next decade, 80% of jobs will require **STEM** skills

Occupational Employment Predictions

There will be an estimated 1.2 Million unfilled **STEM** related jobs in 2018

U.S. Bureau of Labor Statistics

SHASTA HIGH SCHOOL STEM PATHWAY

STEM

SCIENCE • TECHNOLOGY • ENGINEERING • MATHEMATICS

Shasta High School — STEM Pathway

So you want to be an Engineer? Well, first off, lets get an idea of what you need to do to prepare for a program of study in Engineering:

High School Students - You should start focusing on your college education now! It's not too early. **You will need to take as many math and English classes that are available to you at your high school.** Most high schools offer Advanced Placement math and English courses and completing those courses would be best. You should take math through the highest level of calculus that is available to you. Engineering majors require a significant amount of math and physics background.

It is helpful to take some sort of drafting course that includes an introduction to visualization, sketching, and drafting. A basic knowledge of hand tools shop practices, and shop safety would also be beneficial.

Space Science and Engineering (Robotics)

This CTE course explores the interaction of science and technology and is designed to interest students in the field of robotics and motivate them to pursue advanced education in science and engineering. Students will work in small groups to research, design, program, and construct robotic devices. *Meets one year of Lab Science and elective requirement for graduation. Meets UC/CSU requirements. Satisfies district computer proficiency requirement.*

CAD (Computer Aided Drafting)

Computer-aided drafting (CAD) is the use of computer systems to assist in the creation, modification, analysis, or optimization of a design. CAD is an important industrial art extensively used in many applications, including automotive, shipbuilding, and aerospace industries, industrial and architectural design, and the engineering process for design and analysis.

AP Computer Science

Computer Science emphasizes object-oriented programming methodology with an emphasis on problem solving and algorithm development and is meant to be the equivalent of a first-semester course in computer science. You will learn how to program and code in this course.

Exploring Engineering

In Exploring Engineering, students explore basic concepts and detailed applications of engineering. Students experience the planning and design, physics, and analysis and testing aspects of engineering while creating and working with prototypes. Students gain insight to real-world careers in engineering while preparing for more advanced science and engineering courses they will encounter later in high school.

Course of Study

Freshman:

CP English I	Social Science
Math 1 Hnrs	PE
Earth Science	STEM Elective (Computer Aided Drafting or Exploring Engineering)

Sophomore:

CP English II	CP World History
Math 2 Hnrs	CP Biology
PE	STEM Elective (Computer Aided Drafting or Exploring Engineering)

Junior:

CP English III	CP US History
Math 3 Hnrs	Chemistry
Foreign Language	STEM Elective (AP Computer Science and/or Robotics)
Fine Art	

Senior:

CP English IV	CP Government/Econ
AP Calculus	Physics
Foreign Language	STEM Elective (AP Computer Science and/or Robotics)

Note: *You can open up your schedule for Music and Foreign Language by taking coursework at Shasta College, through Independent Study, or through BYU Correspondence Courses.*