

Tempe★Union

Career & Technical Education

Pursue your interests. Get ahead. Have fun. Join a CTE Program

Engineering Sciences

Imagine having both the passion to make a difference in the world and the technical know-how to achieve it—that's what engineering is all about.

The **Engineering Sciences Program** provides students with an in-depth study into the fields of engineering and the engineering design process. Students are exposed to 3D design, electrical engineering, computer programming, mechanical engineering, bioengineering, alternative energies, robotics, and EPICS (Engineering Projects in Community Service). Students learn valuable 21st-century skills used in the workplace such as problem-solving, critical thinking, project planning, and decision-making. Additionally, students apply scientific laws and modeling



of mathematics to real-world projects. Project-based learning is emphasized within the Engineering Sciences courses. For example, students participate in a variety of capstone projects in the advanced engineering classes. Some examples of these projects include solar go-kart racing, battle bots, design and build for products such as an electric motorcycle, solar cell phone charger, rescue drones, and a plastic recycling center.

Suggested Course

Sequence:

Year 1: Engineering 1-2

Year 2: Engineering 3-4

Year 3: Engineering 5-6

CTSO:

[SkillsUSA](#)

Industry Certification:

**RECF Pre-Engineering
Certification**

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Engineering Sciences



Students will also have the opportunity to participate in local, state, and national engineering and robotics competitive events. Engineers are at the center of innovation. Their work drives our economy. More engineers are needed in our country to stay competitive in the global marketplace and meet future demand. This program is highly recommended for students who are pursuing higher education and employment in any engineering fields and beyond. Engineering is a versatile degree. More than half of the people who have an engineering degree work in other areas like medicine, law, investment banking, and consulting. The average annual salary for entry-level engineers who have just graduated from college is between \$56,000 and \$69,000. Engineers can expect to make between \$88,000 and \$115,000 per year as they advance in their careers. The employment outlook for job openings within the field of engineering is favorable and expected to grow as much as 10 percent in the coming decade.

Related Careers

Aerospace Engineering, Mechanical Engineering, Electrical Engineering, Robotics Engineering, Civil Engineering, Biomedical Engineering

Higher Education Options

Associate's Degree in Electronics Technology, Bachelor of Science Degrees in Electrical and Mechanical Engineering, Bachelor of Engineering Technology Degree and Masters Degree in Engineering.

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500 West Guadalupe Road, Tempe, AZ 85283

Phone: 480.839.0292