

Academy Pathways Course Descriptions

Computer Science

Year 1: Computer Science Essentials (CSE)

Students will use visual, block-based programming and seamlessly transition to text-based programming with languages such as Python to create apps and develop websites, and learn how to make computers work together to put their design into practice.

Year 2: AP Computer Science Principles (APCSP)

An overview for beginners that explores fundamental areas of CS: game design, simulation, programming, data science, cybersecurity, the web, and mobile program design. Can receive college credit with an AP exam score of 3 or better.

Year 3: AP Computer Science Applications (APCSA)

Students learn to code in Java, master advanced algorithms, and will develop their own apps as a CS capstone. College credit upon passage of the AP exam with a 3 or better.

Year 4: Engineering Design and Development (EDD)

Students apply the professional skills they have developed to document a design process to standards, completing Engineering Design and Development ready to take on any post-secondary program or career.

Engineering

Year 1: Introduction to Design (IED)

Students learn engineering design process, 3D drafting, modeling, sketching, and 3D printing. Counts as a UC art class and can receive college credits with an EoC score of 6 or better.

Year 2: Civil Engineering & Architecture (CEA)

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software.

Year 3: Principles of Engineering (POE)

Students learn statics, build structures, build mechanisms, use tools, design circuits, design control systems, and design and build robots. Can receive college credits with an EoC score of 6 or better.

Year 4: Engineering Design & Development (EDD)

Students apply the professional skills they have developed to document a design process to standards, completing Engineering Design and Development ready to take on any post-secondary program or career.