CHICO HIGH SCHOOL

Career and Technical Education Course Sequence

| Programming & Software Engineering | Robotics & Drone Design |

Course Descriptions

**Programming & Software Engineering:**

* CHS Math Credit * Butte College Credit * UC A-G “G” Credit *

Students learn modern programming basics using logic, pseudocode, flow charts, and storyboarding with programs such as Python. This course is designed to introduce students to math concepts in computer programming and data manipulation fundamentals. There is an emphasis on top down programming technique; syntax; documentation methods; modular, event oriented, object oriented programming; and graphic user interface design. Opportunity to use 3D modeling in Blender and game design through Unity. Programming and Software Engineering experience is desired in most careers, even those outside of specific computer science fields, such as business, manufacturing, nursing, and law enforcement.

**Robotics and Drone Design:**

* FFA Drone Pilot Certification * UC A-G “G” Credit *

This course will explore, via VEX V5 robotics equipment, relationships between math, science, physics, and technology. The class caters to all levels (basic to advanced) of student expertise in robotics. Students will participate in class challenges, as well as having the opportunity of competing against other high schools through SkillsUSA and the VEX Robotics Competition. Experiences with drone development and deployment are also offered. Students are prepared for employment in fields related to robotics, engineering, automation, manufacturing, electronics, and emergency services.

Other Opportunities

SkillsUSA: A national Student Leadership Organization that offers opportunities to compete in relevant contests in regional, state & national events as well as developing leadership skills

MESA: Math Engineering Science Achievement is a national organization who’s goal is to promote opportunities for non-traditional and underserved population in STEM.

SWE: The Society of Women Engineers - SWENext provides a variety of quality programs, resources, and access to engineers to empower students to prepare for engineering and technology careers.

Computer Science Club: Group of student who meet to talk about current events in computer science, teach each other relevant skills and compete in competitions

Panther Robotics: Members compete in the VEX Robotics Competition (VRC) and the Remote Aerial Drone Competition (RAD) in a unique yearly challenge.

IT Council: Student leadership opportunities within various CHS IT pathways

Note: These templates are designed to help guide students. The order of some classes may vary and individual variation can be applied.