

PACIFICA HIGH SCHOOL

CTE TECHNOLOGY EDUCATION COURSE DESCRIPTIONS

UC Approved Fine Art Courses < f >

Digital Film and Web Design (HT1711/2) UC < f > Full Year

Students will design websites in XHTML, CSS, and HTML5 code and produce highly functional web pages utilizing hand coding, Adobe Dreamweaver and Photoshop. Additionally, students will edit professional video projects using Adobe Premier and After Effects.

- Web Design with compatibility across all platforms including mobile devices
- Edit and create professional web graphics
- Web accessibility practices and search engine optimization (SEO)
- Video Editing with GoPro Cameras

The Art of Graphic Design (HT1661/2) UC < f > Full Year

Learn how to use marketing techniques to create brand recognizable products. Projects are themed around student hobbies and interests, which emphasize the use of shape and color in visual communication and presentation. All work is done in class.

- Assignments include: movie poster, logo, short animated video, and a wearable t-shirt design
- Software used: Adobe Photoshop, Illustrator, Flash, and InDesign

Articulation Agreements: Students earning a B or better in this course are eligible for credit at the following colleges. Fine art credit is added to college student's transcript, upon completion of another college class.

- Coastline Community College: Satisfies DGA C120 Intro to Design (3 units)
- Golden West College: Satisfies DART G103 - Digital 2D Design (3 units)
- Orange Coast College: Satisfies DMAD A181 - Introduction to Computer Graphics (3 units)
- Santa Ana College: Satisfies Art 195 (3 units)

The Art of Digital Photography (HT1951/2) UC < f > Full Year

This course focuses on the methods, processes, and equipment used to create, modify, and present digital imagery. Instruction focuses on choosing camera settings to achieve desired effects, retouching photos in Photoshop, applying photos to photojournalistic works, and developing a professional portfolio. Class set of cameras provided. All work is done in class. This course is only offered during 0-period.

- Skills taught: portrait, action, architectural, landscape, animal, and still life photography
- Software used: Adobe Bridge, Adobe Photoshop

Articulation Agreements: Students earning a B or better in this course are eligible for credit at the following colleges. Fine art credit is added to college student's transcript, upon completion of another college class.

- Coastline Community College: Satisfies DGA C131 Intro to Digital Photography & Image Editing w/Adobe (1.5 units)
- Santa Ana College: Satisfies Photography 180 (3 units)

Engineering Design Studio (HT1531/2) UC < f > Full Year 10th, 11th, and 12th grades only

This capstone pathway course provides students with studies in rapid visualization, aesthetics, materials and processes, presentation techniques, principles of design methodology, elements of art, product development, human factors, and prototyping. Students will also be given basic training in CNC mill setup and operation, basic CNC mill G-code programming, and an introduction to CAD/CAM.

- Design projects, 3D print prototypes and build in a real wood/metal shop environment
- Present projects to faculty/staff and industry professionals
- Advanced level use of Solidworks and 3D printing
- Students receive a free copy of CAD and SolidWorks for installation on home computers
- HAAS CNC mill basics

UC Approved General Elective Courses < g >

3D Printing (HT2971/2) UC < g > Full Year

The number of job ads requiring workers with 3D printing skills increased 1,834% in 4 years and 103% when comparing August 2015 to August 2014. Students learn industry standard software AutoCAD and SolidWorks. Class projects will be tested and evaluated in friendly student competitions. Students will learn the advantages and limitations of 3D printing technology first hand.

- Evaluate real-life scenarios and recommend the appropriate use of 3D printing technology
- Design and print objects containing moving parts
- Students receive a free copy of CAD and SolidWorks for installation on home computers

Exploring Computer Science (HT0701/2) UC < g > Full Year

Explore how coding and computer logic can be applied in problem solving, web design, game creation, and robotics.

- Assignments include: JavaScript apps, 2D game, HTML website, and robot programming challenge
- Software used: Code Studio, App Studio, and Game Studio for JavaScript

Computing with Robotics UC < g > Full Year

Learn to solve a series of robotics challenges using block based programming, and the Python programming language.

- Assignments include: programming Linkbot robots to follow commands and perform specific tasks
- Software used: Blockly, Python compiler

AP Computer Science Principles (HT1991/2) UC < g > Full Year

Learn the foundational topics of programming, algorithms, the Internet, big data, digital privacy, and security.

- Assignments include: coding design challenges, app design, innovation research, and presentations
- Software used: Code Studio, App Studio, and Game Studio for JavaScript
- Prerequisites: 2.5 GPA, A/B in Algebra II

Career Technical Education Elective Course (non a - g)

Product Design Studio (HT6111) Semester Course

Product Design is a combination of industrial technology and computer technology to give students an introduction to the world of design, engineering, and manufacturing through computer drafting and woodworking. Students learn to follow the steps of the design process as they turn conceptual ideas into fully functioning products. Emphasis is placed on learning Google Sketch-Up software and basic AutoCAD. This course is the recommended starting point for the Technology Education Pathway offered at Pacifica High School. Students are encouraged to take Health in conjunction with Product Design as they are both only semester long courses.

- Design, build, and create packaging and advertising for projects
- Design in computer lab and work in a real wood/metal shop environment
- Software used: Google Sketch-up, Adobe Photoshop, and Adobe Illustrator
- Machinery used: Laser Engraver, CNC controlled machines, and various fabrication tools

Computer Repair / ICT Essentials (0-Pd. Only)(HR2941) Semester Course

Students learn how to diagnose problems, replace malfunctioning parts, install vital upgrades, and support operating systems/software applications to achieve optimum PC performance. Diagnostic and troubleshooting techniques are covered and applied in real life classroom activities. This course is offered only during 0 period.

- All major hardware systems, and common peripheral devices
- Detailed coverage of Windows-based operating systems
- Introductory exposure to basic networking practices
- Build a custom gaming PC