

A-G Courses Manager

Reference List
2021-22

Engineering Design and Development (H)

Hillcrest High School (054677)

**Adopted Program
Course Approved**Feb 18, 2020
Christopher Martin

Basic Course Information

Title:	Engineering Design and Development (H)
Transcript abbreviations:	CAD 4
Length of course:	Full Year
Subject area:	College-Preparatory Elective (G) / Interdisciplinary
UC honors designation?	Yes
Non-honors equivalent course:	None
Prerequisites:	C or better in previous year Mathematics Course (Required) C or better in previous year English Course (Required)
Co-requisites:	Engineering Design (Required) Engineering Design and Prototyping (Required)
Integrated (Academics / CTE)?	Yes
Grade levels:	12th

**Course learning
environment:**

Classroom Based

course Description

This course is adopted from **College and Career Advantage ROP**. Please refer to their course list for a full course description.

course Materials

This course is adopted from **College and Career Advantage ROP**. Please refer to their course list for a full course description.

©2018 Regents of
the University of
California

Student

Board Approval Date:

Executive Director

ENGINEERING DESIGN AND DEVELOPMENT - OUTLINE & COMPETENCIES										COURSE		STATE STANDARDS		CLASSROOM		LAB HRS.		CC HRS.		RELATED INSTR		INSTR. CERT.							
												Plan	Actual	Plan	Actual	Plan	Actual	Time	Initials	Date									
Course Description: An advanced course in the Engineering Technology pathway, focusing on specialized concepts and/or industries that require post-secondary training in the design, production, or maintenance of mechanical, electrical, electronics or electromechanical products and systems																													
ORIENTATION AND COURSE INTRODUCTION Course Orientation 1. Student Responsibilities a. Lists course objectives b. List rules and responsibilities Roles and Responsibilities 1. Work Place Duties a. Describes duties and responsibilities b. Understanding professional terminology												10																	
HEALTH AND SAFETY GUIDELINES A. Pass Test with 100% accuracy B. Understands occupational safety issues and observes safety rules C. Understands occupational safety issues and observes safety rules D. Identifies job site hazards E. Describes a safe work environment Component 1: Researching a Problem Element A: Identification and Justification of the Problem Element B: Identification and Analysis of Prior Solution Attempts Element C: Presentation and Justification of Solution Requirements Component 2: Design a Solution Element D: Design Concepts, Generation, Analysis and Selection Element E: Application of STEM Principles and Practices Element F: Consideration of Design Viability												2																	
												30																	
												30																	

