

El Monte Union High School District – Career Technical Education

7731 ADVANCED ENGINEERING DESIGN

DATE:

INDUSTRY SECTOR: Engineering and Architecture Sector

PATHWAY: Engineering Design

CALPADS TITLE: Advanced Engineering Design (Capstone)

CALPADS CODE: 7731

HOURS:

Total	Classroom	Laboratory/CC/CVE
180	90	90



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METHODS OF INSTRUCTION

- Direct instruction
- Group and individual applied projects
- Multimedia
- Demonstration
- Field trips
- Guest speakers

STUDENT EVALUATION:

- Student projects
- Written work
- Exams
- Observation record of student performance
- Completion of assignment

INDUSTRY CERTIFICATION:

- None

RECOMMENDED TEXTS:

- Technology Engineering & Design by: Sharon A. Brusic, James F. Fales, Vincent F. Kuetemey

PROGRAM OF STUDY

Grade	Fall	Spring	Year	Course Type	Course Name
9, 10, 11, 12				Introductory	Introduction to Engineering and Architecture
10, 11, 12				Concentrator	

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				Knowledge and Skills: 10.1 CTE Pathway: C2.1, C3.3
IX.	ENGINEERING DESIGN PROCESS AND DOCUMENTATION	CR	Lab/ CC	Standards
	A. Design Process Overview B. Develop an Engineering Report a. Technical Writing & Oral Communication b. Formal Report c. Product Presentation Using PowerPoint	5	0	Academic: RSIT: 11-12.2 WS: 11-12.4, 11-12.6 ETS: ETS1.A, ETS1.B, ETS1.C CTE Anchor: Problem Solving and Critical Thinking: 5.1, 5.2 CTE Pathway: C5.1
X.	PRODUCT DESIGN DEVELOPMENT CHALLENGE	CR	INTEGRATION CHALLENGE	