



Integrated Program of Study Course Grid

Engineering and Architecture Sector
Engineering Design Pathway*



Grade	CTE/VAPA Courses	Social Science	English Language Arts	Math	Integrated Science	Misc. Required Courses	World Language	Early College Credit Options	College Courses	Work-Based Learning
8	Exploratory CTE	History	Language Arts	Math 8 or Algebra I (UC)	Physical Science	PE	World Language HS Credit (optional)	Cypress College: Engineering Technology Programs	Fall	Guest Speakers, Workplace Tours
									Spring	
									Summer	
9	Visual or Performing Art (UC)		English 9 or English 9 H (UC)	Algebra I or Geometry H (UC)	Biology (UC)	Health & PE-1	World Language (UC) (Required)	FC: Industrial Drafting Programs	Fall	Guest Speakers, Workplace Tours
									Spring	
									Summer	
10	Intro to Engineering (UC) Introductory CTE	World History or AP World History (UC)	English 10 or English 10 H (UC)	Geometry or Algebra II/Trig (UC)	Chemistry (UC)	PE-2	World Language (UC) (Required)	IVC: Drafting Technology & Engineering Programs	Fall	Guest Speakers, Workplace Tours
									Spring	
									Summer	
11	Principles of Engineering (UC) Concentrator CTE	US History or AP US History (UC)	English 11 or AP English Language (UC)	Algebra II or Pre-Calculus (UC)	Physics (UC)		World Language (UC) (Elective)	OCC: Construction Technology Programs SC: Drafting Technology Programs	Fall	Guest Speakers, Workplace Tours, Job Shadowing
									Spring	
									Summer	
12	Computer Integrated Manufacturing (UC) Capstone CTE	Government/Economics or AP Govt/Econ (UC)	ERWC, Literature, or AP English Literature (UC)	Pre-Calculus, Finite, or AP Statistics or Calculus (UC)	AP Physics (UC)		AP World Language (UC) (Elective)	SAC: Engineering Programs	Fall	Guest Speakers, Workplace Tours, Job Shadowing, Internships
									Spring	
									Summer	
Potential Certifications, Certificates, Degrees	High School Industry Certifications			Community College Programs/Certificates			UC/CSU Degree Programs			
	Certified SolidWorks Associate			Engineering Design Technology			CSU Construction Engineering and Management			
				Building Construction			CSU Civil Engineering			
				Drafting - CAD Technology			UC Civil Engineering and Mechanical Engineering			
Potential Employment/Salary (median salary in OC)	Mechanical Technician - \$70K			Civil Engineer - \$107K			Architectural and Engineering Manager - \$172K			
	Mechanical Drafter - \$60K			Civil Engineering Technician - \$68K			Construction Manager - \$118K			
	Engineering Assistant - \$54K			Architectural Drafter \$63K			Energy Engineer - \$102K			