

Torrance USD Program of Study for ENG Engineering Design Pathway 152

Industry Sector: Engineering & Architecture (ENG)					Pathway: Engineering Design (152)					
Torrance Unified School District (TUSD) Program of Study										
Site	Grade	English	Math	Social Studies	Science	Other Required Courses or Recommended Electives			Career Technical Education Course	Occupations, Degrees, & Certificate Programs
T O R R A N C E U N I F I E D	7	English 7	Math 7	Soc. St. 7	Science 7	--	PE	--	PLTW Comp. Sci. CSIM & AC	<u>Occupations (High School Diploma)</u> <ul style="list-style-type: none"> Non-Destructive Testing Specialist Power Plant Operator
	8	English 8	Math 8	Soc. St. 8	Science 8	--	PE	--	PLTW Engineering DM & AR	
	9	English 1	Algebra 1	--	Biology/H	World Lang	PE	Health	*PLTW IED	<u>Occupations (Training/2-Yr Degree)</u> <ul style="list-style-type: none"> Engineering Technician (Automotive, Electrical, Mechanical, Civil, Robotics) Industrial Machine Technician Mechanical Engineering Design Technician
	10	English 2	Geometry/H	*World History	Chemistry/H	World Lang	PE	--	* PLTW POE	
	11	English 3 or AP Comp	Algebra 2/H	*US History	Physics, AP Chemistry, or AP Physics 1	World Lang	--	--	*PLTW DE, *PLTW AE, or AP CSP	
	12	*English 4 or AP Lit	Pre-Calculus/H	Gov/Econ	AP Physics 1, 2, or C	--	--	Fine Arts	*PLTW EDD	<u>Occupations (4-Yr Degree/Higher)</u> <ul style="list-style-type: none"> Engineer (various specialties) Engineer Technologists (various specialties)
	UC CSU	4 Yrs Req	3 Yrs Req 4 Yrs Rec	2 Yrs Req	2 Yrs Req 3 Yrs Rec	2 Yrs Req 3Yrs Rec	--	1 Yr Fine Arts Req 1 Yr Elective Req	CTE is not req for UC/CSU/TUSD	
TUSD	4 Yrs Req	2 Yrs Req	2 Yrs Req & Econ/Gov	2 Yrs Req	1 Yr Lang or Fine Art Req	2 Yrs Req	1 Sem Health Req	<i>These CTE courses meet the Yr 3 Sci & Elective Req.</i>	<u>Pre/Apprenticeship Programs</u> <ul style="list-style-type: none"> Aero-Flex Pre-Apprenticeship Aero-Flex Apprenticeship 	
<p>* Indicates a course that has the option of earning high school credit AND college credit through El Camino (see your high school counselor for details on dual enrollment & articulation)</p>										
E L C A M I N O C O L L E G E	<u>General Education Requirements for ECC Majors</u>					<u>ECC Engineering AS Degree Requirements</u>				
	13 ↓ 15	<u>Required Categories for ECC AS Degree</u> Natural Sciences (3 units) Social and Behavioral Sciences (3 units) Humanities (3 units) Language and Rationality (6 units) <ul style="list-style-type: none"> One course from each section: A & B Health & PE (3 units) <ul style="list-style-type: none"> Exemption Options: Pass the Contemporary Health Waiver Exam or obtain approval for the Petition for Military Service Credit. Mathematics <ul style="list-style-type: none"> Option 1: Pass the Math Competency Test Option 2: Pass one approved Math class with a C or better Electives <ul style="list-style-type: none"> Additional units needed to total 60 units Courses cannot double count in multiple categories 			<u>Engineering Technician Required 16 Units</u> *ETEC 10 PLTW POE *ETEC 12 PLTW IED *ETEC 14 PLTW DE ETEC 16 PLTW CIM Machine Tool Tech 101 <u>Require 5-9 Units from:</u> *ETEC 15 PLTW AE *ETEC 18 PLTW EDD Machine Tool Tech 16 Welding Comp Aided Design/Draft Elec/Comp Hdwr Tech 22 Manufacturing Tech 70 Manufacturing Tech 75A/B			<u>Engineering Technology Required 26 Units</u> *ETEC 10 PLTW POE *ETEC 12 PLTW IED *ETEC 14 PLTW DE ETEC 16 PLTW CIM Physics 2A Chemistry 1A Mathematics 190 <u>Required 3-7 Units from:</u> *ETEC 15 PLTW AE *ETEC 18 PLTW EDD Comp Info Sys 13 Elec Comp Hdwr Tech 110C Engineering 1 Engineering 9 Machine Tool Tech 16 Manufacturing Tech 70 Manufacturing Tech 75A/B		<u>Degree Programs</u> BS Degrees in Engineering: <ul style="list-style-type: none"> Computer Aerospace Electrical Civil Mechanical Environmental Biomedical Chemical Project Management
Please note, additional courses are needed to meet the <u>UC/CSU Transfer Requirements</u> . See your ECC counselor for details.										

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Industry Sector: Engineering & Architecture (ENG)							Pathway: Engineering Design (152)				
Torrance Unified School District (TUSD) Program of Study											
Site	Grade	English	Accelerated Math (Preferred)	Social Studies	Accelerated Science (Preferred)	Other Required Courses or Recommended Electives			Career Technical Education Course	Occupations, Degrees, & Certificate Programs	
T O R R A N C E U N I F I E D	7	English 7	Accelerated Math 7	Soc. St. 7	Science 7	--	PE	--	PLTW Comp. Sci. CSIM & AC	Occupations (High School Diploma) • Non-Destructive Testing Specialist • Power Plant Operator	
	8	English 8	Algebra 1	Soc. St. 8	Biology H	--	PE	--	PLTW Engineering DM & AR		
	9	English 1	Geometry/H	--	Chemistry H	World Lang	PE	Health	*PLTW IED	Occupations (Training/2-Yr Degree)	
	10	English 2	Algebra 2/H	*World History	AP Chemistry	World Lang	PE	--	* PLTW POE	• Engineering Technician (Automotive, Electrical, Mechanical, Civil, Robotics) • Industrial Machine Technician • Mechanical Engineering Design Technician	
	11	English 3 or AP Comp	Pre-Calculus/H	*US History	AP Physics 1	World Lang	--	--	*PLTW DE, *PLTW AE, or AP CSP		
	12	*English 4 or AP Lit	AP Calculus AB or BC	Gov/Econ	AP Physics 2 or C	--	--	Fine Arts	*PLTW EDD		
	UC CSU	4 Yrs Req	3 Yrs Req 4 Yrs Req	2 Yrs Req	2 Yrs Req 3 Yrs Rec	2 Yrs Req 3Yrs Rec	--	1 Yr Fine Arts Req 1 Yr Elective Req	CTE is not req for UC/CSU/TUSD	Occupations (4-Yr Degree/Higher) • Engineer (various specialties) • Engineer Technologists (various specialties)	
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	13 ↓ 15	Required Categories for ECC AS Degree Natural Sciences (3 units) Social and Behavioral Sciences (3 units) Humanities (3 units) Language and Rationality (6 units) • One course from each section: A & B Health & PE (3 units) • Exemption Options: Pass the Contemporary Health Waiver Exam or obtain approval for the Petition for Military Service Credit. Mathematics • Option 1: Pass the Math Competency Test • Option 2: Pass one approved Math class with a C or better Electives • Additional units needed to total 60 units • Courses cannot double count in multiple categories					Engineering Technician Required 16 Units *ETEC 10 PLTW POE *ETEC 12 PLTW IED *ETEC 14 PLTW DE ETEC 16 PLTW CIM Machine Tool Tech 101 Require 5-9 Units from: *ETEC 15 PLTW AE *ETEC 18 PLTW EDD Machine Tool Tech 16 Welding Comp Aided Design/Draft Elec/Comp Hdwr Tech 22 Manufacturing Tech 70 Manufacturing Tech 75A/B			Engineering Technology Required 26 Units *ETEC 10 PLTW POE *ETEC 12 PLTW IED *ETEC 14 PLTW DE ETEC 16 PLTW CIM Physics 2A Chemistry 1A Mathematics 190 Required 3-7 Units from: *ETEC 15 PLTW AE *ETEC 18 PLTW EDD Comp Info Sys 13 Elec Comp Hdwr Tech 110C Engineering 1 Engineering 9 Machine Tool Tech 16 Manufacturing Tech 70 Manufacturing Tech 75A/B	
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