CSU 120/180 Units Curriculum Map

Campus: Cal Poly Pomona

Degree (BA, BS...): BS

Major: Computer Engineering

Concentration:

Total units: 194

GE Area requirements double counted with major or other requirement: 68

Please attach sheet detailing exceptions requested.

		MATH 114 Analytical Geometry/Calculus I (GE: B4)	MATH 115 Analytical Geometry/Calculus II	MATH 116 Analytical Geometry/Calculus III	MATH 214 Calculus of Several Variables I	MATH 215 Calculus of Several Variables II	MATH 224 Linear Algebra & Differential Equations	CHM121/L or CHM 115 Gen Chem I / Chem for Eng. (GE: B1,B3)	PHY131/L General Physics I (GE B1, B3)	PHY132/L General Physics II	PHY 133/L General Physics III	EGR481 Prog, Design and App. I (GE: B5)	EGR482 Prog, Design and App. II (GE: B5)	ECE 109/L Intro to Electrical Engineering	ECE 114/L C for Engineers	ECE 130 Discrete Structures	ECE 264/L Intro to Combinational Logic	EE 205/L Intro to Sequential Logic	ECE 207/L Network Analysis I	EE 209/L Network Analysis II	ECE 230/L Electronic Devices & Circuits	ECE 256 Obj. Or. Programming	ECE 302 Electromagnetic Fields	ECE 304 Data Structures for Engineers	ECE 306/L Discrete Time Signals & Systems	ECE 309/L Control Systems Engineering	ECE 315 Prob. Stat. & Random Processes	ECE 352/L Elect. Design for Digital Circuits	ECE 341/L Intro. To Microcontrollers	ECE 425/L Computer Architecture	ECE 426/L Operating Systems	ECE 431/L or 433/L Comp. Networks or TCP/IP	ECE 464 Prof. Topics for Engineers	ECE 467 Team Project	ECE 480 Software Engineering	Upper Div. Tech. Elective I 300 level or above	Upper Div. Tech. Elective II Selected from list	Upper Div. Tech. Elective III Selected from list	Area A1 Oral Communication	Area A2 GE Written Communication	Area A3 GE Critical Thinking	Area B2 GE Biological Sciences	Area C1 GE (4 units)	Area C2 GE (4 units)	Area C3 GE (4 units)	Area C4 GE (4 units)	Area D1 GE PLS 201 American Govt.	Area D1 GE HST 202 US History	Area D2 GE (4 units)	Area D3 GE (4 units)	Area D4 GE (4 units)	Area E GE (4 units) Lifelong Learning	
	All courses required for graduation →																																																			
	Number of Units →	4	4	4	3	3	4	4	4	4	4	2	2	4	4	4	4	4	4	4	5	4	4	4	5	5	4	4	4	4	4	4	1	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	194
Student Learning Outcomes (identify all required for accreditation, certification, or licensure)	**Accreditation Student Outcome A** Apply math, sci and engineering knowledge		I	I	I	D	D	D	I	I	I	I	M	M	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	M	M	M		M	M	M	M	M	M														
	Accreditation Student Outcome B Experiments, analyze and interpret data									I	I	I			I			I	I	I	I	I	I	D	D	D	D	D	D	D	M	M	M		M	M	M	M	M	M														
	Accreditation Student Outcome C Design systems or components to meet needs within												M	M	I	I	I	I	I		I	I	I			D	D		D	D	M	M	M		M	M	M	M	M	M														
	Accreditation Student Outcome D Work in multidisciplinary teams												M	M	I					I		I			D						M	M		M		M	M	M															I
	Accreditation Student Outcome E Identify, formulate, solve engineering problems												M	M	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	M	M	M		M	M	M	M	M	M														
	Accreditation Student Outcome F Professional ethics																							D										M	D		M																
	Accreditation Student Outcome G Communicate effectively												M	M		I	I	I	I	I			I	I		D				D	D	M	M	M	D	M	M	M	M	M	I	I												
	Accreditation Student Outcome H Breadth for understanding engineering in many contexts		I	I	I	I	I	I	I	I	I	I			I	I									D						M	D		M					I	I				I		I		I	I	
	Accreditation Student Outcome I Life long learning												M	M								I		D	D					D	M		M	D		M	M	M	M													
	Accreditation Student Outcome J Knowledge of contemporary issues												M	M										D	D								M	D		M	M	M	M													I
	Accreditation Student Outcome K Use modern engineering skills & tools for practice												M	M	I	I	I	I	I	I	I	I	I	D	D	D	D	D	D	D	M	M	M			M	M	M	M													
Program Objectives	**Program Objective 1** Graduate students who are successfully practicing in the computer engineering profession with solid theoretical and hands-on knowledge of circuits, elelctronics, computer software, hardware, control systems, and digital system design.		I	I	I	I	I	I	I	I	I	I	M	M	I	I		I	I	I	I	I	I	D	D	D	D	D	D	D	D	M	M	D	M	M	M	M	M														
	Program Objective 2 contribute to society through their undergraduate preparation, whether they work in the engineering profession or they decide to pursue an alternate career												M	M	I	I	I	I	I	I	I	I	I	D	D	D	D		D	D	D	M	M	D	M	M	M	M	M														
	Program Objective 3 Pursue personal success by way of ethical and responsible behavior												M	M								I		D	D								M	D	M	M	M	M	M	I	I													
	Program Objective 4 understand the challenges of a dynamically and glbalized changing world and are willing to adapt their skills through continuous learning and self improvement												M	M				I																			M	M	M														
	Program Outcome 5 Master effective communication skills to obtain success either working individually or within a team environment												M	M	I	I	I	I	I	I		I	I		D				D	D	M	M	M	D	M	M	M	M	M														
CSU GE Area A	**GE Area A1--Oral Communication** 4 units																																								I											
	GE Area A2--Written Communication 4 units																																									I										
	GE Area A3--Critical Thinking 4 units																																										I									

CSU GE Area B	**GE Area B1--Physical Science** 4 units								I	I																																											
	GE Area B2 --Biological Science 3 units																																										I										
	GE Area B3--Laboratory Science (with B1 or B2 course) 1 units								I	I																																											
	GE Area B4--Math/Quantitative Reasoning 3units		I																																																		
	GE Area B5--Science and Technology Synthesis **4**units												M	M																																							
CSU GE Area C	**GE Area C1--Visual and Performing Arts** 4units																																											I									
	GE Area C2--Philosophy and Civilization 4units																																												I								
	GE Area C3--Lit, Phil, Language (not English) 4 units																																													I							
	GE Area C4--Humanities Synthesis (upper Div) 4 units																																														I						
CSU GE Area D	**GE Area D1--US History, Constitution, American Ideals** 8 units																																															I	I				
	GE Area D2--History, Economics and Poli Sci 4 units											I																																						I			
	GE Area D3--Sociology,Anthropology, Ethics and Gender Studies 4 units																																																		I		
	GE Area D4--Social Science Synthesis (upper Div) 4 units																																																			I	
CSU GE Area E	**GE Area E--Lifelong Understanding and Self-Development** 4 units																																																				I
American Institutions	**American Institutions: US History Constitution** GE Area D1																																															I					
	American Institutions: California and local gov. GE Area D1																																																I				