Academic Requirements Worksheet: Computer Engineering (CPE)
Effective Fall 2021 Catalog and Beyond

To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). There is no way to list all possible overlaps, so please complete this form with a professional advisor. We can help you identify the best course of action.

Graduation Requirements *Items with * require C- or better*	√
Total Unit Requirements:	
# Total units required for a CPE BS **124 units**	
# Total major-related units **97 units**	
# Total units outside of major **27 units**	
American Institutions:	
➢ US History *Recommend HIST 17A or 17B*	
➢ US Constitution *Recommend POLS 1*	
➢ CA State & Local Govt *Recommend POLS 1*	
Race & Ethnicity in American Society (R+E) _____	
English Composition:	
1. Written Communication* ENGL 5/5M or 11/11M	
2. Second Semester Composition* ENGL 20/20M	
Graduation Writing Assessment Requirement (GWAR):	
3. Writing Placement for Juniors (WPJ) or ENGL 109W	
4. Writing Intensive (WI) Course* _____	
Foreign Language (FL) **EXEMPT**	√

Next Semester Course Option   (Units)

1. _____( )
2. _____( )
3. _____( )
4. _____( )
5. _____( )
6. _____( )

Total Units:____

To Do:

_____

_____

_____

General Education for Engineering *Items with * require C- or better*				
A. Basic Subjects (6 units)	**Suggestion or Requirement**	**Course**	**Semester**	**Grade**
A1. Oral Communication*	COMS 4 or COMS 5			
A2. Written Communication*	ENGL 5/5M or ENGL 11/11M			
B. Physical Universe & Its Life Forms (12 units total - 9 *units must be lower division*)				
B1. Physical Science & B3. Lab*	Met by major: PHYS 11A			
B2. Life Forms*	Met by major: ENVS 10			
B4. Quantitative Reasoning*	Met by major: MATH 30			
B5. Upper Division GE*	Met by major: CPE 190/191			
C. Arts & Humanities (12 units total - 9 *units must be lower division*)				
C1. Arts				
C2. Humanities				
Second Semester Composition*	ENGL 20/20M			
Upper Division GE*	*Recommend: Writing Intensive*			
D. The Individual & Society (9 units total - 6 *units must be lower division*)				
U.S. History	*Recommend: HIST 17A or 17B*			
U.S. Constit., CA State, & Local Govt	*Recommend: POLS 1*			
Upper Division GE*	Met by major: ENGR 140 & CPE 190/191			
E. Understanding Personal Development (3 units)				
3 units of lower division courses*	Met by major: ENGR 1 & CPE 64			
F. Ethnic Studies (3 units)				
Any Area F lower division course				

Computer Engineering Course Check List
Fall 2021-Spring 2022 Catalog
Disclaimer

The below list is not to be used to plan out your courses. It is only used as a check list to reflect your progress within your program. For course planning assistance, please speak with an academic advisor or faculty member to assist you.

All the courses on this list must be passed with a C- or better.

Lower Division Requirements

Code	Title	Pre-requisite(s)	Units	☑
CPE/EEE 64	Introduced to Logic Design	CSC 15 or CSC 25 or ENGR 50	4	
CSC 15	Programming Concepts & Methodology I	CSC 10A or programming experience	3	
CSC 20	Programming Concepts & Methodology II	CSC 15	3	
CSC 28	Discrete Structures for Computer Science	MATH 29 & CSC 20 (concurrently)	3	
CSC 35	Introduction to Computer Architecture	CSC 15	3	
CSC 60	Introduction to Systems Programming in UNIX	CSC 20 & CSC 35	3	
ENGR 1	Introduction to Engineering	Engineering Major or Instructor Permission	1	
ENGR 17	Introductory Circuit Analysis	PHYS 11C & Math 45; one can be concurrent	3	
ENVS 10	Introduction to Environmental Science		3	
MATH 30	Calculus I	ALEKS PPL Score of 76 or high, or MATH 29	4	
MATH 31	Calculus II	MATH 30	4	
MATH 45	Differential Equations	MATH 31	3	
PHYS 11A	Mechanics	MATH 30 & MATH 31 (concurrently)	4	
PHYS 11C	Electricity and Magnetism	PHYS 11A & MATH 31	4	

Upper Division Requirements

Code	Title	Pre-requisite(s)	Units	☑
CPE/CSC 138	Computer Networking Fundamentals	CSC 35, CSC 60, & CSC 130	3	
CPE/CSC 142	Advanced Computer Organization	CSC 137 or CPE 166 & CPE 185	3	
CPE 151	CMOS and VLSI	CPE 64 & EEE 108	3	
CPE 166	Advanced Logic Design	CPE 64 & ENGR 17	4	
CPE 185	Computer Interfacing	CPE 64, CSC 35 & CSC 60	4	
CPE 187	Embedded Systems Design	CPE 185 or EEE 174	3	
CPE 190	Senior Design Project I	CPE 166, CPE 187, EEE 108, CPE 142 (concurrently)	2	
CPE 191	Senior Design Project II	CPE 190 & WPJ	2	
CSC 130	Data Structure and Algorithm Analysis	CSC 20, CSC 28 (concurrently)	3	
CSC 139	Operating System Principles	CSC 60, CSC 130, & CSC 137 or CPE 185	3	
EEE 108	Electronics I	EEE 117 & EEE108L (Concurrently)	3	
EEE 108L	Electronics I Laboratory	EEE 117, EEE 117L, & EEE 108 (concurrently)	1	
EEE 117	Network Analysis	ENGR 17, MATH 45, & PHYS 11C & EEE 117L (concurrently)	3	
EEE 117L	Network Analysis Laboratory	EEE 117 (concurrently)	1	
EEE 180	Signals and Systems	Engr 17, Math 45 & EEE 117 (concurrently)	3	
ENGR 120	Probability and Random Signals	EEE 180 (concurrently)	3	
ENGR 140	Engineering Economics	ENGR 17	2	
Technical Elective I	Select one of the following: CPE 144, CPE 153, CPE 186, CSC 131, CSC 133, CSC 134, CSC 151, CSC 152, CSC 153, CSC 154, CSC 155, EEE 120, EEE 122, EEE 181, EEE 187	Please see a Catalog for course descriptions. Pick in consultation of a Faculty Advisor.	3	
Technical Elective II	Select one of the following: CSC 154 or CSC /CPE 159	Please see a Catalog for course descriptions. Pick in consultation of a Faculty Advisor.	3	
		Total Units: 97		

Any Questions?
Please visit the ECS Student Success Center – Advising, Counseling, and Tutoring Center in Santa Clara 1213
Or the Computer Engineering Department in Riverside 3022

Hub for online student resources including major roadmaps, catalogs, Academic Advising Worksheets, Placement exams, and online resources: https://www.csus.edu/college/engineering-computer-science/student-success/student-resources.html