

CpE Program Curriculum Pattern/Map (Fall 2019 - 2021)

First-year First Semester

First-year Second Semester

CSc 15	Prog. Concepts & Methodology I (CSc 10A or Experience)	3		CSc 20	Prog. Concepts & Methodology II (CSc 15)	3
Math 30	Calculus I (Pre-Calculus, Math 29)	4		Math 31	Calculus II (Math 30 or AP Credit)	4
ENVS 10	Environmental Science	3		Phys 11A	Mechanics (Math 30, Math 31*)	4
Engr 1	Intro. to Engineering (Algebra & Trigonometry)	1		CSc 35	Microcomputers and Assembly Language (CSc 15)	3
ENGL 5/ ENGL 10*	Accelerated Academic Literacies / Academic Literacies I (ENGL 10 Fall only)	3		ENGL 11+	Academic Literacies II (ENGL 11 Spring only)	3+
				GE	General Education Course	3
Total Units		14		Total Units		17+

Second-year First Semester

Second-year Second Semester

CpE 64	Introduction to Logic Design (CSc 15 or CSc 25)	4		CSc 28	Discrete Structures (Math 29, CSc 20*)	3
Math 45	Differential Equations (Math 31)	3		CSc 130	Data Struct. & Algorithm Develop. (CSc 20, CSc 28*)	3
Phys 11C	Electricity & Magnetism (Math 31, Phys 11A)	4		Engl 20	Expository Writing (Engl 1A or Engl 2)	3
CSc 60	Intro. to Systems Programming (CSc 20, CSc 35)	3		Engr 17	Intro. Circuit Analysis (Phys 11C**, Math 45**)	3
GE	General Education Course	3		GE	General Education Course	3
Total Units		17		Total Units		15

Third-year First Semester

Third-year Second Semester

CpE 166	Advanced Logic Design (CpE 64, ENGR 17)	4		CpE 142	Adv. Computer Org. (CpE 166 & CpE 185)	3
CpE 185	Computer Interfacing (CpE 64, CSc 35, CSc 60)	4		EEE 108	Electronics 1 (EEE 117, Co-Req EEE 108L)	3
ENGR 140	Engineering Economics. (ENGR 17 or ENGR 30)	2		EEE 108L	Electronics I Lab (EEE 117, EEE 117L, Co-Req EEE 108)	1
EEE 117	Network Analy. (CpE 64*, Engr 17, Co-Req EEE 117L)	3		EEE 180	Signals and Systems (EEE 117*)	3
EEE 117L	Network Analysis Lab (Co-Req EEE 117)	1		CpE 186	Computer Hardware Design (CpE 185)	3
GE	General Education Course	3		GE	General Education Course	3
Total Units		17		Total Units		16

Four-year First Semester

Four-year Second Semester

CpE 151	CMOS & VLSI (CpE 64, EEE 108)	3		CpE 159	Operating Sys Pragmatics (CSc 139)	3
CSc 139	Operating System Principals (CSc 60, CSc 130, CpE 185)	3		CpE 138	Computer Networks and Internets (CSc 35, CSc 60, CSc 130)	3
CpE 190	Senior Project Design (CpE 142, CpE 166, CpE 186, CpE 187, EEE 108)	2		CpE 191	Senior Design Project II (CpE 190)	2
Engr 120	Probability and Random Signals (EEE 180*)	3		Elective	CpE Technical Elective	3
GE	General Education Course	3		GE	General Education Course	3
Total Units		14		Total Units		14

Degree Unit Requirements

124

Courses in parentheses are prerequisites

* = May be taken concurrently ** = One course may be taken concurrently, but not both

+ = ENGL 10 and ENGL 11 may be taken in lieu of ENGL 5 (only 3 units will be counted towards degree)

CpE Technical Elective Courses CSc 131, CSc 133 (CSc 131), CSc 134, CSc 151, CSc 152 (Engr 120), CSc 153 (CpE 138), CSc 154 (CpE 138), CSc 155 (CSc 133), EEE 120 (EEE 108), EEE 122 (EEE 180), EEE 181 (EEE 180), EEE 187 (EEE 180), CpE 187 (CpE 185, CpE 166)+ CpE 199

Courses offered are subject to change. For the most accurate course planning guides, refer to the website at: <https://www.csus.edu/college/engineering-computer-science/computer-engineering/forms.html>