

Bachelor of Science in Computer Engineering Suggested Sequence of Courses

First Semester		Units
CHEM 180	Chemistry for Energy & the Environment (Major Core, B1, B3, ES)	3
MATH 226	Calculus I (Major Core, B4) ²	4
ENGR 100	Introduction to Engineering (Major Core)	3
ENGR 212	Introduction to Unix and Linux for Engineers (Major Core)	2
ENG 114	Writing the First Year: Finding Your Voice (A2) ¹	3
Units		15

Second Semester		
MATH 227	Calculus II (Major Core)	4
PHYS 220 & PHYS 222	General Physics with Calculus I and General Physics with Calculus I Laboratory (Major Core, B1, B3)	4
ENGR 213	Introduction to C Programming for Engineers (Major Core) ⁴	3
ENGR 214	Programming Laboratory (Major Core)	1
GE Area A: Oral Communication (A1) ^{3,4}		3
GE Area C		3
Units		18

Third Semester		
MATH 228	Calculus III (Major Core)	4
PHYS 230 & PHYS 232	General Physics with Calculus II and General Physics with Calculus II Laboratory (Major Core)	4
ENGR 221	Data Structures with Python (Major Core)	4
GE Area B: Life Science (B2)		3
Units		15

Fourth Semester		
MATH 245	Elementary Differential Equations and Linear Algebra (Major Core)	3
ENGR 205	Electric Circuits (Major Core) ⁴	3
ENGR 206	Circuits and Instrumentation Laboratory (Major Core)	1
ENGR 281	Probability and Statistics with Matlab (Major Core)	2
GE Area C		3
GE Area D		3
Units		15

Fifth Semester

ENGR 305	Linear Systems Analysis (Major Core)	3
ENGR 340	Programming Methodology for Engineers (Major Core)	4
ENGR 356	Digital Design (Major Core)	3
ENGR 357	Digital Design Laboratory (Major Core)	1
ENGR 478	Design with Microprocessors (Major Core)	4
GE Area F [±]		3
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Units		18
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Sixth Semester

ENGR 354	Microelectronics for Computer Engineers (Major Core)	4
ENGR 378	Digital Systems Design (Major Core)	3
ENGR 413	Artificial Intelligence with Engineering Applications (Major Core) ⁵	3
ENGR 451	Digital Signal Processing (Major Core)	4
GE Area C		3
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Units		17
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Seventh Semester

ENGR 456	Computer Systems (Major Core)	3
ENGR 476	Computer Communications Networks (Major Core)	3
ENGR 498	Advanced Microcontroller (Major Core)	4
ENGR 696	Engineering Design Project I (Major Core) ⁶	1
GE Area D		3
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Units		14
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Eighth Semester

ENGR 697GW	Engineering Design Project II - GVAR (Major Core)	2
Major Upper-Division Electives - Take Two ⁷		6
GE Area UD-C: Upper-Division Arts and/or Humanities (Consider SF State Studies Course) ⁸		3
GE Area UD-D: Upper-Division Social Sciences (Consider SF State Studies Course) ⁸		3
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Units		14
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Total Units	126
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