

Required Courses

- 15 units of mathematics, 8 units of physics, 3 units of chemistry,
- 21 units of lower division engineering and computer science courses and 46 units of required upper division courses,
- 6 units of elective courses and 33 units of General Education courses (for Engineering Track)
- Course prerequisites are strictly enforced. Students not meeting the prerequisites can be administratively dropped.
- All required lower division courses must be passed before upper division courses can be taken

Required Math and Science Lower Division Courses

Course Number	Course Name	Units	Grade	SFSU or Transfer	Term Yr	Prerequisite
CHEM 180	Chemistry for the Energy and the Environment	3				550 or above on Entry Level Math (ELM) exam or approved exemption, or MATH 70© and satisfactory score on chemistry placement exam.
MATH 226	Calculus I	4				Successful completion of ELM requirement; MATH 199© or equivalent.
MATH 227	Calculus II	4				MATH 226©
MATH 228	Calculus III	4				MATH 227©
MATH 245	Elementary Differential Equations & Linear Algebra	3				MATH 228©
PHYS 220/222	General Physics with Calculus I & Lab	4				High school physics or equivalent; MATH 226©; PHYS 222♥; MATH 227♥
PHYS 230/232	General Physics with Calculus II & Lab	4				PHYS 220© and MATH 227©; PHYS 232♥

© = Course must have been passed with a grade of C or better

Required Lower Division Courses for Computer Engineering

ENGR	Course Name	Units	Grade	SFSU or Transfer	Term Yr	Prerequisite
ENGR 100	Introduction to Engineering	1			F,S	High school algebra and trigonometry
ENGR 121	Gateway to Computer Engineering	1			F,S	High school algebra and trigonometry
ENGR 205	Electric Circuits	3			F,S	PHYS 230; MATH 245♥
ENGR 206	Circuits and Instrumentation Lab	1			F,S	ENGR 205♥
CSC 210	Introduction to Computer Programming	3				
ENGR 212	Introduction to Unix/Linux for Engineers	2			F,S	Consent of instructor
ENGR 213	Introduction to C Programming for Engineers	3			F,S	MATH 226©
CSC 220	Data Structures	3				CSC 210©, MATH 226©, MATH 227♥ or ©
CSC 230	Discrete Mathematics	3				CSC 210©, MATH 226©, MATH 227♥ or ©

Required Upper Division Courses for Computer Engineering

ENGR	Course Name	Units	Grade	SFSU or Transfer	Term Yr	Prerequisite
ENGR 300	Engineering Experimentation	3			F,S	ENGR 205, ENGR 206; ENGLISH 214©
ENGR 301	Electronics Laboratory	1			F,S	ENGR 300, ENGR 353♥
ENGR 305	Linear Systems Analysis	3			F,S	ENGR 205©; MATH 245
CSC 340	Programming Methodology	3			F,S	CSC 220©, CSC 230©; MATH 227©
ENGR 353	Microelectronics	3			F,S	ENGR 205©, 206©,
ENGR 356	Digital Design	3			F,S	ENGR 205©
ENGR 357	Digital Design Laboratory	1			F,S	ENGR 356♥
ENGR 378	Digital Systems Design	3			F	ENGR 356©
CSC 413	Software Development	3			F,S	CSC 340©
ENGR 451	Digital Signal Processing	4			F,S	ENGR 305©; ENGR 213© or 290© (Matlab)
ENGR 456	Computer Systems	3			F	ENGR 356©; ENGR 213© or CSC 210©
ENGR 476	Computer Communication Networks	3			S	ENGR 356©; ENGR 213© or CSC 210©
ENGR 478	Design with Microprocessors	4			F,S	ENGR 356©; ENGR 213© or CSC 210©
ENGR 696	Engineering Design Project I	1			F,S	Complete 21 upper division CompE units
ENGR 697	Engineering Design Project II	2			F,S	ENGR 696

© = Engineering Course must have been passed with a grade of C- or better

© = CSC Course must have been passed with a grade of C or better

♥ = Course may be taken concurrently

Transferred Courses

Students wishing to transfer Math, Science, Computer Science and Engineering courses from other educational institutions should complete this form and see the Program Head of Electrical Engineering in their first term of residence at SFSU. If you haven't done your transfer credit evaluation with the Program Head, you may not be able to enroll in courses with prerequisites, *so do it now!*

- Students transferring lower division courses from other schools in California only need bring a copy of their DARS and/or transcripts (official or unofficial) and this form.
- Transfers of upper division courses and transfers from out-of-state institutions are evaluated on a case-by-case basis. Students wishing to make such transfers should bring a copy of the Advanced Standing Evaluation (ASE) from SFSU, as well as all relevant supporting material, including course syllabi, books, notes, etc.

Students must complete at least 30 units of coursework at SFSU, including 24 units of upper division courses. Twelve units (upper or lower division) must be in the Electrical Engineering major. Nine units must be Segment III GE.

Course Number	Course Name	Institution	Course	Units†	Term/Year	Grade	Approval
CHEM 115 or CHEM 180	General Chemistry I: Essential Concepts of Chem.						
MATH 226	Calculus I						
MATH 227	Calculus II						
MATH 228	Calculus III						
MATH 245	Elementary Differential Equations & Linear Algebra						
PHYS 220/222	General Physics with Calculus I & Lab						
PHYS 230/232	General Physics with Calculus II & Lab						
ENGR 100	Introduction to Engineering						
ENGR 121	Gateway to Computer Engineering						
ENGR 205	Electric Circuits						
ENGR 206	Circuits and Instrumentation						
ENGR 212	Introduction to Unix/Linux for Engineers						
ENGR 213	Introduction to C Programming for Engineers						
CSC 210	Introduction to Computer Programming						
CSC 220	Data Structures						
CSC 230	Discrete Mathematics						

† Express as semester units. Each quarter unit = 2/3 semester units

Examined by: _____ Signed: _____ Date: _____