SAN FRANCISCO STATE UNIVERSITY
COMPUTER ENGINEERING STUDENT PLANNING WORKSHEET

This worksheet centralizes information pertaining to your progress towards graduation, including contact information, course planning, and transfers. It is intended to be used as a guideline for advising purposes. See SFSU Academic Bulletin for most recent major curriculum, course information & prerequisites. You should keep an updated copy of this worksheet in your folder in the engineering office. Privacy note: *By law, all student information and grades are kept strictly confidential and are only accessed by authorized personnel of the School of Engineering.*

Student Information

Student ID#: | | | | | | | | | | | |

Name:_____
LAST FIRST MI

Main address where official mail may be sent:

_____
STREET

_____
CITY

_____ _____
STATE ZIP

(_____)_____ _____
PHONE E-MAIL

Term/Year entered SFSU: _____ Term/Year you expect to graduate: _____

Δ Transfer Student?

Δ If yes, are your transfer credits evaluated?
Δ Graduation plan O.K.?

Advising Information

Advisor Name	Approval Signature	Term	Year	Comments

Required Courses

*subject to change

- 15 units of mathematics, 8 units of physics, 3-5 units of chemistry
- 20 units of lower division engineering and computer science courses and 40 units of required upper division courses,
- 6 units of elective courses and 36 units of General Education courses (for Engineering Track)
- Course prerequisites are strictly enforced.

Required Math and Science Lower Division Courses

Course Number	Course Name	Units	Grade	SFSU or Transfer	Term	Yr	Prerequisite
CHEM180 or CHEM 115	Chemistry for the Energy and the Environment	3					Category I or II QR/Math placement; or Category III or IV QR/Math placement: MATH 197© or GE B4♥.
	General Chemistry I: Essential Concepts of Chemistry	5					Category I or II QR/Math placement; or Category III or IV QR/Math placement: MATH 197© or GE B4.
MATH 226	Calculus I	4					MATH 198© or 199© or equivalent or etc, (see bulletin for full details)
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© & MATH 227© & PHYS 232♥ (MATH 228♥ recommended)

Required Lower Division Courses for Computer Engineering

Course #	Course Name	Units	Grade	SFSU or Transfer	Term	Yr	Prerequisite
ENGR 100	Introduction to Engineering	1					High school algebra and trigonometry
ENGR 121	Gateway to Computer Engineering	1					High school algebra and trigonometry
ENGR 205	Electric Circuits	3					PHYS 230; MATH 245♥
ENGR 206	Circuits and Instrumentation Lab	1					ENGR 205♥
CSC 210	Introduction to Computer Programming	3					CSC 211 ♥ (recommended, not mandatory)
ENGR 212	Introduction to Unix/Linux for Engineers	2					
ENGR 213	Introduction to C Programming for Engineers	3					MATH 226©
CSC 220	Data Structures	3					CSC 210©
CSC 230	Discrete Mathematics	3					CSC 210©; MATH 227♥©

Required Upper Division Courses for Computer Engineering

Course #	Course Name	Units	Grade	SFSU or Transfer	Term	Yr	Prerequisite
ENGR 300	Engineering Experimentation	3					ENGR 205©-; ENGR 206©-
ENGR 301	Electronics Laboratory	1					ENGR 353♥
ENGR 305	Linear Systems Analysis	3					ENGR 205©-; MATH 245
CSC 340	Programming Methodology	3					CSC 220©; CSC 230©
ENGR 353	Microelectronics	3					ENGR 205©-; ENGR 206©-
ENGR 356	Digital Design	3					ENGR 205©-
ENGR 357	Digital Design Laboratory	1					ENGR 356♥
ENGR 378	Digital Systems Design	3					ENGR 356©-
CSC 413	Software Development	3					CSC 220©
ENGR 451	Digital Signal Processing	4					ENGR 305©-; ENGR 213©- or ENGR 271©- or CSC 210©
ENGR 456	Computer Systems	3					ENGR 356©-; ENGR 213©- or CSC 210©
ENGR 476	Computer Communication Networks	3					ENGR 356©-; ENGR 213©- or CSC 210©
ENGR 478	Design with Microprocessors	4					ENGR 356©-; ENGR 213©- or CSC 210©
ENGR 696	Engineering Design Project I	1					18 upper division ENGR units
ENGR 697	Engineering Design Project II	2					ENGR 696; GE Area A2

©- = Course must be passed with a grade of C- or better © = Course must be passed with a grade of C or better

♥ = Course must either be completed or taken concurrently

Elective Courses

- A minimum of 6 upper division elective units is required and must be completed at SFSU.
- Upper division courses must have been taken within five years of graduation.
- Students with a GPA of at least 3.0 and the required prerequisites may take graduate courses (numbered 800 and above) with the approval of their advisor or the program head.

Elective Upper Division Courses for Computer Engineering

ENGR	Course Name	Units	Grade	SFSU or Transfer	Term	Yr	Prerequisite
CSC 415	Operating Systems Principles	3					PHYS 230©; CSC 340©; CSC 256©; MATH 324©
CSC 510	Analysis of Algorithm I	3					CSC 340©; MATH 324©
CSC 645	Computer Networks	3					CSC 415©; GPA of 3.0 or better; or permission of instructor
CSC 648	Software Engineering	3					CSC 413©; CSC 317©; GPA of 3.0 or better; or permission of instructor
CSC 667	Internet Application Design and Development	3					CSC 413©; GPA of 3.0 or better; or permission of instructor
CSC 668	Object Oriented Programming	3					CSC 413©; senior standing; GPA of 3.0 or better; or permission of instructor
ENGR 415	Mechatronics	4					ENGR 305©- or ENGR 307©-
ENGR 442	Operational Amplifier Systems Design	3					ENGR 305©-
ENGR 446	Control Systems Laboratory	1					ENGR 447♥
ENGR 447	Control Systems	3					ENGR 305©- or ENGR 307©-
ENGR 449	Communication Systems	3					ENGR 305©-
ENGR 453	Digital Integrated Circuit Design	4					ENGR 301© or ENGR 354©;356©
ENGR 454	ASIC Design	4					ENGR 356 ©–
ENGR 492	Hardware for Machine Learning	3					ENGR 213© & ENGR 353© & ENGR 356©
ENGR 844	Embedded Systems	3					Graduate Standing or consent of instructor
ENGR 845	Neural-Machine Interfaces: Design and Applications	3					Graduate Standing or consent of instructor
ENGR 848	Digital VLSI Design	3					Graduate Standing or consent of instructor
ENGR 849	Advanced Analog IC Design	3					Graduate Standing or consent of instructor
ENGR 850	Digital Design Verification	3					Graduate Standing or consent of instructor
ENGR 851	Advanced Microprocessor Architecture	3					Graduate Standing & ENGR 456 or instructor consent
ENGR 852	Advanced Digital Design	3					Graduate Standing or consent of instructor
ENGR 853	Advanced Topics in Computer Communication and Networks	3					Graduate Standing or consent of instructor
ENGR 856	Nanoscale Circuits and Systems	3					Graduate Standing or consent of instructor
ENGR 858	Hardware Security and Trust	3					Graduate Standing & ENGR 356 or consent of instructor
ENGR 859	On-Device Machine Learning	3					See SFSU Bulletin
ENGR 868	Advance Control Systems	3					Graduate Standing or consent of instructor
ENGR 869	Robotics	3					Graduate Standing or consent of instructor
ENGR 870	Robot Control	3					Graduate Standing or consent of instructor
ENGR 871	Advanced Electrical Power Systems	3					Graduate Standing & MATH 245 or consent of instructor
ENGR 890	Static Timing Analysis for Nanometer Designs	3					Graduate Standing & ENGR 350 or consent of instructor
	Units Completed		© = Engineering course must have been passed with a grade of C- or better				
	Minimum Required	**6**	♥ = Listed course should be taken concurrently				

Graduation Requirements

- Completed GE Worksheet
- Transfer courses evaluated

Program Planning

Term	Year	Course Numbers					

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 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.

See SFSU Bulletin for Degree Requirements

Course Number	Course Name	Institution	Course	Units†	Term/Year	Grade	Approval
CHEM 180 or CHEM 115	Chemistry for the Energy and the Environment General Chemistry I: Essential Concepts of Chemistry						
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 Lab						
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: _____

*subject to change (see SFSU Bulletin for current information)

October 2023