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. 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

Alternate address (i.e. work/parents):

_____
STREET

_____
CITY

_____ _____
STATE ZIP

(_____)_____ _____
PHONE E-MAIL

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

☐ Transfer Student? ☐ If yes, are your transfer credits evaluated?
☐ Graduation plan O.K.?

Advising Information

Advisor Name	Approval Signature	Term	Year	Comments

Required Courses

- 15 units of mathematics, 8 units of physics, 3 units of chemistry
- 19 units of required lower division engineering and 42 units of required upper division courses,
- 3 units of upper division 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.

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					Category I or II QR/Math placement; or Category III or IV QR/Math placement and MATH 197© or GE Area B4. Satisfactory score on the Chemistry readiness assessment.
MATH 226	Calculus I	4					One of the following: MATH 198© or MATH 199©; or high school pre-calculus with B or better; or high school calculus with a grade of C or better.
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					MATH 226©; PHYS 222♥; (MATH 227♥ recommended)
PHYS 230/232	General Physics with Calculus II & Lab	4					PHYS 220© and MATH 227©; PHYS 232♥ (MATH 228♥ recommended)

Required Lower Division Courses for Computer Engineering

ENGR	Course Name	Units	Grade	SFSU or Transfer	Term	Yr	Prerequisite
100	Introduction to Engineering	3					High school algebra and trigonometry
205	Electric Circuits	3					PHYS 230; MATH 245♥
206	Circuits and Instrumentation Lab	1					ENGR 205♥
212	Introduction to Unix/Linux for Engineers	2					
213	Introduction to C Programming for Engineers	3					MATH 226©; ENGR 212©
214	Programming Laboratory	1					ENGR 213♥
221	Data Structures and Algorithms in Python	4					ENGR 213©-
281	Probability and Statistics for Engineers	2					MATH 226©-

Required Upper Division Courses for Computer Engineering

ENGR	Course Name	Units	Grade	SFSU or Transfer	Term	Yr	Prerequisite
305	Linear Systems Analysis	3					ENGR 205©-; MATH 245
340	Programming Methodology for Engineers	4					ENGR 221©-
354	Electronics for Computer Engineers	4					ENGR 205©, 206©
356	Digital Design	3					ENGR 205©-
357	Digital Design Laboratory	1					ENGR 356♥
378	Digital Systems Design	3					ENGR 356©-
413	Artificial Intelligence with Engineering Applications	3					ENGR 221©-, ENGR 281©-, MATH 245©
451	Digital Signal Processing	4					ENGR 305©-; ENGR 213©- or ENGR 271©-
456	Computer Systems	3					ENGR 356©-; ENGR 213©-
476	Computer Communication Networks	3					ENGR 356©-; ENGR 213©-
478	Design with Microprocessors	4					ENGR 213©-
498	Advanced Design with Microcontrollers	4					ENGR 478©-
696	Engineering Design Project I	1					ENGR 478©-; 18 upper division ENGR units
697	Engineering Design Project II	2					ENGR 696

©- = 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 six upper division engineering elective units is required.
- 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
415	Mechatronics	4					ENGR 305©- or ENGR 307©-
442	Operational Amplifier Systems Design	3					ENGR 305©-
446	Control Systems Laboratory	1					ENGR 447♥
447	Control Systems	3					ENGR 305©- or ENGR 307©-
449	Communication Systems	3					ENGR 305©-
453	Digital Integrated Circuit Design	4					ENGR 301© or ENGR 354©;356©
454	ASIC Design	4					ENGR 356©
492	Hardware for Machine Learning	3					ENGR 213© & ENGR 353© & ENGR 356©
844	Embedded Systems	3					Graduate Standing or consent of instructor
845	Neural-Machine Interfaces: Design and Applications	3					Graduate Standing or consent of instructor
848	Digital VLSI Design	3					Graduate Standing or consent of instructor
849	Advanced Analog IC Design	3					Graduate Standing or consent of instructor
850	Digital Design Verification	3					Graduate Standing or consent of instructor
851	Advanced Microprocessor Architecture	3					Graduate Standing & ENGR 456 or instructor consent
852	Advanced Digital Design	3					Graduate Standing or consent of instructor
853	Advanced Topics in Computer Communication and Networks	3					Graduate Standing or consent of instructor
856	Nanoscale Circuits and Systems	3					Graduate Standing or consent of instructor
858	Hardware Security and Trust	3					Graduate Standing & ENGR 356 or consent of instructor
859	On-Device Machine Learning	3					See SFSU Bulletin
868	Advance Control Systems	3					Graduate Standing or consent of instructor
869	Robotics	3					Graduate Standing or consent of instructor
870	Robot Control	3					Graduate Standing or consent of instructor
871	Advanced Electrical Power Systems	3					Graduate Standing & MATH 245 or consent of instructor
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				