SF State Scholars *Tentative*Computer Engineering Roadmap

Bold= must take courses & pass before applying

Green= Undergraduate courses
Orange= Graduate Courses

**Students must meet with their advisor prior to registering for courses. This roadmap is designed for general planning ONLY! Roadmaps for more than 5 years plan may vary please consult with your department.

Freshman

Fall	Spring
CHEM 180 or 115	ENGR 213
ENG 114	MATH 227
ENGR 100 + 121+212	PHYS 220+222
MATH 226	Area D
Area A	Area E
17-19 Units (17-19 total)	17 Units (34-36 total)

Sophomore

Fall	Spring
CSC 210	MATH 245
MATH 228	ENGR 205+206
PHYS 230/232	CS 220
Area B2	CS 230
Area C	Area D
17 Units (51-53 total)	16 Units (67-69 total)

Junior

Fall	Spring	Summer
ENGR 300+301	ENGR 451	UD-C
ENGR 305	ENGR 476	UD-D
ENGR 353	ENGR 478	Area C
ENGR 356+357	CSC 340	
Area C	Area D	
17 Units (84-86 total)	16 Units (100-102 total)	9 Units (109-111 total)

Apply to SF Scholars

81 Units (GE Requirements	3.0 GPA

Senior

Fall	Spring
CS 413	ENGR 697 GW
ENGR 456	ENGR 378
ENGR 696	UD-Elective
UD-Elective	ENGR 852
ENGR 844	Graduate Elective
Graduate Elective	
16-17 Units (125-128 total)	17 Units (142-145 total)

Graduate

Fall	Spring
ENGR 800	ENGR 801
ENGR 897 or Graduate Elective	Graduate Elective
Graduate Elective	ENGR 898 or 895
9 Units (151-154 total)	9 Units (160-163 total)

Minimum Units required for Bachelors =128
Minimum Units required for Masters = 30

Computer Engineering Prerequisite Flow Chart

School Of Engineering

Legend:
- Required lower-division Mathematics and Science
- Required lower-division Engineering
- Required upper-division Engineering
- Senior project
- Elective upper-division
- Required lower-division Computer Science
- Required upper-division Computer Science
- Corequisite (may be taken concurrently)
- Prerequisite
- Prerequisite (with Grade)

First Semester
- CHEM 180 — Chem. for Energy & Environment
- MATH 226 — Calculus I
- ENGR 121 — Gateway to Computer Engineering
- ENGR 100 — Introduction to Engineering

Second Semester
- PHYS 220/222 — Physics I and Physics I Laboratory
- MATH 227 — Calculus II
- ENGR 213 — Introduction to C Programming
- ENGR 212 — Introduction to Unix/Linux for Engineers

Third Semester
- PHYS 230/232 — Physics II and Physics II Laboratory
- MATH 228 — Calculus III
- CSC 210 — Intro to Comp Programming

Fourth Semester
- MATH 245 — Differential Equations and Linear Algebra
- ENGR 205 — Electric Circuits
- ENGR 206 — Circuits & Instrumentation Lab
- CSC 220 — Data Structures
- CSC 230 — Discrete Mathematics

Fifth Semester
- ENGR 353 — Microelectronics
- ENGR 305 — Linear Systems Analysis
- ENGR 300 — Engineering Experimentation
- ENGR 356 — Digital Design
- ENGR 357 — Digital Design Laboratory

Sixth Semester
- ENGR 301 — Microelectronics Laboratory
- ENGR 476 — Comp Communication Network
- ENGR 451 — Digital Signal Processing
- ENGR 478 — Design with Microprocessor
- CSC 340 — Programming Methodology

Seventh Semester
- ENGR 696 — Senior Design Project I
- ENGR 378 — Digital System Design
- ENGR 456 — Computer System
- CSC 413 — Software Development

Eighth Semester
- ENGR 697 — Senior Design Project II
- Engineering Electives
- Engineering Electives