# MINOR IN COMPUTER ENGINEERING

The purpose of the Minor in Computer Engineering is to give students who are interested in computer technology a good basic background in software development, digital electronics, computer organization, and microprocessor applications. Additional knowledge of computer networks, multimedia systems, real-time systems, etc. may be acquired through electives. Students interested in the Computer Engineering minor must meet with the program coordinator and complete the Computer Engineering Minor Program Approval Form. Revision of the form requires the approval of the program coordinator.

All coursework used to satisfy the requirements of the minor must be completed with a minimum grade point average of 2.0.

## Computer Engineering Minor - 21 units

To earn the Minor in Computer Engineering, a student must complete at least 12 of the required 21 core and elective units at SF State. Each of the courses in the minor must be taken for a letter grade (CR/NC is not acceptable).

A minimum of 6 upper-division units are required to complete the minor.

All coursework used to satisfy the requirements of the minor must be completed with a minimum grade point average of 2.0.

#### Prerequisite Requirements (25 units)

The minor is intended for students who have satisfied the following prerequisite requirements.

Code	Title	Units
MATH 226	Calculus I	4
MATH 227	Calculus II	4
MATH 228	Calculus III	4
MATH 245	Elementary Differential Equations and Linear Algebra	3
PHYS 220 & PHYS 222	General Physics with Calculus I and General Physics with Calculus I Laboratory	4
PHYS 230 & PHYS 232	General Physics with Calculus II and General Physics with Calculus II Laboratory	4
ENGR 212	Introduction to Unix and Linux for Engineers	2

The minor may be satisfied by a minimum of 21 units (not including prerequisite units) distributed as follows:

### **Core Requirements (15 units)**

Code	Title	Units
ENGR 213	Introduction to C Programming for Engineers	3
ENGR 205	Electric Circuits	3
ENGR 206	Circuits and Instrumentation Laboratory	1
ENGR 356	Digital Design	3
ENGR 357	Digital Design Laboratory	1
ENGR 478	Design with Microprocessors	4

#### Electives (6 units)

Approved upper-division computer engineering courses. No upperdivision course from the major can be double-counted toward meeting the elective requirements of the minor or second major. There must be prior approval from the program head.