### Computer Engineering Curriculum 2006-2008

#### Freshman First Semester
- **Math 30** Calculus I (Pre-Calculus, Math 29) 4
- **CSc 15** Prog. Concepts & Methodology I (CSc 10) 3
- **Chem 1A** General Chemistry (Entrance Exam) 5
- **GE** (English Recommended) 3
  
  **Total units** 15

#### Sophomore First Semester
- **Math 45** Differential Equations (Math 31) 3
- **CSc 28** Discrete Structures (Math 29, CSc 20) 3
- **CSc 60** Intro. to Systems Programming (CSc 20, CSc 35) 3
- **Engl 20** Expository Writing (Engl 1A) 3
- **Econ 1B** Introduction to Microeconomic Analysis 3
  
  **Total units** 18

#### Junior First Semester
- **CpE 166** Advanced Logic Design (CpE 64, Engr 17) 4
- **CpE 185** Computer Interfacing (CpE 64, CSc 35) 4
- **EEE 102** Analog/Digital Electronics (Engr 17) 3
- **EEE 102L** Analog/Digital Electronics Lab (Engr 17) 1
- **CSc 130** Data Struct. & Algorithm Develop. (CSc 20, CSc 28) 3
  
  **Total units** 18

#### Senior First Semester
- **CpE 151** CMOS & VLSI (CpE 64, EEE 102) 3
- **CpE 159** Operating System Pragmatics (CSc 139) 3
- **CpE 190** Senior Project Design (CpE 142, CpE 166, CpE 186, EEE 102, WPE) 2
- **CpE** Technical Elective 3
- **Engr 181** Electronic Materials (Chem 1A, Phys 11A, Math 45) 3
  
  **Total units** 17

#### Freshman Second Semester
- **Math 31** Calculus II (Math 30) 4
- **Phys 11A** Mechanics (Math 30, Math 31) 4
- **CSc 20** Prog. Concepts & Methodology II (CSc 15) 3
- **CSc 35** Microcomputer Assembly Language Programming (CSc 15) 3
- **CpE 64** Introduction to Logic Design (CSc 15 or CSc 25) 4
  
  **Total units** 18

#### Sophomore Second Semester
- **Engr 17** Introductory Circuit Analysis (Phys 11C, Math 45 – one or the other may be a co-requisite, but not both) 3
- **Stat 50** Introduction to Probability & Statistics (Math 26A, Math 30) 4
- **Phys 11C** Electricity & Magnetism (Math 31, Phys 11A) 4
  
  **Total units** 17

#### Junior Second Semester
- **CpE 142** Advanced Computer Organization (CpE 166, CpE 185) 3
- **CpE 186** Computer Hardware Design (CpE 185) 3
- **CpE 187** Embedded Processor System Design (WPE, CpE 166, CpE 185, EEE 102) 2
- **CSc 139** Operating System Prin. (CSc 60, CSc 130, CpE 185) 3
  
  **Total units** 17

#### Senior Second Semester
- **CpE 138** Computer Networks and Internets (CSc 35, CSc 60, CSc 130) 3
- **CpE 191** Senior Design Project II (CpE 190) 2
- **CpE** Technical Elective 3
- **Math 100/150** Linear Algebra or Numerical Analysis 3
  
  **Total units** 17

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**List of CpE Technical Electives (choose two):**

- software related – CSc 131, CSc 133, CSc 134, CSc 151, CSc 155

**General advice for Computer Engineering Majors:**

1. The above program guide shows only one way to meet graduation requirements in four years of study. Being careful to satisfy prerequisites will allow you to come up with your own schedule of courses.

2. Very few students routinely take 17 units per semester. Most full-time students find that 14 to 15 units is a reasonable load. Many CSUS students work part-time to support themselves. Someone working 15 hours per week should consider 10 to 12 units of course work per semester.

3. CSUS offers an excellent Cooperative Education program. Doing a "CO-OP" will extend your graduation date by one semester - a small matter when compared to the tangible benefits of the co-op experience!

4. If you plan to study during the summers, save your general education courses for that purpose. CpE does not offer summer courses. Sometimes Stat 50, Math 100, and 150 are offered in the summer. Check with the Math Department.

**Special note to pre-Fall 1999 CpE students – you can use this guide to follow course changes, however your curriculum does not include Engr. 181.**