To be adopted:

Proposed Change in B.S. Degree
Computer Engineering

Present

Upper-division requirements (83 units minimum):

a) MATH 112, MATH 113
b) STAT 155
c) CS 120A/EE 120A, CS 120B/EE 120B; one course from CS 122A or EE 128
d) CS 141, CS 161, CS 180; one course from CS 160 or CS 163
e) EE 100A, EE 100B, EE 110A, EE 110B, EE 141

e) Five courses as technical electives from the following set of Computer Science and Engineering, and Electrical Engineering upper-division courses: CS 100, CS 121, CS 122A-CS 122B, CS 130, CS 133, CS 150, CS 160, CS 163, CS 164, CS 165, CS 166, CS 168, CS 170, CS 171, CS 177, CS 180, CS 181, CS 182, CS 183, CS 193

EE 102, EE 105, EE 115, EE 128, EE 132, EE 144, EE 146, EE 150, EE 151, EE 152, EE 175A-EE 175B

Proposed

Upper-division requirements (83 units minimum):

a) No change
b) No change
c) No change
d) CS 141, CS 161, CS 180; one course from CS 160 or CS 153
e) No change
f) Five courses (at least 20 units) as technical electives from the following set of Computer Science and Engineering, and Electrical Engineering upper-division courses: CS 100, CS 121, CS 122A-CS 122B, CS 130, CS 133, CS 150, CS 160, CS 152, CS 153, CS 164, CS 165, CS 166, CS 168, CS 170, CS 171, CS 177, CS 179 (E-Z), CS 180, CS 181, CS 183, CS 193

EE 102, EE 105, EE 115, EE 128, EE 132, EE 144, EE 146, EE 150, EE 151, EE 152, EE 175A-EE 175B

The selection of technical electives must be planned, in consultation with a faculty advisor, to include at least one coherent sequence of two classes from either Computer Science and Engineering or Electrical Engineering. The technical electives must be distinct from those used to satisfy the upper-division requirements specified in items c)-e) listed previously.

The technical electives selected from f) must include either CS 179 (E-Z) or both EE 175A and EE 175B. The selection of the remaining technical electives must be planned, in consultation with a faculty advisor, to include at least one coherent sequence of two classes from either Computer Science and Engineering or Electrical Engineering. The technical electives must be distinct from those used to satisfy the upper-division requirements specified in items c)-e) listed previously.

Justifications:
1) Since the approved technical elective courses listed under item f) have differing unit values, the clarification has been added that at least 20 units must be included.

2) A hallmark of an undergraduate degree in engineering is the emphasis on the problem-solving and “design” nature of the profession. All of the other engineering programs in the College address this by requiring students to complete a major design project as part of the senior year curriculum. Such a component has now been added to the Computer Engineering program by including either CS 179 (E-Z), a new set of "projects" courses recently introduced by the Department of Computer Science and Engineering, or EE 175A-175B, the existing Electrical Engineering Senior Design courses, as a major requirement.
3) The Department of Computer Science and Engineering has recently renumbered their courses CS 163 and CS 182 to CS 153 and CS 152, respectively, necessitating those changes above.

Approved initially by the Faculty of the Department of Computer Science and Engineering on 2/2/01
Approved by the Faculty of the Department of Electrical Engineering on 2/2/01
Approved by the Executive Committee, College of Engineering on 2/14/01.
Approved by the Committee on Educational Policy on 4/19/01