2009-10 BIOENGINEERING CURRICULUM CHART

Advanced Math
AMS 10 *** or AMS 10A ***
AMS 20 *** or AMS 20A ***
Math. Methods Engineers I & II

OR

MATH 22 or 23A
AND
MATH 24
Multivar. Calc. & Differential Equations

 AMS 7/L ***
Statistical Methods

CHEM 1A *
General Chemistry

CHEM 1B/M *
General Chemistry

CHEM 1B/M and CHEM 7 or 108A or 108B

CHEM 1C/N *
General Chemistry

CHEM 108A/L
Organic Chemistry

BME 150/L ***
Biomolecular Mechanics

BME 80G
Bioethics in the 21st Century: Science, Business, and Society
(Satisfies T6)

CHEM 1A *
General Chemistry

CHEM 1B/M *
General Chemistry

BIO 20A
Cell and Molecular Biology

BIOE 20B
Development and Physiology

BMB 100 A-B***
Biochemistry and Molecular Biology

OR

CMPE 12/L
Computer Systems & Assembly Language

CMPE 13/L
Computer Systems & C

CMPS 128/M ***
Intro to Data Structures

CONCENTRATION (choose 1)
BIOELECTRONICS
EE 101/L
Electronic Circuits

EE 103
Signals and Systems

EE 104
Measurements and Instrumentation in Physiology

EE101/L and EE103

BME 5
Introduction to Biotechnology

BME 80A3
Assistive Technology and Universal Access
(Satisfies T7)

CMPE 80A
Human-Computer Interaction

BIOMOLECULAR

BME 5
Introduction to Biotechnology

BME 160/L
Programming for Biologists and Biochemists

CMPS 12A/L ***
Intro to Programming

REHABILITATION

CMPE 12/L ***
Computer Systems & Assembly Language

CMPE 13/L
Computer Systems & C

CMPS 128/M ***
Intro to Data Structures

Three SOE electives*** pertinent to track.
(more information and suggestions on back of this chart)

Faculty Approval ________________________________ ______________

BME/CE/EE 123A Engineering Design Project I
(● co-requisite: CMPE 185)

BME/CE/EE 123B Engineering Design Project II (● CMPE 123A)
- OR -

BME 195 Senior Thesis

Senior Design Project:

Prior to graduation, you must:

1. Submit a Portfolio
2. Attend an Exit Interview
3. Complete an Exit Survey

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1. Submit a Portfolio
2. Attend an Exit Interview
3. Complete an Exit Survey

www.soe.ucsc.edu/advising/undergraduate :: advising@soe.ucsc.edu :: (831) 459-5840 :: 5/08/2009
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**BENG Electives Approval Form**

These electives are well suited to the bioengineering major concentrations. CMPE 131 may be used as an elective in tracks that do not require it. Electives must be chosen with and approved by your faculty advisor to ensure a coherent study plan. New bioengineering-oriented electives are introduced regularly.

**Bioelectronics**: EE 212 (S) Introduction to BioMEMS, EE 270 (W and S) Neural Implant Engineering, and new courses in development

**Biomolecular**: BME 140 (F) Bioinstrumentation, BME 155 (W) Biotechnology & Drug Development, BME 110 (F, S)

**Computational Biology Tools**

**Rehabilitation**: CMPE 118/L (W) Mechatronics/Lab, CMPE 167/L (F) Sensing & Sensor Technology/Lab, and CMPE 233 (S)

Human Factors; or CMPS 109 (W) Advanced Programming

Student Name ___________________________________________
Student ID ______________________________________________

Elective 1: ____________________________
Elective 2: ____________________________
Elective 3: ____________________________

Explanation of choice of electives:

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

Faculty Advisor’s Approval: ____________________________ Date: ______________

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