# UCSC Baskin School of Engineering
## Bioinformatics BS Degree
### Curriculum Chart
#### 2006-2007

## Math
- **CMPE 16 or 16H**
  - Discrete Math
- **MATH 19A or 20A**
  - Calculus Honors Calc.
- **MATH 23A**
  - Multivariable Calculus
- **CMPE 107 or AMS 131**
  - Stochastic Probability Theory
- **AMS 206**
  - Bayesian Statistics

## Engineering
- **CMPS 13H**
  - Programming (Honors)
- **CMPS 12A/L**
  - Programming
- **CMPS 12B/M**
  - Data Structures
- **CMPS 101**
  - Abstract Data Types
- **CMPS 180**
  - Database Systems
- **CMPE 185**
  - Technical Writing
- **Choose One**
  - **BME 109**
    - Resource-Efficient Programming
  - **CMPE 177**
    - Graph/Algorithms
  - **CMPS 104A**
    - Compiler Design I
  - **CMPS 109**
    - Advanced Programming
  - **CMPS 115**
    - Software Methodology

## Science
- **CHEM 1B/M**
  - General Chemistry
- **CHEM 1C/N**
  - General Chemistry (with the grade B or above)
- **CHEM 108A/L**
  - Organic Chemistry
- **BIOL 20A or BIOL 21A**
  - Cell & Molecular Biology
- **BIOL 20B or BIOL 21B**
  - Development & Physiology
- **BIOC 100A**
  - Biochemistry

## Bioinformatics
- **BME 80G**
  - Bioethics
  - OR
  - **PHIL 145**
    - Genetics Ethics
- **BME 110**
  - Computational Biology Tools
- **BME 205**
  - Bioinformatics
- **BME 210**
  - Application and Analysis of Microarrays
  - OR
  - **BME 220/L**
    - Protein Bioinformatics
  - OR
  - **BME 230/L**
    - Computational Genomics
  - OR
  - **BME 195**
    - Senior Thesis

## Electives
- Two courses; approved by faculty advisor; consider the following:
  - AMS: 147, 156, 162, 174, 203, 205, 207, 215
  - BIOC: 100B, 100C*, 110*
  - CHEM: 108B/M, 112C/N
  - CMPE: 108, 177
  - CMPS: 104A*, 104B*, 105, 109, 115*, 116*, 130, 140, 160

 Choices must form a coherent program and be approved by a faculty advisor for bioinformatics.

Shaded boxes represent foundation courses which must be completed before applying to the major.

* Additional prerequisite courses required

† Additional prerequisite of CHEM 108B/M or CHEM 112C/N waived if grade in prior course is B or above.

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www.soe.ucsc.edu/advising/undergraduate :: advising@soe.ucsc.edu :: (831) 459-5840 :: 9/22/2006
### BINF Electives Approval Form

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**Student Name** ___________________________________________

**Student ID** ______________________________________________

**Elective 1** ______________________________________________

**Elective 2** ______________________________________________

**Explanation of choice of electives:**

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**Faculty Advisor’s Approval:** _______________________________   Date: ___________