

**UCSC Baskin School of Engineering  
Bioinformatics BS Degree  
Curriculum Chart  
2004-2005**

**Math**

**CMPE 16 or 16H**  
Discrete Math

**MATH 19A or 20A**  
Calculus Honors Calc.

**MATH 19B or 20B**  
Calculus Honors Calc.

**MATH 23A**  
Multivariable Calculus

**CMPE 107 or AMS 131**  
Stochastic Probability Theory

**AMS 206**  
Bayesian Statistics

**Bioinformatics**

**BME 80G**  
Bioethics  
or  
**PHIL 145\***  
Genetics Ethics

**BME 100/L**  
Intro to Bioinformatics

**BME 110**  
Computational Biology Tools

**BME 220/L**  
Protein Bioinformatics  
or  
**BME 230**  
Computational Genomics  
or  
**BME 195**  
Senior Thesis

**Engineering**

**CMPS 13H**  
Programming  
(Honors)

OR

**CMPS 12A/L**  
Programming

**CMPS 12B/M**  
Data Structures

**CMPS 101**  
Abstract Data Types

**CMPS 180**  
Database Systems

**CMPE 185 or BIOL 20L(W)**  
Technical Writing Exper. Bio. Lab

**BME 109** Resource Efficient  
Programming

or

**CMPE 177** Graph/Algorithms

or

**CMPS 104A\*** Compiler Design I

or

**CMPS 109** Advanced Programming

or

**CMPS 115\*** Software Methodology

**Science**

**CHEM 1B/M or 4A/L**  
General Chemistry

**CHEM 1C/N or 4B/M**  
General Chemistry

**CHEM 108A/L<sup>†</sup>**  
Organic  
Chemistry

OR

**CHEM 112A/L**  
Org. Chem.

**CHEM 112B/M<sup>†</sup>**  
Org. Chem.

(with the grade B or above)

**BIOL 20A or BIOL 21A**  
Cell & Molecular Biology

**BIOL 20B or BIOL 21B**  
Development & Physiology

**BIOC 100A<sup>†</sup>**  
Biochemistry

**Electives**

**Two courses, approved by faculty advisor, typically chosen from:**

**AMS:** 147, 156, 162, 174, 203, 205, 207

**BIOC:** 100B, 100C\*, 110\*

**BIOL:** 102L, 105 or 106, 105L\*, 109L\*,  
110, 115\*, 116L, 117A\*, 187L\*,  
210

**BME:** 109, 110, 210/L, 220, 230

**CHEM:** 108B/M, 112C/N

**CMPE:** 108, 150\*, 151\*, 177

**CMPS:** 104A\*, 104B\*, 109, 115\*, 116\*,  
130, 160

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

**Shaded boxes represent foundation courses**

\* Additional prerequisite courses required

† Additional prerequisite of CHEM 108B/M or CHEM 112C/N waived if grade in 108A/L or 112 B/M is B or better

UCSC BASKIN SCHOOL OF ENGINEERING  
 BIOINFORMATICS BS  
 DEGREE CURRICULUM  
 2004-2005

| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
|------------|--------------|--------------|--------------|
|            |              |              |              |

| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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|            |              |              |              |

| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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|            |              |              |              |

| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
|------------|--------------|--------------|--------------|
|            |              |              |              |

**BINF Electives Approval Form**

Student Name \_\_\_\_\_

Student ID \_\_\_\_\_

Elective 1 \_\_\_\_\_

Elective 2 \_\_\_\_\_

Explanation of choice of electives:

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Faculty Advisor's Approval: \_\_\_\_\_ Date: \_\_\_\_\_