Bioinformatics BS Degree
Curriculum Chart
2007-2008

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 132 or AMS 206
Statistical Inference   Bayesian Statistics

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 211
Computational Systems Biology
BME 220/L
Protein Bioinformatics
OR
BME 230/L
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
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

CHEM 108A/L
Organic Chemistry   **OR**

CHEM 112A/L
Org. Chem.

CHEM 112B/M
Org. Chem.

(with the grade B or above)

BIOL 20A
Cell & Molecular Biology

BIOL 20B
Development & Physiology
or
BIOL 105
Genetics

BIOC 100A†
Biochemistry

Electives
Two courses; approved by faculty advisor; consider the following:

AMS: 162, 203, 205, 207, 215
BIOC: 100B, 100C*, 110*
BIOL: 100L, 105, 105L*, 105M, 109L*, 110, 115*, 115L, 117A*, 117B, 119, 119L, 187L*, 200A, 200B

BME: 109, 130, 210, 220, 230
CHEM: 108B/M, 112C/N, 200A, 200B, 200C
CMPE: 108, 177
CMPS: 104A*, 105, 109, 115, 116*, 130, 140*, 142, 160/L*
ISM: 206, 250

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.

BIOINFORMATICS BS
DEGREE CURRICULUM

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

BINF Electives Approval Form

Student Name _____

Student ID _____

Elective 1 _____

Elective 2 _____

Explanation of choice of electives:

_____

_____

_____

_____

_____

Faculty Advisor's Approval: _____ Date: _____