Bioinformatics BS Degree
Curriculum Chart
2008-2009

Math

CMPE 16
Applied Discrete Math

MATH 19A
Calculus

MATH 19B
Calculus

MATH 20A
Honors Calc.

MATH 20B
Honors Calc.

MATH 23A
Multivariable Calculus

CMPE 107
Stochastic

AMS 131
Probability Theory

AMS 132
Statistical Inference

AMS 206
Bayesian Statistics

Bioinformatics

BME 80G
Bioethics

PHIL 145
Genetics

BME 110
Computational Biology Tools

BME 205
Bioinformatics Models and Algorithms

ONE of the following:

BME 210
Application and Analysis of Microarrays

BME 211
Computational Systems Biology

BME 220/L
Protein Bioinformatics

BME 230/L
Computational Genomics

BME 195
Senior Thesis

Science

CHEM 1A
General Chemistry

CHEM 1B/M
General Chemistry

CHEM 1C/N
General Chemistry

CHEM 112A/L
Organic Chemistry

CHEM 112B/M
Organic Chemistry

(with the grade B or above)

BIOC 100A
Biochemistry

BIOC 110
Cell Biology

BIOC 115
Eukaryotic Molecular Biology

BIOC 119
Microbiology

BME 155
Biotechnology and Drug Development

Engineering

CMPS 5J
Intro to Program. Java

CMPS 11
Intermediate Program.

CMPS 12/L
Comp. System and Assem. Lang.

CMPS 12A/L
Intro to Programming

CMPS 13/L
Comp. System and C Prog.

CMPS 12B/M
Data Structures

CMPS 109
Advanced Programming

CMPS 182
Intro to Database Management Systems

CMPS 180*
Database Systems

CMPS 185
Technical Writing

Electives

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

AMS: 132, 162, 203, 205, 207, 215
BIOG: 100B, 100C, 110
BME: 102, 109, 130, 210, 220, 230
CHEM: 103, 108B/M, 112C/N, 200A, 200B, 200C
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

### 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:** ___________