## Bioinformatics BS Degree
### Curriculum Chart
#### 2007-2008

<table>
<thead>
<tr>
<th>Shaded boxes represent foundation courses which must be completed before applying to the major.</th>
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<tbody>
<tr>
<td>* Additional prerequisite courses required</td>
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<tr>
<td>† Additional prerequisite of CHEM 108B/M or CHEM 112C/N waived if grade in prior course is B or above.</td>
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### 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
  - Statistics

### Engineering
- CMPS 13H
  - Programming (Honors)
- CMPS 12A/L
  - Programming
- CMPS 12B/M
  - Data Structures
- CMPS 101
  - Abstract Data Types
- CMPS 180
  - Database Systems
- CMPS 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
- CHEM 112A/L
  - Org. Chem.
- CHEM 112B/M
  - Org. Chem.

### 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

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- BME 80G
  - Bioethics
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  - BME 220/L
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  - OR
  - BME 230/L
  - Computational Genomics
  - OR
  - BME 195
  - Senior Thesis

### Electives
- Two courses; approved by faculty advisor; consider the following:
  - AMS: 162, 203, 205, 207, 215
  - BIOC: 100B, 100C*, 110*
  - 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.
### BIOINFORMATICS BS
### DEGREE CURRICULUM

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### BINF Electives Approval Form

Student Name ___________________________________________
Student ID ______________________________________________
Elective 1 ______________________________________________
Elective 2 ______________________________________________

Explanation of choice of electives:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Faculty Advisor’s Approval: _______________________________   Date: ___________