# Bioinformatics B.S. Degree 2015-2016 Curriculum Chart

## Math
- **CMPE 16**: Applied Discrete Math
- **MATH 19A**: Calculus
- **MATH 20A**: Honors Calc
- **MATH 19B**: Calculus
- **MATH 20B**: Honors Calc
- **MATH 23A**: Multivariable Calculus
- **AMS 131**: Probability Theory
- **AMS 132**: Statistical Inference

## Engineering
- **CMPS 12A/L**
- **CMPS 12B/M**: Data Structures
- **CMPS 101**: Abstract Data Types
- **CMPS 109**: Advanced Programming
- **CMPS 180**: Database Systems
- **CMPS 182**: Intro to Database
- **CMPE 185**
  - Technical Writing
  - **BME 185**
  - Technical Writing for Bioengineers

## Science
- **CHEM 1A**: General Chemistry
- **CHEM 1B/M**: General Chemistry
- **CHEM 1C/N**: General Chemistry
- **CHEM 108A/L**: Organic Chemistry
- **CHEM 108B/M**: Organic Chemistry
- **BIOE 20B**: Development & Physiology
- **BIOL 105**: Genetics
- **BIOL 105G**: Bioethics
- **BIOC 100A**: Biochemistry

## Bioinformatics
- **BME 80G**: Bioethics
- **BME 110**: Computational Biology Tools
- **BME 130**: Genomes
- **BME 205**: Bioinformatics Models and Algorithms
- **ONE of the following:**
  - **BME 211**: Computational Systems Biology
  - **BME 230/L**: Computational Genomics
  - **BME 195**: Senior Thesis

## Electives
- **ONE course, approved by faculty advisor, consider the following:**
  - **AMS**: 162
  - **BIOC**: 100B, 100C, 110
  - **BME**: 101/L, 128, 140, 150, 155, 177, 178, 211, 230
  - **CMPE**: 108, 177
  - **CMPS**: 104A, 105, 115, 116*, 130, 140, 142, 160/L
  - **METX**: 119, 119L
  - **TIM**: 105, 206

*Students must justify their choice in writing and be approved by their faculty advisor.*

*Additional prerequisite course required

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**Admission Requirements to Bioinformatics**: Students must complete 50 units from the following list by the end of the fifth quarter (60 by the 7th, 70 by the 8th, or 80 by the 9th quarter) and have a GPA of 2.8 or better in all attempts:
- **BIOL 20A**, **BIOE 20B**, **BME 80G**, **CHEM 1A**, **CHEM 1B/M**, **CHEM 1C/N**, **CMPE 16**, **CMPS 12A/L** (or **CMPS 5J** and **11**, or **CMPE 12/L** and **13/L**), **CMPS 12B/M**, **MATH 19A**, **MATH 19B**, **MATH 23A**, **AMS 131**, **CHEM 108A/L**, **CHEM 108B/M**, and **CMPS 101**

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### Bioinformatics B.S. Degree

2015-2016 Curriculum Chart

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### BINF Electives Approval Form

Student Name ___________________________________________

Student ID ______________________________________________

Elective 1 ______________________________________________

Explanation of elective choice:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Faculty Advisor’s Approval: _______________________________   Date: ___________