# 2019 - 2020 Biomolecular Engineering and Bioinformatics: Bioinformatics DRAFT

## Math and Statistics
- **MATH 19A** (or **MATH 20A**)
  - Calculus I
- **MATH 19B** (or **MATH 20B**)
  - Calculus II
- **CSE 16**
  - Discrete Math
- **STAT 131**
  - Intro to Probability Theory
- **STAT 132**
  - Statistical Inference

## Chemistry
- **CHEM 1A**
  - General Chemistry
- **CHEM 1B/M**
  - General Chemistry/Lab (7 units)
- **CHEM 1C/N**
  - General Chemistry/Lab (7 units)
- **CHEM 8A**
  - Organic Chemistry
- **CHEM 8B**
  - Organic Chemistry

## Biology & Biochemistry
- **BIO 20A**
  - Cell & Molecular Biology
- **BME105** (Strongly Recommended)
  - Genetics in the Genomics Era
  - OR
  - **BIOL 105**
  - Genetics
- **BIOC 100A**
  - Biochemistry & Molecular Biology

## Humanities
- **BME 80G**
  - Bioethics
- **BME 185**
  - Technical Writing for Bioengineers
  - OR
  - **CSE 185E**
  - Technical Writing

## Elective
  - BME grad course not already required

## Programming & Bioinformatics
- **BME 160**
  - Research Programming
- **BME 163**
  - Applied Visualization and Analysis
- **BME 110**
  - Computational Biology Tools
- **CSE 13S**
  - Computer Systems and C Programming (7 units)
- **CSE 182**
  - Introduction to Database Management Systems

## Bioinformatics Capstone
- **BME 205**
  - Bioinformatics Models and Algorithms
- **BME 230A**
  - Intro. Computational Genomics and Systems Biology
- **BME 230B**
  - Adv. Computational Genomics and Systems Biology (Not required but recommended)

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* Denotes courses that have additional prerequisites not required for the major.
+ Students can substitute CMPS 180 in place of CMPS 182. However CMPS 180 has additional prerequisites.
Ω CSE 20 Beginning Programming in Python is recommended for students who have never programmed.
Ψ Students may petition to substitute STAT 206 for STAT 132.
### 2018-19 Biomolecular Engineering and Bioinformatics: Bioinformatics

**DRAFT**

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**Student Name:**

**Staff Advisor Signature:**