Computation & Systems Biology Track
Curriculum Map

**Fall Year 1 (16 hrs)**
- MATH 221 (4) Calculus I
- ENG 100 (0) Engineering Lecture
- BIOE 199/100 (1) Undergraduate Seminar
- RHET 105 (4) Principles of Composition
- CHEM 102 (3) General Chemistry I
- Biol Chem Lab I
- SS/Hum (3)

**Spring Year 1 (16 hrs)**
- MATH 231 (4) Calculus II
- PHYS 211 (4) Univ. Physics, Mechanics
- BIOE 120 (1) Introduction to Bioengineering
- MCB 150 (4) Molec&Cellular Basis of Life
- CHEM 103 (1) General Chemistry II
- CHEM 104 (3) General Chem Lab II
- BIOE 200 (1) BioE Career Immersion
- CS 125 (4) Introd. to Comp **Instead of CS 101**

**Fall Year 2 (18 hrs)**
- MATH 241 (4) Calculus III
- BIOE 201 (3) Conservation Principles BIOE
- BIOE 206 (3) Cellular Bioengineering
- BIOE 198 (2) Biomedical Data Analysis
- BIOE 200 (1) BioE Career Immersion
- CHEM 232 (4) Organic Chemistry I
- Bio Eng Lab
- CS 173 (3) (as free elective)
- BIOE 298 AMS (1) Career Ecosystems
- BIOE 435 (2) Biomed Eng I

**Spring Year 2 (15 hrs)**
- BIOE 205 (3) Systems in Bioengineering
- BIOE 210 (3) Linear Algebra for Biomedical Data Science
- BIOE 202 (2) Cell & Tissue Engineering Lab
- CHEM 232 (4) Organic Chemistry I
- BIOE 303 (2) Quant Human Physiology Lab
- CS 225 Data Structures (4)
- Math 225 (2) (as free elective)
- SS/Hum (3)

**Fall Year 3 (17 hrs)**
- BIOE 476 (3) Tissue Engineering
- BIOE 220 (3) Bioenergetics
- BIOE 302 (3) Modeling Human Physiology
- BIOE 303 (2) Quant Human Physiology Lab
- BIOE 415 (2) Biomedical Instrumentation Lab
- BIOE 310 (3) Comp. Tools for Bio. Data
- BIOE 414 (3) Biomedical Instrumentation Lab
- BIOE 360 (3) Transport & Flow in Bioengineering
- BIOE 210 (3) Linear Algebra for Biomedical Data Science
- BIOE 200 (1) BioE Career Immersion
- Bio Eng Lab
- CS 225 Data Structures (4)
- Math 225 (2) (as free elective)
- SS/Hum (3)

**Spring Year 3 (14 hrs)**
- BIOE 436 (2) Sr. Design I
- BIOE 435 (2) Biomed Eng I
- BIOE 420 (3) Intro. Bio. Control Systems
- BIOE 414 (3) Biomedical Instrumentation Lab
- BIOE 435 (2) Biomed Eng I
- BIOE 420 (3) Intro. Bio. Control Systems
- BIOE 414 (3) Biomedical Instrumentation Lab

**Fall Year 4 (14/17 hrs)**
- BIOE 436 (2) Sr. Design II
- BIOE 435 (2) Biomed Eng I
- BIOE 420 (3) Intro. Bio. Control Systems
- BIOE 414 (3) Biomedical Instrumentation Lab

**Spring Year 4 (14 hrs)**
- Track Elec (3)
- Track Elec (3)
- Track Elec (3)
- SS/Hum (3)
- SS/Hum (3)
- SS/Hum (3)
- SS/Hum (3)

**Note:** These classes have prerequisites. Please make sure you have met all before taking the course.

**Courses with dashed line borders are not currently required as part of the Core BIOE Curriculum; updated 10/2018**

**Note – not taking courses as advised may result in a delayed graduation date. Students are responsible for any impact resulting from not following departmental advising.**

**If outlined in RED then the BIOE course is offered both Fall & Spring Semesters**

**Courses with advisor approval.**