# 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
- **Chem 102 (3)**: General Chemistry I
- **Chem 103 (1)**: General Chem Lab I
- **SS/Hum (3)**

## Spring Year 1 (16 hrs)
- **Math 231 (3)**: Calculus II
- **Phys 211 (4)**: Univ. Physics, Mechanics
- **Bioe 120 (1)**: Introduction to Bioengineering
- **Bioe 198 (2)**: Biomedical Data Analysis
- **Chem 104 (3)**: General Chemistry II
- **Bioe 100 (0)**: Engineering Lecture

## Fall Year 2 (18 hrs)
- **Math 241 (4)**: Calculus III
- **Phys 212 (4)**: Univ. Physics, Elec & Mag
- **Bioe 201 (3)**: Conservation Principles Bioe
- **Bioe 206 (3)**: Cellular Bioengineering
- **Bioe 105 (1)**: General Chem Lab II

## Spring Year 2 (15 hrs)
- **Math 285 (3)**: Intro. Diff. Eq.
- **Bioe 202 (2)**: Cell & Tissue Engineering Lab
- **Bioe 200 (1)**: Bioe Career Immersion
- **Bioe 298 (1)**: Career Ecosystems

### Komputation & Systems Biology Track Electives:
- **Bioe 454 - Systems Bioengineering (3 hr)
- **Bioe 450 - Intro. Synthetic Biology (3 hr)
- **Bioe 498 Ji - Finite Element Mthds in Biomed (3 hr)
- **Abe 440 - Applied Statistical Methods I (4 hr)
- **Ece 490 - Introduction to Optimization (3 hr)
- **Se 243 - Mechatronics (3 hr)
- **Ie 310 - Deterministic Models in Optimization (3 hr)
- **Ie 370 - Stochastic Processes and Applications (3 hr)
- **Other 400 level CS or Systems course (3 or 4 hr) - with advisor approval.

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

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

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

**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.**