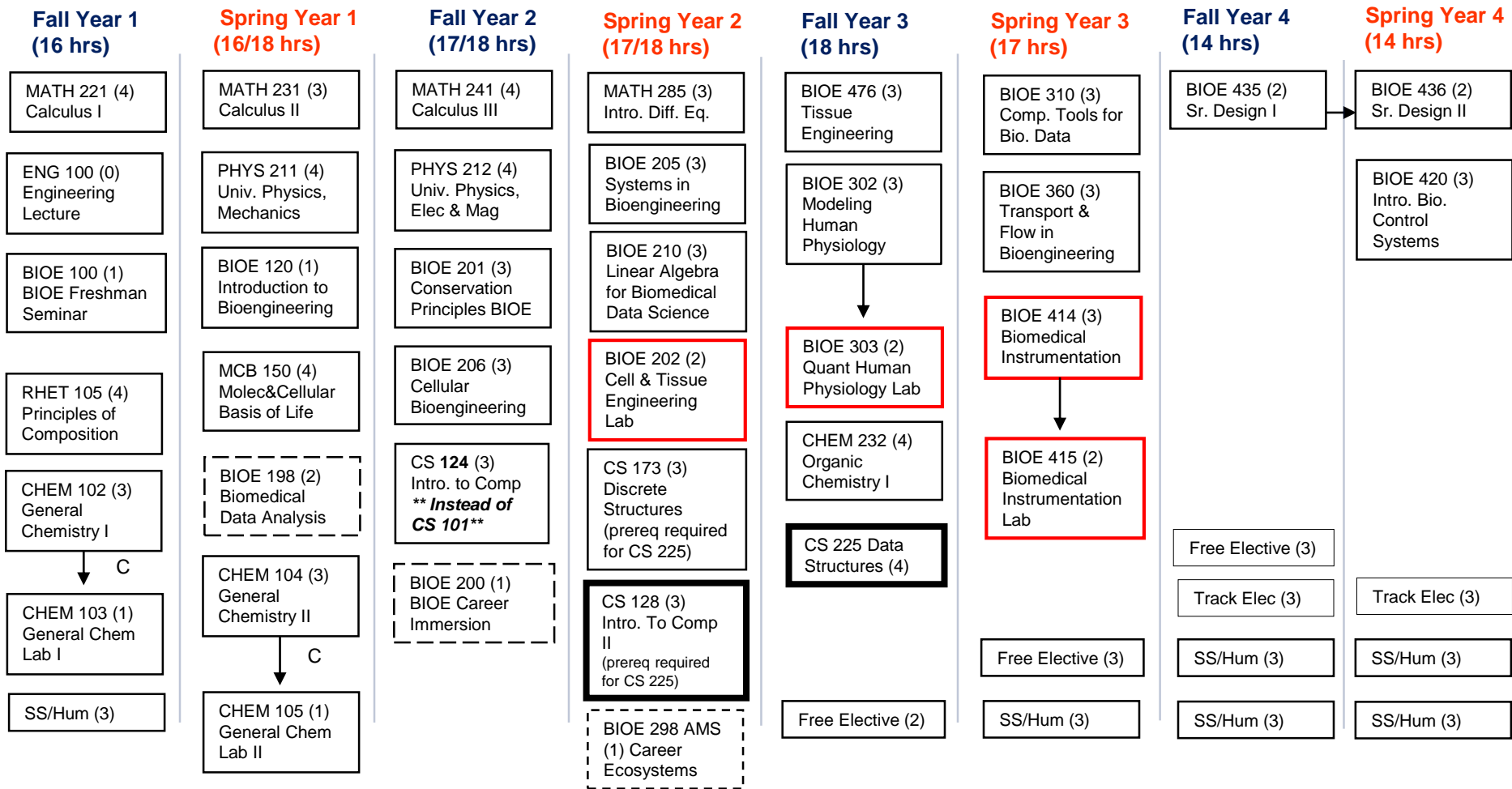


# Computation & Systems Biology Track

## Curriculum Map



**\*\* 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 dashed line borders are not currently required as part of the Core BIOE Curriculum**

## Computation & Systems Biology Track Electives

- BIOE 430 – Intro. Synthetic Biology (3 hr)
- BIOE 483 – Biomedical Computed Imaging/Systems (3 hr)
- BIOE 485 – Comp Math for Machine Learning/Imaging (3 hr)
- BIOE 498 TL – Intro to Systems Bio (3 hr)
- BIOE 498 PJ – Experimental Design in Automation (3 hr)
- BIOE 498 RI – Regulatory Safety Issues In Bioengineering (3 hr)
- ABE 440 – Applied Statistical Methods I (4 hr)
- ECE 365 – Data Science & Engineering (3 hr)
- ECE 401 – Signal & Image Analysis (4 hrs)
- ECE 490 – Introduction to Optimization (3 hr)
- ECE 498 NSU – Deep Learning in Hardware (3 hr)
- SE 423 – Mechatronics (3 hr)
- IE 310 – Deterministic Models in Optimization (3 hr)
- IE 370 – Stochastic Processes and Applications (3 hr)
- NPRE 461 – Probabilistic Risk Assessment (3 hr)
- NPRE 498 PRA – Advanced Risk Analysis (3 hr)
- TMGT 461TMD/TME – Tech, Eng, and Mngmt Project (4 hr)
- CS 225 – Data Structures (4 hr)
- CS 398 DL – Deep Learning (3 hr)
- CS 411 – Database Systems (3 hr)
- CS 412 – Introduction to Data Mining (3 hr)
- CS 440 – Artificial Intelligence (3 hr)
- CS 465 – User Interface Design (3 hr)
- CS 466 – Introduction to Bioinformatics (3 hr)

### General Education Requirements

- 6 hours in Humanities
- 6 hours in Social/Behavioral Sciences
- 6 hours in Liberal Education
- 1 Advanced Composition Course
- 1 Western Comparative Cultures Course
- 1 Non-Western Comparative Cultures Course
- 1 US Minority Cultures Course
- Language Other Than English

### PreMed Requirements

- Meet with The Career Center for Premed advising
- Common Courses (*additional requirements may apply depending on school*):
  - MCB 450/354 (BioChem)
  - CHEM 233 (Orgo 1 lab)
  - Social/Behavioral Science Sequence (3 courses)