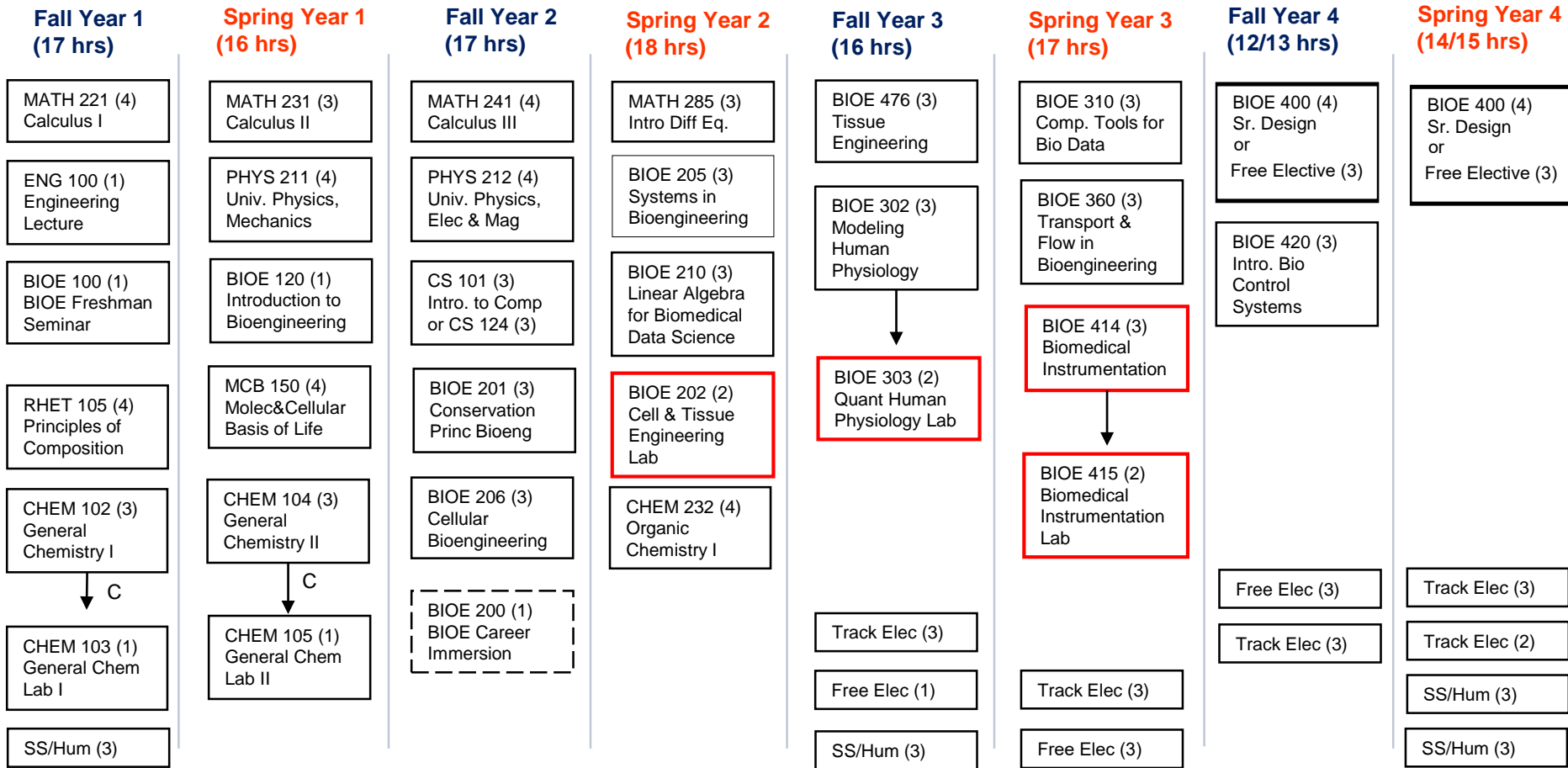


Imaging & Sensing Track Curriculum Map



** 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

Imaging/Sensing Track Electives

- BIOE 424 - Preclinical Molecular Imaging (3 hr)
- BIOE 432 - Systems Biology (3 hr)
- BIOE 434 - Immunoengineering (3 hr)
- BIOE 450 - Quantitative Pharmacology (3 hr)
- BIOE 483 - Biomedical Computed Imaging Systems (3 hr)
- BIOE 484 - Stat Analysis of Biomedical Images (3 hr)
- BIOE 485 - Comp Math for Machine Learning/Imaging (4 hr)
- BIOE 486 - Applied Deep Learning for Biomedical Imaging (3 hr)
- BIOE 498 NIE/ST1 - Surgical Technologies (3 hr)
- BIOE 498 LEC/TC1 - Tech for Cancer Diag & Therapy (3 hr)
- BIOE 498 RI - Regulatory Safety Issue in Bioengineering (3 hr)
- ECE 210 - Analog Signal Processing (4 hr)
- ECE 329 - Fields and Waves I (3 hr)
- **ECE 310 - Digital Signal Processing (3 hr)**
- **ECE 311 - Digital Signal Processing Lab (1 hr)**
- ECE 365 - Data Science & Instrumentation (3 hr)
- ECE 380 - Biomedical Imaging (3 hr)
- **ECE 401 - Signal & Image Analysis (4 hr)**
- **ECE 416 - BioSensors (3 hr)**
- **ECE 417 - Multimedia Signal Processing (4 hr)**
- **ECE 418 - Image & Video Processing (4 hr)**
- **ECE 437 - Sensors & Instrumentation (3 hr)**
- **ECE 460 - Optical Imaging (4 hr)**
- **ECE 467 - BioPhotonics (3 hr)**
- **ECE 472 - Biomedical Ultrasound Imaging (3 hr)**
- ECE 473 - Fundamental of Engineering Acoustics (3 hr)
- **ECE 480 - Magnetic Resonance Imaging (3 hr)**
- SE 423 - Mechatronics (3 hr)
- ME 487 - MEMS-NEMS Theory & Fabrication (4 hr)
- TMGT 461 TMD/TME - Tech, Eng, & Mngmt Project (4 hr)
- ECE/NE 410 - Neural Circuits & Systems (3 hr)
- ECE 421/NE 420 - Neural Interface Engineering (3 hr)

*Note, ECE 210 & ECE 329 are no longer required track electives. However, this pathway is necessary to meet prereqs for the **bolded** ECE upper level courses so please check what course you want to take when deciding.

General Education Requirements

- 6 hours in Humanities
- 6 hours in Social/Behavioral Sciences
- 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)