

Biomechanics Track Curriculum Map

Fall Year 1 (17 hrs)	Spring Year 1 (16 hrs)	Fall Year 2 (17 hrs)	Spring Year 2 (18 hrs)	Fall Year 3 (15 hrs)	Spring Year 3 (17 hrs)	Fall Year 4 (12/13 hrs)	Spring Year 4 (15/16 hrs)
MATH 221 (4) Calculus I	MATH 231 (3) Calculus II	MATH 241 (4) Calculus III	MATH 285 (3) Intro Diff Equ.	BIOE 476 (3) Tissue Engineering	BIOE 310 (3) Comp Tools for Bio Data	BIOE 400 (4) Sr. Design or Free Elective (3)	BIOE 400 (4) Sr. Design or Free Elective (3)
ENG 100 (1) Engineering Lecture	PHYS 211 (4) Univ Physics, Mechanics	PHYS 212 (4) Univ Physics, Elec & Mag	BIOE 205 (3) Systems in Bioengineering	BIOE 302 (3) Modeling Human Physiology	BIOE 360 (3) Transport & Flow in Bioengineering	BIOE 420 (3) Intro Bio Control Systems	
BIOE 100 (1) BIOE Freshman Seminar	BIOE 120 (1) Introduction to Bioengineering	CS 101 (3) Intro to Comp	BIOE 210 (3) Linear Algebra for Biomedical Data Science	↓	BIOE 414 (3) Biomedical Instrumentation		
RHET 105 (4) Principles of Composition	MCB 150 (4) Molec&Cellular Basis of Life	BIOE 201 (3) Conservation Princ Bioeng	BIOE 202 (2) Cell & Tissue Engineering Lab	BIOE 303 (2) Quant Human Physiology Lab	↓		
CHEM 102 (3) General Chemistry I	CHEM 104 (3) General Chemistry II	BIOE 206 (3) Cellular Bioengineering	CHEM 232 (4) Organic Chemistry I	TAM 212 (3)	BIOE 415 (2) Biomedical Instrumentation Lab		Free Elec (3)
↓ C	↓ C	BIOE 200 (1) BIOE Career Immersion	*TAM 210 (2) or TAM 211 (preferred – 3)		TAM 251 (3)	Free Elec (3)	SS/Hum (3)
CHEM 103 (1) General Chem Lab I	CHEM 105 (1) General Chem Lab II			Free Elec (1)	Free Elec (3)	Track Elec (3)	Track Elec (3)
SS/Hum (3)				SS/Hum (3)			SS/Hum (3)

** 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.

*TAM 210 or TAM 211 can be taken in the 3rd or 4th semester, wherever it fits in, **if** you postpone to the 5th semester you risk not graduating on time due to pre-requisites.

** 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

Biomechanics Track Electives

- BIOE 450 - Quantitative Pharmacology (3 hr)
- BIOE 461 - Cellular Biomechanics (4 hr)
- BIOE 498 NIE/ST1 - Surgical Technologies (3 hr)
- BIOE 498 RI - Regulatory Safety Issues in Bioengineering (3 hr)
- BIOE 498 HG - Soft Robotics (3 hr)
- BIOE 498 MPM - Disease Models for Personalized Medicine (3 hr)
- ME 330 - Engineering Materials (4 hr) - Contact MechSE Dept. Office
- ME 481 - Whole-Body Musculoskel Biomech (3 hr) - Contact MechSE Dept. Office
- ME 482 - Musculoskel Tissue Mechanics (3 hr) - Contact MechSE Dept. Office
- ME 483 - Mechanobiology (4 hr)
- SE 402 - Comp-Aided Product Realization (3 hr)
- SE 423 - Mechatronics (3 hr)
- TAM 445 - Continuum Mechanics (4 hr) - Contact MechSE Dept. Office
- TMGT 461 TMD/TME - Tech, Eng, & Mngmt Project (4 hr)
- NE 420 - Neural Interface Engineering (3 hr)

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 (2-3 courses)