

LAFAYETTE

ENGINEERING

Bioengineering Focus Area Electives

The following are approved courses for the Bioengineering focus area – discuss the courses that meet your specific interests with your advisor. Please note that some biology courses normally require both BIOL 111 and BIOL 112 as prerequisites; however, IntE students are typically allowed to enroll with instructor permission.

Engineering Electives

CHE 331	Polymers
CHE 360	Drug Delivery
CHE 372	Biomolecular Engineering
CHE 386	Composites
ME 338	Soft Tissue Mechanics
ME 482	Advanced Fluid Dynamics w/ Apps
ME 489	Intro to Biomedical Engineering
ME 492	Biomechanics
ECE 205	Human Machine and Adv in Med Tech
ECE 322	Solid State Circuits
ECE 414	Embedded Systems
ECE 427	Sensors and Electronic Systems
ECE 434	Digital Signal Processing
ECE 435	Image and Speech Signal Processing
ECE 437	Biomed Systems Modeling

Math, Science, or Eng Electives (can be any from the above list, plus the courses listed below – 2 must be from the Biology Electives list)

CHEM 221	Organic Chemistry I
CHEM 351	Biochemistry Survey
CM 261	Introduction to Numerical Computing for Engineers
NEUR 201	Intro to Neuroscience
PHYS 220	Medical and Biological Physics

Biology Electives (2 from this list – may require instructor permission)

BIOL 213	Comp. Vertebrate Anatomy
BIOL 214	Neuroanatomy
BIOL 245	Immunology
BIOL 251	Molecular Genetics
BIOL 270	Biostatistics
BIOL 274	Intro to Bioinformatics
BIOL 277	Cell Biology
BIOL 314	Anatomy of Vision
BIOL 356	Biomedical Informatics
BIOL 345	Infectious Diseases
BIOL 350	Genomics
BIOL 351	Precision Medicine
BIOL 3xx	various biology electives

Related Electives (can be any from the above lists, plus the courses list below)

AGS 201	Intro to Aging Studies
HIST 215	History of Technology
HIST 252	Transformation of the American Environment
PHIL 145	Bioethics
PHIL 236	Philosophy of Science
PHIL 225	Philosophy of the Mind
PSTD 255	Multinational Business and Corporate Social Responsibility
PSYC 225	Psychopharmacology
PSYC 226	Human Factors and Engineering Psychology