

Integrative Engineering – Bioengineering Focus

Typical Four-year Schedule

First Year:

Fall

ES 101 Intro to Eng
MATH 161 Calculus I
CHEM 107 General Chemistry I (L)
First Year Seminar

Spring

ES 103 Systems I
MATH 162 Calculus II
*PHYS 131/151 Physics I / Acc. Physics (L)
BIOL 112 Biomol Foundations (L)

Second Year:

Fall

ES 201 Systems II (L)
MATH 263 Calculus III
ES 232 Biomaterials
CS 104 or 105
BIOL 111 Unity and Diversity (L)/Elective

Spring/Study Abroad**

CS 104, 105, or 106/Elective
MATH 264 DEQs with Linear Algebra
Chem 108 General Chemistry II (L)/Elective
Elective
Elective

Third Year:

Fall

ECE 331 Signals and Systems (L)
ChE 311 Transport/Elective
EGRS 251 Intro to Eng Public Policy
Engineering or Related Elective (see list)
Biology Elective

Spring

ES 301 Biosystems
ME 362 Fluids*** /Elective
Biology Elective
Engineering or Related Elective (see list)
Elective

Fourth Year:

Fall

Capstone I****
Engineering elective (see list)
Engineering elective (see list)
Elective

Spring

Capstone II****
Related Elective
Elective
Elective

**If deciding between ChE and IntE, take CHEM 108 instead of Phys*

***If study abroad, a Lafayette faculty-led program for engineering students or the DIS-Stockholm program is recommended – discuss the options with your advisor*

****take ME 362 this semester if you did not previously take ChE 311*

*****two-semester capstone course offered by ECE or ME related to Bioengineering– under certain circumstances, Honors Thesis (ES 495 & ES 496) can be substituted for capstone*

Electives are used to fill the Common course of study (CCS) requirements: <https://ccs.lafayette.edu/chart/>

Note 1: Your 26 total courses for the IntE major must include 8 math/sci courses, EGRS 251 + 12 engineering/cs courses + 2 Biology electives + 1 additional Science course + 2 Biosystems related electives from any Division of the College.

Note 2: If you enter Lafayette with AP credit (e.g. for Calculus), talk to your advisor about how this schedule could be modified for your particular situation.

Note 3: If you switch to IntE in your second year, move ES 103 to spring second year, and ES 201 to fall third year.