

RICE UNIVERSITY
Department of Bioengineering

Non-thesis Degree: **B.S. in Bioengineering** 131 hours — normally 4 years

The following table indicates the B.S. requirements for a degree in Bioengineering. Electives may be chosen from the *General Announcements* catalog as long as all the requirements are satisfied. These requirements are for all students matriculating in or after fall 2019.

Freshman Year

6	MATH 101, MATH 102
8	PHYS 101 [or 125], PHYS 102 [or 126]
8	CHEM 121, CHEM 122
3	CAAM 210
3	FWIS
6	<u>Electives</u>
34	Total credits for freshman year

Sophomore Year

6	MATH 211, MATH 212
3	CHEM 211
3	BIOC 201
5	BIOE 252, BIOE 440 or 439
7	BIOE 320, BIOE 322, BIOE 391
4	ELEC 243
6	<u>Electives</u>
34	Total credits for sophomore year

Junior Year

4	BIOE 383, BIOE 385
3	BIOE 370
3	BIOC 341 or BIOE 341
3	MECH 211
1	BIOE 342
9	BIOE 330*, BIOE 332*, BIOE 372
9	<u>Electives</u>
32	Total credits for junior year

Senior Year

2	BIOE Advanced Labs
6	BIOE 451, BIOE 452
3	BIOE 420*
9	BIOE Technical Electives
10	<u>Electives</u>
31	Total credits for senior year

* Please see notes page

Core Bioengineering Courses

- Bioengineering Fundamentals (BIOE 252)
- Systems Physiology and Lab (BIOE 322, BIOE 320)
- Bioreaction Engineering (BIOE 330)
- Thermodynamics (BIOE 332)
- Tissue Culture Lab (BIOE 342)
- Biomaterials (BIOE 370)
- Biomechanics (BIOE 372)
- Biomedical Engineering Instrumentation and Lab (BIOE 383, BIOE 385)
- Numerical Methods (BIOE 391)
- Biosystems Transport (BIOE 420)
- Statistics for Bioengineers (BIOE 440 or BIOE 439)
- BIOE Advanced Labs (two of the following: BIOE 442, 443, 444, 445, 446, 447, 449)
- Bioengineering Design (BIOE 451, BIOE 452)

BIOE Technical Elective Courses

Students are required to complete three BIOE technical elective courses. The three technical electives must contain a minimum of 3 courses, 6 engineering points and 9 credit hours. Technical elective courses and their associated engineering points are made available each semester during registration.

Undergraduate Committee

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NOTES: If you have AP credit in MATH, CHEM or PHYS, it is advisable to take BIOC 201 the fall of your freshman year.

ELEC 243 is a MANDATORY pre-requisite for BIOE 383 and BIOE 385.

MECH 211 is a MANDATORY pre-requisite for BIOE 372.

BIOE 383 and BIOE 385 are MANDATORY pre-requisites for BIOE 451 and BIOE 452.

BIOE 341 may be taken in place of BIOC 341.

If you want to study abroad, please contact an advisor early. The spring semester of your sophomore or junior year is generally the best time.

* Recent curriculum changes regarding these courses should be discussed with a BIOE academic advisor.