

# 2024-2025 Bachelor of Science in Biomedical Engineering (Tissue Track)

## University of Texas at Arlington – Four Year Course Sequence

### First Year

#### Fall Semester – 17 Total Hours

Course	Hours
BE 1105 – Medical Applications of Engineering	1
ENGR 1101 – Entrance to ENGR for Transfers OR UNIV 1131 – Student Success	1
MATH 1426 – Calculus I	4
CHEM 1441 – General Chemistry I	4
BIOL 1441 – Biology for Science Majors I	4
BE 1325 – Intro to Bioengineering	3

#### Spring Semester – 18 Total Hours

Course	Hours
PHYS 1443 – Technical Physics I	4
MATH 2425 – Calculus II	4
CHEM 1442 – General Chemistry II	4
BE 2315 – Intro to Computational Tools for BE	3
ENGL 1301 – Rhetoric & Composition	3

### Second Year

#### Fall Semester – 17 Total Hours

Course	Hours
PHYS 1444 – Technical Physics II	4
MATH 2326 – Calculus III	3
BE 3415 – Fundamentals of Biomolecular Engineering	4
MATH 3316 or IE 3301 – Statistical Inference or Engineering Probability	3
COMS 2302 – Professional & Technical Communication for Science and ENGR	3

#### Spring Semester – 16 Total Hours

Course	Hours
EE 2440 or CSE 2440 – Circuit Analysis w/Lab	4
MATH 3319 – Differential Equations & Lin Algebra	3
BE 3320 – Measurement Lab	3
HIST 1301 – US History to 1865 (or HIST 1331)	3
BE 2310 – Engineering Appr. To Solving Clinical Challenges (Optional, counts as BE Tech Elective)	3

### Third Year

#### Fall Semester – 16 Total Hours

Course	Hours
BE 4382 – Lab Principles	3
BE 3380 – Human Physiology in BE	3
BE 4368 or BE 4364 or BE 4372 (choose one)	3
BE 3317 – Linear Systems in Bioengineering	3
BE 3101 or 3191 – Seminar in BE or Directed Research in BE	1
POLS 2311 – US Government	3

#### Spring Semester – 13 Total Hours

Course	Hours
BE 3310 or BE 4312 – Biomechanics & Fluid Flow or Tissue Biomechanics	3
BE 3301 – Cell Physiology	3
BE 3367 or BE 4365 or BE 4373 (choose one)	3
BE 3180 – Intro to Med Dev Regulations, Requirements & Quality Standards	1
POLS 2312 – State & Local Government	3

### Fourth Year

#### Fall Semester – 15 Total Hours

Course	Hours
BE 4337 or BE 4314 – Transport Phenomena or Biomedical Implants (choose one)	3
BE 4350 – Senior Design I	3
BE Technical Elective	3
PHIL 1304 – Contemporary Moral Problems	3
HIST 1302 – US History II (or HIST 1332)	3

#### Spring Semester – 15 Total Hours

Course	Hours
BE 4333 or BE 4331 – Nano Biomaterials or Biopolymers & Biocompatibility (choose one)	3
BE 4355 – Senior Design II	3
BE Technical Elective	3
Creative Arts Elective	3
Social/Behavioral Science Elective	3

### Notes

View list of Core Curriculum requirements here: <https://catalog.uta.edu/academicregulations/degree requirements/generalcorerequirements/>