

**UNIVERSITY OF CALIFORNIA, DAVIS**  
*Bachelor of Science in Biomedical Engineering*  
2024-2025 Undergraduate Curriculum

## Engineering and Science Electives

These restricted electives should be selected, in consultation with an advisor, from the list of approved electives below.

### Engineering Electives

- Any letter graded upper division BIM course that is not required (*except BIM 102, 161A, 161L*)
- 4 units of BIM 192 or BIM 199 with the approval of the BME UG Committee
- ENG 35\*, 45/45Y\*, 102, 103, 104, 104L, 106
- Biological Systems Engineering 128, 130, 165, 175
- Chemical Engineering 141, 144, 145A, 145B, 155, 160, 161L, 170
- Computer Science 124
- Electrical and Computer Engineering 110A, 110B, 118, 130A, 130B, 140A/140AV, 140B, 151, 157A/157AV, 157B/157BY, 160
- Materials Science and Engineering 147, 160, 162, 162L, 164, 172, 172L, 174, 174L, 180, 181, 182
- Mechanical Engineering 150A, 150B, 151, 152, 154, 165, 171, 172

\* *No more than 4 units allowed from lower division coursework.*

### Science Electives

- To be chosen according to specialization. BIS 2B, BIS 2C, ECS 32A, ECS 32B, PHY 9D, BIM 102, BIM 161A, BIM 161L or any letter graded upper division course in the Biological Sciences, Chemistry or Physics that is designated as Science and Engineering topical breadth. 4 units of BIM 192 or BIM 199 with the approval of the BME UG Committee.

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### Areas of Specialization

As Biomedical Engineering is defined so broadly, specializing in a subfield of engineering can provide more in-depth expertise in a focus area. Through the judicious selection of upper division engineering and science electives, students can create this depth in one of our suggested areas of specialization or in an area of the student's choosing.

Biomedical Engineering specializations are:

***Biomechanics***

***Cellular and Tissue***

***Imaging***

***Medical Devices***

***Systems & Synthetic Biology***

One of the strengths of the UC Davis program is the flexibility to design one's own emphasis of study. These specializations are neither required nor degree-notated.

### Pre-medical students

Engineering is playing an increasing role in the practice of medicine, and students interested in medicine can focus on the intersection of engineering and medicine. To meet admission requirements for medical school, students must complete extra course work. These courses are in addition to the listed Department of Biomedical Engineering curricular requirements.

