

**The Ohio State University  
College of Engineering  
Approved for the College of Arts and Sciences**

**Biomedical Engineering Minor (BIOMEDE-MN)**

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Biomedical Engineering Department, Lindsay Tolchin  
270C Bevis Hall, 1080 Carmack Road  
Columbus, OH 43210-1002; 614-292 2154  
<https://bme.osu.edu>

The minor is designed to provide undergraduate students education and problem solving skills in biomedical engineering and its applications to better prepare them for jobs in industry, or advanced studies and research in this field. It is anticipated that students taking the minor will be more employable in health services, pharmaceutical industries, rehabilitation engineering, biomedical product companies, and many relatively new high-tech industries such as those developing and manufacturing bio-microelectromechanical systems.

The biomedical engineering minor consists of 12 credit hours of course work as listed below. You are responsible for taking the prerequisites for each course. If you are interested in this minor, you should contact the biomedical engineering minor advisor (Lindsay Tolchin; Tolchin.6@osu.edu) and propose a plan for your minor program. Next, you must obtain your major advisor's signature on the Minor Program Form and return to BME for the signed approval of the minor faculty advisor. You must file the signed form with your college or school counselor. For further information about the minor program, contact the Biomedical Engineering Department.

**Set A courses (6 credit hours)**

*Physiology or biological science course (2000 level or higher); e.g. Anat 2220, Bio 2100, EEOB 3510 etc (3+);*  
prereq: varies with course

AND

*BME 2000 (3);* prereq: Physics 1250, Math 1172, Chem 1220, Engr 1182 or equiv; concur: ME 2040, Bio 1113, Math 2177 or equivalent courses

**Set B courses (6 credit hours)**

Choose at least one "Domain" course. The second course may come from the list of "Advanced BME Courses."

*BME Domain Courses:*

*BME 4110 (3);* prereq: Physics 1251, Math 2177, Anat 2220, or EEOB 2520, or permission of instructor  
*BME 4210 (3);* prereq: BME 2000, Math 2177, ME 3500, or permission of instructor  
*BME 4310 (3);* prereq: BME 2000, MSE 2010, Math 2177, and concur EEOB 3510, or permission of instructor  
*BME 4410 (3);* prereq: BME 2000, Math 2177, ME 2040 and concur EEOB 3510, or permission of instructor  
*BME 4510 (3);* prereq: BME 2000, Math 2177, Biochem 4511, EEOB 3510, or permission of instructor  
*BME 4610 (3);* prereq: BME 2000, MSE 2010, Biochem 4511, or permission of instructor

*Advanced BME Courses:*

*BME 5001 (3);* prereq: Senior or grad standing in Engineering or Medicine; or permission of instructor

*BME 5110 (3);* prereq: BME 4110 or equiv, and senior or grad standing; or permission of instructor  
*BME 5120 (3);* prereq: BME 4110 or equiv, and senior or grad standing; or permission of instructor  
*BME 5186 (3);* prereq: BME 4110 or equiv, and senior or grad standing; or permission of instructor  
*BME 5310 (3);* prereq: BME 4310 or equiv, and senior or grad standing; or permission of instructor  
*BME 5353 (3);* prereq: BME 5310; or permission of instructor  
*BME 5420 (3);* prereq: BME 4410 and senior or grad standing; or permission of instructor  
*BME 5421 (3);* prereq: BME 4410 and senior or grad standing; or permission of instructor  
*BME 5430 (3);* prereq: Math 2177 or equiv, Anat 2220 or equiv, and senior or grad standing; or permission of instructor  
*BME 5470 (3);* prereq: BME 4410 or equiv, ME 2040 or equiv, and senior or grad standing; or permission of instructor  
*BME 5510 (3);* prereq: BME 4510 or equiv, and senior or grad standing; or permission of instructor  
*BME 5520 (3);* prereq: BME 4510 or equiv, and senior or grad standing; or permission of instructor  
*BME 5580 (3);* prereq: Math 2177 or equiv., EEOB 3510 or equiv., or grad standing in BME; or permission of instructor  
*BME 5610 (3);* prereq: BME 4610 or equiv, or Grad standing; or permission of instructor  
*BME 5635 (3);* prereq: Senior or grad standing in Engineering; or permission of instructor  
*BME 5639 (3);* prereq: BME 2000, and senior or grad standing; or permission of instructor  
*BME 5661 (3);* prereq: BME 4610 or equiv, and senior or grad standing; or permission of instructor  
*BME 5662 (3);* prereq: BME 5661; or permission of instructor  
*BME 5663 (3);* prereq: ME 3503 or equiv, or grad standing; or permission of instructor  
*BME 5667 (3);* prereq: Senior standing in BioMedE, or permission of instructor  
*BME 5668 (3);* prereq: Senior or grad standing in Engineering; or permission of instructor  
*BME 5569 (3);* prereq: BME 5639; or permission of instructor

**Biomedical Engineering minor program guidelines**

Required for graduation No

Credit hours required A minimum of 12 credit hrs. At least 6 credit hrs must be at the 2000 level or above and 6 credits must be at the 3000 level or above.

Transfer credit hours allowed At least half of the credits counting toward the minor must be earned in regular OSU coursework.

Overlap with the GE Permitted, no more than 6 credit hours.

Overlap with the major and additional minor(s)

• The minor must be in a different subject than the major.

- The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

#### Grades required

- Minimum C- for a course to be listed on the minor.
- Minimum 2.00 cumulative GPA for all minor course work.
- Course work graded Pass/Non-Pass cannot count on the minor.
- No more than 3 credit hours of course graded Satisfactory/Unsatisfactory may count toward the minor

#### Approval required

If you are interested in this minor, you will contact the biomedical engineering minor advisor (Lindsay Tolchin; Tolchin.6@osu.edu) and propose a plan for your minor program. Next, you must obtain your major advisor's signature on the Minor Program Form and return to BME for the signed approval of the minor faculty advisor. You must file the signed form with your college or school counselor.

Filing the minor program form The minor program form must be filed at least by the time the graduation application is submitted to a college/school counselor.

Changing the minor Once the minor program is filed in the college office, any changes must be approved by all parties and a new form re-filed.