What is Biomedical Engineering (BME)?

It is the use of engineering tools to analyze and solve problems in biology and medicine. It is the design of new medical instruments, devices, software, therapies or procedures and it is highly multidisciplinary.

Key Features of UW-BME:

- **Design** throughout the curriculum
- Emphasis on **hands-on learning** (laboratories in all core courses)
- Premed **courses** are built into the curriculum (two options available)
- Flexibility for and recommend co-ops, internships and abroad
- **Research** opportunities and Honors in research (can count up to 3 credits)
  - Department offers one-year M.S. degree option

Design Throughout the Curriculum

Teams of 4-6 students work on real-world, client-based design projects every semester with close advising, faculty mentors advise up to four teams each.

UW-BME Area Specializations (Students Select One)

1. Medical Instrumentation (related to ECE)
2. BioImaging and Optics (related to ECE, CS, Medical Physics)
3. Biomechanics (related to ME)
4. Biomaterials/Cellular/Tissue Engineering (related to CBE and MS&E)

After Graduation with a B.S. in BME Students Have Gone to:

- Graduate Programs (MS and/or PhD) ~ 45%
- Biomedical Industry ~ 31%
- Medical School ~ 18%
- Other post degrees ~ 6%

Admissions to the BME Department

Freshman are directly admitted into the department. To apply, be considered, or continue within BME, students must complete the GCR or General College Requirement, as well as the BME GPA requirements during their first year, see:

http://progression.engr.wisc.edu
General College Requirements (GCR): To be admitted or progress into BME, the GCR must be satisfied which includes four core courses. There are different options to fulfill the GCR courses, these are the minimum courses for BME.

Chemistry Requirement: Choose either Chem 343: Organic chemistry as the pre-req for Chem 344-345: Intermediate Organic Chemistry and Lab. You may take Chem 327 or 329 Analytical chemistry instead of 344/5 in which case Chem 341 is sufficient. You may NOT take Chem 341 and then 344-345.


Required core courses: All three core courses with labs are required. It is advisable to take them in order of interest. For example, take BME 430 first in the sophomore year if you wish to enter the biomaterials track.
B.S. Biomedical Engineering Curriculum Flowchart – PreMed (non-Biocore)

**General College Requirements (GCR):** To be admitted into BME, the GCR must be satisfied during the semester in which applying. There are different options to fulfill the GCR courses, these are the optimal courses for BME.

**Engineering Area Technical Electives:** At least 15 credits total from ONE of the following BME tracks (required area electives):

**Required core courses:** All three core courses with labs are required. It is advisable to take them in order of interest. For example, take BME 430 first in the sophomore year if you wish to enter the biomaterials track.

**Medical School Requirements:** All pre-med and MCAT requirements are built into the curriculum by taking the courses recommended above. Note, some courses are not “required” by your BME Degree, instead free elective or liberal elective credits are notated as “recommended” such as Biochemistry 501, Psychology, and Sociology. Each Medical school has specific requirements – it is recommended to identify these early and fulfill them.
General College Requirements (GCR): To be admitted into BME, the GCR must be satisfied during the semester in which applying. There are different options to fulfill the GCR courses, these are the optimal courses for BME.


Required core courses: All three core courses with labs are required. It is advisable to take them in order of interest. For example, take BME 310 first in the sophomore year if you wish to enter the biomaterials track.

Medical School Requirements: All pre-med and MCAT requirements are built into the curriculum by taking the courses recommended above. Note, some courses are not "required" by your BME Degree, instead free elective or liberal elective credits are notated as "recommended" such as Biochemistry 501, Psychology, and Sociology. Each Medical school has specific requirements – it is recommended to identify these early and fulfill them.