THE BIOMEDICAL ENGINEERING
GRADUATE PROGRAM
GRADUATE
ADMISSIONS
PROCEDURE

UNIVERSITY OF CONNECTICUT
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This document supplements the Biomedical Engineering (BME) Graduate Handbook and the BME Faculty Bylaws, and is meant to clarify the Graduate Application Procedure for incoming graduate students. Additional information may be found at the Graduate School website (http://grad.uconn.edu/), the Graduate Catalog (http://catalog.grad.uconn.edu/), or on the BME website (http://www.bme.uconn.edu/).
1.0 APPLICATION SUBMISSION

All graduate students submit a complete graduate application with application fee directly to the Graduate School. Also, three Letters of Recommendation and a Personal Statement are sent to the Graduate School. The Letters of Recommendation should be from individuals familiar with the academic and industry performance of the candidate. Graduate applications are received throughout the year and processed as they are received.

1.1 Expected Applicant Background

Students with a B.S. degree in Biomedical Engineering are ideally suited for the Biomedical Engineering M.S. and Ph.D. studies at the University of Connecticut. Students with a B.S. degree in either engineering or physical sciences or mathematics may also seek admission to the Biomedical Engineering Program at the University of Connecticut. Students with a non-Biomedical Engineering degrees will need to take at least the required undergraduate Biomedical Engineering courses at the University (BME 3100, 3300, 3400, 3500, 3600W, and 3700). Students with life science undergraduate degrees must take remedial course work in basic and advanced engineering and mathematics (two years through differential equations) and the required undergraduate Biomedical Engineering courses at the University. Course descriptions can be found in the Undergraduate Catalog [http://www.catalog.uconn.edu/](http://www.catalog.uconn.edu/). Note that these undergraduate courses do not count toward the Biomedical Engineering graduate program degree requirements.

1.2 Application Form and Preliminary Review of Applications

An application form for graduate study is available online at: [http://www.grad.uconn.edu/apply.html](http://www.grad.uconn.edu/apply.html). The BME graduate program does not require or review preliminary applications. All students interested in applying to the program (domestic and international students) should download the application as if their address was within the United States.

Applicants are required to submit to the Graduate School:

- three letters of recommendation (preferably from members of the academic profession)
- a personal letter from the student describing their interest in biomedical engineering, indicate which of the six areas of concentration you wish to pursue, and any other information that might be helpful for evaluation purposes

- Areas of concentration are:
  - **Biomaterials** (which includes Biochemical Engineering, Drug Delivery, Cellular & Tissue Engineering)
  - **Bioinformatics**
  - **Bioimaging & Bioinstrumentation** (which includes Biosignal Processing, Biosensors)
  - **Biomechanics** (which includes Biodynamics, Human Performance Engineering, Ergonomics, Cardiac Mechanics, Rehabilitation Engineering)
  - **Physiological and Biomedical Modeling** (which includes Neural Systems Engineering)
  - **Clinical Engineering**

- In addition to selecting an area of concentration, applicants to the Industrial
Internship Program should also write *Industrial Internship Program.*

On the application form, specify Biomedical Engineering in Field of Study.

A graduate student is admitted into the Biomedical Engineering graduate program only if a Biomedical Engineering faculty has agreed to serve as the major advisor. **Applicants are encouraged to communicate directly with a potential major advisor at the time of the graduate application submission as well as specify a preferred major advisor on the application form.**

### 1.3 Required Documents In The Application Package

**1.3.1 GRE**
Graduate applicants with a degree outside of the United States are required to submit a GRE Score for Verbal, Analytical and Quantitative. While there are no minimum GRE requirements, students entering the graduate program score well above 700 out of 800 in the quantitative portion of the GRE. Generally, applicants without the required GRE are not evaluated until the scores are received from the applicant or GRE directly. The UConn institutional code number for the GRE is 3915.

**1.3.2 TOEFL**
Students whose native language is not English must show evidence of proficiency in the English language by having earned a written score of at least 550 for the paper-based test, 213 for the computer-based test, or 80 for the Internet-based test on the TOEFL (Test of English as a Foreign Language), administered by the Educational Testing Service, Princeton, New Jersey 08541-6151. The application for candidates not meeting this requirement are not released by the Graduate School until the minimum score is satisfied.

**1.3.3 Official Transcript Evaluation Form from the Graduate School**
The Graduate School provides an analysis of the transcript provided by the student and makes recommendation as to the admission classification of the applicant (Too Low for admission, Regular, Provisional (MS only) and Language Conditional). An analysis by the Graduate School translates the GPA from the student’s transcript to a 4.0 scale. The minimum GPA to be considered for entry into the BME Graduate Program is 3.0 out of 4.0. Most of the applicants who enter the program have substantially above a 3.0 GPA.

**1.3.4 Application Processing Fee**
A non-refundable application fee must accompany the application. It may not be applied toward other charges. This fee must accompany every application submitted and may not be waived. The only exception is for individuals applying for the doctoral degree program after having completed a MS degree in BME from UConn.

**1.3.5 Letters of Recommendation and Personal Statement**
An application package without *Letters of Recommendation* and a *Personal Statement* is generally not sent out for evaluation by the Graduate Admissions Committee until these items are received.
rare occasions, a graduate application package is distributed for review by the Graduate Admissions Committee without the Letters of Recommendation and Personal Statement.

1.3.6 Exceptions
On occasion, a student is admitted as a Provisional Graduate Student to the BME Master’s Graduate Program with a GPA slightly below a 3.0 due to extenuating circumstances. When this happens, a detailed memo is sent to the Graduate School by the BME Program Director with a request to waive the minimum GPA of 3.0. Provisional graduate students are not eligible for any financial assistance and must maintain a GPA at or above a 3.0. When the provisional graduate student has completed 12 credit hours of course work with a GPA at or above a 3.0, the student is then admitted into the Regular Graduate Program and is then eligible for financial support.

2.0 FINANCIAL SUPPORT

Financial support (graduate assistantship) is offered in the Biomedical Engineering Graduate Program through research and teaching assistantships. Research assistantships are provided directly from the Biomedical Engineering faculty. Applicants should correspond directly with the faculty members that best match their research interests to learn about research assistantship opportunities. Teaching assistantships are only awarded to current graduate students with the necessary background for the course. There is no financial aid form used by the Biomedical Engineering graduate program. More information can be found in the Graduate School website, http://grad.uconn.edu/ and in the Graduate Catalog, http://catalog.grad.uconn.edu/.

3.0 INTERNATIONAL APPLICANTS

Students who are not United States citizens or permanent resident aliens must meet additional requirements before their admission is finalized.

1. They must present documentary evidence of their ability to meet all expenses for at least the first year of study and an acceptable plan for financing the remainder of their program.

2. Students whose native language is not English must show evidence of proficiency in the English language by having earned either a computer-based score of at least 213 or a written score of at least 550 on the TOEFL (Test of English as a Foreign Language), administered by the Educational Testing Service, Princeton, New Jersey 08541-6151. University policy requires that all graduate students who will be serving as teaching assistants will be required to present evidence of competence in spoken English. This may take the form of a score of 50 or better on the Test of Spoken English if the student does not hold a degree from an Anglophone college or university.

3. The Graduate Record Examination (GRE) General Test is required.
4.0 APPLICATION DEADLINES

Students are advised to file the application for admission several months in advance of the first semester of course work. All credentials, including official transcripts covering all undergraduate and graduate work taken up to the time of application, as well as the non-refundable processing fee, must also have been received in the Graduate Admissions Office by these dates. Because research assistantships are filled far in advance of the international application deadline for fall and spring admission, prospective students are encouraged to submit their applications for admission as early as possible. Applications for the Clinical Engineering Internship are due by January 1st. Please see Appendix A of the Biomedical Engineering Graduate Program Handbook and http://www.bme.uconn.edu/grad/bmeinternsclinical.htm for requirements.

5.0 GRADUATE ADMISSIONS COMMITTEE

The admission process is managed by the BME Graduate Admission Committee. The current Graduate Admissions Committee consists of all members of the BME Graduate Program. The current Chair of the Committee is the BME Program Director. This committee develops criteria and streamlines the procedures for admission of students to the BME graduate program. Admission criteria must be voted on and approved by the BME faculty.

Furthermore, selected members of the BME Graduate Faculty serve on the Graduate Admissions Committee with representatives from all BME tracks. A Graduate Admissions Chair is elected from this Committee, and the Committee assumes all responsibility for admitting graduate students.

All applications are eligible to be reviewed by the entire Faculty. However only the Faculty in the BME track of the applicant are expected to evaluate the application. The Graduate Admissions Committee will decide on admissions based on Faculty input, and assign a major advisor for each graduate student upon consent of the Faculty member.

6.0 REVIEW OF GRADUATE APPLICATIONS

The Graduate Application review form is used by the faculty to evaluate all BME Graduate Applications. On this form, faculty provide a qualitative description of the adequacy of the candidate and comments concerning GPA, GRE, TOEFL and past experiences are usually noted.

Candidates without the prerequisite backgrounds (e.g., Biology Undergraduate BS Degree) can be admitted to the “Regular Program” as long as the minimum GPA, GRE and TOEFL requirements are satisfied, but remedial coursework is necessary before starting the Graduate Program.

Students who do not meet the minimum standards are given the “Reject” recommendation. Typically, one faculty recommending “Reject” is sufficient for rejection of the application unless there are compelling reasons to further consider the application.
Remedial coursework is listed that is required before the candidate begins the BME Graduate Program. Many times, students can take a few remedial courses concurrently with the BME Graduate courses. Students without a BME BS typically need to take some undergraduate life-science and BME courses (those with an Engineering BS) or BME (and others) courses (those with a life-science BS). The purpose of the remedial coursework is not to provide a BS degree in the area, but provide sufficient background necessary to complete the BME Graduate Program successfully.

- **Life Science Backgrounds.** Students should all have a minimum of 3-semesters of calculus plus a course in differential equations. In addition, 1-year of chemistry, and at least a semester of biology and organic chemistry is required.

  Physiological Modeling (BME 3100), Statics & Dynamics for BMEs (BME 3150), Electrical Circuits (ECE 2001W), Materials Science & Engineering I (MSE 2101), Biosystem Analysis (BME 3400), Biomedical Engineering Measurements (BME 3500), Biomechanics (BME 3600W) and Biomaterials (BME 3700) are usually required. Depending on the track in BME, additional courses are also recommended (e.g., BME Technical Electives in the track).

- **Engineering Backgrounds.** Students should have a background in Biology, Anatomy & Physiology, and Organic Chemistry. BME undergraduate courses: Physiological Modeling (BME 3100), Biosystem Analysis (BME 3400), Biomedical Engineering Measurements (BME 3500), Biomechanics (BME 3600W) and Biomaterials (BME 3700). Depending on the BME Track, additional courses may be required (e.g., in Biomaterials, courses in cell biology, biochemistry, and genetics).

*Please note that the course titles listed above are specific to the University of Connecticut. Please refer to the Undergraduate Catalog ([http://www.catalog.uconn.edu/](http://www.catalog.uconn.edu/)) for course descriptions and content.*

The Reviewer indicates preference for working or not working with the candidate. Funding available for a candidate that the Reviewer has identified a preference for working with is also indicated.

Decisions as to who will be the major advisor when several Faculty wish to work with a graduate student are based on input from the candidate and the financial package given to the candidate.

Every Graduate Student must have a major advisor before being admitted into the program. If no major advisor is identified after evaluation by the Faculty, then the student is “Rejected” automatically. The rejection of students without a major advisor takes place at the end of each academic year in May.