Biomedical Engineering (BME) Doctoral Program: Overview of Requirements

Relevant Websites
All forms are available on the Registrar’s website:
https://www.stevens.edu/directory/office-registrar/forms

Stevens doctoral program (Intranet site):
https://my.stevens.edu/provost/graduate-academics/handbook/doctoral.html

Requirements for maintenance of academic standing (Intranet site):
https://my.stevens.edu/provost/graduate-academics/handbook/academic-standing.html

Thesis formatting and submission to library:
https://library.stevens.edu/node/88361

Academic calendar:
https://www.stevens.edu/directory/office-registrar/academic-calendar

Requirements for the Ph.D.
1. Total credits
A total of 84 credits beyond a bachelor’s degree or 54 credits beyond a master’s degree are required.

2. Study plan and coursework

Study plan
Prior to the start of the student’s second term in the Ph.D or M.E./Ph.D. program, the student must complete a study plan. The student and research advisor should, together, decide on an appropriate study plan. The student should then have the study plan signed as indicated below.

Form: Doctoral Study Plan
Required signatures: Student
Dissertation advisor
BME Program Director Dr. Hazelwood
Vice Provost for Academics Dr. Chassapis
Registrar

Of the total 54 credits beyond the master’s degree, at least 15 credits must be for coursework. Any exceptions must be approved by the Ph.D. Program Director, Dr. Perlman.

All courses counting toward the M.E. and Ph.D. degrees must be at the 500 level, or higher, whether within or outside of the BME program. The courses taken should be relevant to the student’s intended field of doctoral research.

Required courses
-All students must take PRV 961: Doctoral Signature Credit Seminar. Students should take this course at the same time as writing their Ph.D. proposal. Students entering the Ph.D. program post-master’s degree should take this course in their second term. Students entering the Ph.D. program post-bachelor’s degree should take this course while preparing their Ph.D. proposal or soon after completing their first 30 credits, whichever comes first.
Students who do not hold a BME master’s degree from Stevens must take the following two courses.

- BME 600: Strategies and Principles of Biomedical Design
- BME 601: Advanced Biomedical Engineering Laboratory

Any student without a background in digital signal processing must take the following course.

- BME 810: Special Topics in BME—Digital Signal Processing

Academic probation

Any student with a GPA of less than 3.0 after earning 10 or more credits; who receives three or more C’s; or who receives an F in a course and another F upon repeating the same course will be placed on probation. See Academic Standing website for more detail.

3. Research credits

Of the total 54 credits beyond the master’s degree, at least 30 credits must be research credits for enrollment in BME 960: Research in Biomedical Engineering.

Once the student enrolls in BME 960 for the first time, the student must file a research progress report at the end of every fall and every spring term. Without submitting this report, the student will not be able to register for the next term.

4. Ph.D. Proposal and Qualifying Examination

The Qualifying Examination in BME consists of submission of a written Ph.D. proposal and successful oral defense of the proposal. A student must pass the Qualifying Examination before registering for more than 9 credits of BME 960. The Ph.D. proposal is due by 4 pm on the first Friday of the term starting one calendar year after the student enters the Ph.D. program or the Ph.D. portion of the joint M.E./Ph.D. program. Students admitted to the joint M.E./Ph.D. program enter the Ph.D. portion of the program after completing their first 30 credits. Students in the joint M.E./Ph.D. program are encouraged to submit their Ph.D. proposal by the end of their fourth term in the M.E./Ph.D. program; if they do not do
so, then they must submit a two-page description of the Specific Aims of their intended research project by the last day of classes of their fourth term. Proposals are welcome to be submitted ahead of the deadline; every effort will be made to review the proposals within four weeks of submission, but holidays/academic breaks will add to review time and unavailability of appropriate faculty may also delay review.

When there are extenuating circumstances that prevent a student from submitting the proposal on time, the student may request an extension of the deadline by contacting the Ph.D. Program Director at least two weeks ahead of the deadline. The Ph.D. Program Director will consider the request, but there is no guarantee that the deadline will be extended. Any student who does not submit his/her Ph.D. proposal by the regular (or, when approved, extended) deadline will fail that attempt at the BME Qualifying Examination.

Following the Qualifying Examination, the student must file the following report.

Form: Report on Qualifying Examination/Proposal Defense
Required signatures: All members of Qualifying Examination Committee
BME Program Director Dr. Hazelwood
Vice Provost for Academics Dr. Chassapis

5. Doctoral Dissertation Committee

Following successful passage of the Qualifying Examination, the Doctoral Dissertation Advisory Committee should be formed. This committee must include at least four members, one of whom must be the student’s dissertation advisor, who usually serves as Chair, and one of whom must be a Stevens faculty member from a program other than Biomedical Engineering. Inclusion on the committee of a qualified expert from outside of Stevens is encouraged but not required.

Form: Doctoral Dissertation Advisory Committee Nomination
Required signatures: Student
Dissertation advisor
BME Program Director Dr. Hazelwood
Vice Provost for Academics Dr. Chassapis

At least once a year, the student must meet with the dissertation advisory committee to update the committee on his research progress. This meeting must be reported to the Vice Provost for Academics Dr. Chassapis.

6. Maintenance of matriculation

Following completion of the 84 credits required for graduation and prior to completing and successfully defending the dissertation, the student must maintain matriculation.

Form: D999 Maintenance of Matriculation Enrollment
Submission time: Each term following completion of credits/prior to graduation
Required signatures: Student
Dissertation advisor
BME Program Director Dr. Hazelwood
Vice Provost for Academics Dr. Chassapis
7. Manuscript submission

Prior to defending the dissertation, at least one manuscript based on the dissertation work must have been submitted for publication to a peer-reviewed journal. When emailing committee members to schedule the Ph.D. defense, students should (i) copy BME Ph.D. program director Dr. Perlman and (ii) attach a published manuscript or a copy of an email from a journal confirming submission of a manuscript.

8. Ph.D. dissertation and defense

At the start of the term in which the student expects to defend the Ph.D., the student must file an application for candidacy.

Form: Doctoral Application for Candidacy (same form as study plan)
Submission time: Prior to October 1/March 1 for fall/spring graduation
Required signatures: Student
Dissertation advisor
BME Program Director Dr. Hazelwood
Vice Provost for Academics Dr. Chassapis
Registrar

Graduate School policy requires that the student submit the completed dissertation to the Dissertation Advisory Committee at least six weeks prior to the defense date.

At least ten business days before the dissertation date, the dissertation title and abstract must be forwarded to Dr. Chassapis’s office and, from there, to the Registrar, for email distribution to all Stevens faculty. If, within a few days after abstract submission, the thesis advisor does not see that the dissertation announcement has been distributed to the faculty, then the student should contact Dr. Chassapis’s office to ensure that the announcement is distributed.

According to the Academic Calendar, the last day on which the dissertation may be defended is the last day of classes in the term in which the student is to graduate.

Following the dissertation defense, the student must file the following report.

Form: Report on Dissertation and Final Examination (Defense) for the Degree of Doctor of Philosophy
Required signatures: All members of Dissertation Advisory Committee
Department Chair
Vice Provost for Academics Dr. Chassapis

The final dissertation must be formatted according to the library’s specifications and submitted to the library (see Relevant Websites, at top). The dissertation must be accepted by the library by the last day of classes in the term in which the student is to graduate.